RAP PUBLICATION 2009/12

Plant protection profiles from Asia-Pacific countries (2007-2008)

2nd edition

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ASIA AND PACIFIC PLANT PROTECTION COMMISSION

and

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
REGIONAL OFFICE FOR ASIA AND THE PACIFIC

Bangkok, 2009

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Foreword

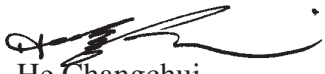
The first edition of plant protection profiles which was published in March 2007 with inputs from 14 member countries of the Asia and Pacific Plant Protection Commission (APPPC) served as a platform for information exchange among its members and other countries in the region in line with one of the key objectives of the Commission.

This second edition includes not only updated information for each country but also more profiles with contributions from 19 member countries of APPPC as well as another country from the region, namely Japan.

Thanks to the considerable efforts and valuable contributions by the participating countries and their supporting staff, this unique publication provides valuable information about plant protection activities in Asia and the Pacific, and presents dynamic data on each country's institutional, infrastructure and capacities. The country profiles provide a unique reference for countries to compare procedures and practices, and identify potential priority areas that need strengthening and may require collaboration among the participants. In addition, the plant protection profiles highlight the degree of relevance of 31 International Standards for Phytosanitary Measures (ISPMs) and the current status of their implementation in the participating countries.

This edition features executive summaries of the activities undertaken during the period from 2007-2008 as well as the activities of some countries that were undertaken as recently as June 2009. One of the participating countries has included the work and financial plan for plant protection activities in 2009 in its profile. Such information is very useful and we look forward to receiving this kind of input from other member countries in the next edition. Also included in this document is the progress achieved by Parties to the Rotterdam Convention in Asia and the Pacific in the implementation of the Convention in relation to pesticide management. Noteworthy is the information about the Notification of Final Regulatory Action for Annex III and Non-Annex III chemical of the Convention as well as the information about the chemicals covered by import responses by the Parties.

It is hoped that the country plant protection profiles will not only help policy-makers formulate more effective strategies and policies for pest and pesticide management, but also assist in regional harmonization and closer cooperation among the countries in this region. Importantly, it is hoped that the information will help them avoid costly pitfalls as well as unnecessary overlaps and repetition of work in dealing with problems related to their plant protection activities.



He Changchui
Assistant Director-General and
FAO Regional Representative for Asia and the Pacific

Bangkok, July 2009

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List of acronyms

APPPC	Asia and Pacific Plant Protection Commission
ASEAN	Association of Southeast Asian Nations
Codex	Codex Alimentarius Commission
DAALI	Department of Agronomy and Agricultural Land Improvement
DNA	Designated National Authority
DOA (or DoA)	Department of Agriculture
ESCAP	Economic and Social Commission for Asia and the Pacific
ETL	Economic Threshold Level
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FAOSTAT	FAO Statistical Database
FFS	Farmer Field School
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GMO	Genetically Modified Organism
GNI	Gross National Income
IPM	Integrated Pest Management
IPP	International Phytosanitary Portal (https://www.ippc.int/IPP/En/default.jsp)
IPPC	International Plant Protection Convention
ISPM	International Standards for Phytosanitary Measures
LMO	Living Modified Organism
MOA (or MoA)	Ministry of Agriculture
MOE (or MoE)	Ministry of Environment
MOH (or MoH)	Ministry of Health
MRL	Maximum Residue Limits
NGO	Non-Governmental Organization
NPPO	National Plant Protection Organization
OC	Organochlorine (pesticides)
OECD	Organisation for Economic Co-operation and Development
OP	Organophosphate (pesticides)
PANAP	Pesticide Action Network Asia and the Pacific
PCE	Phytosanitary Capacity Evaluation
PIC	Prior Informed Consent (Rotterdam Convention)
POP	Persistent Organic Pollutants (Stockholm Convention)
PPD	Plant Protection Department/Division/Directorate
PPProfiles	Plant Protection Profiles

PRA	Pest Risk Analysis
PRG	Plant Growth Regulator
RSPM	Regional Standards for Phytosanitary Measures
SPS	Sanitary and Phytosanitary
TOT	Training of Trainers
UNEP	United Nations Environmental Programme
USD	United States Dollar
WHO	World Health Organization
WTO	World Trade Organization

1. Plant protection information exchange among APPPC member countries

Background information

One of the key objectives of the Asia and Pacific Plant Protection Commission (APPPC) is to promote information exchange among its members and other countries in the region. The Commission recognizes the importance of efficient and transparent exchange of critical information as a means to improve regional cooperation and development.

The first edition of plant protection profiles which was published in March 2007 has played an instrumental role in promoting such exchange. The profiles provide key information in an organized and structured manner so that it can be easily understood and updated.

Before the publication of the profiles, there was no database or country profiles for plant protection. Although there was some country phytosanitary information available on the International Phytosanitary Portal (IPP), it was focused on certain areas of phytosanitary measures. There was no unified source of information for other plant protection areas such as pest and pesticide management, or the control of pest outbreaks. It was also difficult to find this information in conference proceedings or on websites of country plant protection organizations since it was incomplete or only available in the local language.

The availability of country plant protection profiles not only helps policy-makers formulate better policies and strategies for plant protection but also facilitates the international reporting requirements. This includes, among others, monitoring of the compliance and implementation of the International Standards for Phytosanitary Measures (ISPMs). Importantly, the profiles may assist in regional harmonization and cooperation by providing transparency of procedures and practices.

Apart from updating the information, this second edition includes more profiles with valuable contributions from 18 of its member countries and other countries from the region such as Japan.

APPPC was founded in 1956. An amendment to the original agreement related to the mandatory financial contribution to the Commission was adopted in 1983 and will enter into force in September 2009 as the number of the accepting countries reaches the required two-thirds of the countries. It is expected that the funds given by the contributing members will significantly promote regional plant protection activities in the region.

The Commission consists of 24 member states (see the following table with the exception of Japan), all of which are also parties to the International Plant Protection Convention (IPPC), Codex Alimentarius and the Convention on Biological Diversity. As well, most of them are parties to other conventions including the World Trade Organization (WTO), the Rotterdam Convention, the Stockholm Convention, and the Basel Convention.

APPPC members vary greatly in size and level of economic development. The Commission holds biennial meetings to review the overall plant protection situations both at national and regional levels as well as activities undertaken by its members in the previous two years.

Ratification and membership of international agreements

Country	APPPC	APPPC 1983 Amendment*	IPPC	Rotterdam Convention	Stockholm Convention	Basel Convention	Codex Alimentarius	WTO SPS	Convention on Biological Diversity
Australia									
Bangladesh					2007				
Cambodia									
China									
Korea, DPR						2008			
Fiji									
France									
India									
Indonesia									
Japan*									
Lao PDR									
Malaysia									
Myanmar									
Nepal				2007	2007				
New Zealand									
Pakistan					2008				
Papua New Guinea									
Philippines									
Republic of Korea					2007				
Samoa									
Solomon Islands									
Sri Lanka									
Thailand									
Tonga								2007	
Viet Nam				2007				2007	
Total	**24**	**16**	**25**	**17**	**22**	**20**	**25**	**22**	**25**

* Japan is not a member of APPPC.

Brief status, development and progress

The following tables provide information about the status, development and progress achieved by APPPC members and Japan in different areas of plant protection including plant quarantine, outbreak management (surveillance, pet outbreaks and invasive species), pest management and pesticide management. The information is based on the country reports presented at the 25th Session of the Commission which was held in Beijing, China, in August 2007 and the plant protection profiles covering the period from 2007 to June 2009.

General information

Country	General Information (2007 – June 2009)
Australia	**Review of Australia's Quarantine and Biosecurity Arrangements** In February 2008, the Australian Government Minister for Agriculture, Fisheries and Forestry announced a comprehensive, independent review of Australia's quarantine and biosecurity arrangements. The review was undertaken by an independent panel of experts. In December 2008, the government released the panel's report, One Biosecurity: a working partnership, and its preliminary response to the recommendations. In its preliminary response, the government agreed in principle to all of the review panel's 84 recommendations. **National Plant Health Status** A concise overview of Australia's plant biosecurity system is provided by the first National Plant Health Status Report. It is a consolidated snapshot of the system that protects Australian agricultural and forestry industries, worth more than $20 billion/year, from exotic pests. It describes Australia's plant health system and provides information on the plant pests of greatest concern to Australia; the organizations and processes involved in keeping Australia's agricultural and forestry industries free from pests; and the innovative plant health research projects currently being undertaken by Australian research organizations and universities. For the 2007-2008 financial year (July 2007 – June 2008), it identifies details of more than 200 high priority exotic pests of significant quarantine concern and also highlights over 120 surveillance programmes targeting plant pests of concern across the country. The National Plant Health Status Report 07/08 is made available on the International Phytosanitary Portal.

Country	General Information Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Australia	The Department of the Environment and Water Resources (DEW) administers the Designated National Authority (DNA) obligations for industrial chemicals in cooperation with the Australian regulator for industrial chemicals, the National Industrial Chemicals Notification and Assessment Scheme (NICNAS). The Department of Agriculture, Fisheries and Forestry administers DNA obligations for pesticides. The Australian Quarantine and Inspection Service (AQIS) was restructured on 1 January 2007. It has a new Executive Director, Stephen Hunter, and plant quarantine and plant exports are now handled in different branches in different divisions. From 1 July 2007, new corporate governance structures came into effect at the Australian Pesticides and Veterinary Medicines Authority (APVMA) following reforms implemented by the Australian Government. Key reforms include conferring responsibility for governance of the APVMA on the Chief Executive Officer and establishing a new Advisory Board. The Advisory Board will include experts in the chemical industry, primary production, consumer interests, public health, the environment and occupational health and safety. These reforms only relate to the governance of the APVMA and do not change the regulatory scheme that is administered by the APVMA.

Country	General Information (2007 – June 2009)
Bangladesh	Apart from following IPPC's guidelines on the phytosanitary export certification and phytosanitary import regulatory systems, the Plant Quarantine Section of the Plant Protection Wing (NPPO) is responsible for implementing the International Standards for Phytosanitary Measures (ISPMs) in Bangladesh. Importantly, NPPO plays a vital role in implementing the National Pest Management Policy through the activities of Integrated Pest Management (IPM) and Integrated Crop Management (ICM) projects. They strengthen IPM activities and help farmers to become aware about healthy crop production.

Country	General Information (2007 – June 2009)
Cambodia	The Plant Protection and Phytosanitary Inspection Office (PPPIO) as Cambodia's NPPO has recently been upgraded as the Plant Protection and SPS Department (PP-SPSD) of the General Directorate of Agriculture (GDA). NPPO was previously under the supervision of the former Department of Agronomy and Agricultural Land Improvement (DAALI). The Government of Cambodia has endorsed Sub-Degree No. 188 (14/11/2008) with the establishment of GDA which consists of nine departments. One of these is the Plant Protection, Sanitary and Phytosanitary Department (PP-SPSD) that has the following roles and responsibilities: • To prepare the policy, plan, project, development programmes, the measure to *reduce* the crop production loose caused by pest, to *manage* chemical substances used to prevent, control, repellant, grow regulate (and all other pesticide actives) pest and all agent or biological substances used for the above mentioned purpose and for soil fertility improvement in order to increase productivity and plant production in the sound of sustainable of natural resources and biodiversity of the environment; • To prepare the plant product *quality standards,* the *assurance system of safety* and quality of plant product, policy plant project development programmes to *improve* the quality and safety of plant product in order to assure the quality and safety of plant product to consumer, market and encourage the export of plant product; • To prepare the *regulation* and to be the *regulatory service* in the management of *plant protection work, safety of food* originally from plant product and *phytosanitary inspection* according to the Government policy and SPS agreement of WTO; • To direct, manage and encourage the *research activities* of research institution under its manage and in cooperation with the agricultural extension department and local organizations to encourage the *extension* of plant protection, phytosanitary and production measures to improve the quality and safety of product to farmers, farmer organization, investor and private sector for increasing their benefits and family income to improve population's welfare and facilitate the exportation of agricultural product; • To be a *supporting service to the seed inspector* by playing a role of regulatory authority for inspecting all the seed transportation across the border;

Country	General Information (2007 – June 2009)
	• To persuade, facilitate and *encourage private sector to invest* the supporting service for plant protection, phytosanitary and improving quality of agricultural product; • To be a *technical advisor* and a service in *pest control* intervention, in *assessment of chemical* substances used to prevent, control, repellant, grow regulate (and all other pesticide actives) pest and all agent or biological substances used for the above mentioned purpose and for soil fertility improvement and in *assessment of quality* of agricultural product; • To liaison, cooperate and implement the convention, agreement related in national, regional and international level. • To implement other duties as given by Director Team of General Directorate. This newly endorsed Sub-Degree just described the general mandate of these nine departments. Ministerial regulations are being drafted for each department and will be submitted to the Ministry of Agriculture, Forestry and Fisheries (MAFF) for approval.

Country	General Information Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Cambodia	In Cambodia, three ministries are involved in plant protection, namely the **Ministry of Agriculture, Forestry and Fisheries (MAFF)**, Ministry of Environment (MoE) and Ministry of Commerce (MoC). However, MAFF is the main ministry responsible for plant protection and phytosanitary measures, IPM activity, pesticide registration and regulation, training, research and extension activities. The MoE is responsible for activities relating to the Stockholm Convention and the MoC is responsible for issue related to WTO SPS. Many government and ministerial regulations had been developed for the management of border check points, the management of plant quarantine activities and phytosanitary inspection.

Country	General Information (2007 – June 2009)
China	China has made steady progress in all areas of plant protection during the period from 2007-2008. The Plant Protection Office was established under the Ministry of Agriculture (MOA) in 2008 in order to enhance the leadership in plant protection.

Country	General Information Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
China	**Plant Protection Policies** The Ministry of Agriculture re-formulated the national plant protection policies towards "public plant protection" and "green plant protection". The policy on "public plant protection" requires that the Government be responsible for the provision of public services relating to plant protection. The policy on "green plant protection" requires that plant protection strategies, technologies, standards and protocols be sustainable and environment friendly.

Country	General Information (2007 – June 2009)
Fiji Islands	The agriculture sector holds a lot of promise but Fiji has yet to realize its full potential. The sector is further challenged with the loss of sugar preferential price that affects the sugar industry. The Cabinet on 18 January 2005 agreed on the reorganization of the Quarantine Department. A scoping study of the Department and audit of the Department's operations were carried out in the same year. The recommendations from the scoping study and the audit highlighted the need to reform the Department on areas of institutional strengthening to meet the SPS Agreement of the WTO. The Charter recommendations highlight the following areas for reform: • The review of the Quarantine Legislations; • Training of officers; • Improve facilities and equipment; • Review and streamline current work practices; • Operating instructions; • Strengthen technical capacity; • Communication; • Awareness; and • New organization structure for the statutory authority to be known as the Biosecurity Authority of the Fiji Islands (BAFI). The reform exercise has been progressing slowly. However, the review of the legislation has been completed, awareness programmes for the public are ongoing, communication has improved in the last two years and a standard operational procedure manual has been finalized. Currently in the pipeline, is the review of the organization structure and to be followed with the establishment of the Statutory Authority. The Authority will administer the Biosecurity Promulgation 2008 and fast-track the completion of the reform. This reform will bring the plant and animal biosecurity under one administration and develop its facilities and equipment to facilitate its operations. The Authority will have its laboratory and technical expertise to conduct risk and pest assessment whilst the Ministry Research Laboratory to focus on the Ministry's laboratory needs and will assist BAFI on needs that are beyond the capacity of BAFI's laboratory. The Government of the day is placing high priority on national security, putting biosecurity in the fore-front of its development plan. Fiji's biosecurity systems and services will continue to be developed, and we expect to fully administer the Biosecurity Promulgation 2008 when the Biosecurity Authority of the Fiji Islands is fully established in the year 2012.
India	The Headquarters of the Directorate of Plant Protection Quarantine and Storage is located at Faridabad, Haryana. This office is headed by the Plant Protection Adviser to the Government of India and is responsible for the implementation of plant protection policies and programmes of the Department of Agriculture and Cooperation, the Ministry of Agriculture, the Government of India. The major activities are exclusion of exotic pests, surveillance and monitoring and control of desert locust, ensuring availability of quality pesticides and biopesticides, promotion

Country	General Information (2007 – June 2009)
	of integrated pest management approach in plant protection, development of the human resources in plant protection and monitoring of pesticide residues in agricultural commodities. The Directorate of Plant Protection, Quarantine and Storage, Department of Agriculture and Cooperation administer the Destructive Insects and Pests Act, 1914 (2 of 1914) under which Plant Quarantine (Regulation of Import into India) Order 2003 regulates the imports of agricultural commodities and the wood packaging material. Being the National Plant Protection Organization, the Directorate is responsible for implementation of the phytosanitary certification programme. More than 150 plant protection specialists from all over the country have been authorized by NPPO to issue phytosanitary certificates, in accordance with the requirements of importing countries as per IPPC. 194 714 Phytosanitary certificates were issued during 2008-2009 and more than 239 pest risk analyses were carried out. A number of quarantine pests had been intercepted in the imported consignments and notifications sent to the exporting countries.
Japan (Observer)	The Ministry of Agriculture, Forestry and Fisheries (MAFF) is mainly responsible for plant protection and plant quarantine services to control and prevent the introduction of pests of plants and plant products. The Plant Protection Station (PPS) of MAFF is responsible for implementation of import/export inspections and supervision of disinfestation treatment. The PPS of Japan consisted of five head offices, 15 substations, 53 branches, three detached offices and one plant inspector's office and 865 plant quarantine officers who are authorized by the NPPO to implement appropriate inspection/ certification. MAFF is working closely with pest control stations run by prefectural governments to conduct monitoring surveys to detect infiltrating pests at an early stage, and engage in emergency eradication, where necessary. Domestic certification systems are under operation for seed potatoes and major fruit tree seedlings and regulating the movement of plant from outbreaking area to non-outbreaking area. MAFF provided the specific guidelines for the crop of rice, cabbage, citrus, soybean, tomato, strawberry, pear, apple, tea, chrysanthemum and sugarcane to facilitate implementation of IPM for individual farmers.
Korea, DPR	In DPRK, the Central Plant Quarantine Station (CPQS), MOA, is responsible for inspecting and quarantining seeds and planting materials. CPQS also trains the quarantine staff of the Korea Export & Import Commodity Inspection & Quarantine Committee (KIQC). On the other hand, the State Administration for Quality Management (SAQM) is responsible for inspecting and quarantining plant commodities while the Bio-Safety Committee (BSC), the State Academy of Sciences, is responsible for inspecting and quarantining genetically modified organisms.
Lao PDR	Lao PDR is a landlocked country. It occupies an area of 236 800 km^2 out of which approximately 75 percent is mountainous and lies entirely within the tropics and is located between latitudes 14°10′ to 22°10′ N and longitudes 100°20′ to 107°50′ E. The population early 2008 was estimated at about 5.8 million, and more than half of the population is concentrated in flat plain adjacent to Mekong basin and its tributaries. Agriculture is the main stay of the national economy and contributes 45 percent of the country's GDP and it employs about 80 percent of the population.

Country	General Information (2007 – June 2009)
	Lao PDR with its much smaller population and abundant but largely untapped natural resources, which include water and land, is in a prime position to serve what must become growth markets for rice, vegetables and other farm produce. Currently, the major food crop and agriculture product of Lao PDR is rice. It is cultivated during the wet season, either rain fed in upland areas of under wet conditions on inundated river plains. Rice is often grown as a subsistence crop. The problem continues to be nation wide food security made worse by the frequency of droughts and floods. Despite the importance, agricultural productivity in Lao PDR is at a rather low level mainly due to traditional farming system susceptible to adverse affect of pests and diseases associated with the introduction of high yielding varieties and exotic crops. Increasingly, the traditional agriculture utilizing natural resources and providing basic needs is being replaced by a much more complex system dependent on many external influences such modern agricultural inputs, e.g. improved seed, fertilizer, new technology and credit access. Increasing income and growth in neighbouring countries create a growing demand for food and agricultural products. These can be supplied from Lao PDR, whose natural resources favour expansion of agricultural production. Improvement of the investment climate, membership of the World Trade Organization (WTO) and making optimal benefits of ASEAN Free Trade Area (AFTA) membership will play synergetic roles in unleashing the growth potential of agriculture. Exports of agricultural products from Lao PDR have not yet faced a major ban or suspension for SPS non compliance, but there are specific concerns for the future. At present most agricultural exports are destined to market segments in neighbouring countries where food safety and quality requirements are still moderate or low. There is no formal record, but it is estimated that greater than half of agricultural exports are through informal border trade. However, public and market requirements for quality and safety in neighbouring countries are also increasing. The role and responsibilities of the NPPO has been made more explicit under the WTO SPS regime and stipulated in the New Revised Text of the IPPC (1997).
Malaysia	Since the last session of the APPPC 2007, Malaysia is now getting to the final stage in the drafting of the plant quarantine legislation to replace the Plant Quarantine Act 1976, and alongside with it the Plant Protection Regulations is also being drafted to replace the existing Plant Quarantine Regulations 1981.
Myanmar	Myanmar has to rely mainly on its natural resources with its economy being based on agriculture. The agriculture contributes around 23 percent of the country's export earnings and employs about 63 percent of working population. For further development of agricultural sector, it is vital that the agricultural outputs are produced and traded in compliance with SPS requirements which are internationally accepted. At present, 90 percent of major export crops such as pulses and maize are sold to countries with less rigorous SPS requirements. The authorities are trying their best to comply with the SPS requirements and implement ISPMs in a timely manner. The Plant Protection Division of Myanmar Agriculture Service is playing the role of the National Plant Protection Organization (NPPO) and actively participates in the

Country	General Information (2007 – June 2009)
	implementation of the country's plant quarantine measures in line with both Regional Standards for Phytosanitary Measures (RSPMs) and International Standards for Phytosanitary Measures (ISPMs). Whenever the drafts for the new standard are received for comments, NPPO has made every effort to cooperate and respond to the request. However, the implementation of existing international and regional standards of phytosanitary measures still needs to be further strengthened. While no pest outbreak occurred during the period of 2007-2008, rodent outbreaks occurred in the northern part of Myanmar in 2008 but they were not of agricultural importance. The biological control research which is part of the Integrated Pest Management (IPM) Programme is being carried out for cotton, groundnut and vegetables. While the Farmer's Field Schools (FFS) have been established since 2000, emphasis was placed only on the rice farmers during the beginning stage. The work related to the country's pesticide management has been progressing steadily. It covers pesticide registration schemes, licensing programme, control of Persistent Organic Pollutants, disposal of toxic wastes, as well as management of transboundary movement of illegal products.
Nepal	The economy of Nepal is predominantly dependant on agriculture. Nearly 17.71 million populations are engaged in agriculture and about 17 percent of the population lives below poverty line. The total cultivated area under agriculture is 3.091 million ha. The contribution of agriculture sector to the country's GDP constitutes about 32.60 percent. Sustainable reduction of poverty, ensuring food security taking advantage of the country's agro-climatic diversity while fulfilling its international obligations concerning biodiversity conservation and environment protection are the important priorities of the government of Nepal. The above strategies are also closely linked to the various international conventions and agreements to which Nepal is a party. To streamline the services in the area of plant protection, the Government of Nepal has established a separate Plant Protection Directorate (PPD) in the Department of Agriculture under the Ministry of Agriculture and Cooperatives (MoAC). The Plant Protection Directorate executes and coordinates various plant protection functions such as plant quarantine and implementation of international standards on phytosanitary measures, surveillance, pest outbreaks and invasive species management, pest and pesticide management programmes through its different outfits as follows: 1. National Plant Quarantine Programme (with five regional plant quarantine check posts, eight check posts and two sub-check posts), 2. National IPM Programme, 3. Pesticide Registration and Management Office, 4. Five regional plant protection laboratories located in five development regions of the country. In addition to above, each District Agriculture Development Office (DADO) (a total of 75) is posted with a Plant Protection Officer with supporting Junior Technicians and Technical Assistants, who are made responsible to coordinate and implement various plant protection functions at the district level.

Country	General Information (2007 – June 2009)
	In 2004, in line with the provision made by the IPPC, the Government of Nepal nominated PPD as National Plant Protection Organization (NPPO) contact point for IPPC/APPPC and the Director of the PPD was assigned as focal point for the NPPO. The government of Nepal also nominated focal points for WTO SPS related matters *(Department of Food Technology and Quality Control under MoAC)*, international treaties and conventions such as Rotterdam Convention, Stockholm Convention *(Pesticide Registration and Management Office)* as well as a competent authority (CA) and a focal point for Basel Convention *(Ministry of population and Environment)*. Also, Nepal has either already brought into force or is in the process of legislating laws, rules and regulations compatible with the above international treaties such as Plant Protection Act (2007), Pesticides Act (1991) and Plant Protection Regulation (2009), which is under process of approval.
New Zealand	Since the last Session of the Asia and Pacific Plant Protection Commission, New Zealand has continued to develop and refine its Biosecurity system. MAF Biosecurity New Zealand (MAF BNZ) is the division of the Ministry of Agriculture and Forestry (MAF) charged with leadership of the New Zealand biosecurity system. It encompasses facilitating international trade, protecting the health of New Zealanders and ensuring the welfare of our environment, flora and fauna, marine life and Maori resources.
Pakistan	During the period 2007-2008, Pakistan has made steady progress in all areas of plant protection. Under the supervision of the Ministry of Food and Agriculture (MINFA), the Department of Plant Protection (DPP) now consists of four divisions including Plant Quarantine, Locust Survey & Control, Pesticide Registration and Management and Aerial Spray.
Republic of Korea	One of the government goals to achieve for the next five years is 'Profit-making agriculture and fisheries and lively rural society'. In the line with the government commitment, the Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF) aims to upgrade agriculture from primary production-based industry into advanced industry which encompasses processing and marketing so that our agriculture and fisheries can compete in a global arena. MIFAFF also drives production of environmentally-friendly, safe and high quality agro-good products. The former Ministry of Agriculture and Forestry has been enlarged into Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF) and substantive restructuring happened. A new bureau for Food Safety and Consumer Affairs Policy is developed in the Ministry and a new division for Labelling, Quarantine and Inspection was developed under the new bureau which may mean strengthening food safety and quarantine. However, major implementation organizations regarding plant protection such as National Plant Quarantine Service, Rural Development Administration, are unchanged.
Sri Lanka	Some key organizational changes took place during 2007-2008. Some senior officers were transferred to other work places while some retired or were promoted. Discussions were held to revise the regulations made under the Plant Protection Act. The draft on the revised regulations was submitted to the World Trade Organization. Incorporating comments from stakeholders, the draft was now under review for

Country	General Information (2007 – June 2009)
	consistency with the Act. As some loopholes were found, the National Committee was appointed to revise the Plant Protection Act No. 35 of 1999. The purpose was to make necessary changes to reflect the current requirements, ensuring that the regulations were consistent with IPPC recommendations. Noteworthy in the revised regulations was the control of Coconut Leaf Rot Disease and Weligama Cococnut Wilt Disease in the southern region of Sri Lanka.
Thailand	The Plant Quarantine Act B.E. 2507 (1952) amended by the Plant Quarantine Act (No. 2) B.E. 2542 (1999) and Plant Quarantine Act (No. 3) B.E. 2551 (2008) have been enforced by the Department of Agriculture (DOA). The Plant Quarantine Act (No. 3) provides specifications and criteria for notification of plants, plant pests and carriers as prohibited articles. DOA has recently given a number of notifications to strengthen the quarantine practices for both export plants and plant products and import prohibited articles. In 2008, the outbreak of an unknown species of mealybug occurred in some cassava plantations. The new pest caused more severe damage to cassava than striped mealybug, *Ferrisia vergata*. DOA has recently conducted a detection survey of mango seed weevil, *Sternochetus mangiferae*. The purpose is to confirm that Thailand is free from this weevil and to expand the export market for Thai mango. During 2007-2008, the Department of Agricultural Extension (DOAE) has not changed the national policy on IPM Programme. However, a number of IPM training programmes and farmer field schools had to be curtailed, due to the budget constraint. Farmers' education placed emphasis on changing the attitude of the farmers who applied highly toxic pesticides and on helping them understand the good principles of Good Agricultural Practices (GAPs). The farmers were also encouraged to use bio-agents to replace or alternate with chemical pesticides. Since the end of 2007, under the project entitled "Using Integrated Pest Management for Decreasing Risk of Plant Pest Infestation", DOAE has put efforts to develop farmers into "Pests Management Professionals in IPM", to reduce damage to farmers crops, to encourage less investment, and to enhance community participation. Area-wide IPM of fruit fly control programme using the Sterile Insect Technique (SIT) has been carried out over a large area. However, its success largely depends on adequate and timely financial support from the government. The Hazardous Substances Act B.E. 2535 (1992) was amended in 2008 and is enforced. DOA gave a notification on registration and licensing, which requires pesticide companies or laboratories to adopt the Good Laboratory Practices (GLPs).
Viet Nam	**Outstanding Issues** During the last two years (2007-2008), Viet Nam continued to strengthen and improve its plant health system. The Plant Protection Department (PPD) is the National Plant Protection Organization (NPPO) responsible for carrying out the functions specified in the International Plant Protection Convention (IPPC), and for overseeing the agricultural plant safeguarding system. The mission statement of PPD for this new period is "to become a highly effective, efficient and professional NPPO with the capacities and

Country	General Information (2007 – June 2009)
	competencies to protect the nation's plant health status and biodiversity and promote market access for plant and plant products in compliance with international agreements and standards". **Plant Protection** The plant health functional responsibilities in Viet Nam are delegated to 2 layers: central and provincial levels. PPD has a substantial network at the provincial level with Plant Protection Sub Departments (PPSDs) in 63 cities and provinces, managing and implementing plant health programme.

Plant quarantine

Country	Plant Quarantine (2007 – June 2009)
Australia	**Australian IPPC activities** Dr Bill Roberts, Biosecurity Australia, was elected as the Southwest Pacific representative on the IPPC Bureau. David Porritt, Biosecurity Australia is one of three Southwest Pacific representatives on the Standards Committee. Australian experts on Technical Panels are Rob Duthie (Fruit Flies) and Mallik Malipatil (Diagnostic Protocols). Information exchange has been carried out using the IPP. This has included pest reports and the first nationally endorsed diagnostic protocols, for plum pox virus and apple brown rot (Monilinia fructigena). Awareness of IPPC activities and consultation on draft standards continued throughout 2007 and 2008, including contributions to Pacific activities. **Biosecurity Australia** Biosecurity Australia provides science based quarantine assessments and policy advice that protects Australia's favourable pest and disease status and enhances Australia's access to international animal and plant related markets. It develops new policy, usually through an import risk analyses (IRA), and also reviews existing quarantine policy on imports of animals, plants and their products. An IRA is required where there is no quarantine policy or a significant change in existing quarantine policy is to be considered. IRAs identify and classify potential quarantine risks and develop policies to manage them. **Border quarantine inspections** The Australian Quarantine and Inspection Service (AQIS) inspect approximately 900 000 entries of sea or air cargo. The majority of detections of insects, fungi and contaminant weed seeds in horticultural products, grains and seeds and timber are sent for treatment without detailed taxonomic investigation. In addition, a small number of detections of quarantinable pests occur in products that have been released from quarantine. Over 60 percent of post quarantine detections are of insects, mainly associated with detections are furniture and wooden items (including bamboo, cane and wicker). This is thought to reflect the difficulty in detection on arrival due to the cryptic nature of wood boring insects.

Country	Plant Quarantine (2007 – June 2009)
	Australian Fumigation Accreditation Scheme (AFAS) AFAS is a management system for overseas agencies, a training and accreditation for fumigators, a registration system for fumigation companies and acceptance by Australia of fumigation certificates issued under AFAS. The scheme provides capacity building for overseas quarantine agencies in monitoring and registering fumigators and to enhance the technical expertise of these fumigators and providing training for methyl bromide fumigations. It also assists fumigators in maintaining a high standard of fumigation performance and compliance with AQIS requirements and facilitates export trade. It has been implemented in Indonesia, Malaysia, Thailand, India, Papua New Guinea and the Philippines leading to reduced fumigation failures. Full implementation of AFAS is scheduled in China in 2009 and discussions have commenced with Viet Nam.

Country	Plant Quarantine Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Australia	**Plant Quarantine (Import Risk Analysis – IRA)** Australia has recently reformed its import risk analyses (IRA) process to increase transparency and timeliness, enhance consultation with stakeholders and increase the level of scientific scrutiny. The reforms will not compromise Australia's conservative approach to quarantine or change their science based risk analysis. Timeframes for the completion of IRAs have been imposed through regulations, improving timeliness and predictability for stakeholders. The regulations provide for a standard or expanded IRA process, depending on the complexity of the science and nature of the biosecurity risks. A standard IRA will be completed within 24 months and an expanded IRA within 30 months. The new process has the flexibility for timeframes to be suspended in certain circumstances, such as when Biosecurity Australia is waiting for scientific information considered essential to complete the IRA. The role of the Eminent Scientists Group (ESG) has been strengthened. The ESG's role will now include assessing conflicting scientific views provided to it and reviewing the conclusions of draft final IRA reports to ensure they are scientifically-based on the material presented. A high level **Department of Agriculture, Fisheries and Forestry group** has been established to prioritize import proposals, thus assisting Biosecurity Australia to develop its work programme. The group will also monitor the progress of IRAs undertaken by Biosecurity Australia. Biosecurity Australia has completed the IRA for New Zealand apples under the previous IRA process and will also finalize the Philippines banana IRA under the old IRA process. The Chief Executive of Biosecurity Australia will announce the transition arrangements for other IRAs currently underway closer to the commencement of the new process. **ISPMs and RSPMs** Australia continues to be active in standard setting, both internationally and through the APPPC, with Australia involved in the draft ISPM on Sampling of Consignments and the Technical Panels on Phytosanitary Treatments and Fruit Flies as well as the production of the draft RSPM on Scales.

Country	Plant Quarantine (2007 – June 2009)
	Plant Pests, Risk Analysis, Phytosanitary Management Australia continues to detect and respond to incursions of emergency plant pests. The approach rate of timber borer pests remains high and will be the subject of a pathway risk analysis to review existing approaches to phytosanitary management. Long running eradication programmes include 6 invasive weed species, citrus canker, red imported fire ant and Wassmania fire ant in Queensland, European House Borer in Western Australia. Grapevine leaf rust has been eradicated from the Northern Territory following a four-year programme.

Country	Plant Quarantine (2007 – June 2009)
Bangladesh	The Plant Quarantine Section of the Plant Protection Wing (NPPO) has followed the IPPC instructions on the Phytosanitary Export Certification and Phytosanitary Import Regulatory Systems in international trade. NPPO is also implementing the International Standards for Phytosanitary Measures (ISPMs) of IPPC into Bangladesh. In case of emergency, phytosanitary actions will be taken by the authority for any interception and non-compliance. NPPO has also drafted Bangladesh Plant Quarantine Act, 2009 and submitted it to the Ministry of Agriculture for approval.

Country	Plant Quarantine (2007 – June 2009)
Cambodia	**Regional capacity building** Activities emphasise SPS awareness, PRA, diagnostics of plant pests, management of pest reference collections, information management and economics of SPS barriers to trade. It is delivered by a mixture of in-country training workshops and reciprocal training visits by ASEAN and Australian technical experts.

Country	Plant Quarantine Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Cambodia	**Phytosanitary Database and Staff Capacity Building** Progress was mainly made in the establishment of the national phytosanitary database and staff capacity building on pest surveillance, pest list and SPS for ASEAN and the placement of plant and animal quarantine staff at the international airport. Constraints to plant quarantine include the absence of plant quarantine check points at river-ports, seaports and border areas. Awareness on phytosanitary inspections was still low and the plant quarantine infrastructure remain much below ISPM standards. The key challenge was to develop a strategy to include plant and animal quarantine staff in the team of inspectors at entry points.

Country	Plant Quarantine (2007 – June 2009)
China	During the period from 2007-2008, a number of regulations and technical specifications/ standards were formulated. These included, among others, the Regulations on the Quarantine and Supervision of Wood Packaging Materials for Entry/Exit Cargo, the Regulations on the Inspection, Quarantine and Supervision of Entry and Exit Fruits, quarantine protocol for the domestic movement of agricultural plants and plant products, plant quarantine protocol for propagating tubers and seedlings of sweet potato in producing areas. In addition, the People's Republic of China's new list of 435 quarantine pests of entry was issued in 2007, based on pest risk analysis. Meanwhile, more national inputs have been provided for the control of plant quarantine pest and the infrastructure construction of plant quarantine. Combined operations against major plant quarantine pests have been conducted by relevant provinces. Pest free areas (PFA) for codling moth are on the way to be established. The central government has helped 100 counties to build plant pest early warning and control stations as well as quarantine and testing labs. Efforts have also been made to provide technical trainings for plant quarantine technicians. In 2007, the 25th session of APPPC was hosted in Beijing, China. A number of Chinese experts were invited by IPPC/SPS/APPPC/APEC or sent by the Chinese government to participate in setting and revising relevant international and regional standards for phytosanitary measures. Two APPPC regional phytosanitary standards were drafted. New ISPMs and RSPMs of Asia and the Pacific region during 2007-2008 were implemented. Bilateral consultation mechanism for phytosanitary issues with many countries was found and a large amount of pest information was provided for counterparts in conducting relevant risk analysis. During 2007-2008, the pest interception cases in the import cargoes reached a new record height of 390 000. Moreover, 2 600 pest species were found. These included 150 dangerous species in 20 000 cases and the other 2 450 varieties in 370 000 cases. These cases involved 170 countries and regions. China has notified relevant countries of the non-compliance through bilateral and multilateral channels.

Country	Plant Quarantine Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
China	During the period of 2005-2007, China completed the legislative approval procedures to join the IPPC. The Chinese Government made great efforts to fulfill the requirements of the IPPC and the SPS agreement during the past two years. All new phytosanitary measures were set up based on PRA guidelines. Some pest free areas were set up in accordance with the requirements of the relevant ISPMs. **International Cooperation** In the development of bilateral cooperation, China signed Bilateral Plant Quarantine Cooperation Agreements with several countries. There is also continued cooperation with Kazakhstan on the control of migratory locusts along the borders. **ISPMs and RSPMs** Chinese experts were involved in the establishment of some international and regional ISPM and RSPM standards and protocols.

Country	Plant Quarantine (2007 – June 2009)
India	Plant Quarantine regulatory measures are operative through the "**Destructive Insects & Pests Act, 1914"**. The purpose and intent of this act is to prevent the introduction of pests/diseases into India and transport from one State to another of any insect, fungus or other pest which is or may be destructive to crops. The Directorate of Plant Protection, Quarantine and Storage was established under Ministry of Agriculture (Department of Agriculture and Cooperation) in 1946 and is entrusted with the implementation of Plant Quarantine Regulations issued under the Destructive Insects & Pests Act, 1914. Ministry of Agriculture issued a notification "The Plant Quarantine (Regulation of Import into India) order 2003". The new regulation is in enforce from 1 January 2004 and has been amended time to time. The existing Plant Quarantine Stations will be strengthened and there is possibility to establish some more stations with a view to enforce the quarantine regulations more effectively so as to keep the exotic pests and diseases at bay and to facilitate safe global trade in agriculture/horticulture by assisting the producers and exporters by providing a technically competent and reliable Phytosanitary Certification system to meet the requirements of trading partners. In Plant Quarantine, besides ongoing activities, the thrust area pertains to Pest Risk Analysis (PRA) and post entry quarantine surveillance. This has become essential in the light of World Trade Organization (WTO) agreement, which will facilitate more and speedier movement of plants, planting materials globally. The Sanitary and Phytosanitary Agreement of WTO envisages application of phytosanitary measures based on scientific justifications. Therefore, it is imperative to conduct all Plant Quarantine inspections as per the International Standards/guidelines. Accordingly, the National Standards for Phytosanitary Measures for some of the important activities have been developed and adopted. The Standards which are critical for exports have been prioritized. To streamline Plant Quarantine activities, efforts have been made to fully computerize the Plant Quarantine Stations for speedy and transparent functioning. Inspection of agricultural commodities meant for export is done as per the requirements of importing countries under International Plant Protection Convention (IPPC) 1951 of FAO, now as per revised text of IPPC and the model certificate prescribed there under, Phytosanitary Certificates are issued. The export inspections involve sampling and detailed laboratory tests in case of seeds and planting material for propagation whereas visual examination under lens and washing tests, etc. are carried out for consumption plant material.
Japan (Observer)	Japan continues to improve its plant protection systems in conformity with the International Plant Protection Convention, the WTO SPS Agreement and relevant international standards on phytosanitary measures since the 25th session of the APPPC.
Korea, DPR	In 2007, CPQS updated the "Animal and Plant Quarantine Regulations on Border" and compiled new "Minor Regulations of the Border Animal and Plant Quarantine" with the support of SAQM. In 2008, the State Administration for Quality Management (SAQM) sent a delegation to China for technical exchange in the field of phytosanitary measures and regulations. CPQS, MOA, will train more phytosanitary staff and uplift the level of pest risk analysis with the support of SAQM which will provide the advanced inspection equipment with cooperation of AQSIQ, China.

Country	Plant Quarantine (2007 – June 2009)
Lao PDR	Lao PDR has not yet fully implemented all 27 ISPMs adopted by CPM. The status of pest surveillance is essentially an ad hoc event with no long term planning programme in place, very limited resources and limited management capacity. Human resource development is the major issue of concern. The development of documented systems and processes, alignment of current activities with the requirements of international standards, improving the physical resources (equipment and transport) are all issues which the NPPO has to address to develop or improve the plant pest surveillance systems in Lao PDR. Because pest surveillance is a national issue, formalized collaborative systems with the provincial departments of agriculture and forestry (PAFO/DAFO), National Agriculture and Forestry Research Institute (NAFRI), the National Agriculture and Forestry Extension Service (NAFES) and the National University of Laos (Faculty of Agriculture) needs to be developed or strengthened. Protecting the Lao People's Democratic Republic's Plant Health Status and Facilitating Safe Trade in Plants and Plant Products, the NPPO of Lao PDR is dealing its mandates with the Prime Minister Decree on Plant Quarantine promulgated on 1993 and so far to be in compliance with the WTO SPS Agreement the National Assembly has approved new Plant Protection and Quarantine Law on December 2008. This new law determines the mandate of the NPPO to become a highly effective, efficient and professional with the capacities and competencies to protect the nation's plant health status and biodiversity and promote market access for plants and plant products in compliance with international agreements and standards. As the role and responsibilities of the NPPO has been made more explicit under the WTO SPS regime and stipulated in the New Revised Text of the IPPC (1997), there is an increasing demand for government organizations to be more efficient, transparent and accountable for their activities or actions both globally with the trading partners and nationally with their stakeholders. Identified strategic areas for further development towards 2010 and 2020 including increasing rice production and production of other crops including maize, coffee, cassava, soybean, green bean, peanut, sugarcane, sugar palm fruit, sesame, vegetable and tropical fruit require to pay critical attention to all economic sectors reforms; to develop human resources in various areas, and to support modern industry development. At present, potentially more than 9 land border posts are going to play a major role in connecting Lao PDR to the neighbouring countries. Lao PDR is also likely to become a major land route for the movement of agricultural products in the GMS countries. Hence, for instance, in the strategic planning process, careful assessment need to be undertaken on the anticipated or projected increase in activities at the various entry/exit points. There entry/exit points are likely to need improved facilities for phytosanitary inspections, testing, certification, etc. Capacity building and infrastructure investment must be prioritized accordingly to correct need.
Malaysia	As for plant quarantine organization, a agency known as Malaysia Quarantine Inspection Service (MAQIS) has been introduced in the organization. This agency is responsible for the inspection services for all agriculture products includes plants, animal and fish at the entry check points in Peninsular Malaysia since August 2008. In addition to that, there is a policy among ASEAN countries, whereby the international entry points are operating under CIQS system as one stop centre to facilitate trade and tourism. There is an appointment of new Director General in Department of Agriculture (DOA) Peninsular Malaysia (2008), Sabah (2007) due to retirement.

Country	Plant Quarantine (2007 – June 2009)
	Treatment facilities in Malaysia have been improved with the purchase of 3 Vapour Heat Treatment units, each with a 5 ton capacity, to carry out phytosanitary treatment for the purpose of market access to Japan and other potential markets. Establishment of two export centre in Kuala Lumpur International Airport and Serdang Selangor to carry phytosanitary treatment, processing and packaging. Electronic permits for import and export had been introduced for import and export of commodities since 2007. The Repository and Culture Collection Centre had also been established in 2007 to serve as biological centre with the aim of acquisition, authentication, production, preservation, development and distribution of standard reference for pest and beneficial organisms specimens as well as to address phytosanitary concerns. In order to facilitate trade and market access of agriculture produces/products, Malaysia had also carried out the following phytosanitary measures: • Pest risk analysis for papaya, jack fruit, rambutan, pineapple, and star fruit had recently been completed in order to facilitate market access to USA. • Malaysia has established three accreditation schemes namely, Malaysia Fumigation Accreditation Scheme (MAFAS), Malaysia Heat Treatment Accreditation Scheme (MAHTAS), and Malaysia Phytosanitary Certification Assurance Scheme (MPCA) to mitigate pest risk, expedite export with minimal phytosanitary requirements. • ISPM 15 for import will be implemented at the end of this year 2009. • Revised import requirement for mango seed weevil (Sternochetus mangiferae) and guava fruit fly (Bactrocera correcta) • Gazetting papaya die-back as a quarantine pest for the control and eradication of this disease on papaya • In the final stage of developing national pest list for commodities such as oil palm, rubber and forest trees. Since 2007, several significant events have taken place in the area of crop protection. Most notably is the enhancement of officer capability in identification/diagnosis of plant pests and diseases. This is made possible with the establishment of the biotechnology unit and the availability of polymerase chain reaction (PCR) technique which has enabled the foresaid activities to be carried out with a greater degree of accuracy and precision, thus, making appropriate remedial measures to be speedily dispensed to the targeted clients. Working closely with the Chemistry Department, this technique (PCR) is also being employed to detect for the presence of GMO in agricultural produce, specifically edible seeds, imported into the country.
Myanmar	The Plant Protection Division, Myanma Agriculture Service of the Ministry of Agriculture and Irrigation is legally responsible for issuing phytosanitary certificates and import certificates, according to the Plant Pest Quarantine Law. The certificates for import and export are issued at the headquarters of the Plant Protection Division as well as at the eight border entry points and two inspection stations. As regards the consignment transits, the post entry quarantine studies have been carried out with limitations.

Country	Plant Quarantine (2007 – June 2009)
	In relation to the ISPMs, Myanmar, as a developing country, has some technical barriers to implement the ISPMs. Myanmar has a very limited number of experts in the field of entomology, plant pathology, weed science and post-harvest quarantine. That in facts is a major obstacle for the implementation of ISPMs. Capacity building and human resource development are absolutely critical issues in Myanmar.
New Zealand	In December 2006, the Director-General of MAF announced that MAF's two biosecurity businesses Biosecurity New Zealand (BNZ), and MAF Quarantine Service (MQS) would be structurally integrated. The new integrated organization commenced operations on the1st of July 2007, and is now known as MAF Biosecurity New Zealand (MAF BNZ). Around $NZ500 million is spent annually on biosecurity in New Zealand, with activities undertaken by central government, regional councils, industry and private landowners. It is estimated government agencies are responsible for $NZ304 million of this. MAF have approximately 1 000 full-time and part-time staff, based across New Zealand and overseas. They include vets, scientists, quarantine inspectors, directors, managers, administrators, advisers, Detector Dogs and their handlers, analysts, investigators, legal experts, policy makers, communicators, strategist and business services staff. Seventy five new organisms associated with plants and plant products were recorded as new to New Zealand by MAF BNZ in 2007-2008. MAF BNZ has officially responded to the presence of a number of these organisms. New Zealand continues to develop and review import health standards based on pest risk assessment in accordance with the International Standards for Phytosanitary Measures. Since the 25th session of the APPPC, import health standards have been developed for a range of plants and plant products. New Zealand continues to be active in the development, implementation and promotion of international and regional standards.
Pakistan	In 2008, the number of phytosanitary inspections amounted to 70 244. The country's international trade in 2008 increased significantly with the export of rice amounting to 2.7 million metric tons while the export of fresh and dry fruits amounted to almost 600 000 metric tons. The number of conventional phytosanitary certificates which were issued amounted to 70 244. Pakistan Plant Quarantine Act and Rules are being revised. The Central Plant Quarantine Laboratory and three regional labs are being completed. Equipment is being installed and recruitment of personnel is under process. A total of 08 PRA of different crops are completed for 52 insects, 72 pathogens and 8 plants but they are being made in conformity of ISPM-4. The main constraint faced by the country is lack of trained personnel for PRA preparation. Training of personnel is also required in collection of information and preparation of different PRA's according to ISPM and surveillance lab analysis. In relation to the implementation of ISPMs, although many areas have been identified for full implementation, few are not fully implemented, mainly due to lack of resources and personnel.

Country	Plant Quarantine (2007 – June 2009)
Philippines	The Plant Quarantine Service (PQS) came up with a series of activities, programmes and developments during the Calendar Year 2007-2008, heading towards the three-point programme focus of improving the PQS image, technical excellence and efficiency to further strengthen the PQS' capacity to render service and carry out its mandate. In line with the PQS' thrust of improving its image and technical excellence, PQS conducted a series of Developing Personal Excellence Seminar for all PQS personnel to develop and improve working relationship through identification of one's self-concept, clarification of one's values and goals and team building process. A series of extensive technical trainings were also facilitated by the PQS which were participated by Plant Quarantine personnel nationwide. This includes *Training on Identification of Pests and Diseases of Fresh Fruits and Vegetables, Stored Products and Wood & Non-wood Forest Products, Training on Identification of Fruit fly, Identification of Ornamental Plants and its Pests and Diseases, Training on Inspection Protocol on Musa Plantlets* and *the 6th General Plant Quarantine Training*. This is part of the technical upgrading of the PQS to equip its personnel with knowledge and learning experience for proficient performance of their duties. On top of these locally organized and funded training, PQS personnel attended numerous training conducted abroad. Moreover, part of PQS' focus of providing efficient and effective service to its clientele, new PQS buildings at the Port of Iloilo, Batangas and Bacolod were constructed and the diagnostic laboratory at the PQS South Harbor was renovated. PQS also acquired additional vehicles for smooth PQS operations. An 87 square meter treatment area was also constructed at the Central office for rapid export facilitation of cut flowers and ornamental plants. With the Philippine Plant Quarantine's need to conform to the international quarantine standards, comply with the requirements of the importing countries and expand the Philippine market internationally, PQS formulated and modified rules and regulatory policies and lined-up plans and programmes to meet the said needs. Protocols for export were developed and amended which includes *Protocol for the Export of Fresh Asparagus to Japan, Revised Protocol for the Export of Fresh Cavendish Banana and Revised Protocol for the Export of Fresh Okra to Japan*. PQS also formulated *Guidelines for the Implementation of the Australian Fumigation Accreditation Scheme (AFAS)* in the Philippines which signifies the readiness of the PQS to implement high standard fumigation. *Rules and Regulations for the Importation, Exportation and Domestic Movement of Irradiated Plants and Plant Products and the Use of Irradiation as Phytosanitary Treatment* was also issued which provides another regulatory option for the Philippines with regards to phytosanitary treatment of fruits and vegetables for export. Recently, the PQS also set-up a total of 260 fruit fly traps all over the country. Ten sites per region were determined as strategic locations for setting of traps. Data gathered in the survey will show the population and changes of population of fruit fly within the coverage area. The survey is a continuing activity of PQS in which the information gathered will be readily available once needed by the countries importing mangoes and other fruits from the Philippines. Furthermore, additional areas were surveyed and identified by the Philippines as area free from Mango Pulp Weevil (*Sternochetus frigidus*) and Mango Seed Weevil (*Sternochetus mangiferae*). These includes the Province of Davao del Sur, Sarangani and City of General Santos. This provides a great opportunity for Philippine exporters given that there will be additional production areas as source of mangoes for export to other countries.

Country	Plant Quarantine (2007 – June 2009)
	All these changes and developments reflect the Philippine Plant Quarantine's initiative of having an improved system in place, highly trained technical personnel, better buildings and laboratory facilities and good rules and regulatory policies to achieve its three-point programme focus and proficiently perform the PQS mandate.
Republic of Korea	National Plant Quarantine Service (NPQS) of MIFAFF developed a '10-year plan for plant quarantine development' in 2007. There are 3 goals: prevention of exotic pest, protection of agricultural and natural resources and contribution to agricultural competitiveness and national development. Since 2008, NPQS has placed strong emphasis on increasing work efficiency with differentiation of inspection methods according to pest risk and adaptation of IT to plant quarantine management system. NPQS has also facilitated export of agricultural products through active negotiation with trading partners and customer friendly inspection for export.
Sri Lanka	There were some important changes in the organization during the period under review, Dr D.H. Muthukudaarachchi was appointed as the Director of the Seed Certification and Plant Protection Centre and thus became the official contact point person for IPPC. The most senior officers working in plant quarantine stations were transferred out of their work places giving way to new officers. There was a policy decision to replace two most senior officers in every three years by other competent officials. The officer holding the Deputy Director post of the National Plant Quarantine Service (NPQS) retired from public service in 2007 and the following year, I was appointed as the Deputy Director. Necessary discussions and the consultations were held to revise the regulations made under the Plant Protection Act. The draft was submitted to the World Trade Organization to revise comments from stakeholders. The required changes were made and the draft of regulations is under review for consistency with the Act. Legal implications on certain decision taken under the provisions of the Plant Protection Act resulted in discovery of some loopholes and the authorities appointed a committee to revise the act. The committee had several discussions on changes to meet the present day requirements and to make the act and the regulations consistent with IPPC recommendations. Quarantine pest intercepted during the import of planting material included *Phoma foveata, Clavieacter michiganensis spp., scpedonicus*, and *Geotrichum candidum*, on sweet potato *Ralastonia solanacearum* on ginger. In 2008, 757 questionable consignments were intercepted and destroyed due to unacceptable phytosanitary states. Upgrading of pest reference collection at the NPQS was done adding 80 specimens of insect pests found in the country. Pest Risk Analysis (PRA) on powdery scab on potato was completed and PRAs on import of dragon fruit and mangosteen from Thailand and in vitro cultures of banana from the Philippines were started. After careful study and bilateral negotiations fresh grapes from Chile were allowed to enter into the country.
Thailand	The Plant Quarantine Act B.E. 2507 (1952) amended by the Plant Quarantine Act (No. 2) B.E. 2542 (1999) and Plant Quarantine Act (No. 3) B.E. 2551 (2008) have been enforced by the Department of Agriculture (DOA), the Ministry of Agriculture and Cooperatives (MOAC).

Country	Plant Quarantine (2007 – June 2009)
	The Plant Quarantine Act (No. 3) B.E. 2551(2008) which was published in the Royal Gazette in May 2008 contains 26 Sections which provide specifications and criteria for notification of plants, plant pests and carriers as prohibited articles, adding power to control the exportation of specific controlled plants, as well as enhancing power of plant quarantine officers toward an effective prevention of exotic plant pests and diseases. In 2007-2008, the Department of Agriculture (DOA) gave five of Notifications of the Ministry of Agriculture and Cooperatives and eight of its own Notifications to strengthen the quarantine practices for both export plants and plant products and import prohibited articles.
Viet Nam	**Pest record/identification** During the period from 2007-2008, 104 cases of quarantine pest interception were reported, including: • Bacterial wilt of maize (Pantoea stewartii (Smith) Mergaert et al) intercepted on maize imported into Viet Nam from Thailand. • Potato tuber moth (Phthorimaea operculella (Zeller 1873)) intercepted on potato imported from China. • Khapra beetle (Trogoderma granarium Everts) intercepted on coconut oil-cake of Indonesia, wheat bran of Srilanca. **New regulations/decisions:** • Decree No. 02/2007/ND-CP of the government on plant quarantine dated 05 January 2007. • Decision No. 34/2007/QD-BNN of 23 April 2007 publishing the list of regulated articles subject to pest risk analysis before importing into Viet Nam. • Decision No. 48/2007/QD-BNN of 29 May 2007, Regulation on Procedure for the issuance of the phytosanitary import permit for articles subject to pest risk analysis before importing into Viet Nam. • Decision No. 89/QD-BNN of 29 October 2007 of Minister of Agriculture and Rural Development promulgating regulations on state management on fumigation practice for regulated articles. • New Law on Plant Protection is being drafted and will be submitted to the National Assembly by the end of 2010 for endorsement. **Projects/programme cooperation:** • Improvement of Plant Quarantine treatment against Fruit Fly on fresh fruits (JICA), finished 2008. • Dragon fruit has been approved and entered into U.S. market since October 2008. • 2 irradiation treatment facilities established in ABC Company and Son Son Company. • 1 vapor heat treatment facility is being built. • Viet Nam Methyl bromide phase out plan: ongoing with World Bank funding. • NZAID phytosanitary capacity building in the Mekong region: going to terminate, (NPD development still ongoing).

Country	Plant Quarantine (2007 – June 2009)
	Achievements: • BPH and Grassy stunt viruses were successfully control in past two years by using IPM community approach for BPH control/management with assistance from FAO/TCP Project. • Coconut beetle was also under controlled by introduction of new parasites from Samoa under FAO/TCP Project. • Many quarantine pests found in two years (104 times). • Successful technical market access to U.S., Japan. • Established equipment of vapor heat treatment and irradiation for fresh fruits exported. • National capacity building in phytosanitary was put in high priority in agriculture sector.

Outbreak management

Country	Outbreak Management (surveillance, pest outbreaks and invasive species) (2007 – June 2009)
Bangladesh	Regular surveillance activities are conducted in every district of the country to monitor the introduction, pest outbreaks, establishment and spread of invasive species**.**

Country	Outbreak Management (surveillance, pest outbreaks and invasive species) Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Cambodia	**Outbreaks** Outbreaks of BPH affected more than 20 000 ha of rice. This problem was dealt with through the regional vegetable IPM Programme and "community level BPH and associated virus management". A key constraint was the high risk from new invasive species owing to the absence of plant quarantine check points at all entry points. **Invasive Pests** The Sub-decree No. 15 on the phytosanitary inspection gave **PQA** the responsibility to conduct pest surveillance and eradicate new exotic pests. The golden apple snail and coconut beetles are considered invasive species to Cambodia. A lot of effort had been made to control and eradicate these pests. Staff of the plant protection office were trained on pest surveillance and biological control to enable the production of bio-agents such as *Asecodes* to control coconut beetle and *Cotesia* to control DBM.

Country	Outbreak Management (surveillance, pest outbreaks and invasive species) (2007 – June 2009)
China	During the period from 2007-2008, outbreaks of some pests on major crops occurred in responses to global warming, significant changes in cropping systems, climate conditions, and crop varieties. Among them, the locusts, lawn moth (*Crambus bolterellus*), wheat stripe rust, rice borers, rice brown plant hopper (*Nilaparavata lugans*), rice leaf folders (*Chaphalocrocis medinalis*), and cabbage diamond back moths (*Plutella xylostella*) were the most severe and destructive ones. The locusts damaged 1.54 million hectares in 2007 and 1.56 million hectares in 2008 respectively. Lawn moth damaged about 6.83 hectares of farm lands and pastures in 2008. The outbreaks of rice stem borers have been occurring with more serious damage over the past ten years. The outbreaks damaged 19.3 million hectares in 2007 and 19.42 million hectares in 2008 respectively. In the case of BPH, the infested area grew to 33.6 million hectares in 2007. The total area infested by major vegetable pests amounted to 29 million hectares in 2007 and 37 million hectares in 2008 respectively. During the period from 2007-2008, pest surveillance and monitoring were strengthened by Chinese government in high risk areas such as coastal areas, border regions, airports, seaports, and distribution centres of imported agricultural products. The nationalwide surveillance of the fruit fly programme was carried out continuously. National or industry standards related to the plant quarantine pests surveillance had been formulated. The forecasting methods for main crop pests had also been sorted and unified. In addition, the TV programmes on the pest forecasting and preventing technology were broadcasted by 31 provinces, covering more than 1 100 counties. The management of the pest data collection, transmission and utilization had improved, thanks to the establishment of the China Crop Pests Management Information System. Meanwhile, large-scale training events for farmers on pest prevention were organized. As a result, serious harmful pests such as locust, migratory rice pests, rice borer, rice blast, wheat stripe rust, and meadow moth, etc. were effectively suppressed.
India	Constant vigil is kept on locust activity in the Scheduled Desert Area of 200 000 sq. km by the Locust Warning Organization (LWO). Keeping in view the locust invasion of 1993, 1997 and International Locust Situation, Locust Surveillance in the strategic areas has been intensified.
Japan (Observer)	Japan has policies to control serious field pest outbreaks, to control migratory or periodically occurring pets, and to eradicate serious newly invaded exotic pests. The total number of designated staff for surveillance of field pets of national importance and migratory and periodically occurring pests amounts to 4 537, 3 637 of whom are prefecture staff and the remaining 900 are government staff. In 2007, Erwinia sp. was discovered in Yamagata Prefecture. The pest affected an area of about 0.5 ha. The control method was to cut down and incinerate the diseased trees.
Korea, DPR	In 2008, the MOA re-organized the County Plant Protection Office in every county under the CPPS. Each office would survey the outbreak of pests in its county, produce and provide biopesticides such as Trichogramma and Beauveria bassiana to the co-operative farms, educate and train farmers on pest management and report its activities and status of the situation to the CPPS through the Province Plant Protection Station during cropping seasons.

Country	Outbreak Management (surveillance, pest outbreaks and invasive species) (2007 – June 2009)
Lao PDR	Lao PDR has not established a national programme for pest outbreaks and invasive species management. Moreover, beside the forecast signal of possibly pest outbreak, the warning system is still weak, to the extent of being almost non-existent. Consequently, farmers are faced with invasive species that become established and create impacts on their cash crop such as coffee and coconut. The Department of Agriculture (DOA) has recently established network of plant protection with their role to monitor and develop database on pest status of economic crop which is further reported to NPPO to indentify proper control measure. Those mandates of plant protection unit have been clearly defined in the Agreement of DOA on function and role of the Provincial Agricultural Sector. Furthermore, with the support of NZAID Phytosanitary Capacity Building in the Mekong Region Project, surveillance work has started with the aim to build specimen-based pest lists on key crops (mango and maize) with potential for export. During the programme, a number of key technical staff (entomologist and pathologist) were trained on pest diagnostic in New Zealand and Viet Nam. In addition, on-the-job training and technical assistance was also given on the use of the internet and digital technology for identifying plant pests, the establishment of formal and informal networks for identifying plant pests in Lao PDR and the improvement of the sample collection system to ensure the capability of the trained staff in carrying out their tasks.
Malaysia	A national committee on Invasive Alien Species (IAS) was formed that was tasked with coordinating and control of IAS. A recently concluded seminar was aimed at creating IAS awareness among the general public. A pest of concern to the country especially in rice fields is golden apple snail (*Pomacea canaliculata*). Concomitantly, an improved version of rice pest surveillance techniques has been developed which, primarily, focuses on increasing the frequency of survey and a more realistic area of coverage. It is envisaged that with its implementation, all rice fields in the country will be surveyed regularly for early detection of pest and disease occurrences so that immediate control measures can be taken to prevent its spread. Efforts are stepped up to control and eradicate the exotic aquatic weeds, namely, *Cyperus papyrus* and *C. japonica* and terrestrial weed, *Pennisetum setaceum*, found in the country. The aquatic weeds, in particular, pose a serious threat where they had invaded the drainage and irrigation canal and impede the smooth flow of water and making it not readily available to the growing crop plants. *Brontispa* sp. is a serious insect pest attacking the leaves of coconut palms. A biological agent, *Asedodes hispanarium* which is a hymenopteran parasite, will be introduced into the country in an effort to combat the menacing *Brontispa* pest.
Myanmar	The survey of pests and diseases occurred in Myanmar has been carried out and data entries are in progress. However, due to lack of expert verification of the collected specimens, it is not feasible yet to publish the updated list of pests in Myanmar. There were rodent outbreaks in the northern part of Myanmar in 2008. A rodent control team was dispatched to study the situation and discuss the results of the study. As the outbreaks occurred in the forestry area (bamboo), they were of no agricultural importance. There was no insect pest outbreak in agricultural areas. There was no invasive species management in Myanmar.

Country	Outbreak Management (surveillance, pest outbreaks and invasive species) (2007 – June 2009)
Republic of Korea	Rural Development Administration (RDA) monitored and observed the pest outbreaks and invasive species. Total 690 observation stations located in 137 cities and counties have been operational. Two species of insect, a katydid *Paratlanticus ussuriensis* and a cicada *Lycorma delicatula,* broke out both in 2007 and 2008. And an invasive disease, TYLCV, out-broke in a limited area and it is under official control. Provincial governments, RDA and KFS collaborated to manage these pests and disease employing all sorts of methods currently in use. They also tried to develop an effective strategy. In 2007 a rice pest, smaller brown planthopper *Laodelphax striatellus*, occurred in extraordinarily high population causing severe damage in areas in vicinity of western coast because of the rice stripe virus disease it transmits. In 2008 the disease incidence decreased greatly in comparison to that of 2007, even though it was still severe showing 205 percent occurrence compared to average year.
Sri Lanka	During the period under review, a new exotic invasive species was reported from the western region of Sri Lanka. It was first observed in August 2008 by field extension officers of Gampaha District, and species was identified as Papaya Mealy Bug – Paracoccus marginatus and confirmed by the senior Biosystematics of the Plant Pest Diagnostic Center, USA. This species was observed in the host plant more than sixty and it caused significant losses to the papaya plants and ornamental plants in home garden. A detailed survey of the area was carried out with the assistance of Extension officers of the relevant district. A package of control practices were recommended and Biological control agent Acerophagus papayae was imported from Puerto Rico APHIS and released into several infested locations. At present damage is under control.
Thailand	A new pest outbreak was detected in some cassava plantations in early 2008. The unknown species of mealybug caused more severe damage to cassava than striped mealybug, Ferrisia vergata. The new pest was collected for taxonomic identification. The Department of Agriculture (DOA) conducts the detection survey of mango seed weevil, Sternochetus mangiferae in order to provide information supporting that Thailand is free from this weevil. This enables the country to expand the export market for Thai mango.
Viet Nam	During 2007-2009, brown plant hoppers and associated stunt virus diseases have been successfully controlled with improved cropping patterns. Viet Nam has also strengthened technical cooperation with neighbouring countries in surveillance and control of rice migratory pests for effective management of these pests at regional level. Sugarcane grassy shoot disease has recently emerged and become a serious problem in sugarcane plantations. In 2008 alone, more than 5 000 ha of sugarcane were infested with this disease. Viet Nam is seeking international support to address this problem.

Pest management

Country	Pest Management (2007 – June 2009)
Australia	**PaDIL** PaDIL was developed by Museum Victoria with support provided by DAFF and Plant Health Australia. PaDIL contains high quality images showing primarily exotic targeted organisms of plant health concern to Australia. It provides information on pests and diseases that assist in helping to protect against invasive threats to Australia's plant health by allowing rapid recognition of emergency plant pests to ensure appropriate response strategies are implemented. Guarding against pest and disease invasion is a key component of Australia's National Plant Health Strategy.

Country	Pest Management Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Australia	**Biosecurity** Australian industries continue to develop industry specific biosecurity plans to significantly reduce the risk and spread of pest incursions. A Cooperative Research Centre of National Plant Biosecurity has been established to coordinate and undertake national plant biosecurity research. The Australian Biosecurity System for Primary Production and the Environment (AusBIOSEC) has been established as a whole-of-government project to improve Australia's biosecurity status. Its aim is to improve outcomes from Australia's biosecurity system for primary production and the environment, through greater national coordination on biosecurity policy, regulation, funding and delivery across jurisdictions and sectors. The scope of AusBIOSEC is along the entire biosecurity continuum from pre-border, border to post-border management of biosecurity risk.

Country	Pest Management (2007 – June 2009)
Bangladesh	The Plant Protection Wing (NPPO) plays a vital role in implementing the National Pest Management Policy through the activities of Integrated Pest Management (IPM) and Integrated Crop Management (ICM) projects. The IPM and ICM projects strengthen IPM activities through establishing and introducing Farmers Field School (FFS), IPM Clubs (Farmers Association), Organic Farming Pilot Programme, Biological Pest Control, Farmers Training and organization of workshops/ seminars throughout the country. They help farmers become aware of healthy crop production. IPM club also helps promote IPM activities among the neighbouring farmers. Pesticide-free crop production has now become popular among the farmers.

Country	Pest Management Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Cambodia	**IPM** The IPM Programme was established in 1993 and now operates in 15 major agriculture production provinces, including the Phnom Penh municipality, with the aim of promoting food security and safety. The main tasks were to reduce the dependence of farmers on agricultural chemicals, to develop the capacity of agriculture trainers and extension workers to educate farmers on agriculture technologies by developing skills in environmentally friendly crop management. The Programme had trained more than 600 district trainers, 2 000 farmer facilitators and 100 000 farmers. IPM training had led to an increase in yield, sustainable and cost-effective production, reduction of ecology disruption and environmental contamination, reduction of public health and toxic residues in food, and improvement of the livelihood of farmers, biodiversity and marketability of produce.

Country	Pest Management (2007 – June 2009)
China	Regional actions were coordinated by the National Agro-technical Extension and Service Center (NATESC) of the Ministry of Agriculture for controlling migratory pests-locusts, lawn moth, rice brown hopper, rice leaf roller and regionally epidemical diseases-wheat stripe rust, rice blast and rice sheath blight, etc. The annual control acreages of major crop pests reached 543.5 million hectares in 2007 and 532.7 million hectares in 2008 respectively. National IPM Programmes coordinated by NATESC have been supporting the implementation of key IPM technologies in major crops and major pests. Biological and ecological control measures such as using microorganisms and reclaiming locust habitats were extensively promoted in recent years. The IPM technologies on rice were well developed and widely applied in China. Seed treatments with fungicides and insecticide were commonly used by farmers to prevent the infestations of rice seedling diseases and insects. Biodiversity strategies were implemented in about 6.67 million hectares annually for rice blast management in 2007 and 2008. Light trips were extended to 0.7 million hectares of rice fields to kill moths of rice borers and leaf folders. During the period from 2007-2008, wheat IPM strategies focused on prevention and ecological approaches. In the regions where the pathogens of wheat stripe rust can over-winter and over-summer, the percentage of seed coating or treatment with fungicides was increased to over 80 percent in 2007. In corn, biological technologies such as the use of *Beauveria bassiana* for killing over-winter larvae of corn borer, artificial release of *Trichogramma* spp. in fields have been extended to above 2.5 million hectares since 2007. In cotton, the transgenic Bt cotton has been expanded to over 2.4 million hectares in China.

Country	Pest Management Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
China	**Pest Management** The quarantine pest list was updated. Two alien invasive pests, i.e., the red imported fire ant and the cucumber green mottle mosaic virus, were discovered and emergency quarantine eradication programmes were undertaken. Integrated measures were strengthened for the plant quarantine pests. Crop pests of national importance, particularly migratory locusts, rice borers, rice plant hoppers and rodent were successfully managed and controlled. Using an ecology approach such as improving biodiversity in its over-summer places to reduce inoculum, the national programme on the management of wheat stripe rust was implemented. Demonstrations of "green protection technologies" such as light-trapping, pheromone mating-disruption and biological control were carried out on a large scale, and these activities attained impressive economic, environmental and social benefits. **International Cooperation** IPM experts from China initiated exchange programmes with Viet Nam and Thailand, to explore the possibilities of cooperation on the management of rice plant hoppers.

Country	Pest Management (2007 – June 2009)
India	Plant Protection plays a vital role in achieving targets of crops production. The major thrust areas of plant protection are promotion of Integrated Pest Management, ensuring availability of safe and quality pesticides for sustaining crop production from the ravages of pests and diseases, streamlining the quarantine measures for accelerating the introduction of new high yielding crop varieties, besides eliminating the chances of entry of exotic pests and for human resource development including empowerment of women in plant protection skills. Keeping in view the ill effects associated with the use of pesticides, Integrated Pest Management (IPM) approach has been adopted as a cardinal principle and main plank of plant protection in the overall crop production programmes in the country. Further IPM is also an important component in the National Agriculture Policy adopted by the Government of India. The objectives of IPM approach are to increase crop production with minimum input costs, minimize environmental pollution and maintain ecological equilibrium. 31 Central Integrated Pest Management Centres have been set up for the purpose.
Japan (Observer)	The training course on disinfestation technique using thermal treatment on fruit fly has been organized since 1988 with trainees being invited from countries which are affected by fruit fly. As a multilateral contribution, Japan financially supported through a trust fund a field project on phytosanitary capacity-building, targeting 10 countries. The project was implemented by the FAO.
Korea, DPR	The "Juche-based Farming Method" established in the Democratic People's Republic of Korea includes all parts of the farming method as well as the management of pests in crops. The method is updated every year by the Ministry of Agriculture (MOA) for dissemination to cooperative farms across the country.

Country	Pest Management (2007 – June 2009)
	Pest management by protecting, producing and applying natural enemies such as Trichogramma and biopesticides, while using few chemical pesticides in the fields, is included recently in the method to increase yields of crops. The Central Plant Protection Station (CPPS), the Ministry of Agriculture, is responsible for carrying out surveillance and managing significant pests in crops in the fields, while the Ministry of Land and Environment Protection is responsible for pest management in the forest. From 2007-2008, Swiss Development Cooperation (SDC) offered assistance such as training on vegetable IPM and provision of 4 sets of Trichogramma rearing facilities to 4 respective counties and Bt facility to AAS. During the period from 2009 to 2010, DPRK plans to increase the investment in pest management, such as pest control in the fields, production of biopesticides as well as phytosanitary measures and regulations. From 2009-2011 the European Union plans to support CPPS, MOA, the Plant Protection Institute and AAS through a project entitled the "Integrated Pest Management Application to Maize Production for Food Security in DPRK" which will provide 24 counties with Trichogramma Rearing Facilities and train personnel for the quality control of production.
Lao PDR	With regard to the policy development and legislation, the Government of Lao PDR has defined its new agriculture and forestry strategy for the period 2006-2010 which contains four key objectives, such as food security, commodity production, eradication of shifting cultivation, and sustainable forest management. The policy of commodity production involves increasing the supply of goods for both domestic and foreign market. The Government is launching the promotion of "Clean Agriculture" aiming to produce organic agricultural products. IPM Programme as well as GAP are included in 4 production systems of Clean Agriculture policy i.e. (i) conventional traditional agriculture, (ii) conventional chemical agriculture (GAP and IPM), (iii) pesticide free products (PFP), and (iv) organic agriculture (OA). The main achievements have been the adoption by the Ministry of Agriculture and Forestry of Lao PDR of the Standards for organic farming. They were adapted to the local context from IFOAM (International Forum for Organic Agriculture Movement) Standards. Therefore GAP is currently being in the process of consideration to support by STDF.
Malaysia	Integrated Pest Management (IPM) has long been implemented in rice, vegetable and fruit crops in an effort to alleviate the problems caused by excessive use of pesticides. New programmes and activities are being planned to further strengthen and expand IPM implementation in order that the benefits are enjoyed by a large segment of the farming community.
Myanmar	Myanmar has a national IPM policy. IPM is one of the main pillars to the development of the Plant Protection Division. The Plant Protection Division was established by a steering committee in 1999. The Division advocates the need for Integrated Pest Management to be adopted as a national

Country	Pest Management (2007 – June 2009)
	crop protection policy. It also makes decision on crop information exchange between Myanmar and other ASEAN countries and international association. Currently, the IPM practices are being adopted to mitigate pest damage. The other aspect of the botanical insecticide such as neem pesticide has been tested against vegetable pests in the field condition. The Farmer's Field School has been established since 2000. However, during the beginning stage, emphasis was placed only on the rice farmers.
New Zealand	Integrated pest management continues to be an integral component of orchard management programmes in New Zealand.
Republic of Korea	Rural Development Administration (RDA) conducted the demonstration projects for rice and citrus to distribute IPM practice. Demonstration farms operated in 2008 consisted of 284 sites for rice and 16 sites for citrus and contributed to reduce the chemical spray times by 4 from 12 times to 8 times in average for citrus, and for rice the chemical application reduced to 2 times from 3 times as well. MIFAFF started a supporting programme in 2005 for the growers who used natural enemies to control insect pests occurring in 9 greenhouse crops including strawberry. The Government gives a subsidy (about 50 percent of the cost for purchasing natural enemies) to the growers who satisfy the requirement set by the programme with a goal that 50 percent of horticultural crop area use biological control methods by 2013. RDA carried out research to determine economic threshold levels for about 13 major pests, 11 major diseases and 7 major weeds in cooperation with 8 provincial research institutes in 2008.
Sri Lanka	During the period under review the most significant change in the Pest Management in Sri Lanka, is the appointment of National committee to revise the Plant Protection Act No. 35 of 1999, to make the necessary changes to meet the present day requirements and submission of new set of regulations under the Act. The country has embarked on several Pest Management Programmes for control of specific pests. Shortage in resource like funds, trained staff, machinery, and equipments always hindered the progress of the programme. Despite the problems encountered the centre has achieved most of the targets. The Integrated Pest Management (IPM) strategy that was practiced in rice cultivation is now extended to vegetable and other plantation crops by using Farmer Field School (FFS) training approach. After the successful implementation of IPM Programme, a new programme was initiated in the country incorporating mosquito vector management into the IPM Programme, called Integrated Pest and Vector Management (IPVM) Programme, funded by UNEP. Due to multidisciplinary nature of the programme it required the involvement of several stakeholder Departments, like the Department of Agriculture, Department of Health and Mahaweli Authority of Sri Lanka (MASL). This itself was a unique experience, integrating Agriculture with Health for the purpose of providing a better service and upgrading the livelihoods of rural communities.

Country	Pest Management (2007 – June 2009)
	In order to sustain the programme IPVM clubs were formed in village where FFS training were conducted so that farmers themselves could continue the activities they learnt at the FFS while disseminating that knowledge to other farmers. Another development in the past two years is the preparation of regulations under Plant Protection Act No. 35, 1999, to control of Coconut Leaf Rot Disease and Weligama Coconut Wilt Disease in southern region of Sri Lanka. Water hyacinth and Salvinea molesta, have been identified as principal invasive weeds that require adoption of biological control methods. Rearing facilities of biocontrol agent *Cytobagous salviniae* has been improved and four regional rearing units were also established during the last two years for biological control programme of salvinea. In addition, biocontrol agent of water hyacinth, *Neochatina bruchi* was imported from Thailand and introduced into water bodies after completing the necessary host specific test.
Thailand	During 2007-2008, MOAC did not change the national policy on IPM Programme. The country's key economic crops included rice, okra, asparagus, fruit crops, vegetables, field crops, and orchids. However, the budget constraint had an impact on IPM activities. The Department of Agricultural Extension (DOAE) had to decrease the number of training programmes and farmer field schools (FFS). As regards the main IPM Programme, DOAE still encouraged the farmers' education and knowledge development, with focus on the change of attitude of farmers using highly toxic pesticides. The education helped them understand the principles and the framework of Good Agricultural Practices (GAP). The main component of the IPM implementation is to encourage farmers to use biological control. A number of bio-agents are introduced to replace or alternate with chemical pesticides. Since the end of 2007, DOAE has set the project entitled "Using Integrated Pest Management for Decreasing Risk of Plant Pest Infestation" as the main activity of the Community Plant Pest Management Centre. The objects of the project are to develop farmers into "Pests Management Professionals in IPM", to reduce damage to farmers crops, to encourage less investment, and to enhance community participation in the project. Technology transfer in the project mainly relies on the adaptation process of FFS. To ensure the product safety for consumers from pesticide residues, products will be tested for chemical residues before being harvested. Area-wide IPM of fruit fly control programme using the Sterile Insect Technique (SIT) has been carried out over a large area, and sometimes involves a major facility and a lot of equipment. The required financial resource may also be large. Even though a programme might be economical on a benefit/cost basis, it is not always affordable. Obtaining operating funds can be the most important issue facing a programme. Adequate financial resource affects the programme strategy and operations as well as the duration and reliability of programme support. In the case of Thailand's programme, financial

Country	Pest Management (2007 – June 2009)
	support from the government is essential for the stability and success of the programme. Sometimes the government support is unreliable or not delivered in a timely manner. For a biological programme, this can easily cause delays, uncertainty, unnecessary repetitions of work, and even a programme failure. The basic requirements for scaling up the pilot project to a national level include not only a complex procedure of incorporating new and better technologies but also the support of the government officials who have to be convinced. This often poses a huge challenge.
Viet Nam	The National IPM Programme has IPM trainers in all 63 provinces of Viet Nam, IPM FFSs have been conducted in more than 95 percent of the communes growing rice nationwide involving over 10 percent of farm households. IPM has been expanded to vegetables, cotton, maize, sweet potato, tea and citrus. FFS have been followed-up with various forms of community activities including establishment of IPM clubs and farmer groups, application of System of Rice Intensification at field level. The National IPM Programme actively supports the National Safe Vegetable Programme by developing IPM aligned to principles of GAP, thereby contributing to improving food safety.

Pesticide management

Country	Pesticide Management (2007 – June 2009)
Australia	**Pesticide regulation** The National Registration Scheme for Agricultural and Veterinary Chemicals (National Registration Scheme) was established under Commonwealth and state legislation to provide an Australian scheme to regulate pesticides and veterinary medicines. The Australian Pesticides and Veterinary Medicines Authority is the prescribed agency within the Agriculture, Fisheries and Forestry portfolio that evaluates, registers and regulates agricultural and veterinary chemicals. DAFF manages the legislation under which the National Registration Scheme operates. Australia is a party to the Rotterdam and Stockholm Conventions.

Country	Pesticide Management Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Australia	**Stockholm Convention** Australia submitted its national implementation plan to the Stockholm Convention Secretariat in August 2006 setting out how Australia will implement its obligations under the Convention. Australia has eliminated the use of the POP chemical mirex and is in the process of withdrawing its exemption. Australia is in the process of adopting the **best available techniques (BAT)** and provisional guidance on **best environmental practices (BEP)**.

Country	Pesticide Management (2007 – June 2009)
Bangladesh	In 2007 the Department of Agricultural Extension (DAE) revised "The Pesticide Ordinance, 1971" and its name was changed to "The Pesticide Ordinance (Amended), 2007". The necessary modifications were also made in The Pesticide Rules, 1995 with the incorporation of the provisions of Biopesticide registration. They have been submitted to the Ministry of Agriculture for necessary action. As part of the effort to disposal off the obsolete pesticides, a survey was conducted in different areas of the country. Moreover, continuous farmers training programmes were also conducted to increase awareness about harmful effects of injudicious use of pesticides.

Country	Pesticide Management Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
Cambodia	**Pesticide Management and Rotterdam Convention** Pesticide regulations issued included the Sub-decree No. 69 on standards and management of agricultural materials and many other relevant documents. A pesticide registration scheme was established and the Department of Agricultural Legislation is responsible for pesticide registration, licensing of importers and retailers of pesticides, and enforcement of regulations, with technical advice from the Department of Agronomy and Agricultural Land Improvement, serving as focal point for the Rotterdam Convention. Current pesticide issues were broadly recognized, especially their implications for production, health, the environment and trade. However, many other constraints remained unresolved, such as insufficient enforcement of regulations, uncontrolled importation, and broad availability of undesirable pesticides, misuse and over-use, limited data on health and environmental effects and high pesticide residues in food.

Country	Pesticide Management (2007 – June 2009)
China	During the period from 2007-2008, in order to protect people's health and environment's safety, China has strengthened pesticide management. China has repealed the registration and production certificates of five highly toxic organophosphorus pesticides including Methamidophos, Parathion-methyl, Parathion, Monocrotophos, Phosphamidon. The country also strictly prohibited the sale and application of this type of pesticides, encouraged and promoted the research and development of low-risk substitutes for highly toxic pesticides, implemented highly toxic pesticides replacement programme, enhanced the public awareness of safe pesticides application and choosing medium and low toxic pesticides. Importantly, it strengthened the quality examination of pesticides and surveillance of pesticides residues in food and environment. China has revised and improved the approval system for pesticides registration. A number of rules and regulations have been formulated. These include the Measures for the Administration of Pesticide Labels and Instructions (Order of MOA, No. 8), the Decision on Amending the Measures for Implementing the Regulation on Pesticide Administration (Order of MOA, No. 9), the Revised Data Requirement for Registration of Pesticide (Order of MOA, No. 10), the Revision and Approval for Pesticide Name (MOA Proclamation No. 944), the Nomenclature for Pesticides (MOA Proclamation No. 945), and the Content of Active Ingredient for Pesticide (MOA Proclamation No. 946).

Country	Pesticide Management (2007 – June 2009)
	During the period from 2007-2008, China implemented the "Sino-German Cooperative Project on Pesticide Wastes Management" in collaboration with the German government. The implementation of this project had a positive influence on the improvement of the pesticide management in China. Emphasis was placed on appropriate pesticide waste disposal technologies and methods that conformed to the situation of China. At the same time, China also collaborated with the United States of Environment Protection Agency on the Continued Good Laboratory Practice Standards Compliance Monitoring Project.

Country	Pesticide Management Up to 2007 (Country reports presented at APPPC 25th session in August 2007)
China	Five types of highly toxic organphosphate pesticides have been banned since 1 January, 2007. National programmes have been developed and were being implemented in major crops. In addition, local government authorities have put in place their own regulations for the replacement of highly toxic pesticides. In the mean time, great effort had been made to develop biopesticides for the replacement of highly toxic chemical pesticides. With the support of FAO in 2006 and 2007, IPM farmer education programmes and field demonstrations of IPM technologies made great contributions to the reduction of pesticide applications. Significant economic, social and ecological benefits also resulted from those IPM Programmes. China successfully organized the 39th International Conference of Codex Committee on Pesticide Residues (CCPR).

Country	Pesticide Management (2007 – June 2009)
India	Quality control of pesticides is accorded highest priority to ensure that the agro-chemicals used for pest management have the requisite efficacy. The Central Insecticide Laboratory, functions as the National Referral Laboratory Regional Pesticides Testing Laboratories, at Chandigarh and Kanpur supplement the resources of state/UT Governments in the analysis of pesticides samples for monitoring their quality to ensure availability of quality pesticides to the farmers.
Japan (Observer)	Agricultural chemical products shall be registered by the Minister of Agriculture, Forestry and Fisheries according to the Agricultural Chemical Regulation Law, if they are manufactured, imported and distributed in Japan. The risk assessment and its management of the products have been conducted in terms of product's quality, human health and environmental effects by the Food Agricultural Material Inspection Center (FAMIC), the Food Safety Commission (FSC), the Ministry of Health, the Labour and Welfare (MHLW), the Ministry of the Environment (MOE) and MAFF.
Korea, DPR	It is noted that DPRK will control Corn Borer, using the biopesticides such as Trichogramma, with less use of chemical pesticides throughout the country.

Country	Pesticide Management (2007 – June 2009)
Lao PDR	Pesticide management has been nationally recognized since the declaration of Pesticide Regulation No. 0886/MAF, dated on 10/030/2000, aiming at management and prohibition of non-quality pesticides and harmfulness to human, plants, animals and environment in Lao PDR. In addition, the regulation also aims at giving definition, principles, measures and approaches for management and inspection of pesticides used in Lao PDR. So far, 26 kinds of pesticides in Lao PDR are prohibited to use in the country. Presently, 112 brand names of the pesticides (consisting of 75 products from Viet Nam and 25 from Thailand) have been registered with DOA. To comply with the WTO SPS Agreement, new Decree on pesticide management is being in the process of public consultation with the national authorities concerned. The first draft preparation was assisted by FAO Experts during 2008. Lao PDR has not yet signed the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and their Disposal. The Ministry of Agriculture and Forestry has submitted a recommendation for ratification of the Rotterdam Convention to the Prime Minister's Office. In April 2006, this recommendation was under consideration by the national focal point, which was under the Prime Minister's Office.
Malaysia	Malaysia has amended the Pesticides Licensing Regulation of the Pesticides Act in 2008, to increase the license fee for the sale of more toxic class of pesticides. Similarly, the fee for the registration of pesticides has also been increased for more toxic class of pesticides. Malaysia is in the process of proposing a new regulation for the control of the manufacture of pesticides under the Pesticides Act. The proposed regulation will ensure a wider scope of authority of the enforcement section, better control of the manufacture of pesticides as well as control of the manufacturer. In an effort to facilitate export by meeting compliance of requirements of importing countries, Malaysia has established an export laboratory under the Central Laboratory Services Section of the Pesticides Control Division, Department of Agriculture. Under the implementation of international conventions, Malaysia has also initiated a review on the registration of tributyltin compound, in line with the inclusion of tributyltin compound in Annex III of the Rotterdam Convention in 2008. To ensure compliance to the Phase-out Schedule for methyl bromide under the Montreal Convention, Malaysia has informed the industry of the requirements of the phase-out schedule and set limits on the quantity of methyl bromide to be used by the industry until the end of the phase-out programme. The use of methyl bromide for quarantine purposes and pre shipment is exempted from the phase-out schedule.
Myanmar	The work related to the country's pesticide management has been progressing steadily. It covers pesticide registration schemes, licensing programme, control of Persistent Organic Pollutants, disposal of toxic wastes, as well as management of transboundary movement of illegal products.
New Zealand	New Zealand operates an approvals framework for pesticides under the HSNO Act, developed a substance reassessment programme, and has implemented a compliance structure to support the approvals framework.

Country	Pesticide Management (2007 – June 2009)
Republic of Korea	Agro-chemical production increased 11.3 percent from 22 847 ton to 25 428 ton in 2007. Among the 1 287 chemicals enlisted in Republic of Korea as pesticide, above 98 percent is low or moderate toxic. Hazardous chemicals including high toxic pesticides are specifically regulated through many measures including a restriction standard on handling those materials. In case of agro-chemicals which are toxic to live organisms in nature, pictorial warning-mark and cautionary directions should be clearly printed on the label of the container. Especially, nowadays the safety standard for Korean ecological indicators including fish and loach has been strengthened. Rural Development Administration (RDA) deposited the instrument of ratification to the Rotterdam Convention on the Prior Informed Consent (PIC) Procedures for Certain Hazardous Chemicals and Pesticides on International Trade in August 2003, and improved related regulations or systems. As such, Republic of Korea has been fulfilling its duties as a contracting party. Also, RDA signed the Stockholm Convention on the production, usage and discharge prohibition of persistent organic pollutants (POPs) in 2001, and ratified in January 2007.
Sri Lanka	The mandate of the Office of the Registrar of Pesticides is to execute statutory provisions of the Control of Pesticides Act No. 33 of 1980. The pesticides registration is the key provision in the course of life cycle management of pesticides in the country from importation through marketing of crops treated with pesticides. During the period 182 registration applications and 319 re-registrations have been completed conforming to the international guidelines and test protocols ensuring acceptability on safety, efficacy and environmental grounds. The issuance of import approvals is entertained on certain quality assuring protocols for pesticide products entering into the country. Apart from procedural control measures, 2 093 formulation analyses have been carried out, prior to marketing, covering 1 118 import consignments during the above period. Under the National Organic Standard Certification Project, the laboratory was upgraded with a number of analytical and ancillary instruments including GCs and GCMS for over Rs. 20 mn. Further, Rs. 11.3 million was contracted for lab space expansion which is under construction. Regulatory decisions were taken to phase out two insecticides (viz., dimethoate and fenthion) and a weedicide (viz., paraquat) based on unacceptable risks, especially acute poisoning associated with liberal use of these pesticides within the country.
Thailand	The Hazardous Substances Act B.E. 2535 (1992) was amended in B.E. 2551 (2008) and is enforced. Under this Act, the Department of Agriculture (DOA), the Ministry of Agriculture and Cooperatives, gave the Notification on Registration and Licensing with DOA responsible for issuing hazardous substances certificates. The main purpose of this Notification is to require pesticide companies or laboratories to adopt the Good Laboratory Practices (GLPs).
Viet Nam	Viet Nam has ratified and implemented all conventions related to pesticides and pesticide regulations/decisions have been amended in compliance with the International Code of Conduct on the Distribution and Use of Pesticides. Up until March of 2009, 877 a.i. with 2 537 trade names have been registered for use, 16 a.i. including 29 trade names restricted and another 29 a.i. have been banned for use.

2. Country Plant Protection Profiles

2.1 AUSTRALIA

I. GENERAL INFORMATION

Last Updated: December 2008

Overall Executive Summary

Review of Australia's Quarantine and Biosecurity Arrangements

On 19 February 2008, the Australian Government Minister for Agriculture, Fisheries and Forestry, the Hon. Tony Burke MP, announced a comprehensive, independent review of Australia's quarantine and biosecurity arrangements. The review was undertaken by an independent panel of experts chaired by Mr Roger Beale AO. On 18 December 2008, the government released the panel's report, *One Biosecurity: a working partnership,* and its preliminary response to the recommendations. In its preliminary response, the government agreed in principle to all of the review panel's 84 recommendations.

National Plant Health Status

A concise overview of Australia's plant biosecurity system is provided by the first National Plant Health Status Report. It is a consolidated snapshot of the system that protects Australian agricultural and forestry industries, worth more than $20 billion/year, from exotic pests. It describes Australia's plant health system and provides information on the plant pests of greatest concern to Australia; the organizations and processes involved in keeping Australia's agricultural and forestry industries free from pests; and the innovative plant health research projects currently being undertaken by Australian research organizations and universities. For the 2007-2008 financial year (July 2007 – June 2008), it identifies details of more than 200 high priority exotic pests of significant quarantine concern and also highlights over 120 surveillance programmes targeting plant pests of concern across the country.

PaDIL

PaDIL was developed by Museum Victoria with support provided by DAFF and Plant Health Australia. PaDIL contains high quality images showing primarily exotic targeted organisms of plant health concern to Australia. It provides information on pests and diseases that assist in helping to protect against invasive threats to Australia's plant health by allowing rapid recognition of emergency plant pests to ensure appropriate response strategies are implemented. Guarding against pest and disease invasion is a key component of Australia's National Plant Health Strategy.

Australian IPPC activities

Dr Bill Roberts, Biosecurity Australia, was elected as the Southwest Pacific representative on the IPPC Bureau. David Porritt, Biosecurity Australia is one of three Southwest Pacific representatives on the Standards Committee. Australian experts on Technical Panels are Rob Duthie (Fruit Flies) and Mallik Malipatil (Diagnostic Protocols).

Information exchange has been carried out using the IPP. This has included pest reports and the first nationally endorsed diagnostic protocols, for plum pox virus and apple brown rot (*Monilinia fructigena*).

Awareness of IPPC activities and consultation on draft standards continued throughout 2007 and 2008, including contributions to Pacific activities.

Biosecurity Australia

Biosecurity Australia provides science based quarantine assessments and policy advice that protects Australia's favourable pest and disease status and enhances Australia's access to international animal and plant related markets. It develops new policy, usually through an import risk analyses (IRA), and also reviews existing quarantine policy on imports of animals, plants and their products. An IRA is required where there is no quarantine policy or a significant change in existing quarantine policy is to be considered. IRAs identify and classify potential quarantine risks and develop policies to manage them.

Border quarantine inspections

The Australian Quarantine and Inspection Service (AQIS) inspect approximately 900 000 entries of sea or air cargo. The majority of detections of insects, fungi and contaminant weed seeds in horticultural products, grains and seeds and timber are sent for treatment without detailed taxonomic investigation. In addition, a small number of detections of quarantinable pests occur in products that have been released from quarantine. Over 60 percent of post quarantine detections are of insects, mainly associated with detections are furniture and wooden items (including bamboo, cane and wicker). This is thought to reflect the difficulty in detection on arrival due to the cryptic nature of wood boring insects.

Australian Fumigation Accreditation Scheme (AFAS)

AFAS is a management system for overseas agencies, a training and accreditation for fumigators, a registration system for fumigation companies and acceptance by Australia of fumigation certificates issued under AFAS. The scheme provides capacity building for overseas quarantine agencies in monitoring and registering fumigators and to enhance the technical expertise of these fumigators and providing training for methyl bromide fumigations. It also assists fumigators in maintaining a high standard of fumigation performance and compliance with AQIS requirements and facilitates export trade.

It has been implemented in Indonesia, Malaysia, Thailand, India, Papua New Guinea and the Philippines leading to reduced fumigation failures. Full implementation of AFAS is scheduled in China in 2009 and discussions have commenced with Viet Nam.

Regional capacity building

Activities emphasise SPS awareness, PRA, diagnostics of plant pests, management of pest reference collections, information management and economics of SPS barriers to trade. It is delivered by a mixture of in-country training workshops and reciprocal training visits by ASEAN and Australian technical experts.

Pesticide regulation

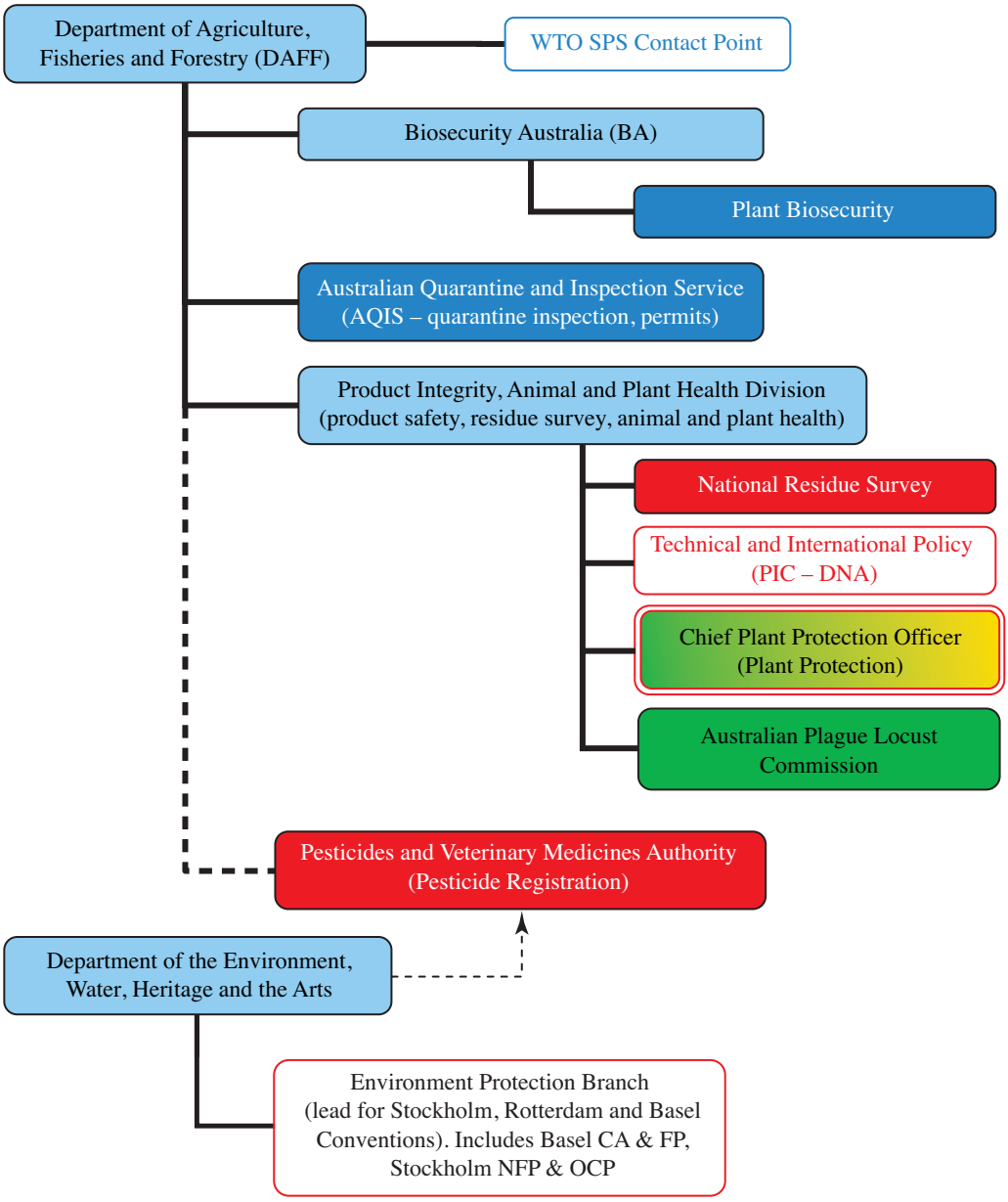
The National Registration Scheme for Agricultural and Veterinary Chemicals (National Registration Scheme) was established under Commonwealth and state legislation to provide an Australian scheme to regulate pesticides and veterinary medicines. The Australian Pesticides and Veterinary Medicines Authority is the prescribed agency within the Agriculture, Fisheries and Forestry portfolio that evaluates, registers and regulates agricultural and veterinary chemicals. DAFF manages the legislation under which the National Registration Scheme operates.

Australia is a party to the Rotterdam and Stockholm Conventions.

References

- Links to all relevant documents and websites can be found on the IPP.
- The Australian Government Department of Agriculture, Fisheries and Forestry website provides information general information on the activities of the department, including quarantine and risk assessment www.daff.gov.au
- The Department's Annual Report is available at http://www.daff.gov.au/about/annualreport/2007-2008
- Specific information has been posted on the IPP at https://www.ippc.int/servlet/CDSServlet?status=ND1ucHBvYXUmNj1lbiYzMz0qJjM3PWtvcw~~
- The Australian Pesticides and Veterinary Medicines Authority (APVMA) is the national independent regulator. Information on the APVMA is at http://www.apvma.gov.au/index.asp
- **2008: Review of Australia's Quarantine and Biosecurity Arrangements**
  Review of Australia's Quarantine and Biosecurity Arrangements – Report and Australian Government Preliminary Response is available at http://www.daff.gov.au/about/publications/quarantine-biosecurity-report-and-preliminary-response

Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Last updated: December 2008

Ministry/Department of Agriculture

Australian Government Department of Agriculture, Fisheries and Forestry (DAFF)
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Website: http://www.daff.gov.au

Plant Protection

Office of the Chief Plant Protection Officer
Lois Ransom, Chief Plant Protection Officer
Product Integrity, Animal and Plant Health
Department of Agriculture, Fisheries and Forestry
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Canberra ACT 2601
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Fax: +61 2 6272 5835
E-mail: ocppo@daff.gov.au
Website: www.daff.gov.au/planthealth

Plant Quarantine

Australian Quarantine and Inspection Service (AQIS) *(inspections, permits)*
Mr Rob Delane, Executive Director
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Canberra ACT 2601
Tel: +61 2 6272 5440

Plant Biosecurity
Mr Bill Magee, General Manager
Biosecurity Australia
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E-mail: bill.magee@daff.gov.au

Pest Outbreaks and Invasive Species Management

Office of the Chief Plant Protection Officer
State/Territory Departments of Agriculture

Pesticide Registration

Australian Pesticides and Veterinary Medicines Authority
Dr Eva Bennet-Jenkins, Chief Executive Officer
Raj Bhula, Program Manager Pesticides
Amtech Park
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Mailing Address:
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Kingston ACT 2604 Australia

Phone Switchboard +61 2 6210 4700
Fax: +61 2 6210 4874
E-mail: EnquiryLine@apvma.gov.au
Website: http://www.apvma.gov.au/

Official International Contact Points

Last updated: December 2008

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

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Tel: (+61) 2 6272 4888
Fax: (+61) 2 6272 5835
E-mail: IPPC.ContactPoint@daff.gov.au;
Website: www.daff.gov.au/plantippc

Date received: 21 March 2006 *Official Correspondence*

Australian IPPC Secretariat
Ms Julia Rymer (Executive Officer)
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Fax: +61 2 6272 5835
E-mail: ocppo@daff.gov.au

WTO SPS Contact Point

Australian Government Department of Agriculture, Fisheries and Forestry
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Canberra ACT 2601
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Fax: + (612) 6272 3678
E-mail/Internet: sps.contact@daff.gov.au
Website: http://www.daffa.gov.au/market-access-trade/sps

Rotterdam Convention (PIC) DNA Pesticides (P)

Manager, Technical and International Policy
Product Integrity, Animal and Plant Health

Australian Government Department of Agriculture, Fisheries and Forestry
GPO Box 858
Canberra ACT 2601
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Fax: +61 2 6272 5697
E-mail: controlledchemicals@daff.gov.au

Stockholm Convention (POP) National Focal Point (P)

Assistant Secretary, Environment Protection Branch

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Fax: (+61 2) 6274 1164
E-mail: chemicals@environment.gov.au

Basel Convention Competent Authority (CA) and Focal Point

Hazardous Waste Section
Director

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E-mail: hwa@environment.gov.au

Selected Country Statistics

Agricultural Population:	0.87 million	Agricultural Land:	48.3 million ha
GDP US$410 590 million	Agric. GDP: 2.9%	GNI per capita: US$26 900	Undernourishment: xx%
Main crops grown:			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last Updated: December 2008

List of Key Legislation/Regulations/Rules
(year, title and possibly short description)

1908 Quarantine Act

The Act provides the legislative basis for human, plant and animal quarantine activities in Australia. It provides a national approach to the protection of Australia's international borders from incursions by exotic pests and diseases.

Web source for further information:
http://www.daff.gov.au/content/output.cfm?ObjectID=D2C48F86-BA1A-11A1-A2200060A1B00706
International Phytosanitary Portal (www.ippc.int) for more information

Policies (regarding plant quarantine)	Yes	No	Don't know
Does phytosanitary legislation cover both domestic and import/export quarantine?	x		
Is plant quarantine a separate organization from animal quarantine?		x	
Does phytosanitary legislation cover non-cultivated plants (wild flora)	x		
Does phytosanitary legislation cover living modified organisms?		x	
Other policy goals:			
Web source for further information: –			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Assessment	DAFF/Biosecurity Australia
Standards development	DAFF/
International notifications	DAFF/OCPPO
Import:	
Import permits/inspections	DAFF/AQIS
Emergency action	DAFF/PIAPH/OCPPO
Export:	
Phytosanitary certificates	DAFF/AQIS
Treatment of commodities	certified service providers

Infrastructure	Years: 2007-2008
Total number of plant quarantine officers	2 800
Total qualified personnel for plant pest risk assessment	[number]
Number of quarantine offices/stations	
Number of post-entry plant quarantine containment facilities	
Number of quarantine service diagnosis laboratories	
Number of entry points (sea/air/land)	13/23/0 = 36

In-country pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect samples	
Number of laboratories for pathogen samples	
Number of laboratories for insect/mite (arthropod) samples	
Number of laboratories for bacteria samples	
Number of laboratories for virus samples	
Number of laboratories for fungus samples	
Number of laboratories for mycoplasma samples	
Number of laboratories for nematode samples	
Number of laboratories for plant/weed samples	
Number of laboratories for other pests (snail, slug, rodents, etc.)	

PestFree Areas According to ISPM 10	**Responsible Organizational Unit (Ministry/Department/Unit)**	
Overall management	States/territories	
– surveillance		
– management		
– certification		
List of target pest species and crops ISPM 4		Number of sites in 2008
Queensland Fruit Fly		[number]
Mediterranean Fruit Fly		
List of target pest species and crops ISPM 10		Number of sites in 2008
		[number]
Web source for further information: Information provided to IPPC in response to pest free areas survey		

Key Situation Indicators depends on year and climatic conditions

International Trade		
Main Import Plant Commodities	Main countries of origin	No. of phytosanitary inspections
		[number]
Main Export Plant Commodities	Main destination countries	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
SPS Capacity Building Programme for ASEAN	AusAID		2004-2007
See SPS paper G/SPS/GEN/717			
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	1.3 million/xxx
Number of import inspections carried out	[number]
Number of emergency phytosanitary treatments taken on imports	
Number notifications of non-compliance	
Number of conventional phytosanitary certificates issued *Do you have an electronic certification system?:* *Yes_____No_____*	
Number of electronic phytosanitary certificates issued	

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodity	Top three pest/commodity	# of interceptions

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests		SEE IPP		
Number of regulated non-quarantine pests				
Number of regulated import articles		15 IRA (Import Risk Analysis)		
Website for the above information: –				

Pest Risk Assessments	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			
PRA included in the IRA: completed for 15 commodities/countries of origin, 9 currently under review SEE LINK AT IPP			
Web source for further information: http://www.daff.gov.au/content/output.cfm?ObjectID=4B6768B0-F086-4EDE-95029297CCAC6B6E			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure ,investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	
ISPM 02 Guidelines for pest risk analysis			x				x	
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x				x	
ISPM 04 Requirements for the establishment of pest free areas			x				x	
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x				x	
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x				x	
ISPM 09 Guidelines for pest eradication programmes			x				x	
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x				x	
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	1 May 2006
ISPM 16 Regulated non-quarantine pests: concept and application			x				x	
ISPM 17 Pest reporting			x				x	
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x				x	
ISPM 19 Guidelines on lists of regulated pests			x				x	
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x				x	
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x				x	
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x				x	
ISPM 25 Consignments in transit	x			x				
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x				x	
ISPM 27 Diagnostic protocols for regulated pests			x				x	
ISPM 28 Phytosanitary treatments for regulated pests			x					
ISPM 29 Recognition of pest free areas and areas of low pest prevalence			x					
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			x					
ISPM 31 Methodologies for sampling of consignments			x					
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

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Web source for further information:
http://www.planthealthaustralia.com.au/top_priorities/priorities.asp?ID=1
http://www.planthealthaustralia.com.au/top_priorities/priorities.asp?ID=2

Policies (regarding invasive/migratory species management)	Yes	No	Don't know
National strategy to control serious field pest outbreaks?	x		
National strategy to control migratory or periodically occurring pests?		x	
National strategy to eradicate serious newly invaded exotic pests?	x		
Other policies: (e.g. subsidies, etc.) Emergency response system			
Web source for further information: www.outbreak.gov.au http://www.daff.gov.au/content/output.cfm?ObjectID=84D90915-8340-434B-9677E0D0B5C54D2F			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	DAFF/PIAPH/OCPPO
Surveillance	States/territories
Control	
Migratory Pest Outbreaks	(e.g. Locusts, birds, armyworm)
Response strategy/plans	DAFF/PIAPH/APLC, QUEENSLAND, NSW, VICTORIA, SOUTH AUSTRALIA, WESTERN AUSTRALIA
Surveillance	DAFF/PIAPH/APLC; state departments in Qld, NSW, Victoria, S Australia, WA
Control	
New Exotic Pest Eradication	(e.g. Coconut beetle)
Response strategy/plans	DAFF/PIAPH/OCPPO
Surveillance	States and territories
Control/eradication	DAFF/PIAPH/OCPPO + states/territories
Reporting to international organizations	DAFF/OCPPO

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	
Number of designated staff for **surveillance** of migratory and periodically occurring pests	
Number of designated staff for **surveillance** of invasive species	
Number of designated staff for **control** of field pests of national importance	
Number of designated staff for **control** of migratory and periodically occurring pests	
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year 2007:	1	4	
Total number for year 2008:	1	3	
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species	Citrus cancer		European house borer
Year of first discovery	2004		
Passway (way of introduction of quarantine target)			
Location of first discovery	Queensland		
Area affected [ha]			
Area treated by government [ha]			
Control method	Host destruction		
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	Australian Plague Locust	Australian Plague Locust	Australian Plague Locust
Year of outbreak	2006-2007	2006-2007	2006-2007
Area affected [ha]			
Estimated damage US$			
Area treated by government [ha]	9 826		
Expenditures by government [US$]			
Control method	Ground and aerial spray		
Add more if necessary	NB APLC is not a national organization and only deals with some areas of relevant states where migration is across state borders	Western Australia	Victoria

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure ,investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Pest Management

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Web source for further information:–

Policies (regarding pest management)	Yes	No	Don't know
Do you have policies encouraging organic or low-pesticide production			
Is IPM specifically mentioned in laws or policy documents?		x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?			
Is pest management extension separate from general extension?			
Other policies:			
Web source for further information:–			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	Australian Government, states and territories
Pest management research	States and territories
Control recommendations	States and territories
Pest management extension	States and territories
IPM training	States and territories
GAP training	

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	[number]
Number of central, regional, provincial or state offices	
Number of district and village level field offices	
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	
Number of government biocontrol production/distribution facilities	
Number of government biopesticide production/distribution facilities	
Number of general extension staff involved in pest management	
Number of designated plant protection technical officers for extension	

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:*		
Does the country have specific IPM extension programmes? *If yes, in which crops?:*		
Does the country have specific IPM research programmes? *If yes, in which crops?:*		
Does the country have specific GAP extension programmes? *If yes, in which crops?:*		
Does the country have specific GAP research programmes? *If yes, in which crops?:*		

Market shares (estimated value, volume or area under control)	**Years: 2007-2008**
Size of chemical pest control market	[number, %]
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop			
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Years: 2007-2008**
Number of farmers trained in IPM during the year	[number]
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented:	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

Agricultural and Veterinary Chemicals Code Act 1994 [No. 47 of 1994]
Agricultural and Veterinary Chemicals Act 1994 [No. 36 of 1994]
Agricultural and Veterinary Chemical Products (Collection of Levy) Act 1994 [No. 41 of 1994]
Agricultural and Veterinary Chemicals (Administration) Act 1992 [No. 262 of 1992]
See Comlaw website http://www.comlaw.gov.au/

Web source: http://www.apvma.gov.au/about_us/legislat.shtml
List of registered products: http://www.apvma.gov.au/actives/standards_actives.shtml

Policies (regarding pesticide management)	Yes	No	Don't know
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		x	
Have you ratified the Rotterdam (PIC) Convention?	x		
Have you ratified the Stockholm (POP) Convention?	x		
Have your ratified the Basel Convention? (hazardous wastes)	x		
Have you ratified the Montreal Protocol? (MeBr phrasing-out)	x		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?			
Have you adopted Good Laboratory Practices (GLP)?	x		
Pesticide Registration			
Do you require pesticides to conform to relevant FAO or WHO specifications?			
Do you allow the "me-too" registration and sale of generic pesticides?	x		
Do you require data on product equivalence for generic registration?	x		
Do you conduct country-specific risk assessments for…			
occupational risks?	x		
consumer risks?	x		
environmental risks?	x		
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labeling?	not yet		
Do you accept evaluation results from other countries?	Yes with qualifications		
Do you accept field studies conducted in other countries?	x		
Do you require environmental fate studies?	x		
Incentives/Disincentives			
Do you have a special tax on pesticides to cover externality costs?		x	
Do you subsidize or provide low-cost pesticides?		x	
Do you subsidize or provide low-cost biopesticides?		x	
Other policies:			
Web source for further information: www.apvma.gov.au			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	DAFF APVMA
Registration	()/APVMA
Licensing of shops	Nil
Licensing of applicators	States
Enforcement/inspections	States/territories and APVMA for supply
Testing of pesticide efficacy	APVMA requires of applicant
Development of pesticide use recommendations	APVMA
Safe use training/extension	States/territories
Food residue monitoring	DAFF/PIAPH/Natl. Residue Survey
Environmental monitoring	DAFF/PIAPH/Natl. Residue Survey
Health monitoring	(DAFF)/APVMA/Adverse Experience Reporting Programme
Other Stakeholders:	
Pesticide Industry Association	CropLife Australia, ACCORD, PACIA
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2007-2008
Number of registration officers	depends how define
Number of enforcement officers	States – unknown
Number of department quality control laboratories	none
Number of quality control laboratory personnel	none
Number of department residue analysis laboratories	National Residue Survey Labs
Number of residue laboratory personnel	unknown

Key Situation Indicators – values $Australian

Pesticide Trade: 2007-2008[a]	Tons*	$Australian '000 Value*
Imports		don't have this broken out
Manufacture		ditto
Export		ditto
Sales (for 2004-2005)	(NOTE – last year's not ready yet)	$2 364 268 000
Pesticide Use Profile: 2007-2008	**Tons**	**$Australian '000 Value**
Agriculture		(for year 2004-2005)
Insecticides		$314 395 000
Fungicides		$159 243 000
Herbicides		$908 519 000
Other		$261 094 000
Veterinary		$620 744 000
Public Health		
Household		$100 273 000
Other		
TOTAL		$2 364 268 000

[a] for most recent year for which data are available

* if possible, give in tons a.i.; if known, also give value in US$ or other currency

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No	Don't know
Do you have significant problems with low-quality pesticides in the market?		x	
Do you have significant problems with pesticide resistance?	x		
Do you have a list of pesticides under close observation for problems?			
Source for more information: –			

Health and Environmental Information	Yes	No	Don't know
Do you maintain data on pesticide poisoning cases?	x		
Do you have a system to monitor pesticide residues in food?	x		
Do you have a system to monitor pesticide residues in the environment?			x
Do you have significant problems of environmental contamination from pesticides?		x	
Do you have data on pesticides effects on wildlife and ecosystems?	x		
Source for Information: –			

Pesticide Disposal	Yes	No	Don't know
Do you have services to collect and safely dispose of used containers and small quantities of left-over pesticides?	x		
Do you have an inventory of outdated and obsolete pesticides in the country?			
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____			
Source for Information: –			

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	
Number of registered pesticide products		
Number of registered biopesticides		
Number of restricted-use pesticides		
Number of banned pesticides		
Number of licensed outlets		
Number of licensed applicators		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year		
Number of food samples analyzed for pesticide residues during year	20 322	
Number of samples exceeding MRL	26	
Number of environmental samples analyzed for pesticide residues	126 (wild fish)	

* active ingredient

List of registered products: http://www.apvma.gov.au/actives/standards_actives.shtml

Pesticides Restricted in Recent Years (2007-2008)	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years (2007-2008)	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.2 BANGLADESH

I. GENERAL INFORMATION

Last updated: December 2008

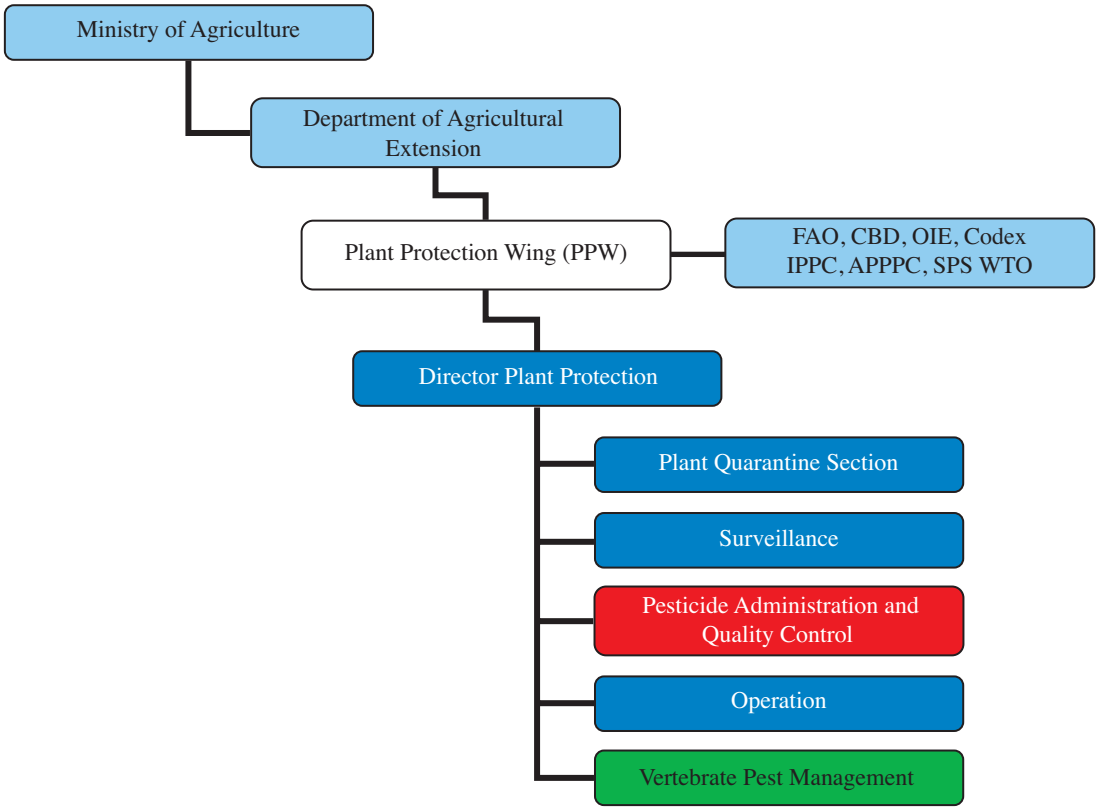
Overall Executive Summary

Apart from following IPPC's guidelines on the phytosanitary export certification and phytosanitary import regulatory systems, the Plant Quarantine Section of the Plant Protection Wing (NPPO) is responsible for implementing the International Standards for Phytosanitary Measures (ISPMs) in Bangladesh. Importantly, NPPO plays a vital role in implementing the National Pest Management Policy through the activities of Integrated Pest Management (IPM) and Integrated Crop Management (ICM) projects. They strengthen IPM activities and help farmers to become aware about healthy crop production.

As regards the pesticide management, in 2007 the Department of Agricultural Extension (DAE) revised "The Pesticide Ordinance, 1971" and its name was changed to "The Pesticide Ordinance (Amended), 2007". The necessary modifications were also made in The Pesticide Rules, 1995 with the incorporation of the provisions of biopesticide registration. They have been submitted to the Ministry of Agriculture for necessary action.

As part of the effort to disposal off the obsolete pesticides, a survey was conducted in different areas of the country. Moreover, continuous farmers training programmes were also conducted to increase awareness about harmful effects of injudicious use of pesticides.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

–

Responsible Department

Plant Protection (Policy, Regulations, Pesticide Registration, Overall Management)

Director

Plant Protection Wing (NPPO)
Department of Agricultural Extension
Khamarbari, Dhaka-1215
Bangladesh
Tel: (+88) 02-9131295
Fax: (+88) 02-9111554
E-mail: dppw@dae.gov.bd
Website: http://www.dae.gov.bd

Address of nominations

–

Operational Offices:

Plant Protection

–

Plant Quarantine

–

Surveillance, Pest Outbreaks and Invasive Species Management

Director

Plant Protection Wing (NPPO)
Department of Agricultural Extension
Khamarbari, Dhaka-1215
Bangladesh
Tel: (+88) 02-9131295
Fax: (+88) 02-9111554
E-mail: dppw@dae.gov.bd
Website: http://www.dae.gov.bd

Pesticide Registration

Director

Plant Protection Wing (NPPO)
Department of Agricultural Extension
Khamarbari, Dhaka-1215
Bangladesh
Tel: (+88) 02-9131295
Fax: (+88) 02-9111554
E-mail: dppw@dae.gov.bd
Website: http://www.dae.gov.bd

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Director

Plant Protection Wing (NPPO)
Department of Agricultural Extension
Khamarbari, Dhaka-1215
Bangladesh
Tel: (+88) 02-9131295
Fax: (+88) 02-9111554
E-mail: dppw@dae.gov.bd
Website: http://www.dae.gov.bd

WTO SPS Contact Point

Senior Assistant Chief/Assistant Chief

Policy-4 Branch
Ministry of Agriculture
Bangladesh Secretariat
Dhaka-1000
Tel: (+88) 02-9555622
Fax: (+88) 02-7167680
Website: http://www.moa.gov.bd

Rotterdam Convention (PIC) DNA Pesticides (P)

–

Stockholm Convention (POP) National Focal Point (P)

Director General

Department of Environment
Paribesh Bhaban
E-16, Agargaon
Sher-e-Bangla Nagar
Dhaka-1207
Tel: (+88) 02-8112461
Fax: (+88) 02-9118682
E-mail: http://www.afrinakter@doe-bd.org
Website: http://www.doe-bd.org

Basel Convention Competent Authority (CA) and Focal Point

Ministry of Environment and Forest
Secretary to the Government of Bangladesh

Selected Country Statistics

Agricultural Population	90.54 million	Agricultural Land	9.10 million ha
GDP $	Agric. GDP: 3.61%	GNI per Capita: $596	Under nourishment:
Main crops grown: Rice, Wheat, Jute, Potato, Sugarcane, Tea, Tobacco, Pulses, Oil seeds etc.			

GDP = Gross Domestic Product; GNI = Gross National Income; Hunger = Population below mini energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

Executive Summary

The Plant Quarantine Section of the Plant Protection Wing (NPPO) has followed the IPPC instructions on the Phytosanitary Export Certification and Phytosanitary Import Regulatory Systems in international trade. NPPO is also implementing the International Standards for Phytosanitary Measures (ISPMs) of IPPC into Bangladesh.

In case of emergency, phytosanitary actions will be taken by the authority for any interception and non-compliance. NPPO has also drafted Bangladesh Plant Quarantine Act, 2009 and submitted it to the Ministry of Agriculture for approval.

List of key Legislation/Regulations/Rules

1914 Destructive Insects & Pests Act
1989 Destructive Insects & Pests Rules-1966 (Plant Quarantine) [Amended]

Web sources for further information: http://www.dae.gov.bd

Policies (regarding plant quarantine)	Yes	No
Does phytosanitary legislation cover domestic quarantine?		
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?		
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress): Plant Quarantine Act, 2009	x	
Web source for further information: http://www.dae.gov.bd	x	

Organization of Plant Quarantine Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Analysis	PPW, DAE, MOA
National standards development	PPW, DAE, MOA
International notifications	PPW, DAE, MOA
Import:	
Import permits	PPW, DAE, MOA
Imports inspections	PPW, DAE, MOA
Emergency action	PPW, DAE, MOA
Export:	
Phytosanitary certificate	PPW, DAE, MOA
Treatment of commodities	PPW, DAE, MOA

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify	18
Total qualified personnel for plant pest risk analysis	18
Number of quarantine offices	13
entry point (sea/air/land/mail = total)	2/3/16/1 = 22
post-entry plant quarantine containment facilities	2
other offices	
Number of quarantine service diagnosis laboratories	13 (Narrow facility)
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	13
Number of laboratories for bacteria samples	
Number of laboratories for virus samples	
Number of laboratories for fungus samples	13
Number of laboratories for mycoplasma samples	
Number of laboratories for nematode samples	13
Number of laboratories for plant/weed samples	13
Number of laboratories for other pests (snail, slug, rodents, etc.)	13

Pest-Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	PPW, DAE, MOA
surveillance	PPW, DAE, MOA
management	PPW, DAE, MOA
certification	PPW, DAE, MOA
List of target pest species and crops ISPM 4	Number of sites in [year]
Fruit fly	
Brown rot on potato	
Stone weevil and pulp weevil on mango	
List of target pest species and crops ISPM 10	Number of sites in [year]

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (Tons)
Raw cotton, Rice, Wheat, Pulses etc.	USA/Canada/Australia/Mayanmar /India/Thailand/Pakistan/Egypt etc.	
Fresh fruits-pome/stone/citrus	China/Thailand/India/Pakistan /Australia/Middle East/Brazil	
Main Export Plant Commodities	Main destination country	
Fresh vegetables, citrus/Fresh Fruits /Frozen Vegetables/Food Stuff	Middle East/EU/USA/Canada/ Australia	
Fine and Aromatic Rice	EU/USA/Middle East	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
			[year – year]
Title of government follow-up programmes		Amount	Years (start-end)
			[year – year]

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	15 337
Number of import inspections carries out	15 337
Number of emergency phytosanitary treatments taken on imports	
Number notifications of non-compliance	
Number of conventional phytosanitary certificate issued	27 337
Number of electronic phytosanitary certificate issued	

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodity	Top three pest/commodity	# of interceptions

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests				
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: http://www.dae.gov.bd				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Upgraded Bangladesh Plant Quarantine Act, 2009 is submitted to Ministry of Agriculture for approval by the Parliament
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Modern Phytosanitary Diagnostic Laboratory support, Human Resources Development and Infrastructural development needed

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	
ISPM 02 Guidelines for pest risk analysis			x				x	
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x			x		
ISPM 04 Requirements for the establishment of pest free areas			x		x			
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x		x			
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x		x			
ISPM 09 Guidelines for pest eradication programmes			x		x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x		x			
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x			x		
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application			x			x		
ISPM 17 Pest reporting			x				x	
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x		x			
ISPM 19 Guidelines on lists of regulated pests			x			x		
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x		x			
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x		x			
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures		x			x			
ISPM 25 Consignments in transit		x			x			
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x		x			
ISPM 27 Diagnostic protocols for regulated pests			x		x			
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

Regular surveillance activities are conducted in every district of the country to monitor the introduction, pest outbreaks, establishment and spread of invasive species.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

List of legislation/regulations/rules for surveillance, pest reporting and emergency actions:

DIP Act proposed to be replaced by Plant Quarantine Act, 2009

Web source for further information: http://www.dae.gov.bd

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?		
National strategy to control migratory or periodically occurring pests?		
National strategy to eradicate serious newly invaded exotic pests?		
Other policies: (e.g. subsidies, etc.)		
Web source for further information: http://www.dae.gov.bd		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	PPW, DAE, MOA
Surveillance	PPW, DAE, MOA
Control	PPW, DAE, MOA
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	PPW, DAE, MOA
Surveillance	PPW, DAE, MOA
Control	PPW, DAE, MOA
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	PPW, DAE, MOA
Surveillance	PPW, DAE, MOA
Control/eradication	PPW, DAE, MOA
Reporting to bilateral or international organizations	PPW, DAE, MOA

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	[number]
Number of designated staff for **surveillance** of migratory and periodically occurring pests	
Number of designated staff for **surveillance** of invasive species	
Number of designated staff for **control** of field pests of national importance	
Number of designated staff for **control** of migratory and periodically occurring pests	
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year 2007:			
Total number for year 2008:			
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Passway			
Location of first discovery			
Area affected [ha]			
Area treated [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species			
Year of outbreak			
Area affected [ha]			
Estimated damage US$			
Area treated by government [ha]			
Expenditures by government [US$]			
Control method			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: December 2008

Executive Summary

The Plant Protection Wing (NPPO) plays a vital role in implementing the National Pest Management Policy through the activities of Integrated Pest Management (IPM) and Integrated Crop Management (ICM) projects.

The IPM and ICM projects strengthen IPM activities through establishing and introducing Farmers Field School (FFS), IPM Clubs (Farmers Association), Organic Farming Pilot Programme, Biological Pest Control, Farmers Training and organization of workshops/seminars throughout the country. They help farmers become aware of healthy crop production. IPM club also helps promote IPM activities among the neighbouring farmers. Pesticide-free crop production has now become popular among the farmers.

List of Key Legislation/Regulations/Rules for Pest Management

1971 The Pesticide Ordinance
1995 The Pesticide Rules

Web source for further information: http://www.dae.gov.bd

Policies (regarding pest management)	**Yes**	**No**
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?		
Is pest management extension separate from general extension?		
Other policies: (subsidies, production inputs, etc.) Emphasis on biocontrol agents, biopesticides and pheromones Phasing out, banning or restricting hazardous chemical pesticides		
Web source for further information: http://www.dae.gov.bd		

Organization of Plant Protection Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Policy development	
Pest management research	
Control recommendations	
Pest management extension	
IPM training	
GAP training	

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	
Number of central, regional, provincial or state offices	
Number of district and village level field offices	
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	
Number of government biocontrol production/distribution facilities	
Number of government biopesticide production/distribution facilities	
Number of general extension staff involved in pest management	
Number of designated plant protection technical officers for extension	

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:*		
Does the country have specific IPM extension programmes? *If yes, in which crops?:*		
Does the country have specific IPM research programmes? *If yes, in which crops?:*		
Does the country have specific GAP extension programmes? *If yes, in which crops?:*		
Does the country have specific GAP research programmes? *If yes, in which crops?:*		

Market shares (estimated value, volume or area under control)	Years: 2007-2008
Size of chemical pest control market	[number, %]
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop			
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	Years: 2007-2008
Number of farmers trained in IPM during the year	222 550
Number of IPM-FFS conducted during the year	6 243
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	15
Crops in which IPM or other ecology friendly programmes are successfully implemented: IPM packages developed	
Crops grown organic/pesticide-free: –	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

Executive Summary

The Pesticide Administration and Quality Control Section of the Plant Protection Wing (NPPO) of the Department of Agricultural Extension (DAE) revised "The Pesticide Ordinance, 1971" and its name was changed to "The Pesticide Ordinance (Amended), 2007".

The necessary modifications were also made to The Pesticide Rules, 1995 with the incorporation of the provisions of biopesticide registration and submitted to the Ministry of Agriculture for necessary action.

To facilitate modern diagnosis and laboratory facilities, the Pesticide Quality Control Laboratory of NPPO has already been modernized with the installation of testing equipment.

To disposal off the obsolete pesticides, a survey was conducted in different areas of the country. Continuous farmers training programmes were also conducted to increase awareness of harmful effects of injudicious use of pesticides.

List of Key Legislation/Regulations/Rules:

1971 The Pesticide Ordinance; The Pesticide Ordinance (Amended) 2007
1985 The Pesticide Rules

Ministry of Environment and Forest

1995 Bangladesh Environmental Conservation Act
1997 Bangladesh Environmental Conservation Rules

Web source for further information: http://www.dae.gov.bd

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction target? If yes, what is the target: –	x	
Have you ratified the Rotterdam (PIC) Convention?		
Have you ratified the Stockholm (POP) Convention?	x	
Have you ratified the Basel Convention? (hazardous wastes)	x	
Have you ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the code of conduct to FAO according to Art 12 of the Code?		
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specification?	x	
Do you allow the "me-too" registration and sale of genetic pesticides?	x	
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for....		
occupational risks?		
consumer risks?	x	
environmental risks?	x	

Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labeling?	x	
Do you accept evaluation results from other countries?	x	
Do you accept field studies conducted in other countries?		x
Do you require environmental fate studies?		x
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?	x	
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x
Other policies: Other policies: Pesticide Ordinance 1971 is being amended, Integrated Pest Management and Integrated Crop Management Policies The Pesticides (Amended) Rules-2007 is under process.	x	
Web source for further information: http://www.dae.gov.bd		

Organization of Plant Protection Functions	Responsible Organization Unit (Ministry/Department/Unit)
Legislation	MOA/PPW, DAE,
Registration	PPW, DAE, MOA
Licensing of shops	PPW, DAE, MOA
Licensing of field applicators	PPW, DAE, MOA
Enforcement/inspections	PPW, DAE, MOA
Testing of pesticide efficacy	PPW, DAE, MOA
Development of pesticide use recommendation	PTAC
Safe use training/extension	PPW, DAE, MOA, BCPA
Food residue monitoring	BSTI
Environmental monitoring	PPW, DAE and DOE
Health monitoring	DOH
Other Stakeholders:	
Pesticide Industry Association	BCPA
Civil Society Organization (NGO, etc.)	BCPA

Infrastructure*	Years: 2007-2008
Number of registration officers	
Number of enforcement officer	550
Number of department quality control laboratories	01
Number of quality control laboratory personnel	06
Number of department residue analysis laboratories	01
Number of residue laboratory personnel	06

* Only include the laboratories belonging to MOA

Key Situation Indicators

Pesticide Trade:	Tons	$ '000 value
Imports	77 712 (Formulated)	
Manufacture		
Export		
Domestic Use/Sales		
Pesticide Use Profile: 2007-2008	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture		
Chem. Insecticides	66%	
Chem. Fungicides	29%	
Chem. Herbicides	3%	
Chem. Others: e.g. molluscicide, acaricide	2%	
Other: e.g. Avamectrin, Bt. NeeM		
Other purposes		
TOTAL		

Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance?	x	
Do you have a list pesticides under close observation for problems		x
Source for more information		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?	x	
Do you have significant problems of environmental contamination from pesticides	x	
Do you have data on pesticides effects on wildlife and ecosystems?		x
Source for more information: http://www.dae.gov.bd		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides?		x
if yes: what is the estimated amount: – **Note:** No estimated made, but it exists.		
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products	123	
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)	02	
Number of restricted-use pesticides/formulations	04	
Number of banned pesticides	07	
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year	02	
Number of quality control analyses conducted during year	56	
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Year	
Year	Name of active ingredient or hazardous formulation

Pesticide Banned in Recent Years	
Year	Name of active ingredient

Cooperation Project			
Purpose/Target	Donor	Amount	Years (start-end)
Strengthening Plant Projection Project	DANIDA		
Purpose/Target of government follow-up programmes		Amount	Years (start-end)
Integrated Pest Management Project	GOB	15 Core	2006

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Implementation of IPM & ICM policies
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Plant Protection legislation, policies, infrastructure, investments, training, etc. should be modernized. Developed Pesticide Residue Analysis Laboratory.

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.3 CAMBODIA

I. GENERAL INFORMATION

Overall Executive Summary

The Plant Protection and Phytosanitary Inspection Office (PPPIO) as Cambodia's NPPO has recently been upgraded as the Plant Protection and SPS Department (PP-SPSD) of the General Directorate of Agriculture (GDA). NPPO was previously under the supervision of the former Department of Agronomy and Agricultural Land Improvement (DAALI).

The Government of Cambodia has endorsed Sub-Degree No. 188 (14/11/2008) with the establishment of GDA which consists of nine departments. One of these is the Plant Protection Sanitary and Phytosanitary Department (PP-SPSD) that has the following roles and responsibilities:

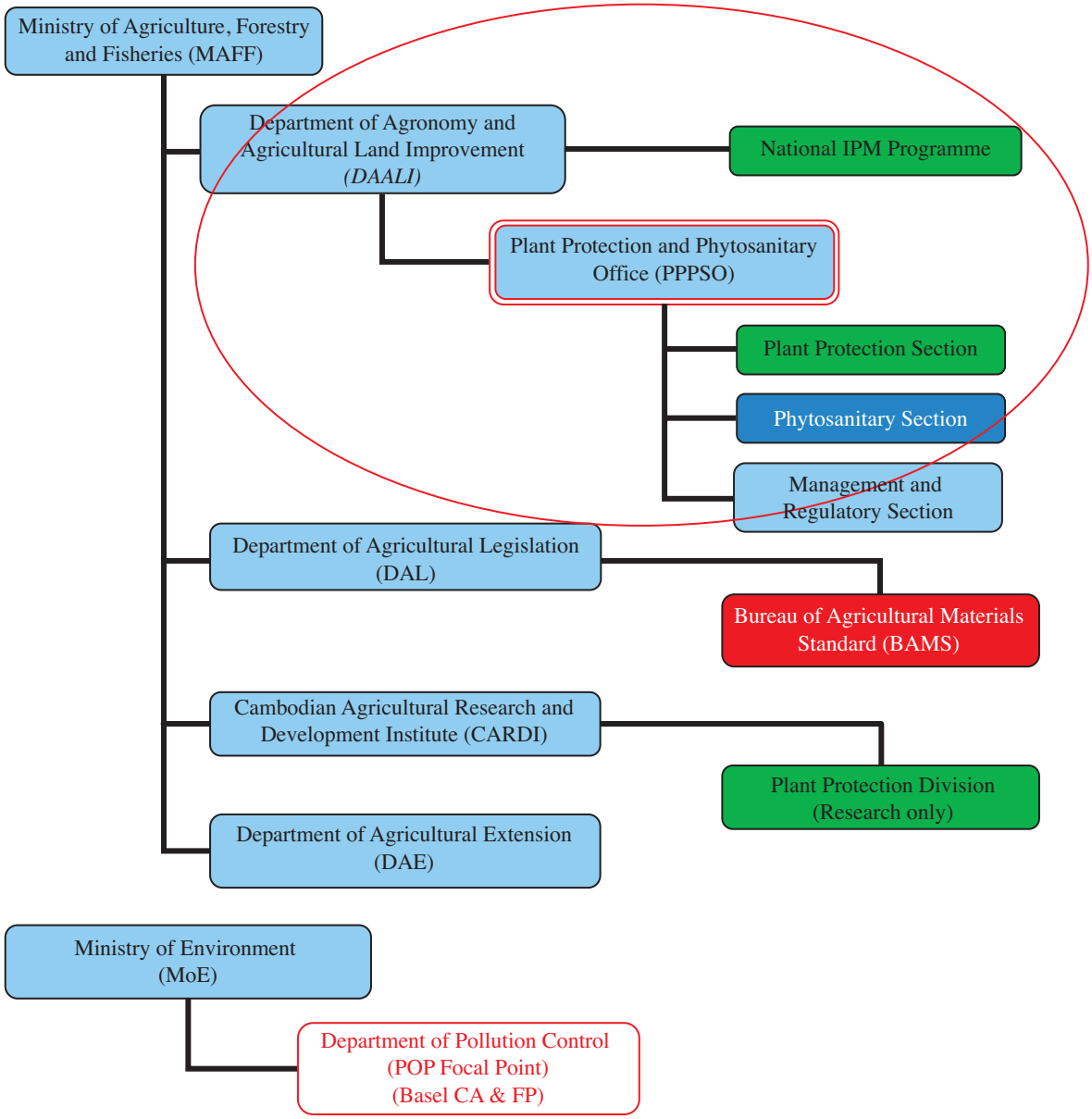
- To prepare the policy, plan, project, development programmes, the measure to *reduce* the crop production loose caused by pest, to *manage* chemical substances used to prevent, control, repellant, grow regulate (and all other pesticide actives) pest and all agent or biological substances used for the above mentioned purpose and for soil fertility improvement in order to increase productivity and plant production in the sound of sustainable of natural resources and biodiversity of the environment;
- To prepare the plant product *quality standards*, the *assurance system of safety* and quality of plant product, policy plant project development programmes to *improve* the quality and safety of plant product in order to assure the quality and safety of plant product to consumer, market and encourage the export of plant product;
- To prepare the *regulation* and to be the *regulatory service* in the management of *plant protection work, safety of food* originally from plant product and *phytosanitary inspection* according to the Government policy and SPS agreement of WTO;
- To direct, manage and encourage the *research activities* of research institution under its manage and in cooperation with the agricultural extension department and local organizations to encourage the *extension* of plant protection, phytosanitary and production measures to improve the quality and safety of product to farmers, farmer organization, investor and private sector for increasing their benefits and family income to improve population's welfare and facilitate the exportation of agricultural product;
- To be a *supporting service to the seed inspector* by playing a role of regulatory authority for inspecting all the seed transportation across the border;
- To persuade, facilitate and *encourage private sector to invest* the supporting service for plant protection, phytosanitary and improving quality of agricultural product;
- To be a *technical advisor* and a service in *pest control* intervention, in *assessment of chemical* substances used to prevent, control, repellant, grow regulate (and all other pesticide actives) pest and all agent or biological substances used for the above mentioned purpose and for soil fertility improvement and in *assessment of quality* of agricultural product;
- To liaison, cooperate and implement the convention, agreement related in national, regional and international level
- To implement other duties as given by Director Team of General Directorate.

This newly endorsed Sub-Degree just described the general mandate of these nine departments. Ministerial regulations are being drafted for each department and will be submitted to the Ministry of Agriculture, Forestry and Fisheries (MAFF) for approval.

As a result, it is not possible yet to fully update information in Cambodia's plant protection profile.

Plant Protection Organization Chart

The information presented below is partially updated. Otherwise, it is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Ministry of Agriculture, Forestry and Fisheries (MAFF)
No. 200, Preah Norodom Blvd., Sangkat Tonle Basak, Khan Chamkarmon,
Phnom Penh, Cambodia
Tel: (023) 211 351, 211 352
Fax: (855) 23 217 320
Website: http://www.maff.gov.kh

Responsible Department

General Directorate of Agriculture (GDA)
Mr So Khan Rithykun, Acting Director General
Tel: (855) 12 833777

Dr Hean Vanhan, Deputy Director General in charge on plant protection, SPS and International Cooperation
Tel: (855) 12818216 / (855) 16818216
Fax: (855) 23216655
E-mail: heanvanhan@gmail.com

National Plant Protection Organization *(if different from Focal Point)*

Plant Protection, Sanitary and Phytosanitary Department (PP-SPSD)
Dr Hean Vanhan, Deputy Director General in charge on plant protection, SPS and International Cooperation (Official NPPO)
Tel: (855) 12818216 / (855) 16818216
Fax: (855) 23216655
E-mail: heanvanhan@gmail.com

Dr Preap Visarto, Acting Director of PP-SPSD (Optonal NPPO)
Tel: (855) 11622916

Address for nominations

General Directorate of Agriculture (GDA)
Dr Hean Vanhan, Deputy Director General in charge on plant protection, SPS and International Cooperation
#56B, Road 365, Teuk Laok III, Tuolkok, Phnom Penh, Cambodia
Tel: (855) 12818216 / (855) 16818216
Fax: (855) 23216655
E-mail: heanvanhan@gmail.com

Operational Offices:

Plant Protection

Plant Protection, Sanitary and Phytosanitary Department (PP-SPSD)

- *Dr Preap Visarto, Acting Director of PP-SPSD/GDA*
  Tel: (855) 11622916
- *Dy Sam An, Deputy Director of PP-SPSD/GDA*
  Tel: (855) 12336934
- *Mr Heng Chhunhy, Deputy Director of PP-SPSD/GDA*
  Tel: (855) 12954963
  #56B, Road 365, Teuk Laok III, Tuolkok, Phnom Penh, Cambodia

Plant Quarantine

Plant Protection, Sanitary and Phytosanitary Department (PP-SPSD)

- *Dr Preap Visarto, Acting Director of PP-SPSD/GDA*
  Tel: (855)11622916
- *Dy Sam An, Deputy Director of PP-SPSD/GDA*
  Tel: (855) 12336934
- *Mr Heng Chhunhy, Deputy Director of PP-SPSD/GDA*
  Tel: (855) 12954963
  #56B, Road 365, Teuk Laok III, Tuolkok, Phnom Penh, Cambodia

Surveillance, Pest Outbreaks and Invasive Species Management

Plant Protection, Sanitary and Phytosanitary Department (PP-SPSD)

- *Dr Preap Visarto, Acting Director of PP-SPSD/GDA*
  Tel: (855)11622916
- *Dy Sam An, Deputy Director of PP-SPSD/GDA*
  Tel: (855) 12336934
- *Mr Heng Chhunhy, Deputy Director of PP-SPSD/GDA*
  Tel: (855) 12954963
  #56B, Road 365, Teuk Laok III, Tuolkok, Phnom Penh, Cambodia

Pesticide Registration (Pesticide Regulatory Agency)

Department of Agricultural Legislation (DAL)

Mr Uk Siphan, Director

Ministry of Agriculture, Forestry and Fisheries (MAFF)
No. 200, Preah Norodom Blvd., Sangkat Tonle Basak, Khan Chamkarmon,
Phnom Penh, Cambodia
Tel: (855) 12807806

Bureau of Agricultural Materials Standards (BAMS) of DAL

Mr Chea Chan Veasna, Chief Office

No. 200, Preah Norodom Blvd., Sangkat Tonle Basak, Khan Chamkarmon,
Phnom Penh, Cambodia
Tel: (855) 12841867

Pesticide Management (Technical Adviser to MAFF for Pesticide evaluation)

1. Plant Protection, Sanitary and Phytosanitary Department (PP-SPSD)
   - *Dr Preap Visarto, Acting Director of PP-SPSD/GDA*
     Tel: (855) 11622916
   - *Dy Sam An, Deputy Director of PP-SPSD/GDA*
     Tel: (855) 12336934
   - *Mr Heng Chhunhy, Deputy Director of PP-SPSD/GDA*
     Tel: (855) 12954963
     #56B, Road 365, Teuk Laok III, Tuolkok, Phnom Penh, Cambodia

2. National Agricultural Lab of GDA
   - *Mrs Um Vannary, Director of NAL/GDA*
     Tel: (855) 12960351
   - *Mr Loan Socheata, Senior of Pesticide Lab of NAL/GDA*
     Tel: (855) 12871856
     #56B, Road 365, Teuk Laok III, Tuolkok, Phnom Penh, Cambodia

Other Useful Contact Addresses

Department of Agricultural Extension

Department of Agricultural Extension (DAE)
Mr Mak Soeun, Director
Ministry of Agriculture, Forestry and Fisheries (MAFF)
No. 200, Preah Norodom Blvd., Sangkat Tonle Basak, Khan Chamkarmon,
Phnom Penh, Cambodia
Tel: (855) 12826617

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

General Directorate of Agriculture (GDA/MAFF)
Dr Hean Vanhan, Deputy Director General in charge on plant protection, SPS and International Cooperation (Official NPPO)
Tel: (855) 12818216 / (855) 16818216
Fax: (855) 23216655
E-mail: heanvanhan@gmail.com

Dr Preap Visarto, Acting Director of PP-SPSD (Optonal NPPO)
Tel: (855) 11622916

Language(s): English
Contact point received: 16/12/2003 Source: NPPO correspondence

WTO SPS Enquiry Point

Cambodia Import Export Inspection and Fraud Repression Department (CAMCONTROL), Ministry of Commerce.
#50Eo, Street 144
Phnom Penh, Cambodia
Tel/Fax: (855) 23426166
E-mail: camcontrol@camnet.com.kh

ASEAN SPS Enquiry Point for MAFF

General Directorate of Agriculture (GDA/MAFF)
Dr Hean Vanhan, Deputy Director General in charge on plant protection, SPS and International Cooperation (Official NPPO)
Tel: (855) 12818216 / (855) 16818216
Fax: (855) 23216655
E-mail: heanvanhan@gmail.com

Rotterdam Convention (PIC) DNA Pesticides (P)

Bureau of Agricultural Materials Standards (BAMS) of DAL
Mr Chea Chan Veasna, Chief Office
Tel: (855) 12841867
No. 200, Preah Norodom Blvd., Sangkat Tonle Basak, Khan Chamkarmon,
Phnom Penh, Cambodia

Stockholm Convention (POP) National Focal Point (P)

Political Focal Point

Ministry of Environment
H.E. Mr Khieu Muth, Secretary of State
#48 Samdech Preah Sihanouk
Tonle Bassac, Chamkarmon
Phnom Penh, Cambodia
Tel: (855) 16 821 180
Fax: (855) 23 219 287
E-mail: moe@online.com.kh

Technical Focal Points

Department of Pollution Control
Mr Ken Choviran, Deputy Director
Ministry of Environment
#48 Samdech Preah Sihanouk
Tonle Bassac, Chamkarmon
Phnom Penh, Cambodia
Tel: (855) 12 856 818
Fax: (855) 23 987 880
E-mail: moepcd@online.com.kh

Basel Convention Competent Authority (CA) and Focal Point

Department of Pollution Control
Director
Ministry of Environment
48, Samdech Preah Sihanouk
Tonle Bassac, Chamkarmon
Phnom Penh, Cambodia
Tel: (855) 12 85 68 18
Fax: (855) 23 21 25 40 or 98 78 80
E-mail: moepcd@online.com.kh

Environmental Pollution Research
and Technology Management
Vice Chief
Department of Pollution Control
Ministry of Environment
48, Samdech Preah Sihanouk
Tonle Bassac, Chamkarmon
Phnom Penh, Cambodia
Tel: (855) 23 21 04 92
Fax: (855) 23 21 25 40 or 98 78 80
E-mails: choviran@hotmail.com or
moepcd@online.com.kh

Selected Country Statistics

Agricultural Population	9.6 million	Agricultural Land	3.8 million ha
GDP US$4 299 million	Agric. GDP: 35.6%	GNI per capita: US$380	Undernourishment: 33%
Main crops grown:			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

The information presented below is not updated and is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.

List of Key Legislation/Regulations/Rules

2003 Prakas (Ministerial Regulation) No. 522 on the creation and role of the office and organization under DAALI (Dated 30 September 2003): *DAALI responsible in Plant Quarantine Activity*.

2003 Sub-Decree (Government Regulation) No. 15 on the Phytosanitary Inspection (Dated 13 March 2003): *which appointed PPPSO of DAALI as Cambodian Plant Quarantine Authority (PQA)*.

2001 Sub-Decree No. 69 on the management of border check points (09/07/01): Plant and animal quarantine staff are not included in the team of border check point inspectors.

2004 Sub-Decree No. 6 on the management of international airport of the Kingdom of Cambodia (30/03/04): *Plant and animal quarantine staff are included in the team of border check point inspectors*.

(prep.) Sub-Decree on the management of the entry exit border check point at the sea and river port of the Kingdom of Cambodia: *Plant and animal quarantine staff may/will be included in the team of border check point inspectors*.

(prep.) Sub-Decree on the management of the entry-exit check point at the land border of the Kingdom of Cambodia: *Plant and animal quarantine staff may/will be included in the team of border check point inspectors*.

Web source for further information: –

Policies (regarding plant quarantine)	**Yes**	**No**
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?		x
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress) protect the agriculture production and biodiversity.		
Web source for further information: www.maff.gov.kh / www.ippc.int		

Organization of Plant Quarantine Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Pest Risk Analysis	MAFF/DAALI/PPPSO/Phytosanitary Section
National standards development	MAFF/DAALI/PPPSO/Phytosanitary Section
International notifications	MAFF/DAALI/PPPSO/Phytosanitary Section (IPPC/APPPC) MOC/CAMCONTROL/(for WTO SPS)
Import:	
Import permits	MAFF/DAALI/PPPSO/Phytosanitary Section
Import inspections	MOC/CAMCONTROL
Emergency action	MAFF/DAALI/PPPSO/Phytosanitary Section
Export:	
Phytosanitary certificates	MAFF/DAALI/PPPSO/Phytosanitary Section
Treatment of commodities	MAFF/DAALI/PPPSO/Phytosanitary Section Authorized pest control services

Infrastructure	Year: 2006
Number of plant quarantine officers authorized to inspect/certify	35
Total qualified personnel for plant pest risk analysis	5
Number of quarantine offices	
entry points (sea/air/land/mail = total)	0/1/0/0 = 1
post-entry plant quarantine containment facilities	0
other offices	0
Number of quarantine service diagnosis laboratories	1
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	2
Number of laboratories for insect/mite (arthropod) samples	2
Number of laboratories for bacteria samples	0
Number of laboratories for virus samples	0
Number of laboratories for fungus samples	2
Number of laboratories for mycoplasma samples	0
Number of laboratories for nematode samples	0
Number of laboratories for plant/weed samples	2
Number of laboratories for other pests (snail, slug, rodents, etc.)	0

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MAFF/DAALI
– surveillance	MAFF/DAALI/PPPSO/Plant Protection Section
– management	MAFF/DAALI/PPPSO/Plant Protection Section
– certification	MAFF/DAALI
List of target pest species and crops ISPM 4	Number of sites in 2008
List of target pest species and crops ISPM 10	Number of sites in 2008

Key Situation Indicators

International Trade		Year: 2006
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Cigarettes	Thailand, Singapore, China	
Dry mushroom	China, Singapore	
Main Export Plant Commodities	Main destination countries	
Anacardium occidentale (Cashew nut)	India, China	25
Arachis hypogaea (Groundnut)	Taiwan	15
Glycine max	Taiwan	5
Hevea brasiliensis (Rubber wood)	Republic of Korea, Malaysia, Taiwan, Thailand, China	47
Manihot esculenta (Tapioca starch)	Indonesia, Malaysia, China, Philippines	16
Nicotiana tabacum (Tobacco)	Indonesia, Singapore, Republic of Korea	13
Oriza sativa (rice) milled paddy rice	Australia, Belgium, France, Malaysia, New Zealand, USA, Thailand, Italy, Taiwan	27
Phellinus linteus (Dry Mushroom)	Republic of Korea	8
Piper nigrum (Black pepper)	UK	1

Sesamum indicum (Seasame)	China, Taiwan	11
Vigna radiata (Mungbean)	Taiwan	10
Zea mays (pigeon corn)	Hong Kong, Republic of Korea, Taiwan	26

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Agric. Productivity Improvement Project	World Bank	<$10 million	1999-2005
Phytosanitary Capacity Dev. Proj. Phase 1 Installation of NPD and SOM	NZAID	?	2001-2005
Phytosanitary Capacity Dev. Proj. Phase 2 Pest surveillance, diagnosis and PRA	NZAID AusAID	AU$29 089 + NZ$37 552	2007-2009
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Year: 2006
Number of import permits issued	19
Number of import inspections carried out	0
Number of emergency phytosanitary treatments taken on imports	0
Number notifications of non-compliance	0
Number of conventional phytosanitary certificates issued	0
Number of electronic phytosanitary certificates issued	287

Number of quarantine pests intercepted		Year: 2006
Top three commodity	Top three pest/commodity	# of interceptions

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests	2004	119	38	13
Number of regulated non-quarantine pests				
Number of regulated import articles		27 plant genera		
Website for the above information: –				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)	0	0	0
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
• National Phytosanitary Database have been set up (NZAID) • Capacity building for staffs on pest surveillance, pest list (entomology and plant pathology) (AusAID: SPS capacity building for ASEAN; NZAID II) • 2004 Sub-Decree No. 6 on the management of international airport of the Kingdom of Cambodia (30/03/04): *Plant and animal quarantine are included in the member of border-check point inspectors*.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
• No Plant Quarantine Check point at all river-port, seaport and entry-exit point of the land border. • Awareness on the advantages of Phytosanitary Inspection is still low amount related inspection agencies, exporters, shipping agencies, and policy-makers. • Plant Quarantine infrastructure is still remain a big gap below the ISPM, that is the main constrain in compliance with the importing country requirement.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade		x						
ISPM 02 Guidelines for pest risk analysis					x			
ISPM 03 Code of conduct for the import and release of exotic biological control agents					x			
ISPM 04 Requirements for the establishment of pest free areas				x				
ISPM 05 Glossary of phytosanitary terms		x						
ISPM 06 Guidelines for surveillance					x			
ISPM 07 Export certification system						x		
ISPM 08 Determination of pest status in an area					x			
ISPM 09 Guidelines for pest eradication programmes					x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites				x				
ISPM 11 Pest risk analysis for quarantine pests					x			
ISPM 12 Guidelines for phytosanitary certificates						x		
ISPM 13 Guidelines for the notification of noncompliance and emergency action				x				
ISPM 14 The use of integrated measures in a systems approach for pest risk management					x			
ISPM 15 Guidelines for regulating wood packaging material in international trade				x				
ISPM 16 Regulated non-quarantine pests: concept and application				x				
ISPM 17 Pest reporting					x			
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure				x				
ISPM 19 Guidelines on lists of regulated pests					x			
ISPM 20 Guidelines for a phytosanitary import regulatory system				x				
ISPM 21 Pest risk analysis for regulated non-quarantine pests				x				
ISPM 22 Requirements for the establishment of areas of low pest prevalence				x				
ISPM 23 Guidelines for inspection					x			
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures				x				
ISPM 25 Consignments in transit				x				
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)				x				
ISPM 27 Diagnostic protocols for regulated pests				x				
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								

Comments/Constraints
- No enough capacity to implement;
- No infrastructure
- No supporting

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

The information presented below is partially updated (highlighted in grey). Otherwise, it is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

2003 Sub-Decree (Government Regulation) No. 15 on the Phytosanitary Inspection (Dated 13 March 2003): *the only one legislation on plant quarantine which give the obligation to plant quarantine authority to conduct the pest surveillance and take the eradication activity in case of new invaded exotic pest*.

Web source for further information: –

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?		x
National strategy to control migratory or periodically occurring pests?		x
National strategy to eradicate serious newly invaded exotic pests?		x
Other policies: (e.g. subsidies, etc.)		
Web source for further information: –		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	MAFF/GDA
Surveillance	MAFF/DGA/PP-SPSD + CARDI
Control	MAFF/DGA/PP-SPSD
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	MAFF/GDA
Surveillance	MAFF/DGA/PP-SPSD
Control	MAFF/DGA/PP-SPSD
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MAFF/GDA
Surveillance	MAFF/DGA/PP-SPSD
Control/eradication	MAFF/DGA/PP-SPSD
Reporting to bilateral or international organizations	MAFF/DGA/PP-SPSD

Infrastructure	Year: 2006
Number of designated staff for **surveillance** of field pests of national importance	25
Number of designated staff for s**urveillance** of migratory and periodically occurring pests	5
Number of designated staff for **surveillance** of invasive species	4
Number of designated staff for **control** of field pests of national importance	
Number of designated staff for **control** of migratory and periodically occurring pests	
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: 2006			
Total number for year: 2005 and before	2		
Total number on record	2		

Eradication or internal quarantine actions taken against economically important species			
Name of species	*Brontispa longissima*		
Year of first discovery	2001		
Passway	coconut and seedling import from Viet Nam		
Location of first discovery	The provinces near Viet Nam border		
Area affected [ha]	around 75% of Palm		
Area treated [ha]	2 provinces near Viet Nam border		
Control method	Raise and release the Ascecodes hispinarum		
Expenditures	support by AusAID through FAO		

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	BPH	Golden snail	
Year of outbreak	2003	2005	
Area affected [ha]	22 500		
Estimated damage US$			
Area treated by government [ha]			
Expenditures by government [US$]	chemical	Mechanical	
Control method			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

- Four staffs of PPPSO have been trained by SPS of AusAID project on basic of pest surveillance (entomology and plant pathology);
- Have ability to raise the Asecodes hispinarum as the parasite to coconut beetle (Brontispa longissima)

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

- No Plant Quarantine Check point at all entry-exit point of the border, It is a big risk to new invade species;
- Plant Quarantine infrastructure is still remain a big gap below the ISPM , that is the main constrain in compliance with the importing country requirement.

IV. PEST MANAGEMENT

The information presented below is partially updated (highlighted in grey). Otherwise, it is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.

List of Key Legislation/Regulations/Rules for Pest Management

–

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?		x
Is pest management extension separate from general extension?		
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MAFF/DGA
Pest management research	MAFF/DGA
Control recommendations	MAFF/DGA
Pest management extension	MAFF/DGA/PP-SPSD
IPM training	MAFF/DGA/Natl. IPM Programme
GAP training	MAFF/DGA

Infrastructure	Year:
Number of technical officers for pest management	44
Number of central, regional, provincial or state offices	24
Number of district and village level field offices	
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	~200+~300 farmers
Number of government biocontrol production/distribution facilities	0
Number of government biopesticide production/distribution facilities	0
Number of general extension staff involved in pest management	
Number of designated plant protection technical officers for extension	

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* **National IPM Programme**, #10, Monireth St., Tuol Svay Prey II, Phnom Penh, Cambodia	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?: Rice, Vegetables*	x	
Does the country have specific IPM research programmes? *If yes, in which crops?:*		x

Does the country have specific GAP extension programmes? *If yes, in which crops?:*		x
Does the country have specific GAP research programmes? *If yes, in which crops?:*		x

Market shares (estimated value, volume or area under control)	**Year:**
Size of chemical pest control market	
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop			
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Community IPM	FAO + donors		-2002
Agric. Productivity Dev. Proj.	World Bank	$1.46 M	2000-
	DANIDA	$4.5 M	2000-2005
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Year:**
Number of farmers trained in IPM during the year	
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented:	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

The information presented below is partially updated (highlighted in grey). Otherwise, it is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.

List of Key Legislation/Regulations/Rules

1998 Sub-Decree on Standards and Management of Agricultural Materials. The Prime Ministers signed this Sub-Decree on 28 October 1998 (Pesticide management in Cambodia was clearly mentioned in Chapter III "Pesticides" of the above Sub-Decree (Article 11-24).

1998 Sub-Decree (No. 69) on Standard and the Management of Agricultural Materials issued 28 October 1998 contains 14 articles mentioning the pesticide management procedures.

1999 Ministerial declaration (No. 038) on the creation of the Bureau of Agricultural Material Standard issued 21 January 1999.

2002 Ministerial guideline (No. 245) on the implementation of Sub-Decree No. 69 on the Standard and the Management of Agricultural Materials issued 21 October 2002.

2003 Ministerial declaration (No. 064) on Formats of Application Forms relating to Agricultural Materials issued 27 February 2003.

2003 Ministerial declaration (No. 522) on the Mandate of the Department of Agronomy and Agricultural Land Improvement issued 30 September 2003.

2003 Ministerial declaration (No. 598) on the Lists of Pesticide in Cambodia issued 15 December 2003.

2004 Ministerial declaration (No. 204) on Amendment of Declaration No. 064 issued 12 July 2004.

2004 Mutual declaration (No. 02/04) between MAFF and MoJ on Formats and Police of Justice for DAL/MAFF issued 26 October 2004

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		x
Have you ratified the Rotterdam (PIC) Convention?		x
Have you ratified the Stockholm (POP) Convention?		x
Have your ratified the Basel Convention? (hazardous wastes)		x
Have your ratified the Montreal Protocol? (MeBr phasing-out)		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?		
Have you adopted Good Laboratory Practices (GLP)?		
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?		
Do you require data on product equivalence for generic registration?		
Do you conduct country-specific risk assessments for…		
occupational risks?		x
consumer risks?		x
environmental risks?		x

Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		x
Do you accept evaluation results from other countries?	x	
Do you accept field studies conducted in other countries?		x
Do you require environmental fate studies?		x
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	MAFF/DAL + DGA
Registration	MAFF/DAL/BAMS
Licensing of shops	MAFF/DAL/BAMS
Licensing of field applicators	
Enforcement/inspections	MAFF/DAL/BAMS
Testing of pesticide efficacy	MAFF/DGA/PP-SPSD
Development of pesticide use recommendations	MAFF/DGA/PP-SPSD
Safe use training/extension	MAFF/DGA/PP-SPSD and MAFF/DAE
Food residue monitoring	MAFF/DGA/PP-SPSD
Environmental monitoring	MAFF/DGA/PP-SPSD
Health monitoring	
Other Stakeholders:	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	

Infrastructure	Year: 2006
Number of registration officers	25
Number of enforcement officers	
Number of department quality control laboratories	1
Number of quality control laboratory personnel	
Number of department residue analysis laboratories	1
Number of residue laboratory personnel	

Key Situation Indicators

Pesticide Trade:	Tons	US$ '000 Value
Imports	39	
Manufacture		
Export		
Domestic Use/Sales		
Pesticide Use Profile:	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture	198	226
Chem. Insecticides	73%	
Chem. Fungicides	3%	
Chem. Herbicides	8%	
Chem. Others: e.g. molluscicide, acaricide	15%	

Other e.g. Avamectrin, Bt, Neem		
Other purposes		
TOTAL		

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance? *Note: Unknown*		
Do you have a list of pesticides under close observation for problems		
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?		x
Do you have a system to monitor pesticide residues in food?		x
Do you have a system to monitor pesticide residues in the environment?		x
Do you have significant problems of environmental contamination from pesticides? *Note: Unknown*		
Do you have data on pesticides effects on wildlife and ecosystems? *Note: Unknown*		
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?		x
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____	x	
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Year:	
	a.i.*	Trade Name
Number of registered pesticide products		
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)		
Number of restricted-use pesticides/formulations		
Number of banned pesticides		
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year		
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
The existing system is not effective to manage the pesticide import and distribution in the country

VI. ADDITIONAL ISSUES OF INTEREST

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.4 CHINA, PEOPLE'S REPUBLIC OF

I. GENERAL INFORMATION

Overall Executive Summary

China has made steady progress in all areas of plant protection during the period from 2007-2008. The Plant Protection Office was established under the Ministry of Agriculture (MOA) in 2008 in order to enhance the leadership in plant protection. The list of plant quarantine pests was revised and approved in 2007, based on the pest risk analysis and the principle of ISPM 19. A number of regulations and technical specifications/standards have been formulated in the field of plant quarantine pest forecasting and pest management.

Over 2 600 pest species were intercepted in 390 000 lots of import cargoes, including 150 dangerous species in 20 000 cases and the other 2 450 varieties in 370 000 cases. These cases involved 170 countries and regions. The non-compliance information was notified to relevant countries through bilateral and multilateral channels.

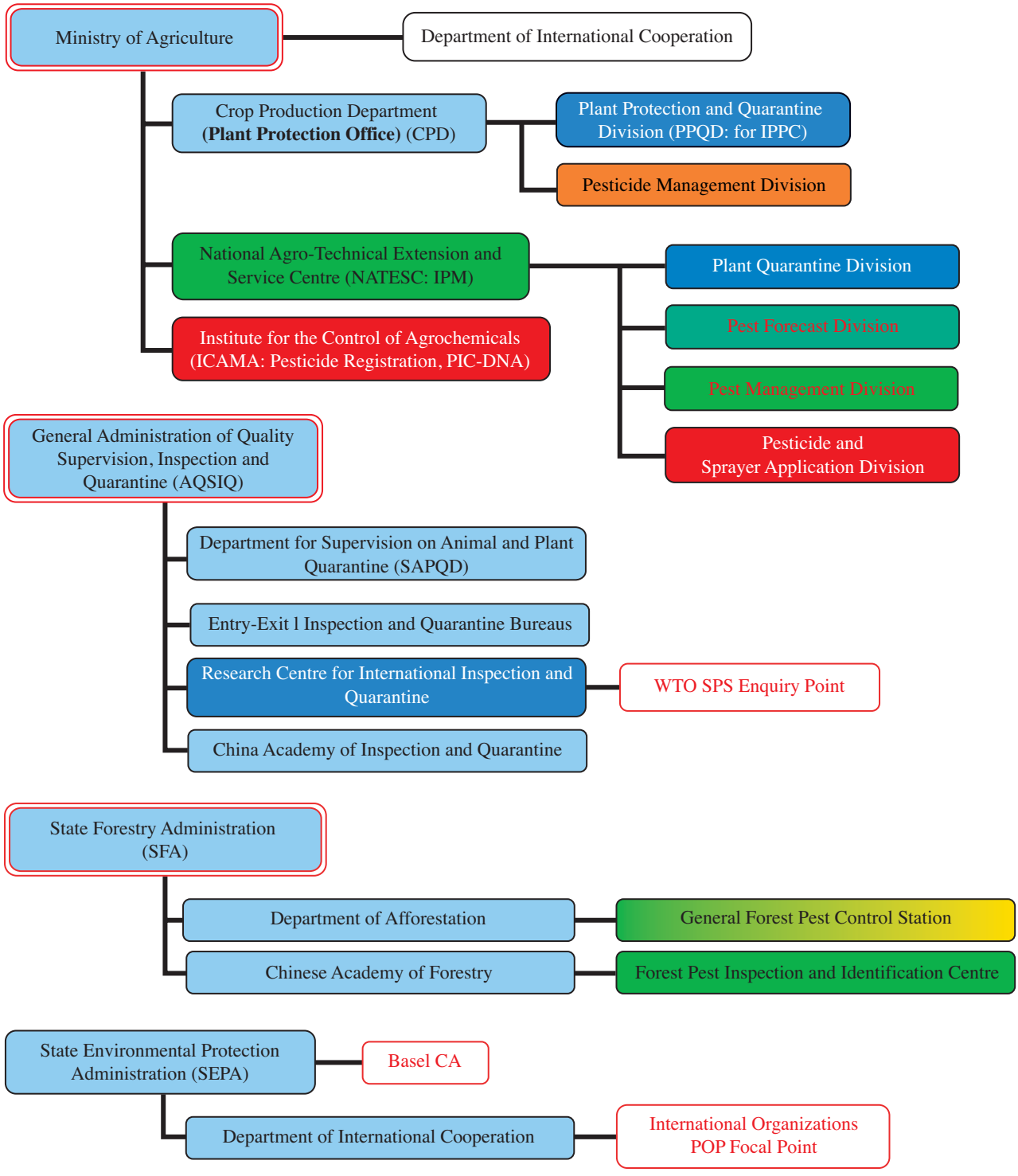
China's Crop Pests Management Information System was also established. Pest free areas (PFA) for codling moth in 9 provinces, such as Gansu, Shaanxi and Shandong and PFA for fruit fly in Chongqing were set up. The pest information about locust, migratory rice pests, rice borer, rice blast, wheat stripe rust, meadow moth were forecasted and promulgated through TV programmes.

A large number of farmer training programmes and prevention activities were organized. As a result, large-scale outbreaks of major crop pests were effectively contained.

Meanwhile, China hosted the 25th session of APPPC in Beijing in August 2007. The country's experts took part in setting and revising relevant international and regional standards for phytosanitary measures, drafting 2 APPPC regional phytosanitary standards, as well as setting up bilateral consultation mechanism for phytosanitary issues with many countries.

During the period from 2007-2008, China also provided many countries with pest information for conducting relevant risk analysis, implementing international phytosanitary measures issued by IPPC and phytosanitary standards in Asian and the Pacific region.

Plant Protection Organization Chart



Important Contact Addresses

Responsible Ministry

Ministry of Agriculture (MOA)
Mr Dun Niu, Deputy Minister
No. 11 Nongzhanguan Nanli, Beijing, P.R. China 100026
Tel: 86-10-6419 2328
Fax: 86-10-6500 3621
Website: www.agri.gov.cn

Responsible Department

Crop Production Department, MOA
Mr Puguo Zhou, Deputy General Director
No. 11 Nongzhanguan Nanli, Beijing, P.R. China 100026
Tel: 86-10-6419 2864
Fax: 86-10-6419 3376
E-mail: ppq@agri.gov.cn
Website: www.agri.gov.cn

Address for nominations

International Cooperation Department
Ms Xiangjun Yao, Deputy General Director
Ministry of Agriculture
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Tel: 86-10-6419 2400
Fax: 86-10-6500 4635
E-mail: yaoxj@agri.gov.cn
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Operational Offices:

Plant Protection and Plant Quarantine

Plant Protection & Quarantine Division
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Websites: www.agri.gov.cn
www.ppq.gov.cn

Forestry Plant Quarantine

Pests Management Division
Ms Xiaohua Wang, Division Director
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Tel: 86-10-8423 8512
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E-mail: wangxiaohua@forestry.gov.cn
Website: www.forestry.gov.cn

Import/Export Plant Quarantine

Department for Supervision on Animal and Plant Quarantine
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General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)
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E-mail: luhoulin@aqsiq.gov.cn
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Plant Quarantine Division
Mr Yiyu Wang, Division Director
Department for Supervision on Animal and Plant Quarantine
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Surveillance, Pest Outbreaks and Invasive Species Management

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National Agro-technical Extension and Service Center (NATESC)
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Mr Enlin Zhu, Division Director
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Mr Fuxiang Wang, Division Director
Plant Quarantine Division
National Agro-technical Extension and Service Center (NATESC)
Ministry of Agriculture
No. 20 Maizidian Street. Chaoyang District, Beijing, P.R. China 100026
Tel: 86-10-5919 4524
Fax: 86-10-5919 4726
E-mail: zhongtianrun@agri.gov.cn
Website: www.natesc.gov.cn

Pesticide Registration

Institute for the Control of Agrochemicals (ICAMA)
Mr Yanqiu Zhang, Director
Ministry of Agriculture
No. 22 Maizidian Street, Chaoyang District, Beijing, P.R. China 100026
Tel: 86-10-5919 4055
Fax: 86-10-6502 5929
E-mail: wangyh@agri.gov.cn
Website: www.chinapesticide.gov.cn

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Plant Protection and Quarantine Division
Ms Xiaoling Wu, Division Director
Crop Production Department, Ministry of Agriculture
No. 11 Nongzhanguan Nanli
Beijing, P.R. China 100026
Tel: 86-10-5919 2804
Fax: 86-10-5919 3376
E-mail: ppq@agri.gov.cn
Website: www.ppq.gov.cn
Language(s): Chinese; English
Contact point received: 10/10/2004
Source: NPPO Correspondence

WTO SPS Contact Point

Research Centre for International Inspection and Quarantine Standards and Technical Regulations of the People's Republic of China
WTO SPS Enquiry Point
General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)
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Tel: 86-10-8226 2432
Fax: 86-10-8226 2449
E-mail: sps@aqsiq.gov.cn

Rotterdam Convention (PIC) DNA Pesticides (P)

Institute for the Control of Agrochemicals (ICAMA)
Ms Yong-zhen Yang, Deputy Director-General (until December 2006)
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E-mail: yangyongzhen@agri.gov.cn

Stockholm Convention (POP) National Focal Point (P)

Division of International Organizations
Mr Yue Ruisheng, Deputy Director General
Department of International Cooperation
State Environment Protection Administration
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Basel Convention Competent Authority (CA)

State Environmental Protection Administration
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Fax: 86-10-6655 6252
E-mails: zhong.bin@sepa.gov.cn or wangqian@sepa.gov.cn

Selected Country Statistics

Agricultural Population	745 million	Agricultural Land	123.4 million ha
GDP US$2 560 billion	Agric. GDP: 12.6%	GNI per capita: US$1 758	Undernourishment: 1.7%
Main crops grown: Rice, Wheat, Maize, Cotton			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Executive Summary

During the period from 2007-2008, a number of regulations and technical specifications/standards were formulated. These included, among others, the Regulations on the Quarantine and Supervision of Wood Packaging Materials for Entry/Exit Cargo, the Regulations on the Inspection, Quarantine and Supervision of Entry and Exit Fruits, quarantine protocol for the domestic movement of agricultural plants and plant products, plant quarantine protocol for propagating tubers and seedlings of sweet potato in producing areas. In addition, the People's Republic of China's new list of 435 quarantine pests of entry was issued in 2007, based on pest risk analysis.

Meanwhile, more national inputs have been provided for the control of plant quarantine pest and the infrastructure construction of plant quarantine. Combined operations against major plant quarantine pests have been conducted by relevant provinces. Pest free areas (PFA) for codling moth are on the way to be established. The central government has helped 100 counties to build plant pest early warning and control stations as well as quarantine and testing labs. Efforts have also been made to provide technical trainings for plant quarantine technicians.

In 2007, the 25th session of APPPC was hosted in Beijing, China. A number of Chinese experts were invited by IPPC/SPS/APPPC/APEC or sent by the Chinese government to participate in setting and revising relevant international and regional standards for phytosanitary measures. Two APPPC regional phytosanitary standards were drafted. New ISPMs and RSPMs of Asia and the Pacific region during 2007-2008 were implemented. Bilateral consultation mechanism for phytosanitary issues with many countries was found and a large amount of pest information was provided for counterparts in conducting relevant risk analysis.

During 2007-2008, the pest interception cases in the import cargoes reached a new record height of 390 000. Moreover, 2 600 pest species were found. These included 150 dangerous species in 20 000 cases and the other 2 450 varieties in 370 000 cases. These cases involved 170 countries and regions. China has notified relevant countries of the non-compliance through bilateral and multilateral channels.

List of Key Legislation/Regulations/Rules

1991 Law of the PRC on the entry and exit animal and plant quarantine
1992 Regulation on Plant Quarantine
1996 Regulation for the implementation of the entry and exit animal and plant quarantine

Web sources for further information: www.agri.gov.cn, www.aqsiq.gov.cn

Policies (regarding plant quarantine)	Yes	No
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?		x
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress):		
Web sources for further information: http://www.aqsiq.gov.cn; http://www.agri.gov.cn		

Organization of Plant Quarantine Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Analysis	MOA/CPD/NATESC AQSIQ/SAPQD SFA/FD/PMD
National standards development	MOA/CPD/NATESC AQSIQ/SAPQD SFA/FD/PMD
International notifications	AQSIQ/SAPQD
Import:	
Import permits	AQSIQ/SAPQD MOA/CPD/NATESC SFA/FD
Import inspections	AQSIQ/SAPQD
Emergency action	MOA/CPD/NATESC SFA/FD/PMD AQSIQ/SAPQD
Export:	
Phytosanitary certificates	AQSIQ/SAPQD
Treatment of commodities	AQSIQ/SAPQD

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify	30 000
Total qualified personnel for plant pest risk analysis	200
Number of quarantine offices	5 557
entry points (sea/air/land/mail = total)	598
post-entry plant quarantine containment facilities	10
other offices	4 949
Number of quarantine service diagnosis laboratories	63
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	400
Number of laboratories for insect/mite (arthropod) samples	many
Number of laboratories for bacteria samples	many
Number of laboratories for virus samples	many
Number of laboratories for fungus samples	many
Number of laboratories for mycoplasma samples	many
Number of laboratories for nematode samples	many
Number of laboratories for plant/weed samples	many
Number of laboratories for other pests (snail, slug, rodents, etc.)	many

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MOA/CPD/PPQD
– surveillance	MOA/NATESC/Plant Quarantine Division
– management	MOA/CPD/PPQD
– certification	MOA
List of target pest species and crops ISPM 4	Number of sites in 2008
Codling moth on apples	9 provinces
Fruit fly on citrus	1 province
List of target pest species and crops ISPM 10	Number of sites in 2008

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Soybean	USA, Brazil, Argentina	26.59 million
Wheat	Canada, Australia, USA	3.51 million
Tapioca	Thailand, Viet Nam, Indonesia	3.33 million
Main Export Plant Commodities	Main destination countries	
Corn	Japan, Korea, Southeast Asia	8.61 million
Fruit	EU, Southeast Asia, North America	2.04 million

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	19 000
Number of import inspections carried out	
Number of emergency phytosanitary treatments taken on imports	
Number notifications of non-compliance	
Number of conventional phytosanitary certificates issued	1 360 000
Number of electronic phytosanitary certificates issued	0

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodities	Top three pest/commodity	# of interceptions
Log	*Xyleborus sp*	1 950
	Heterobostrychus aequalis	1 038
	Ips sp. (non-Chinese species)	32
Soybean	*Callosobruchus maculatus*	4 136
	Bean pod mottle virus	42
	Centhrus tribuloides	20
Fruit	*Bactrocera dorsalis*	2 014
	Planococcus lilacius	808
	Agrilus mali	42

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests	2007	152	242	41
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: www.agri.gov.cn www.aqsiq.gov.cn				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			
Web source for further information: http://www.aqsiq.gov.cn			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Updated the quarantine pest list of entry (2007) Updated the domestic quarantine pest list Finished 3 modern post-entry plant quarantine containment facilities
Main Constraints (personnel, infrastructure, administrative, operational, raining, etc.)
New quarantine staff must be trained before engaged

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	2001
ISPM 02 Guidelines for pest risk analysis			x				x	2001
ISPM 03 Code of conduct for the import and release of exotic biological control agents		x				x		2003
ISPM 04 Requirements for the establishment of pest free areas		x			x			2004
ISPM 05 Glossary of phytosanitary terms			x				x	2005
ISPM 06 Guidelines for surveillance			x				x	2000
ISPM 07 Export certification system			x				x	1998
ISPM 08 Determination of pest status in an area			x				x	2001
ISPM 09 Guidelines for pest eradication programmes			x				x	2002
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	2004
ISPM 11 Pest risk analysis for quarantine pests			x				x	2002
ISPM 12 Guidelines for phytosanitary certificates			x				x	2003
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	2004
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x				x	2003
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	2005
ISPM 16 Regulated non-quarantine pests: concept and application			x		x			2006
ISPM 17 Pest reporting			x				x	2004
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x			x			2003
ISPM 19 Guidelines on lists of regulated pests			x				x	2005
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	2004
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x			x		2005
ISPM 22 Requirements for the establishment of areas of low pest prevalence		x			x			2006
ISPM 23 Guidelines for inspection			x				x	2005
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x				x	2005
ISPM 25 Consignments in transit			x				x	2006
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x		x			2006
ISPM 27 Diagnostic protocols for regulated pests			x			x		2006
ISPM 28 Phytosanitary treatments for regulated pests			x				x	2007
ISPM 29 Recognition of pest free areas and areas of low pest prevalence			x			x		2008
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			x			x		2008
ISPM 31 Methodologies for sampling of consignments			x				x	2008
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Executive Summary

During the period from 2007-2008, pest surveillance and monitoring were strengthened by Chinese government in high risk areas such as coastal areas, border regions, airports, seaports, and distribution centres of imported agricultural products.

The nationalwide surveillance of the fruit fly programme was carried out continuously. National or industry standards related to the plant quarantine pests surveillance had been formulated. The forecasting methods for main crop pests had also been sorted and unified. In addition, the TV programmes on the pest forecasting and preventing technology were broadcasted by 31 provinces, covering more than 1 100 counties.

The management of the pest data collection, transmission and utilization had improved, thanks to the establishment of the China Crop Pests Management Information System. Meanwhile, large-scale training events for farmers on pest prevention were organized. As a result, serious harmful pests such as locust, migratory rice pests, rice borer, rice blast, wheat stripe rust, and meadow moth, etc. were effectively suppressed.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

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Web source for further information: –

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.) In 2007-2008, the amount of $50 million RMB Yuan were subsidized from national government for control of migratory and grain pests		
Web source for further information: www.agri.gov.cn		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	MOA/CPD/PPQD, NATESC, SFA MOA/NATESC + Provincial Plant Protection Stations
Surveillance	MOA/NATESC/Pest Forecast Division, SFA
Control	MOA/NATESC/Pest Management Division, SFA
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	MOA/DCP/PPQD, NATESC, SFA
Surveillance	MOA/NATESC/Pest Forecast Division, SFA
Control	MOA/NATESC/Pest Management Division, SFA
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MOA/DCP/PPQD, NATESC, SFA
Surveillance	MOA/NATESC/Plant Quarantine Division, SFA
Control/eradication	MOA/NATESC/Plant Quarantine Division, SFA

Reporting to bilateral or international organizations	MOA/DCP/PPQD, AQSIQ/SAPQD/PQD

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	15 351
Number of designated staff for **surveillance** of migratory and periodically occurring pests	15 351
Number of designated staff for **surveillance** of invasive species	8 692
Number of designated staff for **control** of field pests of national importance	29 512
Number of designated staff for **control** of migratory and periodically occurring pests	29 512
Number of designated staff for **eradication** of invasive species	8 692

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: 2007	1	1	
Total number for year: 2008	1		
Total number on record	2	1	

Eradication or internal quarantine actions taken against economically important species			
Name of species	CGMMV		
Year of first discovery	2006		
Passway	Seed		
Location of first discovery	LiaoNing Gaizhou		
Area affected [ha]	10		
Area treated [ha]	200		
Control method	Destroy		
Expenditures	1 million US$		

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	BPH	Rice Leaf Folder	The meadow moth
Year of outbreak	2007	2007	2008
Area affected [ha]	15.7 million	26.2 million	21.5 million
Estimated damage $	210 million tons		NA
Area treated by government [ha]	NA	NA	NA
Expenditures by government [$]	NA	NA	NA
Control method	Pesticides	Pesticides	Agricultural treatments, Pesticides
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Executive Summary

During the period from 2007-2008, outbreaks of some pests on major crops occurred in responses to global warming, significant changes in cropping systems, climate conditions, and crop varieties. Among them, the locusts, lawn moth (*Crambus bolterellus*), wheat stripe rust, rice borers, rice brown plant hopper (*Nilaparavata lugans*), rice leaf folders (*Chaphalocrocis medinalis*), and cabbage diamond back moths (*Plutella xylostella*) were the most severe and destructive ones.

The locusts damaged 1.54 million hectares in 2007 and 1.56 million hectares in 2008 respectively. Lawn moth damaged about 6.83 hectares of farm lands and pastures in 2008. The outbreaks of rice stem borers have been occurring with more serious damage over the past ten years. The outbreaks damaged 19.3 million hectares in 2007 and 19.42 million hectares in 2008 respectively. In the case of BPH, the infested area grew to 33.6 million hectares in 2007. The total area infested by major vegetable pests amounted to 29 million hectares in 2007 and 37 million hectares in 2008 respectively.

Regional actions were coordinated by the National Agro-technical Extension and Service Center (NATESC) of the Ministry of Agriculture for controlling migratory pests-locusts, lawn moth, rice brown hopper, rice leaf roller and regionally epidemical diseases-wheat stripe rust, rice blast and rice sheath blight, etc.

The annual control acreages of major crop pests reached 543.5 million hectares in 2007 and 532.7 million hectares in 2008 respectively.

National IPM Programmes coordinated by NATESC have been supporting the implementation of key IPM technologies in major crops and major pests. Biological and ecological control measures such as using microorganisms and reclaiming locust habitats were extensively promoted in recent years.

The IPM technologies on rice were well developed and widely applied in China. Seed treatments with fungicides and insecticide were commonly used by farmers to prevent the infestations of rice seedling diseases and insects. Biodiversity strategies were implemented in about 6.67 million hectares annually for rice blast management in 2007 and 2008. Light trips were extended to 0.7 million hectares of rice fields to kill moths of rice borers and leaf folders.

During the period from 2007-2008, wheat IPM strategies focused on prevention and ecological approaches. In the regions where the pathogens of wheat stripe rust can over-winter and over-summer, the percentage of seed coating or treatment with fungicides was increased to over 80 percemt in 2007.

In corn, biological technologies such as the use of *Beauveria bassiana* for killing over-winter larvae of corn borer, artificial release of *Trichogramma* spp. in fields have been extended to above 2.5 million hectares since 2007.

In cotton, the transgenic Bt cotton has been expanded to over 2.4 million hectares in China.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

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Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?		x
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: http://www.ppq.gov.cn		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MOA/CPD/PPQD, NATESC, SFA
Pest management research	MOA/NATESC, SFA
Control recommendations	MOA/NATESC, SFA
Pest management extension	MOA/NATESC, Plant protection station at county, prefecture and provincial levels. SFA
IPM training	MOA/NATESC, Plant protection station at county, prefecture and provincial levels. SFA
GAP training	Plant protection station at county, prefecture and provincial levels.

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	29 512
Number of central, regional, provincial or state offices	600
Number of district and village level field offices	10 865
Number of field/extension agents for pest management advice	19 026
Number of field/extension agents trained in IPM-FFS facilitation	1 036
Number of government biocontrol production/distribution facilities	NA
Number of government biopesticide production/distribution facilities	NA
Number of general extension staff involved in pest management	29 512
Number of designated plant protection technical officers for extension	29 512

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* NATESC, MOA	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?:* Vegetables and Fruits	x	
Does the country have specific IPM research programmes? *If yes, in which crops?:*		x
Does the country have specific GAP extension programmes? *If yes, in which crops?: Apple*	x	
Does the country have specific GAP research programmes? *If yes, in which crops?:*		x

Market shares (estimated value, volume or area under control)	**Years: 2007-2008**
Size of chemical pest control market	295.9 M ha
Size of biopesticides market	38.69 M ha
Size of biological control agents market	1.25 M ha

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop	Rice [2009]	Vegetables [2009]	Cotton [2009]
Name(s) of pest(s)	Rice borers, BPH, Leaf feeders, Rice blast, Sheath blight	Leaf miners, Caterpillars, DBM, White-flies, Soil diseases, Leaf diseases	Cotton bollworm, Aphids, Lygus bugs
Estimated crop loss	627 million tons	1 283 million tons	36.1 million tons
Affected area	11.93 million ha	26 million ha	2.64 million ha
Number of pesticide applications or amount of pesticide used	12.73 million ha	2.6 million ha	1.87 million ha
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
IPM-FFS in vegetables	FAO/Norway	450 000 US$	2003-2007
Purpose/Target of government follow-up programmes		Amount	Years (start-end)
Matching funds for IPM-FFS in vegetables and fruits		120 000 US$	2005-2008

Pest Management Extension	**Years: 2007-2008**
Number of farmers trained in IPM during the year	56 840
Number of IPM-FFS conducted during the year	189
Number of farmers trained in GAP standards during the year	NA
Area under IPM/low pesticide management [ha]	NA
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented: Rice, cotton, wheat, locusts	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Executive Summary

During the period from 2007-2008, in order to protect people's health and environment's safety, China has strengthened pesticide management.

China has repealed the registration and production certificates of five highly toxic organophosphorus pesticides including Methamidophos, Parathion-methyl, Parathion, Monocrotophos, Phosphamidon. The country also strictly prohibited the sale and application of this type of pesticides, encouraged and promoted the research and development of low-risk substitutes for highly toxic pesticides, implemented highly toxic pesticides replacement programme, enhanced the public awareness of safe pesticides application and choosing medium and low toxic pesticides. Importantly, it strengthened the quality examination of pesticides and surveillance of pesticides residues in food and environment.

China has revised and improved the approval system for pesticides registration. A number of rules and regulations have been formulated. These include the Measures for the Administration of Pesticide Labels and Instructions (Order of MOA, No. 8), the Decision on Amending the Measures for Implementing the Regulation on Pesticide Administration (Order of MOA, No. 9), the Revised Data Requirement for Registration of Pesticide (Order of MOA, No. 10), the Revision and Approval for Pesticide Name (MOA Proclamation No. 944), the Nomenclature for Pesticides (MOA Proclamation No. 945), and the Content of Active Ingredient for Pesticide (MOA Proclamation No. 946).

During the period from 2007-2008, China implemented the "Sino-German Cooperative Project on Pesticide Wastes Management" in collaboration with the German Government. The implementation of this project had a positive influence on the improvement of the pesticide management in China. Emphasis was placed on appropriate pesticide waste disposal technologies and methods that conformed to the situation of China. At the same time, China also collaborated with the United States of Environment Protection Agency on the Continued Good Laboratory Practice Standards Compliance Monitoring Project.

List of Key Legislation/Regulations/Rules

1982 **Pesticide Registration Regulation**
1989 Data Requirement of Pesticide Registration
1995 Pesticide Advertisement Inspection Measures (MOA and SA Industry & Commerce)
1997 **Regulation on Pesticide Administration**
1998 Implementation Rule of Regulation on Pesticide Administration (Min. Chem. Industry)
1999 Implementation Rule of Regulation on Pesticide Administration (MOA)
2007 Measures for the Administration of Pesticide Labels and Instructions (MOA)
2007 The Decision on Amending the Measures for Implementing the Regulation on Pesticide Administration (MOA).
2007 Revised Data Requirement for Registration of Pesticide (MOA).
2007 Revision and Approval for Pesticide Name (MOA).
2007 Nomenclature for Pesticides (MOA).
2007 Content of Active Ingredient for Pesticide (MOA).

Web source: www.chinapesticide.gov.cn

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:* *Note: Reduce the production of high toxic pesticides and persistence organic pollution pesticides*	Note	
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?		x
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?	x	
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		x
Do you accept evaluation results from other countries?		x
Do you accept field studies conducted in other countries?		x
Do you require environmental fate studies?	x	
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	National Legislative Bureau
Registration	MOA/ICAMA and ICAs
Licensing of shops	CAMTC/MOA
Licensing of field applicators	
Enforcement/inspections	AQSIQ, State Admin. for Industry and Commerce (SAIC), MOA
Testing of pesticide efficacy	State PPI, PPS
Development of pesticide use recommendations	MOA/ICAMA
Safe use training/extension	MOA/NATESC, + State PPS
Food residue monitoring	MOA
Environmental monitoring	MOA/ICAMA
Health monitoring	MOA/ICAMA
Other Stakeholders:	
Pesticide Industry Association	Crop Life China, China Pesticide Industry Assoc. China Pesticide Development and Application Assoc.
Civil Society Organizations (NGO, etc.)	

Infrastructure*	Years: 2007-2008
Number of registration officers	445 (ICAMA: 90)
Number of enforcement officers	20 000
Number of department quality control laboratories	62
Number of quality control laboratory personnel	510
Number of department residue analysis laboratories	56
Number of residue laboratory personnel	448
	Total: ~30 000

*only include the laboratories belonging to MOA

Key Situation Indicators

Pesticide Trade:	Tons	US$ '000 Value
Imports	56 500	171 000
Manufacture	584 000	3 719 000
Export	422 800	2 584 000
Domestic Use/Sales	350 000	1 200 000
Pesticide Use Profile:	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture	258 000	
Chem. Insecticides	53%	
Chem. Fungicides	10%	
Chem. Herbicides	25%	
Chem. Others: e.g. molluscicide, acaricide	12%	
Other: e.g. Avamectrin, Bt, Neem		
Other purposes		
TOTAL		

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance?	x	
Do you have a list of pesticides under close observation for problems	x	
Source for more information: www.chinapesticide.gov.cn		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?		x
Do you have significant problems of environmental contamination from pesticides?	x	
Do you have data on pesticides effects on wildlife and ecosystems?	x	
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?		x
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____	x	
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products	600	0
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)	150	0
Number of restricted-use pesticides/formulations	21	
Number of banned pesticides	18	
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year	600	
Number of quality control analyses conducted during year	15 000	
Number of food samples analyzed for pesticide residues during year	12 000	
Number of samples exceeding MRL	250	
Number of environmental samples analyzed for pesticide residues	1 000	

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation
1982, 2002	Methamidophos, Parathion-methyl, Parathion, Monocrotophos, Phosphamidon, Phorate, Isofenphos-methyl, Terbufos, Phosfolan-methyl, Sulfotep, Carbofuran, Demeton, Aldicarb, Ethoprophos, Phosfolan, Coumaphos, Fonofos, Isazofos, Fenamiphos (Banned use on fruit, vegetable, tea and herbal medicine)
1982	Phorate (Restricted for seed dressing)
1982	Carbofuran (Restricted for broadcasting and seed dressing)
	Pyrethroid insecticides (Banned use on paddy)
	Lindan (Restricted for wheat or in wastelands)
	Fenvalerate, Dicofol (Banned use on tea)

Pesticides Banned in Recent Years	
Year	Name of active ingredient
1970's	Arsena, Acetate, Mercury compounds, dieldrin, aldrin
1982	Fluoroacetamide
1983	BHC, DDT, Dibromochloropropane
1984	Ethylene dibromide
1986	Cyhexatin
1990	Chlordimeform (Promugated 1990 and enforced 1992)
1990	
1991	Tetramine, Silatrane
1995	Gliftor
1997	Nitrofen (Promulgated 1997, production banned 2000, use banned 2001)
2007	Methamidophos, Parathion-methyl, Parathion, Monocrotophos, Phosphamidon

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Sino-German Pesticide Quality Control Project	Germany Government	3 750 000 $	1995-2002
Sino-German Obsolete Pesticide Management Project	Germany Government	2 550 000 €	2004-2009
Sino-Dutch Minimize	Holland Government	2 849 461 €	2003-2007
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF INTEREST

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]
Cotton	3 542 000

2.5 REPUBLIC OF THE FIJI ISLANDS

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

The agriculture sector holds a lot of promise but Fiji has yet to realize its full potential. The sector is further challenged with the loss of sugar preferential price that affects the sugar industry.

The Cabinet on 18 January 2005 agreed on the reorganization of the Quarantine Department. A scoping study of the Department and audit of the Department's operations were carried out in the same year. The recommendations from the scoping study and the audit highlighted the need to reform the Department on areas of institutional strengthening to meet the SPS Agreement of the WTO.

The Charter recommendations highlight the following areas for reform:

- The review of the Quarantine Legislations;
- Training of officers;
- Improve facilities and equipment;
- Review and streamline current work practices;
- Operating instructions;
- Strengthen technical capacity;
- Communication;
- Awareness; and
- New organization structure for the statutory authority to be known as the Biosecurity Authority of the Fiji Islands (BAFI).

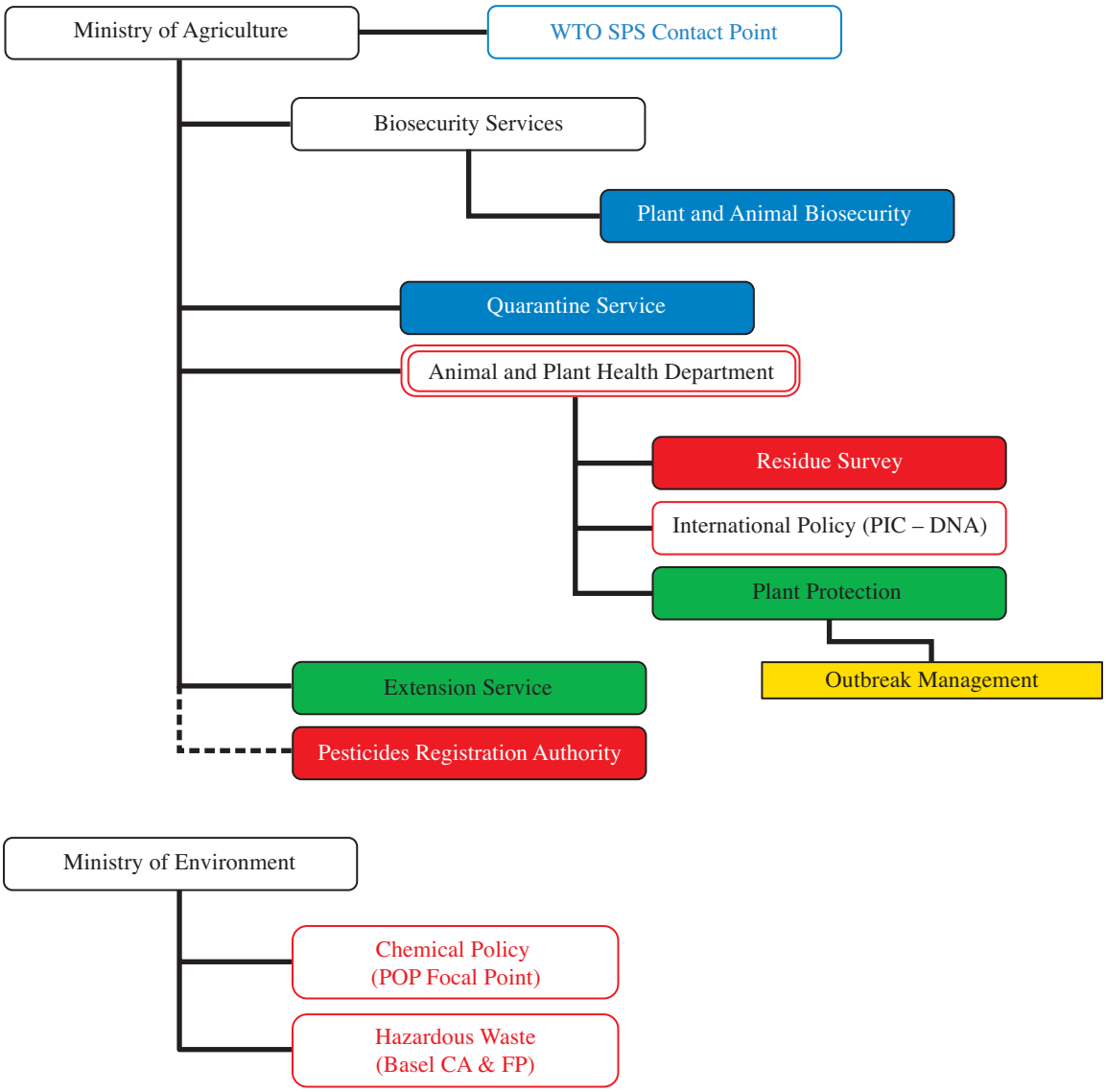
The reform exercise has been progressing slowly. However, the review of the legislation has been completed, awareness programmes for the public are ongoing, communication has improved in the last two years and a standard operational procedure manual has been finalized.

Currently in the pipeline, is the review of the organization structure and to be followed with the establishment of the Statutory Authority. The Authority will administer the Biosecurity Promulgation 2008 and fast-track the completion of the reform.

This reform will bring the plant and animal biosecurity under one administration and develop its facilities and equipment to facilitate its operations. The Authority will have its laboratory and technical expertise to conduct risk and pest assessment whilst the Ministry Research Laboratory to focus on the Ministry's laboratory needs and will assist BAFI on needs that are beyond the capacity of BAFI's laboratory.

The Government of the day is placing high priority on national security, putting biosecurity in the fore-front of its development plan. Fiji's biosecurity systems and services will continue to be developed, and we expect to fully administer the Biosecurity Promulgation 2008 when the Biosecurity Authority of the Fiji Islands is fully established in the year 2012.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

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National Plant Protection Organization (if different from Focal Point)

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Surveillance, Pest Outbreaks and Invasive Species Management (if handled by different agencies, give each contact address)

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Pesticide Registration

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Official International Contact Points

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WTO SPS Contact Point

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Rotterdam Convention (PIC) DNA Pesticides (P)

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Stockholm Convention (POP) National Focal Point (P)

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Basel Convention Competent Authority (CA) and Focal Point

–

Montreal Protocol Focal Point

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Selected Country Statistics

<table>
<tr><td colspan="2">Agricultural Population: Fiji's population is around 800 000 of which 50% or 400 000 are employed in the agricultural sector.</td><td colspan="2">Agricultural Land: Total land area for Fiji is 1.8 million hectares and only 16% is suitable for farming.</td></tr>
<tr><td>GDP: Fiji's economy grew at an average rate of 2% in the past five years. While growth has been positive the rate of economic growth was low.</td><td>Agric. GDP: Agriculture remains a major sector of the economy, accounting for 43%of Fiji's foreign exchange earnings.
It provides 50% of the country's total employment and contributes 19% to Fiji's GDP</td><td>GNI per capita: US$ xx</td><td>Undernourishment: xx %</td></tr>
<tr><td colspan="4">Main crops grown:</td></tr>
</table>

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

List of Key Legislation/Regulations/Rules

(year, title and possibly short description)

Fiji had reviewed its plant and animal quarantine laws and now have the Fiji Biosecurity Promulgation, 2008. The 2008 Promulgation is intended to:

- Replace the Plant Quarantine Act Cap 156, Animal Importation Act Cap 159 and the Animal (Contagious Diseases) Act Cap 160;
- Provide the Fiji Islands with a legislative foundation for action against the introduction of plant and animal pests and diseases;
- Enable the Fiji Islands to comply with its obligations to ensure that plant and animal diseases are not exported from the country into neighbouring countries; and
- Enable the establishment of the Biosecurity Authority of the Fiji Islands (BAFI) as a body corporate to replace the Fiji Quarantine and Inspection Division.

The main features of the Biosecurity Promulgation:

- The Promulgation establishes a regime to control the import and export of regulated pests and diseases;
- It provides powers to control outbreaks of regulated pests and diseases;
- Key administrative feature is the establishment of the Biosecurity Authority of the Fiji Islands (BAFI);
- The Authority will have its functions, prescribed service fees/charges and penalise/fines set out in the Promulgation; and
- The Promulgation contains administrative, miscellaneous and legal provisions, including enforcement procedures.

The Promulgation is divided into 13 Parts:

Part 1 deals with preliminary matters.
Part 2 sets out the administrative framework for implementing the Promulgation.
Part 3 sets out the principles of border biosecurity control.
Part 4 sets out the rules for in-coming and out-going vessels and aircrafts.
Part 5 establishes a regime for the control of incoming goods once they have been landed from a vessel or an aircraft.
Part 6 sets out the control over articles intended for export.
Part 7 sets out the rules relating to plants, animals or other articles in biosecurity quarantine for observation or treatment.
Part 8 defines the general powers of biosecurity officers under the Promulgation.
Part 9 sets out the powers of the Authority and biosecurity officers to control pests and diseases within the Fiji Islands.
Part 10 provides powers to deal with biosecurity emergencies in the Fiji Islands which cannot be dealt with under Part 9.
Part 11 sets out some ancillary administrative provisions needed to allow the Promulgation to function effectively.
Part 12 is concerned with enforcement of the Promulgation and specifies offences and penalties.
Part 13 contains a number of miscellaneous provisions for implementing the Promulgation.

Web source for further information: www.quarantine.gov.fj

Policies (regarding plant quarantine)	Yes	No
Does phytosanitary legislation cover domestic quarantine?	yes	
Does phytosanitary legislation cover import quarantine?	yes	
Does phytosanitary legislation cover export quarantine?	yes	
Does phytosanitary legislation cover living modified organisms?	part	
Is plant quarantine a separate organization from animal quarantine?		no
Other policy initiatives (under review/progress)		
Web source for further information: www.quarantine.gov.fj or www.agriculture.org.fj		

Organization of Plant Quarantine Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Assessment	Biosecurity Services Division and Plant Protection Section of Research Division
National standards development	Biosecurity Services Division and Plant Protection Section of Research Division
International notifications	Biosecurity Services Division
Import:	
Import permits	Biosecurity Services Division
Import inspections	Biosecurity Services Division
Emergency action	Biosecurity Services Division and National Disaster Management Department
Export:	
Phytosanitary certificates	Biosecurity Services Division
Treatment of commodities	Biosecurity Services Division and Accredited Companies

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify	60
Total qualified personnel for plant pest risk assessment	4
Number of quarantine offices	
entry points (sea/air/land/mail = total)	100
post-entry plant quarantine containment facilities	4
other offices	6
Number of quarantine service diagnosis laboratories	2
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	Research laboratory
Number of laboratories for bacteria samples	has been used
Number of laboratories for virus samples	to carry out
Number of laboratories for fungus samples	sampling and
Number of laboratories for mycoplasma samples	identification
Number of laboratories for nematode samples	of insects and
Number of laboratories for plant/weed samples	plant weeds
Number of laboratories for other pests (snail, slug, rodents, etc.)	

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)	
Overall management		
– surveillance	Biosecurity Services Division and Plant Protection Section of Research Division	
– management	Biosecurity Services Division	
– certification	Biosecurity Services Division	
List of target pest species and crops ISPM #4		Number of sites in 2008
Taro Beetle (*Papuana uninodis*) on Taro (*Colocasia esculenta*)		Main island of Vanua Levu and out-lying islands making it 110 sites
Fruitfly (*B. kirki and B. obscura*) on Fruits		Apart from Rotuma, the two main islands of Viti Levu and Vanua Levu including all the smaller islands are free from the two species of fruitfly
List of target pest species and crops ISPM #10		Number of sites in 2008
		[number]

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Fruits, vegetables and spices	New Zealand, Australia, P.R. China	
Potatoes	New Zealand, Australia	
Wheat, rice, maize	Australia, USA, Viet Nam	
Main Export Plant Commodities	Main destination countries	
Root crops	New Zealand, Australia, USA, Canada and some Pacific Island Countries	
Vegetables	NZ, Australia, USA, Canada	
Spices (Ginger, Tumeric)	NZ, Australia	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Bilateral Technical Cooperation between New Zealand MAF Biosecurity and Fiji Biosecurity Services Division on capacity strengthening	New Zealand Aid		2005-2009
Title of government follow-up programmes		Amount	Years (start-end)
			[year – year]

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	3 500
Number of import inspections carried out	153 000
Number of emergency phytosanitary treatments taken on imports	1 899
Number notifications of non-compliance	8
Number of conventional phytosanitary certificates issued	
Number of electronic phytosanitary certificates issued	

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodity	Top three pest/commodity	# of interceptions

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests				
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: –				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
1. Review of the Legislation; 2. Reform of the Quarantine and Inspection Services; 3. Capacity Building.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
1. Delay in establishing the Biosecurity Authority of the Fiji Islands; 2. Insufficient funding to effectively provide biosecurity services; 3. Government policy to “freeze” creating new posts resulting in qualified technical experts returning to old posts.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x		x			2012
ISPM 02 Guidelines for pest risk analysis			x			x		2012
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x			x		2012
ISPM 04 Requirements for the establishment of pest free areas			x		x			2012
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x				x	
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x				x	
ISPM 09 Guidelines for pest eradication programmes			x		x			2012
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x		x			2012
ISPM 11 Pest risk analysis for quarantine pests			x			x		2012
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x		x			2012
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x				x	
ISPM 15 Guidelines for regulating wood packaging material in international trade		x				x		
ISPM 16 Regulated non-quarantine pests: concept and application		x			x			
ISPM 17 Pest reporting			x			x		2012
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure	x			x				
ISPM 19 Guidelines on lists of regulated pests								
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x		x			2012
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x	x				2012
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x				x	
ISPM 25 Consignments in transit			x				x	
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x			x		2012
ISPM 27 Diagnostic protocols for regulated pests		x			x			2012
ISPM 28 Phytosanitary treatments for regulated pests			x			x		
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for surveillance, pest reporting and emergency actions

(year, title and possibly short description)

Fiji Biosecurity Promulgation 2008

Web source for further information: www.quarantine.gov.fj

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?		x
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.)		
Web source for further information: –		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	Biosecurity Services Division and Plant Protection Section of Research
Surveillance	Biosecurity Services Division and Plant Protection Section of Research
Control	Biosecurity Services Division and Plant Protection Section of Research
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	Biosecurity Services Division and Animal Health Division
Surveillance	Biosecurity Services Division and Animal Health Division
Control	Biosecurity Services Division and Animal Health Division
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	Biosecurity Services Division and Plant Protection Section of Research
Surveillance	Biosecurity Services Division and Plant Protection of Research
Control/eradication	BSD and Plant Protection of Research
Reporting to bilateral or international organizations	Biosecurity Services Division

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	60
Number of designated staff for **surveillance** of migratory and periodically occurring pests	100
Number of designated staff for **surveillance** of invasive species	60
Number of designated staff for **control** of field pests of national importance	100
Number of designated staff for **control** of migratory and periodically occurring pests	60
Number of designated staff for **eradication** of invasive species	100

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year 2007:	none		none
Total number for year 2008:	none		none
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species	Taro Beetle (*Papuana uninodis*)	Fruitfly *Bactrocera kirki and B. obscura*	
Year of first discovery	late 1980's	late 1980's	
Passway	arriving vessels	arriving vessels	
Location of first discovery	Eastern side of Viti Levu	Rotuma island about 500 miles from the main islands of Viti Levu and Vanua Levu	
Area affected [ha]		48 sq. km	
Area treated [ha]			
Control method	Internal quarantine measures on the movement of host plants	Traps and internal quarantine control on movement of fruits out of Rotuma	
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species			
Year of outbreak			
Area affected [ha]			
Estimated damage US$			
Area treated by government [ha]			
Expenditures by government [US$]			
Control method			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Pest Management

(year, title and possibly short description)

Fiji Biosecurity Promulgation 2008

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?		x
Is pest management extension separate from general extension?		x
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: www.agriculture.org.fj		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	Ministry of Agriculture and Primary Industries
Pest management research	Agriculture Research Division
Control recommendations	Biosecurity Services Division and Agriculture Research Division
Pest management extension	Crop Extension Division
IPM training	Research and Extension Division
GAP training	

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	[number]
Number of central, regional, provincial or state offices	
Number of district and village level field offices	
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	
Number of government biocontrol production/distribution facilities	
Number of government biopesticide production/distribution facilities	
Number of general extension staff involved in pest management	
Number of designated plant protection technical officers for extension	

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:*	x Extension Pest Management Programme	
Does the country have specific IPM extension programmes? *If yes, in which crops?:*	x Cabbages	
Does the country have specific IPM research programmes? *If yes, in which crops?:*	x Vegetables of *Brassica* family	

Does the country have specific GAP extension programmes? *If yes, in which crops?:*		x
Does the country have specific GAP research programmes? *If yes, in which crops?:*		x

Market shares (estimated value, volume or area under control)	**Years: 2007-2008**
Size of chemical pest control market	[number, %]
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop			
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Years: 2007-2008**
Number of farmers trained in IPM during the year	[number]
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented:	
Crops grown organic/pesticide-free: –	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

(year, title and possibly short description)

Web source for further information: –

Policies (regarding pesticide management)	Yes*	No
Do you have national pesticide reduction targets? *If yes, what is the target:_____*		
Have you ratified the Rotterdam (PIC) Convention?		
Have you ratified the Stockholm (POP) Convention?		
Have your ratified the Basel Convention? (hazardous wastes)		
Have your ratified the Montreal Protocol? (MeBr phasing-out)		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?		
Have you adopted Good Laboratory Practices (GLP)?		
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?		
Do you allow the "me-too" registration and sale of generic pesticides?		
Do you require data on product equivalence for generic registration?		
Do you conduct country-specific risk assessments for…		
occupational risks?		
consumer risks?		
environmental risks?		
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		
Do you accept evaluation results from other countries?		
Do you accept field studies conducted in other countries?		
Do you require environmental fate studies?		
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		
Do you subsidize or provide low-cost pesticides?		
Do you subsidize or provide low-cost biopesticides?		
Other policies:		
Web source for further information: –		

* if yes/no is not appropriate, please insert a note in italics under the question

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	
Registration	
Licensing of shops	
Licensing of field applicators	
Enforcement/inspections	
Testing of pesticide efficacy	
Development of pesticide use recommendations	

Safe use training/extension	
Food residue monitoring	
Environmental monitoring	
Health monitoring	
Other Stakeholders:	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2007-2008
Number of registration officers	[number]
Number of enforcement officers	
Number of department quality control laboratories	
Number of quality control laboratory personnel	
Number of department residue analysis laboratories	
Number of residue laboratory personnel	

Key Situation Indicators

Pesticide Trade: 2007-2008[a]	Tons*	US$ '000 Value*
Imports		
Manufacture		
Export		
Domestic Use/Sales		
Pesticide Use Profile: 2007-2008	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture		
Chem. Insecticides		
Chem. Fungicides		
Chem. Herbicides		
Chem. Others: e.g. molluscicide, acaricide		
Other: e.g. Avamectrin, Bt, Neem		
Other purposes		
TOTAL		

[a] for most recent year for which data are available
* if possible, give in tons a.i.; if known, also give value in US$ or other currency

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?		
Do you have significant problems with pesticide resistance?		
Do you have a list of pesticides under close observation for problems		
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?		
Do you have a system to monitor pesticide residues in food?		
Do you have a system to monitor pesticide residues in the environment?		
Do you have significant problems of environmental contamination from pesticides?		
Do you have data on pesticides effects on wildlife and ecosystems?		
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?		
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)		
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products		
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)		
Number of restricted-use pesticides/formulations		
Number of banned pesticides		
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year		
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Years (2007-2008)	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years (2007-2008)	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
			[year – year]
Purpose/Target of government follow-up programmes		Amount	Years (start-end)
			[year – year]

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.6 INDIA

I. GENERAL INFORMATION

Last updated: June 2009

Overall Executive Summary

The Headquarters of the Directorate of Plant Protection Quarantine and Storage is located at Faridabad, Haryana. This office is headed by the Plant Protection Adviser to the Government of India and is responsible for the implementation of plant protection policies and programmes of the Department of Agriculture and Cooperation, the Ministry of Agriculture, the Government of India.

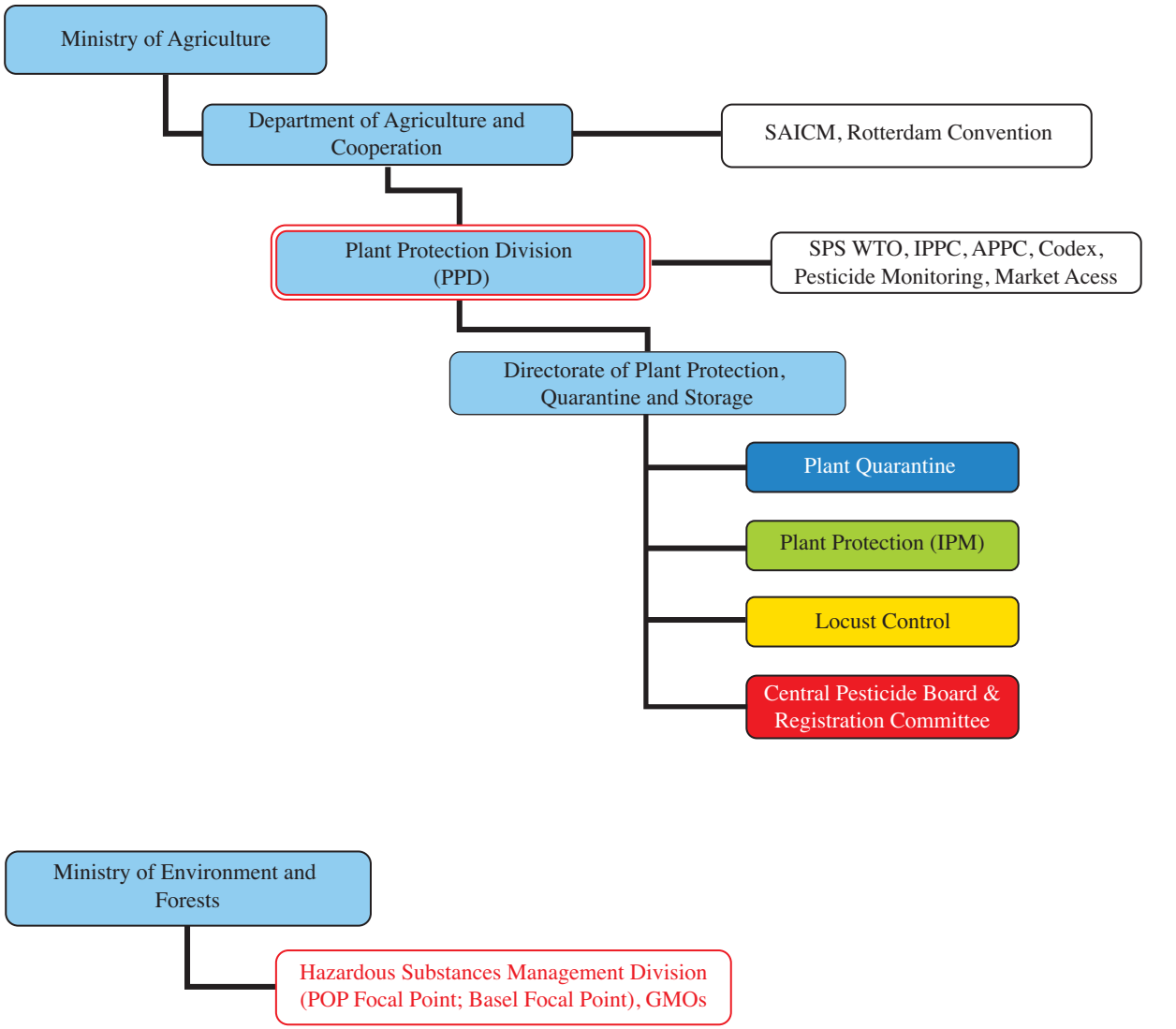
The major activities are exclusion of exotic pests, surveillance and monitoring and control of desert locust, ensuring availability of quality pesticides and biopesticides, promotion of integrated pest management approach in plant protection, development of the human resources in plant protection and monitoring of pesticide residues in agricultural commodities.

The Directorate of Plant Protection, Quarantine & Storage, Department of Agriculture & Cooperation administer the Destructive Insects & Pests Act, 1914 (2 of 1914) under which Plant Quarantine (Regulation of Import into India) Order 2003 regulates the imports of agricultural commodities and the wood packaging material. Being the National Plant Protection Organization, the Directorate is responsible for implementation of the phytosanitary certification programme. More than 150 plant protection specialists from all over the country have been authorized by NPPO to issue phytosanitary certificates, in accordance with the requirements of importing countries as per IPPC. 194 714 Phytosanitary certificates were issued during 2008-2009 and more than 239 pest risk analyses were carried out. A number of quarantine pests had been intercepted in the imported consignments and notifications sent to the exporting countries.

IPM Programme is based on crop based Farmers Field School approach. Seventy seven (77) IPM packages on major agricultural/horticultural crops have been developed. The Government of India encourages the use of biocontrol agents. 318 biocontrol laboratories are in operation. National programme on the monitoring of pesticide residue is in progress. A project on surveillance on fruit flies has been completed during 2008 and the results are awaited. Pest free area has been developed and notified for brown rot *(Ralstonia solanacecarum)* and ring rot *(Clavibacter michijanesis)* of Potato in the State of Punjab, recognition of which is under consideration of EU. Bilateral agreements with USA, Japan and China have been finalized to facilitate the export of fruits, especially mango.

India is a signatory to FAO code of conduct on the distribution and use of pesticides and is implementing its provisions. The Insecticides Act, 1968 regulates the import, manufacture, sale, transport, distribution and use of pesticides with a view to prevent risk to the human beings, animals and the environment. The pesticide management bill in the form of "The Pesticide Management Act" is likely to be introduced during the year 2009 replacing Insecticides Act, 1968.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

–

Responsible Department

–

Plant Protection (Policy, Regulations, Pesticide Registration, Overall Management)

Directorate of Plant Protection, Quarantine and Storage
Mr Pankaj Kumar, Joint Secretary (Plant Protection)
Dr P.S. Chandurkar, Plant Protection Adviser
Department of Agriculture & Cooperation, Ministry of Agriculture
Room No. 224, Krishi Bhawan, Rajendra Prasad Road
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E-mails: pankajkumar@nic.in, ppa@nic.in
Websites: http://www.dacnet.ppin.nic.in; http://www.plantquarantineindia.org/; http//www.cibrc.nic.in, http://agricoop.nic.in.

Address for nominations

–

Operational Offices:

Plant Protection

Plant Quarantine

Surveillance, Pest Outbreaks and Invasive Species Management

Directorate of Plant Protection, Quarantine & Storage
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Department of Agriculture & Cooperation, Ministry of Agriculture
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Fax: (+91) 129-2412125
E-mail: ppa@nic.in
Website: www.plantquarantineindia.org/ http//www.cibrc.nic.in

Pesticide Registration

Registration Committee, Directorate of Plant Protection, Quarantine and Storage
Dr S.K. Khurana, Secretary
Department of Agriculture & Cooperation, Ministry of Agriculture
N.H.IV, CGO Complex
Faridabad 121001 (Haryana), India
E-mail: cibsecy@hub.nic.in
Website: http://www.cibrc.nic.in

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Directorate of Plant Protection, Quarantine and Storage
Mr Pankaj Kumar, Joint Secretary (Plant Protection)
Dr P.S. Chandurkar, Plant Protection Advisor (Information officer for IPP)
Department of Agriculture & Cooperation, Ministry of Agriculture
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Website: http://www.dacnet.ppin.nic.in; http://www.plantquarantineindia.org/

WTO SPS Contact Point

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Rotterdam Convention (PIC) DNA Pesticides (P)

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Stockholm Convention (POP) National Focal Point (P)

Ministry of Environment & Forests
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Basel Convention Competent Authority (CA) and Focal Point

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Hazardous Substances Management Division
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Selected Country Statistics

Agricultural Population	553 million	Agricultural Land	170 million ha
GDP $598 966 million	Agric. GDP: 22.7%	GDP $598 966 million	Undernourishment: 20%
Main crops grown:			

GDP = Gross Domestic Product; GNI = Gross National Income; Hunger = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: June 2009

List of Key Legislation/Regulations/Rules

1914 Destructive Insects & Pests Act
2003 Plant Quarantine Order (effective: 1 January 2004) and amendments thereto (under consideration)

Web sources for further information:
http://www.plantquarantineindia.org/law.htm; http://agricoop.nic.in

Policies (regarding plant quarantine)	Yes	No
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?		x
Does phytosanitary legislation cover living modified organisms?		x
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress): The DIP Act is in the process of being amended but is not likely to result in altered import phytosanitary conditions.		
Web source for further information: http://www.plantquarantineindia.org/abpqo.htm		

Organization of Plant Quarantine Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Analysis	MOA/DAC/PPD/PPQ&S/NBPGR
National standards development	MOA/DAC/PPD/PPQ&S
International notifications	MOA/DAC/PPD
Import:	
Import permits	MOA/DAC/PPD/PPQ&S/NBPGR
Import inspections	MOA/DAC/PPD/PPQ&S/NBPGR
Emergency action	MOA/DAC/PPD/PPQ&S
Export:	
Phytosanitary certificates	MOA/DAC/PPD/PPQ&S/Notified State government authorities/ ICAR/SAUs
Treatment of commodities	MOA/DAC/PPD/PPQ&S/NBPGR/Accredited agencies

Infrastructure	Year: 2009
Number of plant quarantine officers authorized to inspect/certify	274
Total qualified personnel for plant pest risk analysis	100
Number of quarantine offices	
entry points (sea/air/land/mail = total)	34/12/13/ = 59
post-entry plant quarantine containment facilities	140
other offices	5 N/RPQS + 22 PQS
Number of quarantine service diagnosis laboratories	45
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	40
Number of laboratories for bacteria samples	30
Number of laboratories for virus samples	5
Number of laboratories for fungus samples	55
Number of laboratories for mycoplasma samples	5
Number of laboratories for nematode samples	4
Number of laboratories for plant/weed samples	40
Number of laboratories for other pests (snail, slug, rodents, etc.)	4

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MOA/DAC
– surveillance	MOA/DAC/PPQ&S/ICAR/State Agricultural Universities
– management	MOA/DAC assisted by PPQ&S
– certification	MOA/DAC/PPQ&S/ICAR

List of target pest species and crops ISPM 4	Number of sites in [year]
Fruit fly	
Brown rot on potato, ring rot on potato	Punjab State
Stone weevil and pulp weevil on mango	
List of target pest species and crops ISPM 10	Number of sites in [year]

Key Situation Indicators

International Trade		Year:
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Pulses and Peas	USA/Canada/France/Australia/ Myanmar	
Timber	Canada/Malaysia/South America/ New Zealand/Ghana	
Fresh fruits-pome/stone/citrus	Australia/New Zealand, Thailand	
Main Export Plant Commodities	Main destination countries	
Mango	EC/Japan/Canada/Africa/China, USA	
Grapes	EC/Canada/China/Middle East	
Basmati Rice	Across the Globe – Majority of the Countries	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Need assessment and project formulation for the development of an Integrated National Quarantine	UNDP		
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Years: 2008-2009
Number of import permits issued	25 986
Number of import inspections carried out	>60 000
Number of emergency phytosanitary treatments taken on imports	>1 300
Number notifications of non-compliance	112
Number of conventional phytosanitary certificates issued	194 714
Number of electronic phytosanitary certificates issued	–

Number of quarantine pests intercepted		Years: 2008-2009
Top three commodity	Top three pest/commodity	# of interceptions
Timber	Platypus parallebus	
Almond	Ephestia kuehniella	
Coffee beans	Oryzaephilus mercator	

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests	2008-2009	131		
Number of regulated non-quarantine pests	–	–		
Number of regulated import articles	2008-2009		53	
996 Commodities with Import Risk Analyses Web source for further information: http://www.plantquarantineindia.org/seeds.htm# **Note:** India regulates import seeds and consumption plant species, not pests				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)	2 368		
Web source for further information: 1682 Commodities can be imported into India as per the Pest Risk Analysis. Details are available in website: www.plantquarantineindia.org			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

- A new PRA based and continually updated PQ regulation put in effect, i.e. Plant Quarantine Order, 2003, effective since 1 July 2004.
- SPS principles and transparency requirements being met through timely notifications of proposed phytosanitary measures.
- National Phytosanitary certification system being modernized and strengthened.
- Market access and phytosanitary requests from a number of member countries considered and issues resolved.
- National Phytosanitary Standards, protocols and guidelines developed in a number of key phytosanitary activities.
- Emphasis on capacity building; training and human resource development.
- Continuous overhaul of the certification and accreditation system for treatment providers – both fumigators and ISPM 15 heat treatment providers.
- Major expansion of facilities and laboratories under way – Number of new entry points and Plant Quarantine Stations opened across the country, more being opened.
- Modern diagnostic facilities put in place.
- Quarantine treatment facilities using VHT, Irradiation and other treatments developed and accreditation/ certification systems developed for these facilities.
- Massive survey and surveillance programmes undertaken for development and maintenance of pest free areas.
- Pest free area notified for brown rot and ring rot on potato in Punjab, recognition of which is under consideration of EU.

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

- Constraints are mainly in form of staff shortages in the wake of massive expansion of the Plant Quarantine facilities and operations across the country. Also, the need remains for upscaling training of officials and support staff in phytosanitary tasks.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	
ISPM 02 Guidelines for pest risk analysis			x				x	
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x			x		
ISPM 04 Requirements for the establishment of pest free areas			x		x			
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x			x		
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x			x		
ISPM 09 Guidelines for pest eradication programmes			x			x		
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x			x		
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x			x		
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application			x			x		
ISPM 17 Pest reporting			x			x		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x			x		
ISPM 19 Guidelines on lists of regulated pests			x			x		
ISPM 20 Guidelines for a phytosanitary import regulatory system			x			x		
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x			x		
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x		x			
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures		x			x			
ISPM 25 Consignments in transit		x			x			
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x			x		
ISPM 27 Diagnostic protocols for regulated pests			x			x		
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								

Comments/Constraints
15 adopted National standards: http://www.plantquarantineindia.org/standards.htm
5 standards under preparation

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: June 2009

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

List of legislation/regulations/rules for surveillance, pest reporting and emergency actions: DIP Act/Plant Quarantine (Regulation of Import into India) Order, 2003

Web source for further information: www.agricoop.nic.in

Policies (regarding invasive/migratory species management)	**Yes**	**No**
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.): IPM/GAP/Survey and Surveillance Project/NRM		
Web source for further information: www.agricoop.nic.in		

Organization of Outbreak Management Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	MOA/DAC/PPQ&S/CIPMC/LWO/State Government/ ICAR and SAUs
Surveillance	MOA/DAC/PPQ&S/CIPMC/State Governments
Control	MOA/DAC/State Government/PPQ&S/LWO/CIPMCs/ICAR/ SAUs/Pesticide Industry
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	MOA/DAC/PPQ&S/Locust Warning Organization (LWO)
Surveillance	MOA/DAC/PPQ&S/LWO/CIPMC/State Governments
Control	MOA/DAC/State Government/PPQ&S/LWO/CIPMCs/ICAR/ SAUs/Pesticide Industry
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MOA/DAC/PPQ&S/CIPMC/State Government/ ICAR and SAUs
Surveillance	MOA/DAC/PPQ&S/CIPMC/State Governments
Control/eradication	MOA/DAC/State Government/PPQ&S/CIPMCs/ICAR/SAUs/ Pesticide Industry
Reporting to bilateral or international organizations	MOA/DAC/PPD

Infrastructure	**Year:**
Number of designated staff for **surveillance** of field pests of national importance	>150 000
Number of designated staff for **surveillance** of migratory and periodically occurring pests	11 Locust centers and 32 CIPMCs
Number of designated staff for **surveillance** of invasive species	>150 000
Number of designated staff for **control** of field pests of national importance	>600
Number of designated staff for **control** of migratory and periodically occurring pests	11 Locust centers and 32 CIPMCs
Number of designated staff for **eradication** of invasive species	76

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: out break	2		
Total number for year: out break	1		
Total number on record	3		

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Passway			
Location of first discovery			
Area affected [ha]			
Area treated [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	Mealy bug	Tobacco caterpillar	BPH
Year of outbreak	2007	2008	2008
Area affected [ha]	297 640	254 828	112 750
Estimated damage $			
Area treated by government [ha]	238 100	79 497	46 100
Expenditures by government [$]			
Control method			
More information	On cotton in Punjab	On soybean in Maharashtra	On paddy in Haryana

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: June 2009

List of Key Legislation/Regulations/Rules for Pest Management

Insecticides Act, 1968, Insecticides Rules, 1971

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?		x
Other policies: (subsidies, production inputs, etc.) • Increase in financial support for IPM • Phasing out subsidies on chemical pesticides • Emphasis on biocontrol agents, biopesticides and pheromones • Phasing out, banning or restricting hazardous chemical pesticides		
Web source for further information: www.dacnet.ppin.nic.in		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MOA/DAC
Pest management research	MOA/DAC/ICAR & PPQ&S/SAUs
Control recommendations	MOA/DAC/ICAR & PPQ&S/SAUs
Pest management extension	States/PPQ&S
IPM training	States/PPQ&S
GAP training	

Infrastructure	Year:
Number of technical officers for pest management	
Number of central, regional, provincial or state offices	31 Central IPM Centres
Number of district and village level field offices	
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	54 336
Number of government biocontrol production/distribution facilities	177
Number of government biopesticide production/distribution facilities	177
Number of general extension staff involved in pest management	
Number of designated plant protection technical officers for extension	

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme: PPQ&S*	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?: Vegetables & fruits, cereals, pulses, oilseeds, cotton, sugarcane etc.*	x	
Does the country have specific IPM research programmes? *If yes, in which crops?: Several crops*	x	

Does the country have specific GAP extension programmes? *If yes, in which crops?: Grapes, Mangoes*	x	
Does the country have specific GAP research programmes? *If yes, in which crops?:*		

Market shares (estimated value, volume or area under control)	**Years: 2008-2009**
Size of chemical pest control market	43 000 MT
Size of biopesticides market	9 000 MT
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop	Cotton	Paddy	Vegetables
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used	40%	17%	13%
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Years: 2008-2009**
Number of farmers trained in IPM during the year	24 261
Number of IPM-FFS conducted during the year	812
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented: 77 IPM packages developed	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: June 2009

List of Key Legislation/Regulations/Rules

Ministry of Agriculture Department of Agriculture & Cooperation
- 1968 Insecticides Act
- 1971 Insecticides Rules.

Ministry of Environment & Forest
- 1986 Environment Protection Act.

Ministry of Health & Family Welfare
- 2006 Food Safety & Standards Act (residue monitoring, MRLs)

Ministry of Labour
- 1948 Factories Act.

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?		x
Do you allow the "me-too" registration and sale of generic pesticides?	x	
Do you require data on product equivalence for generic registration?	x	x
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?	x	
Do you accept evaluation results from other countries?	x	
Do you accept field studies conducted in other countries?		x
Do you require environmental fate studies?	x	
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x
Other policies: Other policies: Insecticides Act, 1968 being amended.		
Web source for further information: http://agricoop.nic.in		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	MOA/DAC
Registration	MOA/DAC/CIB&RC/PPQ&S
Licensing of shops	State Governments
Licensing of field applicators	State Governments
Enforcement/inspections	States, Central Task Force
Testing of pesticide efficacy	RC, IARI, PLT, ICAR, SAUs
Development of pesticide use recommendations	RC
Safe use training/extension	MOA/DAC/PPQ&S/NPPTI
Food residue monitoring	MOA/DAC/PPD & DOH
Environmental monitoring	DOC/DBT
Health monitoring	DOH
Other Stakeholders:	
Pesticide Industry Association	Crop Life India, Indian Pest Control Assoc., Crop Care Fed. of India, Pestic. Manuf. & Formulation Assoc. of India
Civil Society Organizations (NGO, etc.)	Center for Science and Environment (CSE), Voluntary Health Assoc. of India

Infrastructure	Year:
Number of registration officers	
Number of enforcement officers	>10 000
Number of department quality control laboratories	57
Number of quality control laboratory personnel	>250
Number of department residue analysis laboratories	21 Central Gov't, 56 States; 30 other Gov't sectors
Number of residue laboratory personnel	>1 500

Key Situation Indicators

Pesticide Trade:	Tons	$ '000 Value
Imports	29 297	321 680
Manufacture		
Export	96 268	968 226
Domestic Use/Sales	43 000	
Pesticide Use Profile:	**Tons (a.i./formulation to be specified)**	**$ '000 Value**
Agriculture	43 000	
Chem. Insecticides	*56%*	
Chem. Fungicides	*15%*	
Chem. Herbicides	*15%*	
Chem. Others: e.g. molluscicide, acaricide	*14%*	
Other: e.g. Avamectrin, Bt, Neem		
Other purposes		
TOTAL		

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance?	x	
Do you have a list of pesticides under close observation for problems		
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?	x	
Do you have significant problems of environmental contamination from pesticides?	x	
Do you have data on pesticides effects on wildlife and ecosystems?	x	
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____ **Note:** No estimates made, but it exists.	Note	
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Year:	
	a.i.*	Trade Name
Number of registered pesticide products	220	
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)	16 prov.	
Number of restricted-use pesticides/formulations	13	4
Number of banned pesticides	27	
Number of licensed outlets	145 173	
Number of licensed field applicators (professional and/or farmers)	>300	
Number of licensing violations reported during year	299	
Number of quality control analyses conducted during year	44 226	
Number of food samples analyzed for pesticide residues during year	9 834	
Number of samples exceeding MRL	112	
Number of environmental samples analyzed for pesticide residues	2 751	

* active ingredient; **provisional registration

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Monitoring of pesticide residues at national level, a new national initiative has been started by the Plant Protection Division of the Ministry of Agriculture to synthesize the efforts and data/results of more that 100 laboratories across the country with view to synthesize and collate their results and prepare the basis for future food safety decision-making and as a tool for policy formulation. This scheme is being handled through existing and dedicated laboratories which have been made updated and state of the art in the current year.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF CONCERN

Last updated: June 2009

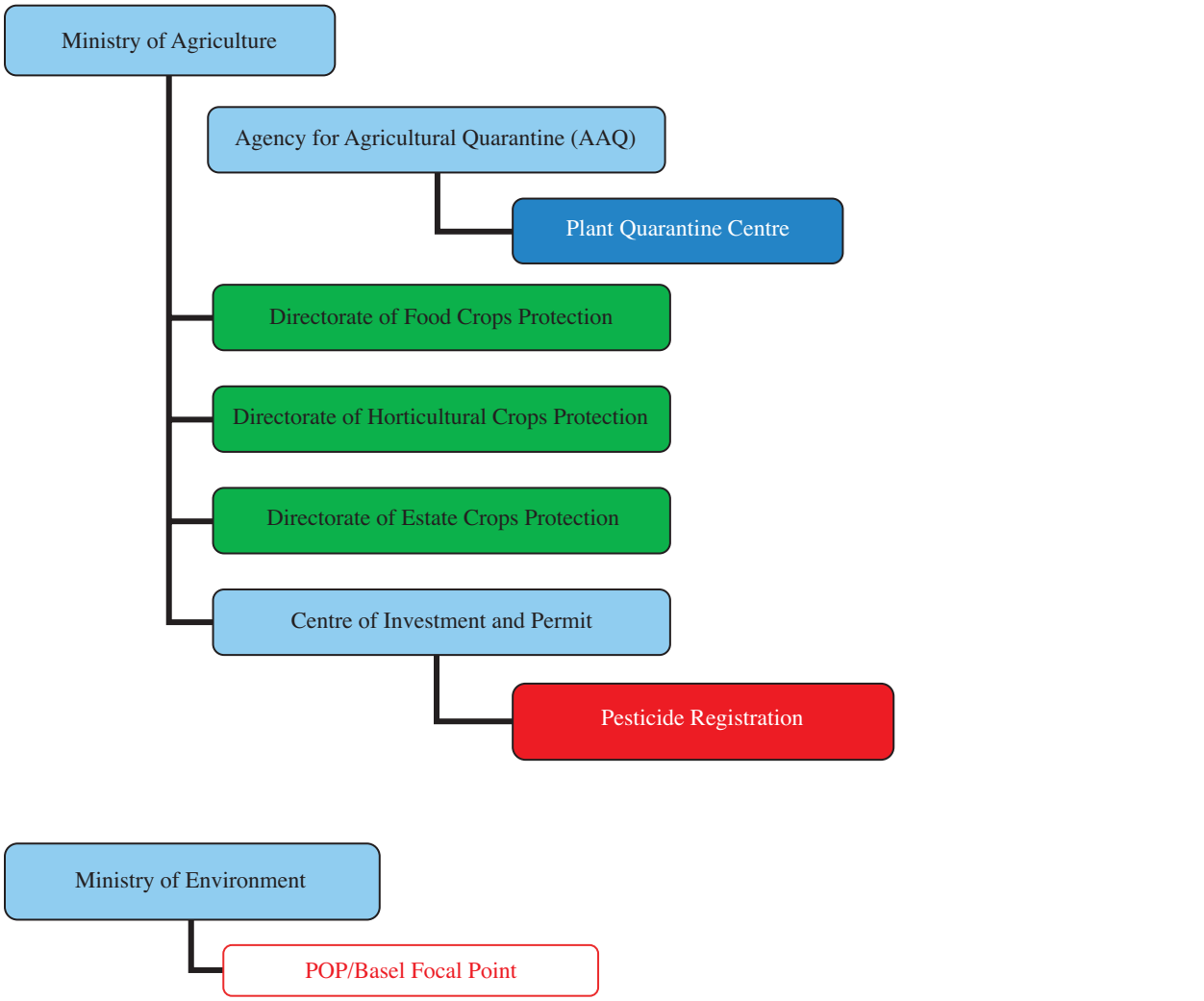
Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.7 INDONESIA

I. GENERAL INFORMATION

Last updated: December 2008

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Centre for Plant Quarantine
Mr Suwanda, Director (NPPO focal point)
Agency for Agricultural Quarantine (AAQ)
Ministry of Agriculture
Jl. Harsono RM No. 3 E Building (5th floor)
Pasar Minggu, Jakarta Selatan 12550, Indonesia
Tel: (+62) 21 7816482 / 7805641 ext. 1508
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E-mail: pusatkt@indo.net.id; suwanda@deptan.go.id
Websites: http://www.karantina.deptan.go.id/
http://www.deptan.go.id/karantina/english/plant.htm

Responsible Department

–

Address for nominations

–

Operational Offices:

Plant Protection

Directorate of Food Crop Protection
Ms Ati Wasiati, Director
Jl. AUP Pasar Minggu, P.O. Box. 7236/Jks Pasar Minggu
Jakarta 12520, Indonesia
Tel: (+62) 21 7806213
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Directorate of Estate Crops Protection
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Tel: (+62) 21 7815684
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Directorate of Horticulture Crop Protection
Mr Sukirno, Director
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Plant Quarantine

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E-mails: pusatkt@indo.net.id; suwanda@deptan.go.id
Websites: http://www.karantina.deptan.go.id/
http://www.deptan.go.id/karantina/english/plant.htm

Surveillance, Pest Outbreaks and Invasive Species Management

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Pesticide Registration

Centre for Investement and Permit
Mr Mohammad Dani, Director
Ministry of Agriculture
3th Floor, Archive Building, Ministry of Agriculture, Jl. Harsono RM No. 3
Ragunan, Pasar Minggu
Jakarta 12550, Indonesia
Tel: (+62) 21 7815380 ext. 6314, 7812162
Fax: (+62) 21 7818205

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Centre for Plant Quarantine
Mr Suwanda, Director (NPPO focal point)
Agency for Agricultural Quarantine (AAQ)
Ministry of Agriculture
Jl. Harsono RM No. 3 E Building (5th floor)
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Jakarta Selatan 12550, Indonesia
Tel: (+62) 21 7816482 / 7805641 ext. 1508
Fax: (+62) 21 7816481 / 7816482 / 7816483
E-mails: pusatkt@indo.net.id; suwanda@deptan.go.id
Website: http://karantina.deptan.go.id/
Language(s): English
Contact point received: 29/01/2004 Source: Official Correspondence

WTO SPS Contact Point

Agency for Agricultural Quarantine (Badan Karantina Pertanian)
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E-mail: caqsps@indo.net.id
Website: http://karantina.deptan.go.id/

Rotterdam Convention (PIC) DNA Pesticides

Pesticide Committee
Mr Hasanuddin Ibrahim,Chairman
Ministry of Agriculture
8th Floor, Building D F Jl. Harsono RM No. 3
Jakarta 12520, Indonesia
Tel: (+62) 21 781 53 80 ext. 6305

Stockholm Convention (POP) National Focal Point (S)

Ministry of Environment
Mr Moh Gempur Adnan, Deputy for Environmental Pollution
5th Floor, Building A
Jl. D.I. Panjaitan, Kebon Nanas
Jakarta 13410, Indonesia
Tel: (+62) 21 858 0110 / 0067
Fax: (+62) 21 852 0763 / 851 8135
E-mail: haruki@indo.net.id

Basel Convention Competent Authority (CA) and Focal Point

Ministry of Environment
Mr Imam Hendargo Abu Ismoyo, Deputy Minister for Hazardous and Toxic Wastes Management
Jl. D.I. Panjaitan, Kebon Nanas
Jakarta 13410, Indonesia
Tel: (+62) 21 85 90 56 37
Fax: (+62) 21 85 90 56 37 or 85 90 49 32
E-mail: db3@menlh.go.id

Selected Country Statistics

Agricultural Population	93.0 million	Agricultural Land	33.7 million ha
GDP US$208 311 million	Agric. GDP: 17.5%	GNI per capita: US$810	Undernourishment: 6%
Main crops grown: Paddy, Maize, Crude Palm Oil, Rubber, Cocoa, Coffee			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

List of Key Legislation/Regulations/Rules

1961 Exportation from the Territory of the Republic of Indonesia of Plant Propagating Materials on Regulation of the Minister of Agriculture No. 6/PMP/1961.

1984 Importation into the Territory of the Republic of Indonesia of Plants Used as Packing on DOMOA No. 796/Kpts/TP.830/10/1984.

1984 Importation into the Territory of the Republic of Indonesia of Plant Growing Media on DOMOA No. 797/Kpts/TP.830/10/1984.

1985 Plant Quarantine Requirements for the Importation of Plant Propagating Materials of Coconut, Oil Palm, Cocoa, Rubber, Coffee, Tea, Sugarcane, and Tobacco on DOMOA No. 559/Kpts/KB.630/8/1985.

1985 Domestic Plant Quarantine on DOMOA No. 809/Kpts/LB.710/12/1985.

1989 Prevention on the Introduction into the Territory of the Republic of Indonesia of South American Leaf Blight of Hevea on DOMOA No. 861/Kpts/LB.720/12/1989.

1989 Eradication for Khapra Beetle (*Trogoderma granarium* Everts) on DOMOA No. 799/Kpts/LB.710/10/1989.

1990 Plant Quarantine Requirements and Actions in relation to the Importation into the Territory of the Republic of Indonesia of Plants and Plant Propagating Materials on DOMOA No. 38/Kpts/HK.310/1/1990.

1992 Law No. 16 of 1992 concerning Animal, Fish, and Plant Quarantine.

1995 Importation into the Territory of the Republic of Indonesia of Biological Agents on DOMOA No. 411/Kpts/TP.120/6/1995.

1995 Formation of Biological Agent Commission on DOMOA No. 412/Kpts/KP.150/6/1995.

2001 Actions and conditions of quarantine plant for the entry of plant and seedling into the territory of the Republic of Indonesia, lastly amended by the decree of the Ministry of Agriculture Number: 211/Kpts/HK.310/2001 on DOMOA No. 469/Kpts/HK.310/8/200.

2002 Government Regulation of the Republic Indonesia No. 14 of 2002, concerning Plant Quarantine.

2006 Decree of the Minister of Agriculture No. 38 of 2006 concerning Plant Quarantine Pests Group I Category A1 and A2, and Group II Category A1 and A2; their hosts, carriers and countries of distribution.

2006 Minister of Agriculture Regulation No. 37 of 2006 concerning Importation of Fresh fruits and vegetables.

2006 Concerning requirements and guideline for Quarantine Installation Establishment for Private on MOAR No. 05/Permentan/HK.060/3/2006.

2006 Concerning requirements and guidelines for the Implementation of Plant Quarantine action by third party on MOAR No. 271/Kpts/HK.310/4/2006.

2006 Concerning the Implementation of Plant Quarantine action conducted import and exit points on MOAR No. 18/Permentan/OT.160/5/2006.

2006 Concerning addition requirements on MOAR No. 52/Permentan/OT.140/10/2006.

2008 Concerning Plant Quarantine Requirements and Measures Governing the Importation of Fresh Plant Products in the form of Fresh Bulb Vegetables into the territory of the Republic of Indonesia.

Web source for further information:

1. http://www.deptan.go.id
2. http://www.karantina.deptan.go.id

Policies (regarding plant quarantine)	**Yes**	**No**
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?	x	
Is plant quarantine a separate organization from animal quarantine?		x
Other policy initiatives (under review/progress)		
Web source for further information: http://www.karantina.deptan.go.id/		

Organization of Plant Quarantine Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Pest Risk Analysis	Center for Plant Quarantine
National standards development	MOA/AAQ/Centre for Plant Quarantine
International notifications	MOA/Agency for Agricultural Quarantine
Import:	
Import permits	DGs of Food Crops, DG of Estate Crops, DG of Horticulture, DG of Livestock
Import inspections	Centre for Plant Quarantine
Emergency action	Centre for Plant Quarantine, Directorate of Horticulture Crop Protection, Directorate of Food Crop Protection, and Directorate of Estate Crop Protection
Export:	
Phytosanitary certificates	MOA/AAQ/Centre for Plant Quarantaine
Treatment of commodities	Center for Plant Quarantaine, Plant Protection

Infrastructure	**Years: 2007-2008**
Number of plant quarantine officers authorized to inspect/certify	356
Total qualified personnel for plant pest risk analysis	17
Number of quarantine offices	51
entry points (sea/air/land/mail = total)	>200
post-entry plant quarantine containment facilities	5
other offices	
Number of quarantine service diagnosis laboratories	6
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	45
Number of laboratories for bacteria samples	15
Number of laboratories for virus samples	4
Number of laboratories for fungus samples	15
Number of laboratories for mycoplasma samples	1
Number of laboratories for nematode samples	15
Number of laboratories for plant/weed samples	45
Number of laboratories for other pests (snail, slug, rodents, etc.)	1

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)	
Overall management	Directorate of Plant Protections of related DG/AAQ	
– surveillance	Directorate of Plant Protections of related DGs	
– management	Directorate of Plant Protections of related DGs	
– certification	Centre for Plant Quarantine	
List of target pest species and crops ISPM 4		Number of sites in [year]
To be determined		
List of target pest species and crops ISPM 10		Number of sites in [year]
To be determined		

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Wheat	Australia, USA, Canada, China, Argentina, Belgia	261 136 575 262
Soybean	USA, India	2 209 255 290
Fruits	Australia, USA, China	425 033 075
Main Export Plant Commodities	Main destination countries	
Crude palm oil	Viet Nam, China,	1 124 440 748
Rubber	USA, Argentina, Africa, Brazil, Netherlands, England, Canada	261 831 055
Living plants (ornamentals)	Korea, Netherlands, Japan, USA	9 604 045

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Fruitfly Management	ACIAR	A$124 000	2004-2008
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	56 044
Number of import inspections carried out	58 832
Number of emergency phytosanitary treatments taken on imports	122
Number notifications of non-compliance	24
Number of conventional phytosanitary certificates issued	63 900
Number of electronic phytosanitary certificates issued	0

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodity	Top three pest/commodity	# of interceptions
Rice seeds	*Acidovorax avenae* subsp. *avenae*	Philippines, China
	Rice Stripe Virus	China
Strawberry seedlings	*Xylella fastidiosa*	USA
Brassicaceae seeds	Turnip Mosaic Virus	South Korea

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests	2009	261	394	58
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: http://www.karantina.deptan.go.id				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			57*
Web source for further information: http://www.karantina.deptan.go.id (* PRA conducted base on country and commodity not base on type of pests, the number of PRA conducted are 57)			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

In 2008, IAQA has successfully issued 1 new Minister of Agriculture Decrees concerning Plant Quarantine Requirements and Measures Governing the Importation of Fresh Plant Products in the form of Fresh Bulb Vegetables into the territory of the Republic of Indonesia.

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

- Reorganize the structure of IAQA by integrating plant quarantine dan animal quarantine into one operational service level
- Increasing diagnostic capacity of quarantine pests in the main service point by providing some equipments and materials
- Two trainings on new recruitment of plant quarantine inspector
- One training on Pest Risk Analysis
- Two trainings on Phosphine Fumigation

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x			x		2008
ISPM 02 Guidelines for pest risk analysis			x				x	2006
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x				x	2000
ISPM 04 Requirements for the establishment of pest free areas			x	x				2009
ISPM 05 Glossary of phytosanitary terms			x			x		
ISPM 06 Guidelines for surveillance			x		x			2007
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x				x	
ISPM 09 Guidelines for pest eradication programmes		x			x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites		x		x				2007
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x			x		2002
ISPM 14 The use of integrated measures in a systems approach for pest risk management	x			x				2008
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	2006
ISPM 16 Regulated non-quarantine pests: concept and application			x	x				2007
ISPM 17 Pest reporting			x			x		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x	x				2008
ISPM 19 Guidelines on lists of regulated pests			x				x	
ISPM 20 Guidelines for a phytosanitary import regulatory system			x			x		
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x					2008
ISPM 22 Requirements for the establishment of areas of low pest prevalence		x			x			
ISPM 23 Guidelines for inspection			x			x		2007
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures		x			x			
ISPM 25 Consignments in transit		x				x		
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x	x				
ISPM 27 Diagnostic protocols for regulated pests			x			x		
ISPM 28 Phytosanitary treatments for regulated pests			x	x				
ISPM 29 Recognition of pest free areas and areas of low pest prevalence	x			x				
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)		x		x				
ISPM 31 Methodologies for sampling of consignments			x		x			

Comments/Constraints
The applications of ISPM involve many different institutions. It needs some periods of time to be harmonized and applied. Changing of MOA internal position also results in different policies of new decision-maker.

Note:

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

Law No. 16 of 1992 and Government Regulation No. 14 of 2002

Web source for further information: –

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.)		
Web source for further information: –		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	MOA
Surveillance	Related Directorate of Plant Protection
Control	Related Directorate of Plant Protection
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	MOA
Surveillance	Related Directorate of Plant Protection
Control	Related Directorate of Plant Protection
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MOA
Surveillance	Related Directorate of Plant Protection/AAQ
Control/eradication	Related Directorate of Plant Protection/AAQ
Reporting to bilateral or international organizations	NPPO/Centre of Plant Quarantine

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	3 000
Number of designated staff for **surveillance** of migratory and periodically occurring pests	3 000
Number of designated staff for **surveillance** of invasive species	
Number of designated staff for **control** of field pests of national importance	3 000
Number of designated staff for **control** of migratory and periodically occurring pests	3 000
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: 2007			
Total number for year: 2008			
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species	*Paracoccus marginatus* (Papaya mealybug)	None	None
Year of first discovery	2008		
Passway	Undetermined		
Location of first discovery	Bogor, West Java		
Area affected [ha]			
Area treated [ha]			
Control method	Plant sanitation, insecticide (spraying)		
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	None	None	None
Year of outbreak			
Area affected [ha]			
Estimated damage $			
Area treated by government [ha]			
Expenditures by government [$]			
Control method			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Pest Management

1992 Law No. 12 on Crop Cultivation System (incl. IPM).
1995 Regulation of Indonesian government/Government Decree No. 6 on Plant Protection.
1997 Agricultural Ministerial Decree No. 887/Kpts/OT/9/1997 on Guideline of Pest Control.
1999 Law No. 22 on Autonomy.
1999 Regulation No. 25 on Decentralization.
2000 Law No. 25 on Conduct of Autonomy.

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production		
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?	x	
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MOA/Directorates of Plant Protection/IAQA
Pest management research	MOA/Directorates of Plant Protection
Control recommendations	MOA/Directorates of Plant Protection
Pest management extension	MOA/Directorates of Plant Protection
IPM training	MOA/Directorates of Plant Protection
GAP training	MOA/Directorates of Plant Protection

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	
Number of central, regional, provincial or state offices	
Number of district and village level field offices	
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	
Number of government biocontrol production/distribution facilities	
Number of government biopesticide production/distribution facilities	
Number of general extension staff involved in pest management	
Number of designated plant protection technical officers for extension	

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:*	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?:* Estates Crops	x	

Does the country have specific IPM research programmes? *If yes, in which crops?:*		
Does the country have specific GAP extension programmes? *If yes, in which crops?:*		
Does the country have specific GAP research programmes? *If yes, in which crops?:*		

Market shares (estimated value, volume or area under control)	Years: 2007-2008
Size of chemical pest control market	
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	Cacao	Tea	
Name(s) of pest(s)	Cacao Pod Borer	Helopeltis	
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	Years: 2007-2008
Number of farmers trained in IPM during the year	1 048 564
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented:	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

1973 Pesticide Regulation No. 7

1996 Joint Decree of the Minister of Health and Minister of Agriculture No. 881/MENKES/SKB/8/1996 on Pesticides Maximum Residues No. 711/Kpts/TP.270/8/1996.

2001 Ministry of Agriculture Decree No. 434.1/Kpts/TP.270/7/2001: Pesticide Registration.

2002 Ministry of Agriculture Decree No. 517/Kpts/TP.290/9/2002 Supervision of storage, use and the distribution of pesticides.

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:*_____	x	
Have you ratified the Rotterdam (PIC) Convention?		x
Have you ratified the Stockholm (POP) Convention?		x
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?		
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?		
Do you require data on product equivalence for generic registration?		
Do you conduct country-specific risk assessments for…		
occupational risks?		
consumer risks?		
environmental risks?		
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		
Do you accept evaluation results from other countries?		
Do you accept field studies conducted in other countries?		
Do you require environmental fate studies?		
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		
Do you subsidize or provide low-cost pesticides?		
Do you subsidize or provide low-cost biopesticides?		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	Pesticides Committee
Registration	MOA/Centre of Investment & Permit/Pesticide Registration
Licensing of shops	Pesticides Committee
Licensing of field applicators	Pesticides Committee
Enforcement/inspections	DG of Crops, DG of Horticulture, DG of Estate DG/Ministry of Environment
Testing of pesticide efficacy	Centre for Plant Quarantine/DG of Crops, DG of Horticulture, DG of Estate DG
Development of pesticide use recommendations	
Safe use training/extension	
Food residue monitoring	Ministry of Health/DG of Crops, DG of Horticulture
Environmental monitoring	DG of Crops, DG of Horticulture, DG of Estate DG/Ministry of Environment
Health monitoring	Ministry of Health
Other Stakeholders:	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2007-2008
Number of registration officers	8
Number of enforcement officers	3 000
Number of department quality control laboratories	5
Number of quality control laboratory personnel	≥12
Number of department residue analysis laboratories	5
Number of residue laboratory personnel	≥10

Key Situation Indicators

Pesticide Trade: 2004	Tons	US$ '000 Value
Imports	50 305	
Manufacture		
Export	48 759	
Domestic Use/Sales		
Pesticide Use Profile: 2004	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture		
Chem. Insecticides		
Chem. Fungicides		
Chem. Herbicides		
Chem. Others: e.g. molluscicide, acaricide		
Other: e.g. Avamectrin, Bt, Neem		
Other purposes		
TOTAL		

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance?	x	
Do you have a list of pesticides under close observation for problems		
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?	x	
Do you have significant problems of environmental contamination from pesticides?		x
Do you have data on pesticides effects on wildlife and ecosystems?		x
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____	x	
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products		1 158
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)	8	>25
Number of restricted-use pesticides/formulations	4	
Number of banned pesticides	36	
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year		
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]
Cotton	> 550 ha

2.8 JAPAN

(non-membership of APPPC)

I. GENERAL INFORMATION

Last Updated: December 2008

Overall Executive Summary

Japan continues to improve its plant protection systems in conformity with the International Plant Protection Convention, the WTO SPS Agreement and relevant international standards on phytosanitary measures since the 25th session of the APPPC.

The Ministry of Agriculture, Forestry and Fisheries (MAFF) is mainly responsible for plant protection and plant quarantine services to control and prevent the introduction of pests of plants and plant products. The Plant Protection Station (PPS) of MAFF is responsible for implementation of import/export inspections and supervision of disinfestation treatment. The PPS of Japan consisted of five head offices, 15 substations, 53 branches, three detached offices and one plant inspector's office and 865 plant quarantine officers who are authorized by the NPPO to implement appropriate inspection/certification.

MAFF is working closely with pest control stations run by prefectural governments to conduct monitoring surveys to detect infiltrating pests at an early stage, and engage in emergency eradication, where necessary. Domestic certification systems are under operation for seed potatoes and major fruit tree seedlings and regulating the movement of plant from outbreaking area to non outbreaking area.

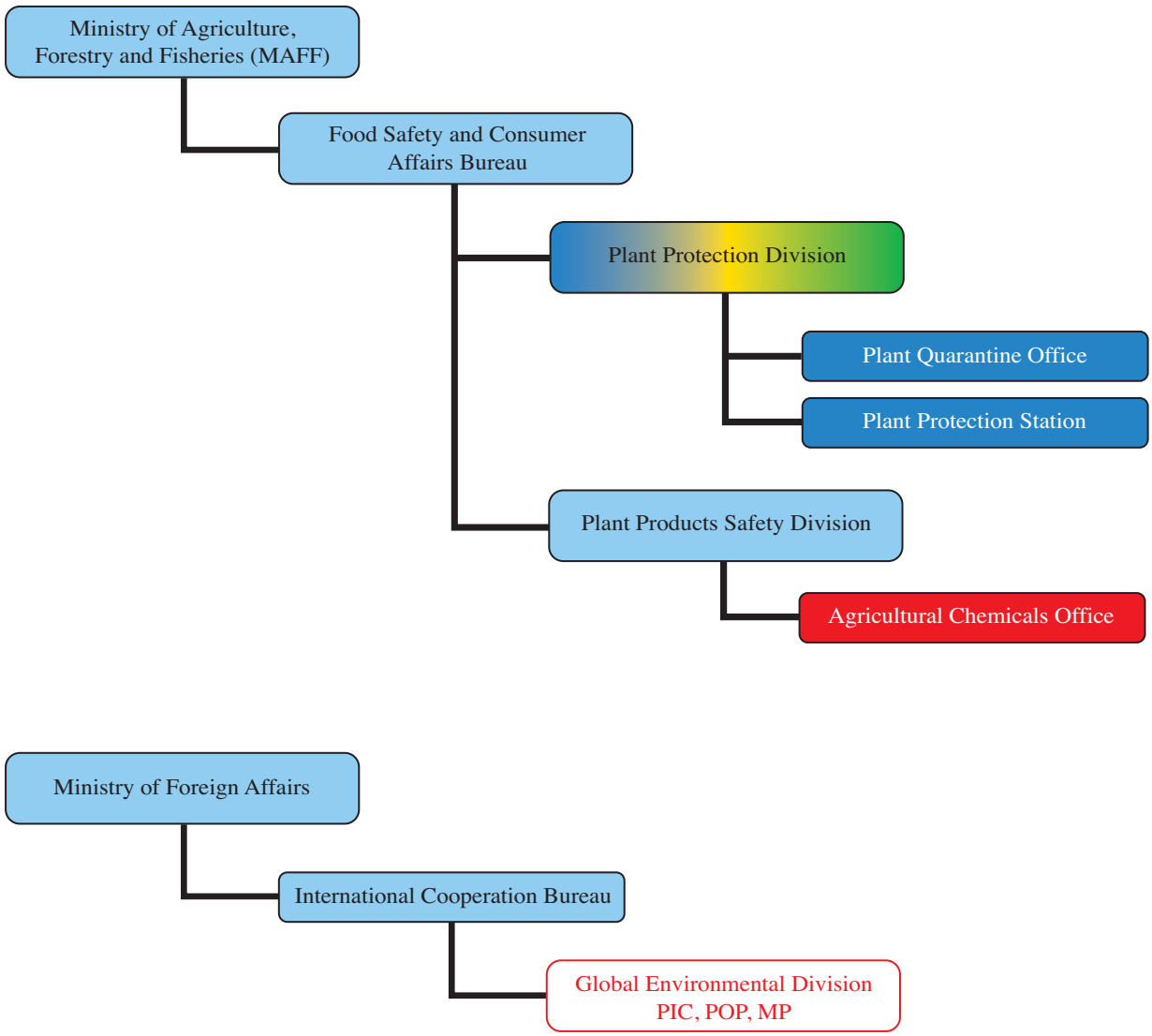
MAFF provided the specific guidelines for the crop of rice, cabbage, citrus, soybean, tomato, strawberry, pear, apple, tea, chrysanthemum and sugarcane to facilitate implementation of IPM for individual farmers.

Agricultural chemical products shall be registered by the Minister of Agriculture, Forestry and Fisheries according to the Agricultural Chemical Regulation Law, if they are manufactured, imported and distributed in Japan.

The risk assessment and its management of the products have been conducted in terms of product's quality, human health and environmental effects by the Food Agricultural Material Inspection Center (FAMIC), the Food Safety Commission (FSC), the Ministry of Health, the Labor and Welfare (MHLW), the Ministry of the Environment (MOE) and MAFF.

The training course on disinfestation technique using thermal treatment on fruit fly has been organized since 1988 with trainees being invited from countries which are affected by fruit fly. As a multilateral contribution, Japan financially supported through a trust fund a field project on phytosanitary capacity-building, targeting 10 countries. The project was implemented by the FAO.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Ministry of Agriculture, Forestry and Fisheries
Mr Shigeru ISHIBA, Minister
Ministry of Agriculture, Forestry and Fisheries
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Operational Offices:

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Plant Quarantine

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Surveillance, Pest Outbreaks

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Invasive Species Management

Wildlife Division
Mr Kazuaki Hoshino, Director
Nature Conservation Bureau
Ministry of Environment
1-2-2 Kasumigaseki, Chiyoda-ku
Tokyo 100-8950
Tel: (81 3) 3581 3351

Pesticide Registration

Agricultural Chemicals Office
Mr Nobuo SUZUKI, Director
Plant Products Safety Division
Food Safety and Consumer Affairs Bureau
Ministry of Agriculture, Forestry and Fisheries
1-2-1 Kasumigaseki, Chiyoda-ku,
Tokyo, 100-8950

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Plant Quarantine Office
Mr Motoi SAKAMURA, Director
Plant Protection Division
Food Safety and Consumer Affairs Bureau
Ministry of Agriculture, Forestry and Fisheries
1-2-1 Kasumigaseki, Chiyoda-ku
Tokyo 100-8950
Tel: (81 3) 3502-8111 / 3502-5978 (direct)
Fax: (81 3) 3502-3386
E-mail: motoi_sakamura@nm.maff.go.jp
Website: http://www.pps.go.jp/english/index.html
Language(s): English
Contact point received: 01/0710/20073 Source: Government Correspondence

WTO SPS Contact Point

Standards Information Service
International Trade Division
Economic Affairs Bureau
Ministry of Foreign Affairs
2-2-1 Kasumigaseki, Chiyoda-ku
Tokyo 100-8919
Tel: (81 3) 5501-8344
Fax: (81 3) 5501-8343
E-mail:enquiry@mofa.go.jp

Rotterdam Convention (PIC) Designated National Authority (DNA)

Global Environmental Division
Mr Masayoshi Mizuno, Director
Ministry of Foreign Affairs
2-2-1 Kasumigaseki, Chiyoda-ku
Tokyo 100-8919
Tel: (81 3) 5501-8245
Fax: (81 3) 5501-8244
E-mail: masayoshi.mizuno@mofa.go.jp

Stockholm Convention (POP) National Focal Point (P)

Global Environmental Division
Mr Masaya Sagawa, Deputy Director
Ministry of Foreign Affairs
2-2-1 Kasumigaseki, Chiyoda-ku
Tokyo
Japan
Tel: (81 3) 5501-8245
Fax: (81 3) 5501-8244
E-mail: masaya.sagawa@mofa.go.jp

Basel Convention Competent Authority (CA) and Focal Point

Director, Office of Waste Disposal Management
Waste Management and Recycling Department
Ministry of the Environment
1-2-2 Kasumigaseki, Chiyoda-ku
Tokyo 100-8975
Tel: (81 3) 5501-3157
Fax: (81 3) 3593-8264
E-mail: env-basel@env.go.jp

Global Environment Division
International Cooperation Department
Ministry of Foreign Affairs
2-2-1 Kasumigaseki, Chiyoda-ku
Tokyo 100-8919
Tel: (81 3) 5501-8245
Fax: (81 3) 5501-8244
E-mail: yutaka.ishii@mofa.go.jp or
fuyumi.naito@mofa.go.jp

Montreal Protocol Focal Point

Global Environmental Division
Ms Masami Fujimoto
Ministry of Foreign Affairs
2-2-1 Kasumigaseki, Chiyoda-ku
Tokyo
Japan
Tel: (81 3) 5501-8245
Fax: (81 3) 55 01-8244

Selected Country Statistics:

Agricultural Population	2.9 million	Agricultural Land	4.6 million ha
GDP US$ JPY 510 924 700 million	Agric. GDP: 0.9%	GNI per capita: US$35 204	Undernourishment: xx%
Main crops grown: Rice (8 815 000 ton [2008])			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last Updated: December 2008

List of Key Legislation/Regulations/Rules

(year, title and possibly short description)

- Plant Protection Law
- Order for Enforcement of Plant Protection Law

Web source for further information: http://www.maff.go.jp/pps/

Policies (regarding plant quarantine)	**Yes**	**No**
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?		x
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress)		
Web source for further information: See the above web source		

Organization of Plant Quarantine Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Pest Risk Assessment	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
National standards development	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
International notifications	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Import:	
Import permits	Plant Protection Station, Ministry of Agriculture, Forestry and Fisheries
Import inspections	Plant Protection Station, Ministry of Agriculture, Forestry and Fisheries
Emergency action	Plant Protection Station, Ministry of Agriculture, Forestry and Fisheries
Export:	
Phytosanitary certificates	Plant Protection Station, Ministry of Agriculture, Forestry and Fisheries
Treatment of commodities	Plant Protection Station, Ministry of Agriculture, Forestry and Fisheries

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify	859/865
Total qualified personnel for plant pest risk assessment	8/8
Number of quarantine offices	77/77
entry points (sea/air/land/mail = total)	105/39/0/8 = 152(2007) 105/39/0/8 = 152(2008)
post-entry plant quarantine containment facilities	4/5
other offices	1/1
Number of quarantine service diagnosis laboratories	2/2
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	77/77
Number of laboratories for bacteria samples	77/77
Number of laboratories for virus samples	77/77
Number of laboratories for fungus samples	77/77
Number of laboratories for mycoplasma samples	77/77
Number of laboratories for nematode samples	77/77
Number of laboratories for plant/weed samples	77/77
Number of laboratories for other pests (snail, slug, rodents, etc.)	77/77

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
– surveillance	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
– management	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
– certification	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries

List of target pest species and crops ISPM 4	Number of sites in 2008
Omphisa anastomosalis	All area except South western Islands in south of latitude 30 degree north
Euscepes postfasciatus	All area except South western Islands in south of latitude 28 degree 40 minutes north and Ogasawara Islands
Cylas formicarius Omphisa anastomosalis	All area except South western Islands in south of latitude 30 degree north and Ogasawara Islands
Citrus greening disease *Euscepes postfasciatus*	All area except south western Islands in south of latitude 27 degree 10 minutes north

List of target pest species and crops ISPM 10	Number of sites in 2008
	[number]

Key Situation Indicators

International Trade		Year: 2007
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Soybean	USA	3 308 834 [2007]
Wheat	USA	3 175 597 [2007]
Rapeseed	Canada	1 943 371 [2007]
Main Export Plant Commodities	Main destination countries	
wheat flour	Socialist Republic of Viet Nam	15 397 [2007]
Apple	Taiwan	24 295 [2007]
Pear (cutting)	Taiwan	10 451 [2007]

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Thermal treatment for the disinfestation of fruit flies Target country: developing countries where fruit flies are present (5 trainees [2007], 5 trainees [2008])	JICA (Japan International Cooperation Agency)		[1988-]
Improvement of plant quarantine treatment technique against fruit flies on fresh fruits Target country: Viet Nam	JICA (Japan International Cooperation Agency)		[2005-2007]
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Year: 2007
Number of import permits issued	
Number of import inspections carried out	732 221
Number of emergency phytosanitary treatments taken on imports	0
Number notifications of non-compliance	455
Number of conventional phytosanitary certificates issued	19 576
Number of electronic phytosanitary certificates issued	0

Number of quarantine pests intercepted		Year: 2007
Top three commodity	Top three pest/commodity	# of interceptions
Banana	Pseudococcidae spp.	4 274
	Diaspididae spp.	3 112
	Aphididae spp.	272
Pineapple	Pseudococcidae spp.	2 517
	Diaspididae spp.	1 534
Rose	*Tetranychus* spp.	2 519
	Aphididae spp.	135
	Frankliniella spp.	52

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of non-quarantine pests	2008	148 species	5 genus + 16 species	
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: –				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)	265	87	0
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x			x		
ISPM 02 Guidelines for pest risk analysis			x				x	
ISPM 03 Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms		x				x		
ISPM 04 Requirements for the establishment of pest free areas			x				x	
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x				x	
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x				x	
ISPM 09 Guidelines for pest eradication programmes			x				x	
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	
ISPM 11 Pest risk analysis for quarantine pests		x				x		
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x				x	
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application		x				x		
ISPM 17 Pest reporting			x			x		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x						
ISPM 19 Guidelines on lists of regulated pests		x				x		
ISPM 20 Guidelines for a phytosanitary import regulatory system			x			x		
ISPM 21 Pest risk analysis for regulated non-quarantine pests		x				x		
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x				x	
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x				x	
ISPM 25 Consignments in transit			x			x		
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x				x	
ISPM 27 Diagnostic protocols for regulated pests			x				x	
ISPM 28 Phytosanitary treatments for regulated pests			x				x	
ISPM 29 Recognition of pest free areas and areas of low pest prevalence			x				x	
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			x				x	
ISPM 31 Methodologies for sampling of consignments			x				x	
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for surveillance, pest reporting and emergency actions

(year, title and possibly short description)

- Plant Protection Law
- Order for Enforcement of Plant Protection Law

Web source for further information: http://www.maff.go.jp/pps/

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.)		
Web source for further information: See the above web source		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Surveillance	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Control	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Surveillance	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Control	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	Ministry of Agriculture, Forestry and Fisheries/Ministry of the Environment
Surveillance	Ministry of Agriculture, Forestry and Fisheries/Ministry of the Environment
Control/eradication	Ministry of Agriculture, Forestry and Fisheries/Ministry of the Environment
Reporting to bilateral or international organizations	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries

Infrastructure	Year: 2007
Number of designated staff for **surveillance** of field pests of national importance	Prefecture 3 637 Government 900 Total 4 537
Number of designated staff for **surveillance** of migratory and periodically occurring pests	Prefecture 3 637 Government 900 Total 4 537
Number of designated staff for **surveillance** of invasive species	
Number of designated staff for **control** of field pests of national importance	
Number of designated staff for **control** of migratory and periodically occurring pests	
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year 2007:			
Total number for year 2008:			
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species	Erwinia Sp.		
Year of first discovery	2007		
Passway	Unknown		
Location of first discovery	Yamagata Prefecture		
Area affected [ha]	0.5		
Area treated [ha]	0.5		
Control method	Cut down and incinerated of diseased tree & contained of orchard		
Expenditures	81 102		

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species			
Year of outbreak			
Area affected [ha]			
Estimated damage US$			
Area treated by government [ha]			
Expenditures by government [US$]			
Control method			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Pest Management

(year, title and possibly short description)

- Plant Protection Law
- Order for Enforcement of Plant Protection Law

Web source for further information: http://www.maff.go.jp/pps/

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?		x
Is pest management extension separate from general extension?		
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: See the above web source		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Pest management research	Agriculture, Forestry and Fisheries Research Council, Ministry of Agriculture, Forestry and Fisheries
Control recommendations	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
Pest management extension	Technology and Extension Division, Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries
IPM training	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
GAP training	

Infrastructure	Year: 2007
Number of technical officers for pest management	Prefecture 3 637 Government 900 Total 4 537
Number of central, regional, provincial or state offices	Central: 1 Regional: 8 Prefecture: 51
Number of district and village level field offices	
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	
Number of government biocontrol production/distribution facilities	
Number of government biopesticide production/distribution facilities	
Number of general extension staff involved in pest management	8 244
Number of designated plant protection technical officers for extension	

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* Guidelines for implementation of IPM	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?:* Eight major crops e.g. Apple and indoor grown tomato	x	
Does the country have specific IPM research programmes? *If yes, in which crops?:* Soybean, potato, tomato, strawberry, cabbage, pear, citrus, apple and tea	x	
Does the country have specific GAP extension programmes? *If yes, in which crops?:*		x
Does the country have specific GAP research programmes? *If yes, in which crops?:*		x

Market shares (estimated value, volume or area under control)	Year: 2007
Size of chemical pest control market	[number, %]
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	Rice [2007]	Rice [2007]	Rice [2007]
Name(s) of pest(s)	Rice bug group	Blast (Ear)	White-backed rice planthopper
Estimated crop loss			
Affected area	1 437 000 ha	1 414 000 ha	1 212 000 ha
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	Year: 2007
Number of farmers trained in IPM during the year	[number]
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented: Rice, indoor grown strawberry, orange and apple etc.	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Progress of the IPM • IPM investigative commission (2004-) • Publication of the guidelines on IPM practice (2005-) • Providing the specific guidelines for rice, cabbage and citrus (2005-) • Providing the specific guidelines for soybean, tomato, strawberry, pear, apple, tea, chrysanthemum and sugarcane (2008-) • Granted project
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

- Agricultural Chemicals Regulation Law
- Order for Enforcement of Agricultural Chemicals Regulation Law
- Ordinance for Enforcement of Agricultural Chemicals Regulation Law
- Ministerial ordinance to provide for standard for users of Agricultural Chemicals
- Ministerial ordinance to provide for prohibition of distribution on Agricultural Chemicals

Web sources:

- The above law etc. are available on website of MAFF in Japanese.
  http://www.maff.go.jp/nouyaku/
- Agricultural Chemicals Regulation Law in English is available on website of Food and Agricultural Materials Inspection Center (FAMIC),
  http://www.acis.famic.go.jp/eng/hourei/index.htm

Policies (regarding pesticide management)	Yes*	No
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		x
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?		x
Do you allow the "me-too" registration and sale of generic pesticides?		x
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		x
Do you accept evaluation results from other countries?		x
Do you accept field studies conducted in other countries?		x
Do you require environmental fate studies?	x	
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x
Other policies:		
Web source for further information: **See the above web sources.**		

* if yes/no is not appropriate, please insert a note in italics under the question

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	Agricultural Chemicals Office, Plant Products Safety Division, Food Safety and Consumer Affairs Bureau, MAFF
Registration	Agricultural Chemicals Office, Plant Products Safety Division, Food Safety and Consumer Affairs Bureau, MAFF
Licensing of shops	Prefectural government
Licensing of field applicators	
Enforcement/inspections	Enforcement Agricultural Chemicals Office, Plant Products Safety Division, Food Safety and Consumer Affairs Bureau, MAFF Inspections Food and Agricultural Materials Inspection Center
Testing of pesticide efficacy	
Development of pesticide use recommendations	
Safe use training/extension	
Food residue monitoring	The Ministry of Health, Labour and Welfare
Environmental monitoring	The Ministry of the Environment
Health monitoring	
Other Stakeholders:	
Pesticide Industry Association	Japan Crop Protection Association
Civil Society Organizations (NGO, etc.)	

Infrastructure	Year: 2008
Number of registration officers[a]	[14]
Number of enforcement officers[b]	[Around 60]
Number of department quality control laboratories	
Number of quality control laboratory personnel	
Number of department residue analysis laboratories	
Number of residue laboratory personnel	

[a] Agricultural Chemicals Office, Plant Products Safety Division, Food Safety and Consumer Affairs Bureau, MAFF

[b] Incorporated Administrative Agency – the Food and Agricultural Materials Inspection Center, Agricultural Chemicals Inspection Station

Key Situation Indicators

Pesticide Trade: 2007[a]	Tons (a.i.)	US$ '000 Value
Imports	18 050	
Manufacture		
Export	26 001	
Domestic Use/Sales		
Pesticide sales Profile[b]: 2007[a]	**Tons (a.i.)**	**US$ '000 Value**
Agriculture		
Chem. Insecticides	22 549	
Chem. Fungicides	26 199	
Chem. Herbicides	12 032	
Chem. Others: e.g. molluscicide, acaricide	384	
Other: e.g. Avamectrin, Bt, Neem		

Other purposes		
TOTAL	61 164	

[a] Data are counted on Japanese Agricultural Chemicals year ending September. (e.g. 2007 is from 1st October 2006 to 30th September 2007)

[b] 1) Data refer to sales of agricultural chemicals in Agricultural Chemicals handbook (Noyaku Yoran). Figures are total A.I.sales amount (t) converted from formulated products with rate of A.I.

2) Data of biopesticides are not provided in this table.

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?		x
Do you have significant problems with pesticide resistance?		
Do you have a list of pesticides under close observation for problems		x
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?	x	
Do you have significant problems of environmental contamination from pesticides?	x	
Do you have data on pesticides effects on wildlife and ecosystems?	x	
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		x
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: As of 31st December 2008	
	a.i.*	Trade Name
Number of registered pesticide products (Total number including biopesticides)	530	4 340
Number of registered biopesticides (macrobial + microbial)	43	108
Number of restricted-use pesticides/formulations (Note that the use of the formulations including these active ingredients has been restricted due to water pollution.)	2	15
Number of banned pesticides	21	
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year		

Number of food samples analyzed for pesticide residues during year	
Number of samples exceeding MRL	
Number of environmental samples analyzed for pesticide residues	

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.9 KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

The "Juche-based Farming Method" established in the Democratic People's Republic of Korea includes all parts of the farming method as well as the management of pests in crops. The method is updated every year by the Ministry of Agriculture (MOA) for dissemination to cooperative farms across the country.

Pest management by protecting, producing and applying natural enemies such as Trichogramma and biopesticides, while using few chemical pesticides in the fields, is included recently in the method to increase yields of crops.

The Central Plant Protection Station (CPPS), the Ministry of Agriculture, is responsible for carrying out surveillance and managing significant pests in crops in the fields, while the Ministry of Land and Environment Protection is responsible for pest management in the forest.

In 2008, the MOA re-organized the County Plant Protection Office in every county under the CPPS. Each office would survey the outbreak of pests in its county, produce and provide biopesticides such as Trichogramma and Beauveria bassiana to the co-operative farms, educate and train farmers on pest management and report its activities and status of the situation to the CPPS through the Province Plant Protection Station during cropping seasons.

In DPRK, the Central Plant Quarantine Station (CPQS), MOA, is responsible for inspecting and quarantining seeds and planting materials. CPQS also trains the quarantine staff of the Korea Export & Import Commodity Inspection & Quarantine Committee (KIQC). On the other hand, the State Administration for Quality Management (SAQM) is responsible for inspecting and quarantining plant commodities while the Bio-Safety Committee (BSC), the State Academy of Sciences, is responsible for inspecting and quarantining genetically modified organisms.

In 2007, CPQS updated the "Animal and Plant Quarantine Regulations on Border" and compiled new "Minor Regulations of the Border Animal and Plant Quarantine" with the support of SAQM.

From 2007-2008, Swiss Development Cooperation (SDC) offered assistance such as training on vegetable IPM and provision of 4 sets of Trichogramma rearing facilities to 4 respective counties and Bt facility to AAS.

In 2008, the State Administration for Quality Management (SAQM) sent a delegation to China for technical exchange in the field of phytosanitary measures and regulations.

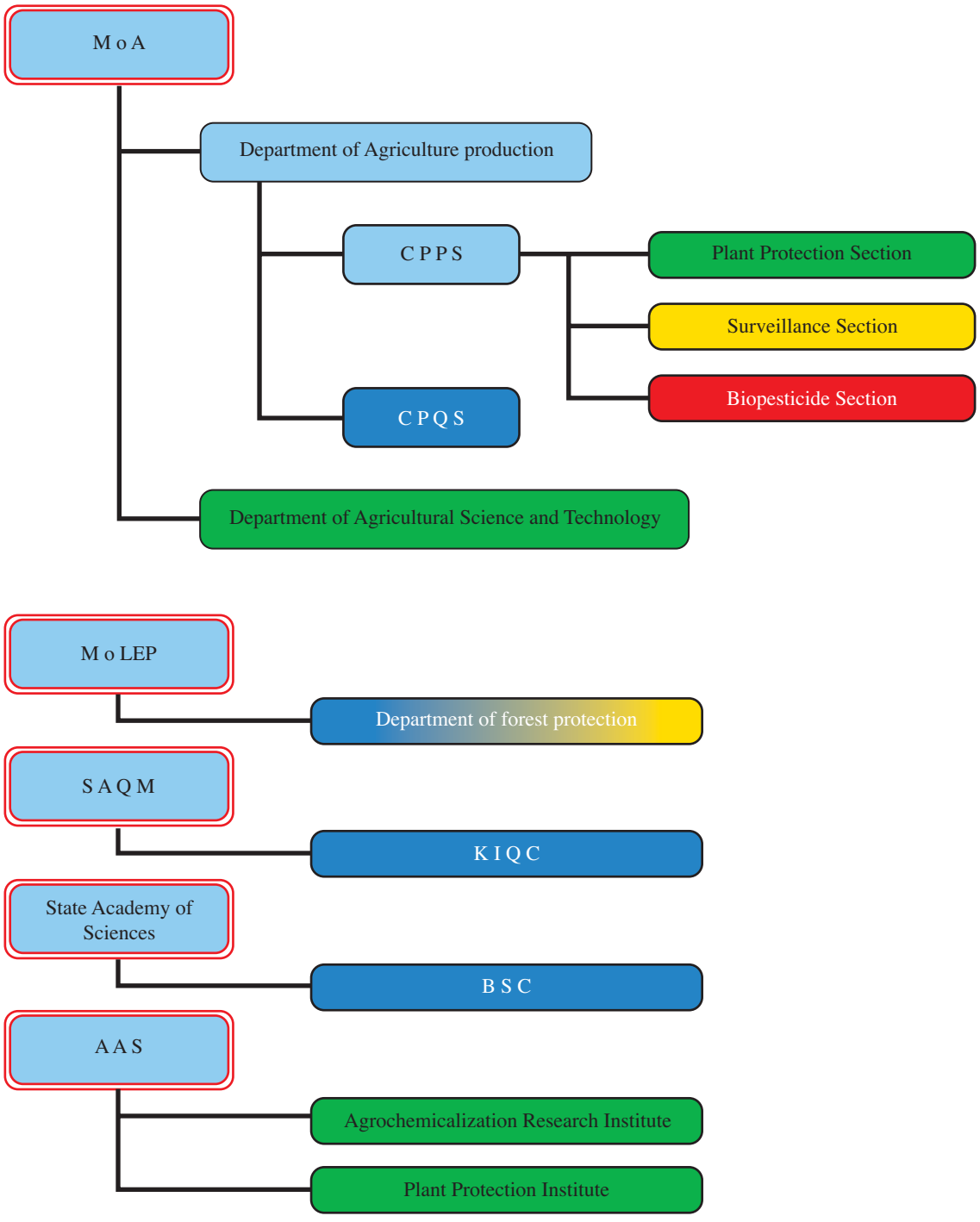
During the period from 2009-2010, DPRK plans to increase the investment in pest management, such as pest control in the fields, production of biopesticides as well as phytosanitary measures and regulations.

It is noted that DPRK will control Corn Borer, using the biopestisides such as Trichogramma, with less use of chemical pesticides throughout the country.

From 2009-2011 the European Union plans to support CPPS, MOA, the Plant Protection Institute and AAS through a project entitled the "Integrated Pest Management Application to Maize Production for Food Security in DPRK" which will provide 24 counties with Trichogramma Rearing Facilities and train personnel for the quality control of production.

CPQS, MOA, will train more phytosanitary staff and uplift the level of pest risk analysis with the support of SAQM which will provide the advanced inspection equipment with cooperation of AQSIQ, China.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Ministry of Agriculture
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Operational Offices:

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Pesticide Registration

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Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

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Language(s): English
Contact point received: – Source: NPPO Directory

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Source: Country Report

WTO SPS Contact Point

–

Rotterdam Convention (PIC) DNA Industrial Chemicals and Pesticides (CP)

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Selected Country Statistics:

Agricultural Population	7.0 million	Agricultural Land	1.85 million ha
GDP US$ million	Agric. GDP: %	GNI per capita: US$	Undernourishment: %
Main crops grown: rice, maize, soybean, potato, wheat, barley.			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

Executive summary

During the period from 2007-2008, there were some changes and developments in fields of phytosanitary measures and regulations.

CPQS

- updated the Regulations of the Border Animal and Plant Quarantine.
- inspected and quarantined seeds and planting materials from other countries.
- arranged technical training workshops for quarantine staff.
- established one more quarantine post in the northern border line.
- prepared to formulate new plant quarantine pests.
- conducted a preliminary analysis on some pest risks with the SAQM.
- visited China for cooperation and technical exchange with MOA in 2007.

SAQM

- inspected and quarantined plant commodities
- engaged in technical exchanges with AQSIQ, China, in 2008.

BSC

- inspected the genetically modified organisms of plants

The business plan envisaged for the next two years is as follows:

- Analysis of more pest risks by collaborating with pest specialists,
- Updating the list of plant quarantine pests, and
- Training of quarantine staff.

List of Key Legislation/Regulations/Rules

"Legislations of the Border Animal and Plant Quarantine" by the decision of Standing Committee of the Supreme People's Assembly, DPRK, No. 89, 16 July 1997.

"Regulations of the Border Animal and Plant Quarantine" by the Cabinet of DPRK, 14 February 1998.

"Minor Regulations of the Border Animal and Plant Quarantine" by the MOA, Sep, 2008

Web source for further information: –

Policies (regarding plant quarantine)	Yes	No
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?	x	
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress)		
Web source for further information: –		

Organization of Plant Quarantine Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Analysis	KIQC
National standards development	MOA/MOLEP
International notifications	CPPS/SAQM
Import:	
Import permits	CPQS/SAQM/BSC
Import inspections	SAQM/CPQS/BSC
Emergency action	MOA/CPPS
Export:	
Phytosanitary certificates	CPQS/SAQM/BSC
Treatment of commodities	SAQM

MOA Ministry of Agriculture
MOLEP Ministry of Land & Environment Protection
CPPS Central Plant Protection Station
CPQS Central Plant Quarantine Service
KIQC Korea Export & Import Commodity Inspection & Quarantine Committee
SAQM State Administration for Quality Management
BSC Bio-Safety Committee
AAS-PPI Academy Agriculture Science-Plant Protection Institute
ARI Agrochemicalization Research Institute

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify	56
Total qualified personnel for plant pest risk analysis	32
Number of quarantine offices	30
entry points (sea/air/land/mail = total)	7/1/17/1 = 26
post-entry plant quarantine containment facilities	2
other offices	2
Number of quarantine service diagnosis laboratories	7
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	Many
Number of laboratories for bacteria samples	Many
Number of laboratories for virus samples	Many
Number of laboratories for fungus samples	Many
Number of laboratories for mycoplasma samples	Many
Number of laboratories for nematode samples	Many
Number of laboratories for plant/weed samples	Many
Number of laboratories for other pests (snail, slug, rodents, etc.)	Many

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MOA/MOLEP
– surveillance	CPPS/SAQM
– management	CPPS
– certification	CPPS/SAQM
List of target pest species and crops ISPM 4	Number of sites in 2008
List of target pest species and crops ISPM 10	Number of sites in 2008

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Rice	China	
Maize	China/Australia	
Wheat	China/Australia/Ukraine	
Soybean		
Main Export Plant Commodities	Main destination countries	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	
Number of import inspections carried out	
Number of emergency phytosanitary treatments taken on imports	
Number notifications of non-compliance	
Number of conventional phytosanitary certificates issued	
Number of electronic phytosanitary certificates issued	

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodity	Top three pest/commodity	# of interceptions
	Unaspis yanoensis/Orange	
	Plnococcus citri Risso/Orange	
	Polyphagotarsonemus latus/Orange	

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests	2004	79	63	33
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: –				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)	11	3	0
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Updated the Legislations of the Border Animal and Plant Quarantine. Conducted training courses for phytosanitary staff.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Staff training on the PRA and surveillance.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x			x		
ISPM 02 Guidelines for pest risk analysis			x		x			
ISPM 03 Code of conduct for the import and release of exotic biological control agents		x				x		
ISPM 04 Requirements for the establishment of pest free areas		x		x				
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x			x		
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x				x	
ISPM 09 Guidelines for pest eradication programmes		x		x				
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	
ISPM 11 Pest risk analysis for quarantine pests			x		x			
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x	x				
ISPM 15 Guidelines for regulating wood packaging material in international trade			x			x		
ISPM 16 Regulated non-quarantine pests: concept and application			x	x				
ISPM 17 Pest reporting			x			x		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x	x				
ISPM 19 Guidelines on lists of regulated pests			x		x			
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x		x			
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x				x	
ISPM 23 Guidelines for inspection			x			x		
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x			x		
ISPM 25 Consignments in transit			x			x		
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x		x			
ISPM 27 Diagnostic protocols for regulated pests			x		x			
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

Executive Summary

During the period from 2007 to 2008, pests such as rice leaf folder and BPH were immigrated to DPRK and caused damage to crops. The damage in 2007 was more serious than 2008. In 2008, the outbreak of rice water weevil causing damage to rice paddy was much less serious, thanks to the climate.

In 2008, MOA re-organized the County Plant Protection Office in every county. Each office surveys pest outbreak and reports to the CPPS and MOA through the Province's City Plant Protection Station during cropping seasons.

During the next two years, CPPS, MOA, will increase the pest surveillance posts which will make a survey and report every week, instead of every 10 days. CPPS will also conduct training courses for the responsible staff.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

Regulations of Crop Protection, 21 February 2005
Minor Regulations for Crop Protection, 16 August 2005

Web source for further information: –

Policies (regarding invasive/migratory species management)	**Yes**	**No**
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.)		
Web source for further information: –		

Organization of Outbreak Management Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	CPPS , MOA/MOLEP
Surveillance	Cooperative farm unit, county unit, Provincial nit under guidance of CPPS, MOA and MOLEP
Control	CPPS, MOA/MOLEP
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	CPPS, MOA/MOLEP
Surveillance	Cooperative farm unit, county unit, Provincial nit under guidance of CPPS, MOA and MOLEP
Control	MOA/MOLEP
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MOA/MOLEP
Surveillance	CPQS/ SAQM
Control/eradication	MOA/MOLEP
Reporting to bilateral or international organizations	CPPS, MOA/MOLEP

Infrastructure	Years: 2007/2008
Number of designated staff for **surveillance** of field pests of national importance	390
Number of designated staff for **surveillance** of migratory and periodically occurring pests	390
Number of designated staff for **surveillance** of invasive species	390
Number of designated staff for **control** of field pests of national importance	5 416
Number of designated staff for **control** of migratory and periodically occurring pests	5 416
Number of designated staff for **eradication** of invasive species	5 416

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: 2007	4	7	
Total number for year: 2008	2	9	1
Total number on record	6	16	1

Eradication or internal quarantine actions taken against economically important species			
Name of species	*Dryocosmus Kuriphilus*	*Trialeurodes vaporariorum*	*Lissorhoptrus oryzophilus*
Year of first discovery	1964	1970	1982
Passway	Europe	Europe	Japan
Location of first discovery			
Area affected [ha]			
Area treated [ha]			
Control method	Pesticide	Pesticide	Pesticide
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	Rice water weevil	Armyworm	
Year of outbreak	2004	2004	
Area affected [ha]	207 741	107 444	
Estimated damage $	10-13%	5-6%	
Area treated by government [ha]	142 000	90 000	
Expenditures by government [$]			
Control method	Deltamethrin	Deltamethrin, Bt	
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Update the Regulations of Crop Protection
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Lack of information on origin and characters of invasive pests. Lack of equipment to survey and control the pests.

IV. PEST MANAGEMENT

Last updated: December 2008

Executive Summary

In 2008, the County Plant Protection Office in every country was re-organized and its responsibilities are as follows:

- Conducting surveillance of pest outbreaks in its area,
- Managing pests in the fields,
- Training farmers,
- Producing biopesticides such as Trichogramma and Beauveria bassiana and distributing them to cooperative farms, and
- Facilitating linkages between cooperative farms and the Province's City Plant Protection Station during cropping seasons.

During the period from 2007-2008, dangerous pests in most areas were controlled by chemical pesticides imported from other countries, especially from China. However, the pests in some areas were controlled by biopesticides produced locally.

During the period, SDC gave following support:

- Training on vegetable IPM,
- 3 Trichogramma rearing facilities,
- 1 Bt production facility,
- 1 locally designed Trichogramma rearing facility, and
- Training on quality control of Trichogramma production.

During the next two years, DPRK will increase its investment in biopesticide production for control of main pests such as Chilo suppressalis and Ostrinia nubilalis as well as forest pests in order to increase sustainable crop yields and protect the forest.

A CABI-EU project worth one million Euros will provide the following:

- 20 locally designed county Trichogramma rearing facilities,
- Training producers and farmers on Tichogramma rearing and application, and
- Training on rotation (e.g. maize-soybean)

List of Key Legislation/Regulations/Rules for Pest Management

Regulations of Crop Protection, 21 February 2005
Minor Regulations for Crop Protection, 16 August 2005

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?	x	
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MOA/MOLEP
Pest management research	PPI (AAS)/CPPS
Control recommendations	CPPS/MOA/MOLEP
Pest management extension	CPPS/AAS/MOLEP
IPM training	CPPS/MOA
GAP training	MOA

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	2 708
Number of central, regional, provincial or state offices	11
Number of district and village level field offices	208
Number of field/extension agents for pest management advice	510
Number of field/extension agents trained in IPM-FFS facilitation	500
Number of government biocontrol production/distribution facilities	208
Number of government biopesticide production/distribution facilities	208
Number of general extension staff involved in pest management	510
Number of designated plant protection technical officers for extension	510

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:*		
Does the country have specific IPM extension programmes? *If yes, in which crops?:*	Maize IPM	
Does the country have specific IPM research programmes? *If yes, in which crops?:*	Rice Maize Vegetables	
Does the country have specific GAP extension programmes? GAP If yes, in which crops?:	All crops	
Does the country have specific GAP research programmes? *If yes, in which crops?:*	All crops	

Market shares (estimated value, volume or area under control)	Years: 2007-2008
Size of chemical pest control market	
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	rice	maize	vegetables
Name(s) of pest(s)	Rice water weevil	Corn Stem Borer	Diamond Back Moth
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken	142 000	90 000	

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
SDC-funded Trichogramma activities in DPRK	Switzerland		2005-2008
IPM application to maize production for food security in DPRK	EU	1 million euro	2009-2011
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	Years: 2007-2008
Number of farmers trained in IPM during the year	
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	0.3 million ha
Crops in which IPM or other ecology friendly programmes are successfully implemented: maize, cabbage and fruits	
Crops grown organic/pesticide-free: cabbage and fruits	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Re-organized County Plant Protection Offices Biopesticides use from 2011 in maize fields is set as obligatory by Government policy
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Analysis and definition of the origin and characters of invasive pests

V. PESTICIDE MANAGEMENT

Last updated: December 2008

Executive Summary

DPRK imported chemical pesticides from China and used them in the fields and forests to control main pests, while producing chemical pesticide with imported raw materials authorised/permitted by the Agro-chemical station Institute, AAS and CPPS, MOA.

List of Key Legislation/Regulations/Rules

1986: Law of the DPRK on the Protection of Environment.
1992: Administration Council Directive No. 78 (12 May 1992): Regulations on Pesticide Control.

Others:
1. Law of the DPRK on the Pesticide Management
2. Pesticide Management Regulation of the DPRK
3. Detailed Regulations for Enforcement of the Pesticide Management Regulation
4. Law of the DPRK on Agriculture
5. Law of the DPRK on the Public Health
6. Law of the DPRK on the Quality Control
7. Law of the DPRK on River
8. Law of the DPRK on Pomiculture
9. Law of the DPRK on Fish Breeding
10. Law of the DPRK on the Conservation of Biodiversity.

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:*_____	x	
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?		
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		
Do you accept evaluation results from other countries?	x	
Do you accept field studies conducted in other countries?	x	
Do you require environmental fate studies?	x	

Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?	x	
Do you subsidize or provide low-cost biopesticides?		x
Other policies:		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	Cabinet/MOA
Registration	MOA/CPPS/ARI/MOLEP
Licensing of shops	
Licensing of field applicators	MOA/CPPS/MOLEP
Enforcement/inspections	MOA/CPPS/MOLEP
Testing of pesticide efficacy	ARI/CPPS
Development of pesticide use recommendations	ARI
Safe use training/extension	ARI/MOA/CPPS/MOLEP
Food residue monitoring	Ministry of Health (MOPH)
Environmental monitoring	MOLEP
Health monitoring	MOPH
Other Stakeholders:	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2007-2008
Number of registration officers	1
Number of enforcement officers	11
Number of department quality control laboratories	11
Number of quality control laboratory personnel	25
Number of department residue analysis laboratories	11
Number of residue laboratory personnel	25

Key Situation Indicators

Pesticide Trade:	Tons	US$ '000 Value
Imports		
Manufacture		
Export		
Domestic Use/Sales		
Pesticide Use Profile:	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture		
Chem. Insecticides		
Chem. Fungicides		
Chem. Herbicides		
Chem. Others: e.g. molluscicide, acaricide		
Other: e.g. Avamectrin, Bt, Neem		
Other purposes		
TOTAL		

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance?	x	
Do you have a list of pesticides under close observation for problems	x	
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?	x	
Do you have significant problems of environmental contamination from pesticides?		x
Do you have data on pesticides effects on wildlife and ecosystems?		x
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		x
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products		
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)		
Number of restricted-use pesticides/formulations		
Number of banned pesticides		
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year		
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Updated the regulation on Registration and management of pesticides. Encourage to use as much as possible environmental friendly pesticides. Training workshops on safe using and effect increasing of pesticides were conducted by CABI and other international organizations.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Lack of techniques and means for pesticide residue monitoring. Lack of information on effective pesticides

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.10 LAO PEOPLE'S DEMOCRATIC REPUBLIC

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

Lao PDR is a landlocked country. It occupies an area of 236 800 km^2, out of which approximately 75 percent is mountainous and lies entirely within the tropics and is located between latitudes 14°10′ to 22°10′ N and longitudes 100°20′ to 107°50′ E. The population in early 2008 was about 5.8 million, and more than half of the population is concentrated in flat plain adjacent to Mekong basin and its tributaries. Agriculture is the main stay of the national economy and contributes 45 percent of the country's GDP and it employs about 80 percent of the population.

Lao PDR with its much smaller population and abundant but largely untapped natural resources, which include water and land, is in a prime position to serve what must become growth markets for rice, vegetables and other farm produce. Currently, the major food crop and agriculture product of Lao PDR is rice. It is cultivated during the wet season, either rain fed in upland areas of under wet conditions on inundated river plains. Rice is often grown as a subsistence crop. The problem continues to be nationwide food security made worse by the frequency of droughts and floods. Despite the importance, agricultural productivity in Lao PDR is at a rather low level, mainly due to traditional farming system susceptible to adverse affect of pests and diseases associated with the introduction of high yielding varieties and exotic crops. Increasingly, the traditional agriculture utilizing natural resources and providing basic needs is being replaced by a much more complex system dependent on many external influences such modern agricultural inputs, e.g. improved seed, fertilizer, new technology and credit access.

Increasing income and growth in neighbouring countries create a growing demand for food and agricultural products. These can be supplied from Lao PDR, whose natural resources favour expansion of agricultural production. Improvement of the investment climate, membership of the World Trade Organization (WTO) and making optimal benefits of ASEAN Free Trade Area (AFTA) membership will play synergetic roles in unleashing the growth potential of agriculture.

Exports of agricultural products from Lao PDR have not yet faced a major ban or suspension for SPS noncompliance, but there are specific concerns for the future. At present most agricultural exports are destined to market segments in neighbouring countries where food safety and quality requirements are still moderate or low. There is no formal record, but it is estimated that greater than half of agricultural exports are through informal border trade. However, public and market requirements for quality and safety in neighbouring countries are also increasing.

The role and responsibilities of the NPPO has been made more explicit under the WTO SPS regime and stipulated in the New Revised Text of the IPPC (1997). Lao PDR has not yet fully implemented all 27 ISPMs adopted by CPM. The status of pest surveillance is essentially an *ad hoc* event with no long term planning programme in place, very limited resources and limited management capacity. Human resource development is the major issue of concern. The development of documented systems and processes, alignment of current activities with the requirements of international standards, improving the physical resources (equipment and transport) are all issues which the NPPO has to address to develop or improve the plant pest surveillance systems in Lao PDR. Because pest surveillance is a national issue, formalized collaborative systems with the

provincial departments of agriculture and forestry (PAFO/DAFO), National Agriculture and Forestry Research Institute (NAFRI), the National Agriculture and Forestry Extension Service (NAFES) and the National University of Laos (Faculty of Agriculture) needs to be developed or strengthened.

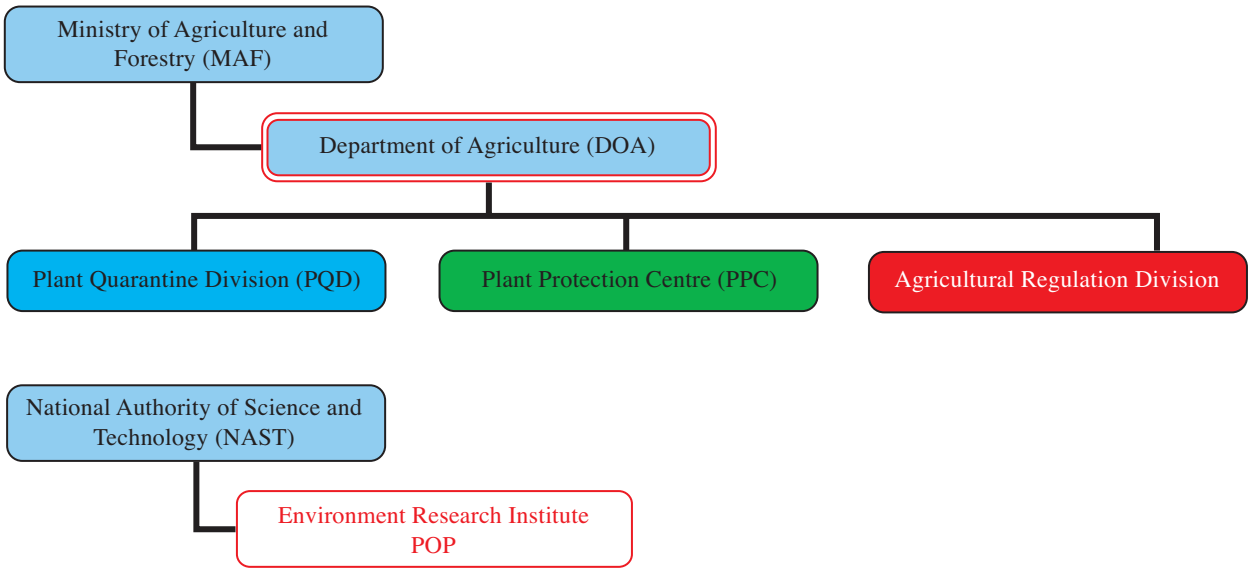
Protecting the Lao People's Democratic Republic's Plant Health Status and Facilitating Safe Trade in Plants and Plant Products, the NPPO of Lao PDR is dealing its mandates with the Prime Minister Decree on Plant Quarantine promulgated in 1993 and so far to be in compliance with the WTO SPS Agreement the National Assembly has approved new Plant Protection and Quarantine Law in December 2008. This new law determines the mandate of the NPPO to become a highly effective, efficient and professional with the capacities and competencies to protect the nation's plant health status and biodiversity and promote market access for plants and plant products in compliance with international agreements and standards.

With regard to the policy development and legislation, the Government of Lao PDR has defined its new agriculture and forestry strategy for the period 2006-2010 which contains four key objectives, including food security, commodity production, eradication of shifting cultivation, and sustainable forest management. The policy of commodity production involves increasing the supply of goods for both domestic and foreign market. The Government is launching the promotion of "Clean Agriculture" aiming to produce organic agricultural products. IPM Programme as well as GAP are included in 4 production systems of Clean Agriculture policy i.e. (i) conventional traditional agriculture, (ii) conventional chemical agriculture (GAP and IPM), (iii) pesticide free products (PFP), and (iv) organic agriculture (OA). The main achievements have been the adoption by the Ministry of Agriculture and Forestry of Lao PDR of the standards for organic farming. They were adapted to the local context from IFOAM (International Forum for Organic Agriculture Movement) Standards. Therefore, GAP is currently being considered for support by STDF.

As the role and responsibilities of the NPPO have been made more explicit under the WTO SPS regime and stipulated in the New Revised Text of the IPPC (1997), there is an increasing demand for government organizations to be more efficient, transparent and accountable for their activities or actions both globally with the trading partners and nationally with their stakeholders. Identified strategic areas for further development towards 2010 and 2020 including increasing rice production and production of other crops including maize, coffee, cassava, soybean, green bean, peanut, sugarcane, sugar palm fruit, sesame, vegetable and tropical fruit require to pay critical attention to all economic sectors reforms; to develop human resources in various areas, and to support modern industry development.

At present, potentially more than 9 land border posts are going to play a major role in connecting Lao PDR to the neighbouring countries. Lao PDR is also likely to become a major land route for the movement of agricultural products in the GMS countries. Hence, for instance, in the strategic planning process, careful assessment need to be undertaken on the anticipated or projected increase in activities at the various entry/exit points. There entry/exit points are likely to need improved facilities for phytosanitary inspections, testing, certification, etc. Capacity building and infrastructure investment must be prioritized accordingly.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

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WTO SPS Contact Point

Implementing Coordination Committee for SPS and TBT related to TDF (Trade Development Facility)

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Rotterdam Convention (PIC) DNA Pesticides

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Stockholm Convention (POP) National Focal Point

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Basel Convention Competent Authority (CA)

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Montreal Protocol Focal Point

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Selected Country Statistics

Agricultural Population	4.5 million	Agricultural Land	1.0 million ha
GDP US$2 321 million	Agric. GDP: 45.4%	GNI per capita: US$500	Undernourishment: 22%
Main crops grown: rice, maize, coarse grain, tube, vegetables, tea, coffee, tropical fruit trees.			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

Executive Summary

Outline of plant quarantine in Lao PDR

Lao PDR is a least developing country, with agriculture being its main sector of natural economy. Lao PDR is a party member of international treaty International Plant Protection Convention (IPPC) which provides standards for phytosanitary measures on how to prevent the spreads and introduction of pest of plants and plant products. Since the country has limited resource and lacks experience on how to deal with these subjects, both in the short term and the long term it will place emphasis on securing common and effective action to prevent the spread and introduction of pest of plants and plant products, and to promote appropriate measure for their control. Its application is much wider than the protection of cultivated plants.

Legal framework

- "Prime Minister Decree on Plant Quarantine" No. 66/PM, dated 21 March 1993.
- "Ministerial Agreement on Plant Quarantine Regulation" No. 0369/MAF, dated 2 July 1993.
- "Ministerial Notice on Role and Function and Standard for Entry/exit Plant Quarantine Stations for implementing the Prime Minister Decree No. 66/PM" No. 0754/MAF.DoA.06, dated 14 July 2006
- **"Plant Protection and Quarantine Law, No. 06/NA" was approved by the National Assembly on 9 December 2008**

Set-ups

1999 Agricultural Regulatory Division, Department of Agriculture, MAF.
2002 Reformed Plant Protection Center.
2000 9 land border and river port plant quarantine border posts.
2008 15 international plant quarantine border posts localed in 10 provinces

Assistance from donors

- **NZAID**

  NZAID conducted "NZAID Project on Phytosanitary Capacity Development" for three years (2001-2004) to establish strategic plan on phytosanitary and national phytosanitary database (NPD). Now "Phytosanitary Capacity Building Project for the Mekong Region" is ongoing as a second phase project focusing on specific training topics on pest surveillance, pest diagnostic, pest specimen curation and preservation.

- **AusAID**

  AusAID is implementing "Sanitary and Phytosanitary Capacity Building Programme" to enhance SPS capacity in Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Viet Nam as a part of "Asia Regional Development Cooperation Programme". The project is seeking to extend its activities.

- **JICA**

  JICA is supporting an in-country and third-country training programme on Phytosanitary aiming to train plant quarantine staff in the area of plant quarantine inspection.

- **World Bank (WB)**

  WB is producing a paper entitled "Sanitary and Phytosanitary (SPS) Management Capacity Building Action Plan" which consolidates the methods to strengthen SPS in Lao PDR. This project has not yet been implemented.

National goal and objectives

1. Conduct physical and instrumental awareness on newly approved Plant Protection and Quarantine Law.
2. Continue using and improving NPD system, since it is already developed half way by the previous NZAID project.
3. Improve inspection system at the main entry/exit points.
4. Develop regulations on plant quarantine and plant protection accordingly as stipulated in the new plant quarantine law in compliance with WTO SPS requirements.
5. Improve pest surveillance systems as well as pest inventory and insect pest collection for major high economic potential crops.
6. Improve pest diagnostic capability.
7. Improve pest risk analysis capability.
8. Improve export certification system.
9. Develop eradication standards for national pests of plants and plant products.
10. Integration of plant and animal quarantine activities at the entry/exit points;
11. Develop a repository of plant pest information on selected major crops based on general surveillance data by collating data/information on all previously recorded pests in the country and entering the data/information in the pest status records component of the national phytosanitary database (NPD).
12. Develop and strengthen physical facilities (premise and equipment) required for plant pest diagnosis. These include a two-level reference laboratory capable for diagnosis of a wide range of plant pest in the various disciplines in central laboratory that should be set in the Plant Protection Center (PPC) in Vientiane, and the development of smaller regional laboratories furbished with necessary rudimentary equipment capable for identification of plant pest at a more basic level at strategic location in the provincial offices near major entry/exit points and major crop production areas. In this context, the post-entry plant quarantine station should be also taken into account.
13. Develop the human resource capabilities for undertaking pest diagnosis in the various phytosanitary and plant health disciplines.

Lao PDR currently has minimal or no capabilities for the identification of some significant pest groups including virus like organisms, bacteria, fungi and weeds.

The capacity to identify arthropod pests is also mainly limited to a small number of common pests which are known to occur on rice in Lao PDR. Hence, this is another critical area which needs urgent attention but one which will take a few years for developing all the intangible assets (e.g. human resource technical capabilities) and tangible assets (including laboratories and equipment).

The NPPO currently has very limited capacity to minimize the probability of new pest introductions or for early detection of new pest introduction and respond to such introductions before the pest becomes widely established. Hence this is another important area for capacity development.

The NPPO has virtually no capacity or competencies to raise PRA to international standards. The lack of technically skilled manpower in Lao PDR, at least in the short term, presents the NPPO with major challenges.

Strategic options to consider in the short term include awareness building and training programmes for the development of basic skills for undertaking PRA with management and technical staff from the NPPO, NAFRI, NAFES and the Faculty of Agriculture of the National University of Laos with donor agency assistance; development of computer assisted tools to facilitate learning and for undertaking PRAs, improving the resources required for undertaking PRAs (modern books, access to the internet, CD-ROMs with pest and crop information, etc.).

In the medium term to long term, the development of the capacity of the National University of Laos to teach PRA as part of its curriculum in plant protection would be a cost effective way of building sustainable systems in the country. Advanced level training for specialists from the University to acquire the skills and establish a course in PRA would assist in developing the foundation for capacity building in this fundamental area for phytosanitary activities.

The NPPO also has very limited capacity to undertake pest diagnosis in almost all the disciplines. The gaps are substantial in all areas: skilled human resources, systems, documented procedures, physical assets (including appropriate laboratories and equipment) and laboratory management capabilities.

The most serious area of concern is the shortage of technically skilled manpower in Lao PDR, leaving the NPPO with limited options for the rapid development of high level technical pest diagnostic skills in this critical or core area.

Specific surveys are procedures by which a NPPO obtains information on pests of concern on specific sites in an area over a defined period of time. The verified information acquired may be used to determine the presence or distribution of pests in an area or in a host or commodity, or their absence from an area (in the establishment of pest free areas).

Historically, specific survey programmes have mainly been focused on rice established under field based Integrated Pest Management (IPM) Programmes for a relatively small number of readily observable pests. Most of the data collected under these programmes were in the nature of monitoring surveys on pest-predator population levels especially on insect pests to determine if interventions were required to control the pest populations. Hence, the objectives of the IPM surveys and the methodologies employed were significantly different from what is required for developing a comprehensive pest surveillance system on a wide range of crops with stringent requirements for pest diagnosis (identification and verification) as outlined in the ISPM.

Neither the NPPO nor any of the non-NPPO agencies can currently meet the technical requirements for diagnostic services in most of the disciplines. Capacity building for pest diagnosis is an urgent and high priority area of need but one in which substantial inputs are required both from the government and from donor agencies.

The NPPO needs a management system that ensures that all requirements, including certification specifications, legislative requirements and administrative requirements are satisfied; identify a

person or office responsible for the export certification system; identify the duties and lines of communication of all personnel with certification related responsibilities; and ensure that adequate personnel and resources are available to undertake the following functions:

- maintenance of information on importing country phytosanitary requirements as needed;
- production of operational instructions to ensure that importing country phytosanitary requirements are satisfied;
- inspection and testing of consignments and associated conveyances;
- identification of organisms found during inspection of consignments;
- verification of the authenticity and integrity of phytosanitary procedures;
- completion and issue of phytosanitary certificates;
- document storage and retrieval;
- training;
- dissemination of certification-related information;
- review regularly the effectiveness of its export certification system; and
- development of bilateral protocols if necessary.

List of Key Legislation/Regulations/Rules

- Prime Minister Decree on Plant Quarantine No. 66/PM, dated 21 March 1993.
- Ministerial Agreement on Plant Quarantine Regulation No. 0369/MAF, dated 2 July 1993.
- Ministerial Notice on Role and Function and Standard for entry/exit Plant Quarantine Station No. 0754/MAF.DoA.06, dated 14 July 2006.

Law on Plant Protection and Quarantine has been approved by National Assembly in 9 December 2008.

Web source for further information: –

Policies (regarding plant quarantine)	Yes	No
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?	x	
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress)		
Web source for further information: –		

Organization of Plant Quarantine Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Analysis	MAF/DOA/PQD/PPC/NUOL
National standards development	MAF/DOA
International notifications	MAF/DOA/PQD
Import:	
Import permits	MAF/DOA/PQD
Import inspections	MAF/DOA/PQD/PAFO
Emergency action	MAF/DOA/PQD/PAFO
Export:	
Phytosanitary certificates	MAF/DOA/PQD/PAFO
Treatment of commodities	

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify	27
Total qualified personnel for plant pest risk analysis	3
Number of quarantine offices	
entry points (sea/air/land/mail = total)	9
post-entry plant quarantine containment facilities	
other offices	
Number of quarantine service diagnosis laboratories	1
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	2
Number of laboratories for bacteria samples	1
Number of laboratories for virus samples	
Number of laboratories for fungus samples	2
Number of laboratories for mycoplasma samples	
Number of laboratories for nematode samples	1
Number of laboratories for plant/weed samples	1
Number of laboratories for other pests (snail, slug, rodents, etc.)	

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	
– surveillance	
– management	
– certification	
List of target pest species and crops ISPM 4	Number of sites in [year]
List of target pest species and crops ISPM 10	Number of sites in [year]

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Seed and planting material	Viet Nam, China, Thailand, India, UK, Australia	
Main Export Plant Commodities	Main destination countries	
Vegetables, coffee, tea, rice, maize, soybean, mungbean	EU, America, Japan, China, Viet Nam, Thailand	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Phytosanitary Capacity Development in CLMV countries	NZAID	Unknown	2000-2001
SPS Capacity Building Programme	AusAID	Unknown	2005-present
ASEAN Plant Health Capacity Project	AusAID	Unknowm	2005-present
Title of government follow-up programmes		Amount	Years (start-end)
Plant Quarantine Strengthening		17 600 USD	2006-2007
Improving PQ entry/exit points		35 200 USD	2007-2008

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	75
Number of import inspections carried out	
Number of emergency phytosanitary treatments taken on imports	
Number notifications of non-compliance	
Number of conventional phytosanitary certificates issued	1 604
Number of electronic phytosanitary certificates issued	

Number of quarantine pests intercepted		Year:
Top three commodity	Top three pest/commodity	# of interceptions

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests				
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: –				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Two in-country training courses on plant quarantine inspection (32 staffs have been trained basic level)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Lack of personnel, no adequate infrastructure, no operational budget, not enough training

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade	x			x				
ISPM 02 Guidelines for pest risk analysis	x			x				
ISPM 03 Code of conduct for the import and release of exotic biological control agents		x			x			
ISPM 04 Requirements for the establishment of pest free areas	x			x				
ISPM 05 Glossary of phytosanitary terms		x			x			
ISPM 06 Guidelines for surveillance	x			x				
ISPM 07 Export certification system			x			x		
ISPM 08 Determination of pest status in an area	x			x				
ISPM 09 Guidelines for pest eradication programmes	x			x				
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites	x			x				
ISPM 11 Pest risk analysis for quarantine pests		x		x				
ISPM 12 Guidelines for phytosanitary certificates			x		x			
ISPM 13 Guidelines for the notification of noncompliance and emergency action	x			x				
ISPM 14 The use of integrated measures in a systems approach for pest risk management	x			x				
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application	x			x				
ISPM 17 Pest reporting	x			x				
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure	x			x				
ISPM 19 Guidelines on lists of regulated pests	x			x				
ISPM 20 Guidelines for a phytosanitary import regulatory system	x			x				
ISPM 21 Pest risk analysis for regulated non-quarantine pests	x			x				
ISPM 22 Requirements for the establishment of areas of low pest prevalence	x			x				
ISPM 23 Guidelines for inspection	x			x				
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures	x			x				
ISPM 25 Consignments in transit	x			x				
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)	x			x				
ISPM 27 Diagnostic protocols for regulated pests	x			x				
ISPM 28 Phytosanitary treatments for regulated pests			x	x				
ISPM 29 Recognition of pest free areas and areas of low pest prevalence			x	x				
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			x	x				
ISPM 31 Methodologies for sampling of consignments			x	x				
Comments/Constraints See as determined in the management responsibilities requirements above.								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

Executive Summary

Lao PDR has not established a national programme for pest outbreaks and invasive species management. Moreover, beside the forecast signal of possibly pest outbreak, the warning system is still weak, to the extent of being almost non-existent. Consequently, farmers are faced with invasive species that become established and create impacts on their cash crops such as coffee and coconut.

The Department of Agriculture (DOA) has recently established networks of plant protection with their role to monitor and develop database on pest status of economic crop which is further reported to NPPO to indentify proper control measure. Those mandates of plant protection unit have been clearly defined in the Agreement of DOA on function and role of the Provincial Agricultural Sector.

Furthermore, with the support of NZAID Phytosanitary Capacity Building in the Mekong Region Project, surveillance work has started with the aim to build specimen-based pest lists on key crops (mango and maize) with potential for export.

During the programme, a number of key technical staff (entomologist and pathologist) were trained on pest diagnostic in New Zealand and Viet Nam. In addition, on-the-job training and technical assistance was also given on the use of the internet and digital technology for identifying plant pests, the establishment of formal and informal networks for identifying plant pests in Lao PDR and the improvement of the sample collection system to ensure the capability of the trained staff in carrying out their tasks.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

–

Web source for further information: –

Policies (regarding invasive/migratory species management)	**Yes**	**No**
National strategy to control serious field pest outbreaks?		x
National strategy to control migratory or periodically occurring pests?		x
National strategy to eradicate serious newly invaded exotic pests?		x
Other policies: (e.g. subsidies, etc.)		
Web source for further information: –		

Organization of Outbreak Management Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	MAF/DOA/PPC
Surveillance	MAF/DOA/PPC
Control	MAF/DOA/PPC
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	
Surveillance	
Control	

New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MAF/DOA/PPC
Surveillance	MAF/DOA/PPC
Control/eradication	MAF/DOA/PPC
Reporting to bilateral or international organizations	MAF/DOA

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	8
Number of designated staff for **surveillance** of migratory and periodically occurring pests	7
Number of designated staff for **surveillance** of invasive species	0
Number of designated staff for **control** of field pests of national importance	7
Number of designated staff for **control** of migratory and periodically occurring pests	7
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year 2007:			
Total number for year 2008:			
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species	Brontispa longissima		
Year of first discovery	2002		
Passway			
Location of first discovery			
Area affected [ha]			
Area treated [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	Coffee berry borer		
Year of outbreak			
Area affected [ha]	25 000		
Estimated damage $			
Area treated by government [ha]			
Expenditures by government [$]			
Control method	parasitoids		
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, nvestments, training, etc.)
• Knowledge and skill of key technical staff on diagnostic and pest surveillance have been improved through NZAID training programme. • Surveillance programme of important crop (corn, mango, cabbage) was initiated to establish a pest list and collection of specimen has been fully establish in Plant Protection Center. • Plant protection network in each province of Lao PDR and its role have been defined by DOA.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Lack of personnel, no adequate infrastructure, no operational budget, not enough training.

IV. PEST MANAGEMENT

Last updated: December 2008

Executive Summary

Pest management is nationwide recognized in Lao PDR through integrated pest management project (IPM) which has been implemented since 1995 under the technical cooperation programme between FAO and Lao PDR.

National IPM project office which is based in Plant Protection Center has the central and local networks within the line institutions aiming at promoting and educating farmers in sustainable and environmentally friendly pest management.

IPM activities play an important role in implementing the Lao Government's current policies on agriculture with emphasis on increasing productivity, market-orientation, exports and household food security. At the same time, the policy also stresses the preservation of agriculture biodiversity and sustainability, equitable development, and the conservation of natural resources. Organic crops and production areas, and production for niche markets have also been advocated.

Strategy for pest management has focused on vegetables since 2005. The IPM activities in Lao PDR have focused on increasing the capacity of IPM Programme and policy support, and on increasing the participative role of stakeholders, especially farmers, in the planning and implementation.

The main development during 2007-2008 has focused on promotion of involvement of additional agencies in the programme support and implementation, including effective coordination among these agencies and strengthening technical and training capacities among field staff.

More than 14 farmer field schools were conducted in the target area with 231 farmers trained in IPM. As well, 7 officers and local trainers of IPM Programme continue upgrading their capability on biological control and good agricultural practice of vegetable production through a series of training activities organized within the country and in the partnership countries (including China, Thailand, Cambodia and Viet Nam).

In collaboration with the Oxfam-Belgium Project on the use and production of biological control agents, a number of biological control agents have been introduced into the programme and investigation is conducted on its potential to control important pests with possible field-level production. The knowledge on biocontrol practice of diamond backmoth, using its major parasitoids (Diadegma semiclausum and cotesia sp.) and biopesticide (bacillus thuringiensis), has been transferred to local trainers and farmer field schools in the target area where huge cabbage is produced for export.

In October 2007, the status of coconut hispine beetle in Lao PDR was assessed through FAO programme. The assessment formulated concrete recommendations for containing the spread of the beetle and for strengthening the biological management of beetle. The experiment to study potential of predatory earwigs and mass rearing of Asecodes hispinarum are being investigated under the lab condition of PPC.

Based on IPM project's activities with its achievement, the Ministry of Agriculture and Forestry as well as the Department of Agriculture have been promoting Integrated Pest Management (IPM/FAO) as basis for implementation of clean agricultural production which comprises 3 steps including (i) good agricultural practice, (ii) pesticide-free production and (iii) organic agriculture.

List of Key Legislation/Regulations/Rules for Pest Management

(In preparation) Regulation on Organic Farming Standard

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?	x	
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MAF/DOA/PPC
Pest management research	MAF/DOA/PPC
Control recommendations	MAF/DOA/PPC
Pest management extension	MAF/DOA/PPC
IPM training	MAF/DOA/PPC
GAP training	MAF/DOA/CADC

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	
Number of central, regional, provincial or state offices	10
Number of district and village level field offices	
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	106
Number of government biocontrol production/distribution facilities	1
Number of government biopesticide production/distribution facilities	1
Number of general extension staff involved in pest management	
Number of designated plant protection technical officers for extension (TOT from 3 provinces has been implemented during IPM Programme)	50

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* PPC	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?:* Vegetables	x	
Does the country have specific IPM research programmes? *If yes, in which crops?:*	x	
Does the country have specific GAP extension programmes? *If yes, in which crops?:*	x	
Does the country have specific GAP research programmes? *If yes, in which crops?:*	x	

Market shares (estimated value, volume or area under control)	**Years: 2007-2008**
Size of chemical pest control market	
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop			
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Integrated Pest Management	FAO		2008-2009
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Years: 2007-2008**
Number of farmers trained in IPM during the year	231
Number of IPM-FFS conducted during the year	38
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented: Head Cabbage, rice	
Crops grown organic/pesticide-free: Rice	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

- Knowledge on using of biological control agent was introduced into FFS of IPM Programme.
- Clean agriculture development center was established and a number of work on organic farm and good agricultural practice (GAP) was initiated.

Frame work on pest management was newly defined in the function and role of provincial agricultural office (PAO).

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

Lack of personnel, no adequate infrastructure, no operational budget, not enough training

V. PESTICIDE MANAGEMENT

Last updated: December 2008

Executive Summary

Pesticide management has been nationally recognized since the declaration of Pesticide Regulation No. 0886/MAF, dated on 10 March 2000, aiming at management and prohibition of non-quality pesticides and harmfulness to human, plants, animals and environment in Lao PDR. In addition, the regulation also aims at giving definition, principles, measures and approaches for management and inspection of pesticides used in Lao PDR.

So far, 26 kinds of pesticides in Lao PDR are prohibited to use in the country. Presently, 112 brand names of the pesticides (consisting of 75 products from Viet Nam and 25 from Thailand) have been registered with DOA.

To comply with the WTO SPS Agreement, a new decree on pesticide management is being in the process of public consultation with the national authorities concerned. The first draft preparation was assisted by FAO experts in 2008. Lao PDR has not yet signed the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and their Disposal.

The Ministry of Agriculture and Forestry has submitted a recommendation for ratification of the Rotterdam Convention to the Prime Minister's Office. In April 2006, this recommendation was under consideration by the national focal point, which was under the Prime Minister's Office.

List of Key Legislation/Regulations/Rules

2000 Regulation on Management and Usage of Pesticides for Agricultural Production issued by the Ministry of Agriculture and Forestry, No. 0886, dated 10 March 2000.

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:_____*		x
Have you ratified the Rotterdam (PIC) Convention?		x
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)		x
Have your ratified the Montreal Protocol? (MeBr phasing-out)		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?		
Have you adopted Good Laboratory Practices (GLP)?		x
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?		
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?		x
consumer risks?		x
environmental risks?		x
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?	x	
Do you accept evaluation results from other countries?	x	

Do you accept field studies conducted in other countries?	x	
Do you require environmental fate studies?	x	
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	
Registration	MAF/DOA
Licensing of shops	PAFO
Licensing of field applicators	
Enforcement/inspections	MAF/DOA/PPC
Testing of pesticide efficacy	MAF/DOA/PPC
Development of pesticide use recommendations	MAF/DOA/NAFRI
Safe use training/extension	MAF/DOA/PPC/NAFES
Food residue monitoring	
Environmental monitoring	MAF/DOA/NAFRI
Health monitoring	MOH/FDD
Other Stakeholders:	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2007-2008
Number of registration officers	2
Number of enforcement officers	2
Number of department quality control laboratories	
Number of quality control laboratory personnel	
Number of department residue analysis laboratories	1
Number of residue laboratory personnel	

Key Situation Indicators

Pesticide Trade:	Tons	US$ '000 Value
Imports	<10	
Manufacture	0	
Export	0	
Domestic Use/Sales		
Pesticide Use Profile:	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture	<10	
Chem. Insecticides		
Chem. Fungicides		
Chem. Herbicides		
Chem. Others: e.g. molluscicide, acaricide		
Other: e.g. Avamectrin, Bt, Neem		
Other purposes		
TOTAL		

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?		x
Do you have significant problems with pesticide resistance?		x
Do you have a list of pesticides under close observation for problems		x
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?		x
Do you have a system to monitor pesticide residues in food?		x
Do you have a system to monitor pesticide residues in the environment?		x
Do you have significant problems of environmental contamination from pesticides?		x
Do you have data on pesticides effects on wildlife and ecosystems?		
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?		x
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)		x
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		x
Source for more information: DOA		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products	46	112
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)		
Number of restricted-use pesticides/formulations		
Number of banned pesticides	26	
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year		
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Regional Programme for Pesticide Risk Reduction in South East Asia	GCP/RAS/ 224/SWE	Unknown	2007-2009
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
One awareness workshop on IPM and Near-Market Pesticide Use with respect to food safety and quality (16-17 November 2006) Prime Minister's Decree on Management and Use of Pesticide (still in the process of editing in the Ministry of Justice)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Lack of personnel, no adequate infrastructure, no operational budget, and not enough training

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.11 MALAYSIA

I. GENERAL INFORMATION

Last updated: June 2009

Overall Executive Summary

Since the last session of the APPPC in 2007, Malaysia is now getting to the final stage in the drafting of the plant quarantine legislation to replace the Plant quarantine Act 1976, and alongside with it the Plant Protection Regulations is also being drafted to replace the existing Plant Quarantine Regulations 1981.

As for plant quarantine organization, an agency known as Malaysia Quarantine Inspection Service (MAQIS) has been introduced in the organization. This agency is responsible for the inspection services for all agriculture products includes plants, animal and fish at the entry check points in Peninsular Malaysia since August 2008. In addition to that, there is a policy among ASEAN countries, whereby the international entry points are operating under CIQS system as one stop centre to facilitate trade and tourism. There is an appointment of new Director General in Department of Agriculture (DOA) Peninsular Malaysia (2008), Sabah (2007) due to retirement.

Treatment facilities in Malaysia have been improved with the purchase of 3 Vapour Heat Treatment units, each with a 5 ton capacity, to carry out phytosanitary treatment for the purpose of market access to Japan and other potential markets. Establishment of two export centre in Kuala Lumpur International Airport and Serdang Selangor to carry phytosanitary treatment, processing and packaging.

Electronic permits for import and export had been introduced for import and export of commodities since 2007. The Repository and Culture Collection Centre had also been established in 2007 to serve as biological centre with the aim of acquisition, authentication, production, preservation, development and distribution of standard reference for pest and beneficial organisms specimens as well as to address phytosanitary concerns.

In order to facilitate trade and market access of agriculture produces/products, Malaysia had also carried out the following phytosanitary measures:

- Pest risk analysis for papaya, jack fruit, rambutan, pineapple, and star fruit had recently been completed in order to facilitate market access to USA.
- Malaysia has established three accreditation schemes namely, Malaysia Fumigation Accreditation Scheme (MAFAS), Malaysia Heat Treatment Accreditation Scheme (MAHTAS), and Malaysia Phytosanitary Certification Assurance Scheme (MPCA) to mitigate pest risk, expedite export with minimal phytosanitary requirements.
- ISPM 15 for import will be implemented at the end of this year 2009.
- Revised import requirement for mango seed weevil (*Sternochetus mangiferae*) and guava fruit fly (*Bactrocera correcta*)
- Gazetting papaya die-back as a quarantine pest for the control and eradication of this disease on papaya
- In the final stage of developing national pest list for commodities such as oil palm, rubber and forest trees.

Since 2007, several significant events have taken place in the area of crop protection. Most notably is the enhancement of officer capability in identification/diagnosis of plant pests and diseases. This is made possible with the establishment of the biotechnology unit and the availability of polymerase chain reaction (PCR) technique which has enabled the foresaid activities to be carried out with a greater degree of accuracy and precision, thus, making appropriate remedial measures to be speedily dispensed to the targeted clients. Working closely with the Chemistry Department, this technique (PCR) is also being employed to detect for the presence of GMO in agricultural produce, specifically edible seeds, imported into the country.

A national committee on Invasive Alien Species (IAS) was formed that was tasked with coordinating and control of IAS. A recently concluded seminar was aimed at creating IAS awareness among the general public.

Integrated Pest Management (IPM) has long been implemented in rice, vegetable and fruit crops in an effort to alleviate the problems caused by excessive use of pesticides. New programmes and activities are being planned to further strengthen and expand IPM implementation in order that the benefits are enjoyed by a large segment of the farming community. A pest of concern to the country especially in rice fields is golden apple snail (*Pomacea canaliculata*). Concomitantly, an improved version of rice pest surveillance techniques has been developed which, primarily, focuses on increasing the frequency of survey and a more realistic area of coverage. It is envisaged that with its implementation, all rice fields in the country will be surveyed regularly for early detection of pest and disease occurrences so that immediate control measures can be taken to prevent its spread.

Efforts are stepped up to control and eradicate the exotic aquatic weeds, namely, *Cyperus papyrus* and *C. japonica* and terrestrial weed, *Pennisetum setaceum*, found in the country. The aquatic weeds, in particular, pose a serious threat where they had invaded the drainage and irrigation canal and impede the smooth flow of water and making it not readily available to the growing crop plants.

Brontispa sp. is a serious insect pest attacking the leaves of coconut palms. A biological agent, *Asedodes hispanarium* which is a hymenopteran parasite, will be introduced into the country in an effort to combat the menacing *Brontispa* pest.

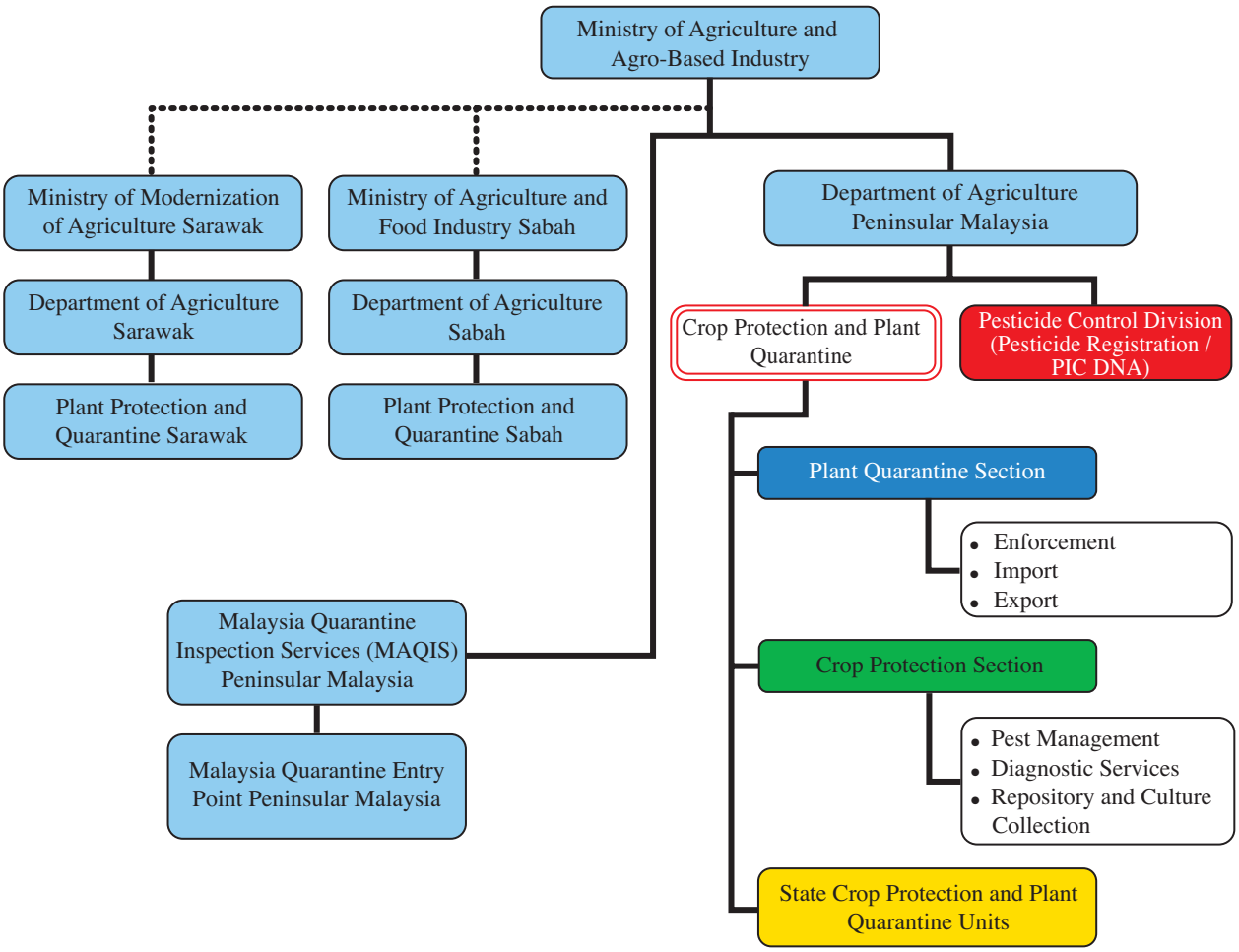
Malaysia has amended the Pesticides Licensing Regulation of the Pesticides Act in 2008, to increase the license fee for the sale of more toxic class of pesticides. Similarly, the fee for the registration of pesticides has also been increased for more toxic class of pesticides. Malaysia is in the process of proposing a new regulation for the control of the manufacture of pesticides under the Pesticides Act. The proposed regulation will ensure a wider scope of authority of the enforcement section, better control of the manufacture of pesticides as well as control of the manufacturer.

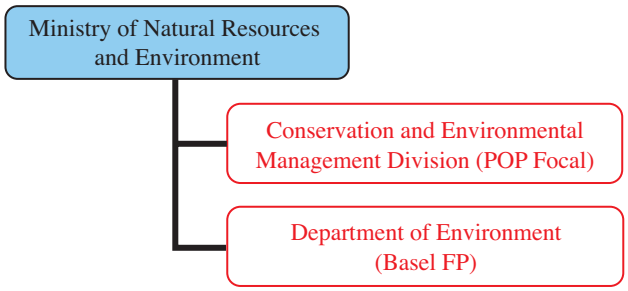
In an effort to facilitate export by meeting compliance of requirements of importing countries, Malaysia has established an export laboratory under the Central Laboratory Services Section of the Pesticides Control Division, Department of Agriculture.

Under the implementation of international conventions, Malaysia has also initiated a review on the registration of tributyltin compound, in line with the inclusion of tributyltin compound in Annex III of the Rotterdam Convention in 2008. To ensure compliance to the Phase-out Schedule for methyl bromide under the Montreal Convention, Malaysia has informed the industry of the requirements of the phase-out schedule and set limits on the quantity of methyl bromide to be used by the industry until the end of the phase-out programme. The use of methyl bromide for quarantine purposes and pre shipment is exempted from the phase-out schedule.

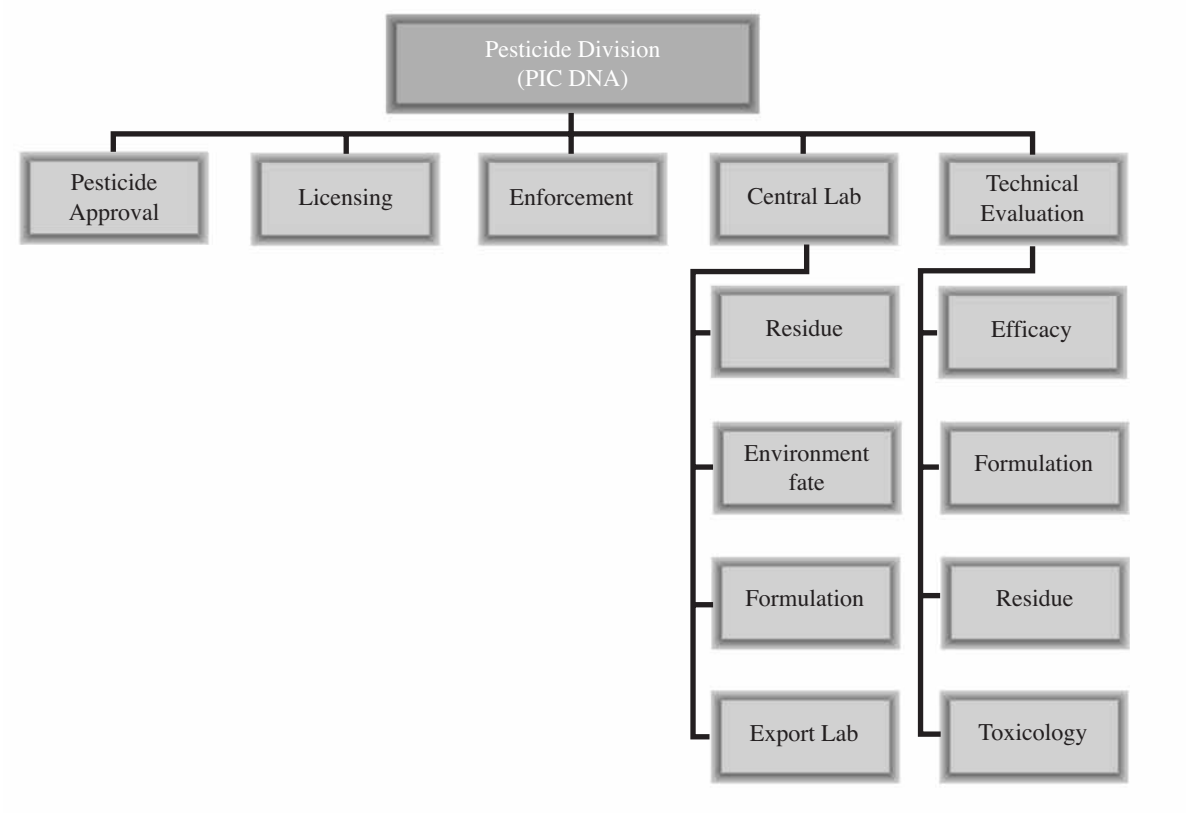
Plant Protection Organization Chart

Last updated: June 2009





Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO



Important Contact Addresses

Ministry/Department of Agriculture

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Surveillance, Pest Outbreaks and Invasive Species Management

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Pesticide Registration

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Official International Contact Points

National Plant Protection Organisation (NPPO) Contact Point (for IPPC/APPPC)

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Website: http://www.doa.gov.my/pqnet
Language(s): English
Contact point received: 30/05/2005 Source: Government Correspondence

WTO SPS Contact Point

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Rotterdam Convention (PIC) DNA Pesticides (P)

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Stockholm Convention (POP) National Focal Point (S)

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Basel Convention Competent Authority (CA) and Focal Point (FP)

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II. PLANT QUARANTINE

List of Key Legislation/Regulations/Rules

(year, title and possibly short description)

1976 Plant Quarantine Act (under revision)

1981 Plant Quarantine Regulations

Web source for further information: www.doa.gov.my/pqnet

Policies (regarding plant quarantine)	Yes	No	Don't know
Does phytosanitary legislation cover both domestic and import/export quarantine?	Yes		
Is plant quarantine a separate organization from animal quarantine?	Yes		
Does phytosanitary legislation cover non-cultivated plants (wild flora)	Yes		
Does phytosanitary legislation cover living modified organisms?		No	
Other policy goals:			
Web source for further information: http://www.doa.gov.my/pqnet			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Assessment	Crop Protection and Plant Quarantine Division (CPPQ)
Standards development	CPPQ
International notifications	Department of Agriculture (DOA)
Import:	
Import permits/inspections	CPPQ Malaysia Quarantine Inspection Services (MAQIS)
Emergency action	DOA, CPPQ
Export:	
Phytosanitary certificates	CPPQ
Treatment of commodities	CPPQ

Infrastructure	Year: 2008
Total number of plant quarantine officers	183
Total number of plant quarantine officers authorized to inspect/certify*	560
Total qualified personnel for plant pest risk assessment	18
Number of quarantine offices/stations	108
Number of post-entry plant quarantine containment facilities	4
Number of quarantine service diagnosis laboratories	4
Number of entry points (sea/air/land/mail)	87
In-country recognize pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mites (arthropod) samples	28
Number of laboratories for pathogen samples (Virus)	8
Number of laboratories for pathogen samples (Bacteria)	21
Number of laboratories for pathogen samples (Fungus)	21
Number of laboratories for nematode samples	4
Number of laboratories for plant/weed samples	4
Number of laboratories for other pest (slug, rodent, snails, etc.)	6

Pest Free Areas	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	CPPQ
– surveillance	Crop Protection Section
– management	CPPQ
– certification	CPPQ

List of target pest species and crops	Number of sites in 2008
	[number]
Khapra beetle	Whole country
Sternochetus mangiferea – Mango	Whole country

Key Situation Indicators

International Trade		
Main Import Plant Commodities	Main countries of origin	No. of Phytosanitary Inspection
Fruits	Thailand, China, Australia, USA	
Vegetables	Thailand, China	
Main Export Plant Commodities	Main destination countries	
Ornamental	Japan, Netherlands	
Fruits	China	
Vegetable	United Kingdom	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
			[year – year]
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Year: 2008
Number of import permits issued/inspections	47 757 / 438 132
Number of emergency phytosanitary treatments taken on imports	214
Number of pests intercepted	1 195
Number notifications of non-compliance	17
Number of phytosanitary certificates issued *Do you have an electronic certification system?: Yes_____ No_____*	54 125

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of regulated quarantine pests	2008	79	164	17
Number of regulated non-quarantine pests	–	–	–	–
Number of regulated import commodities	2008	28		

Pest Risk Assessments	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)	–	–	5
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

Legislation: A Bill named as Plant Protection Act has been drafted to replace the existing Plant Quarantine Act 1976

Infrastructure: Construction of an export centre for food and agriculture produce is in progress and expected to completed and in operation at the end of 2009

Investments: Three units of VHT with capacity of 5 tons each have been purchased in 2008.

1. Workshop on Developing Standard for the Protection against SALB for rubber producing countries 2008.
2. International Master Class on Plant Biosecurity in June 2008.
3. APEC Workshop on Understanding and Developing Risk Management Options for Market Access in October 2008.
4. Workshop on Phytophagus mites 2008 at University Malaya.
5. Workshop on Updating of National Forest Pest List of Malaysia in 2007, 2008 and 2009
6. Workshop on Updating of Oil Palm Pest List in 2008 and 2009
7. Workshop to review 3 draft RSPMs 2008

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

Personnel: Lack of technically qualified PRA personnel.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x		x			
ISPM 02 Guidelines for pest risk analysis			x			x		Plan 2010
ISPM 03 Code of conduct for the import and release of exotic biological control agents		x			x			Plan 2009
ISPM 04 Requirements for the establishment of pest free areas			x		x			Plan 2010
ISPM 05 Glossary of phytosanitary terms			x				x	Actual 2009
ISPM 06 Guidelines for surveillance			x			x		Plan 2010
ISPM 07 Export certification system			x			x		Plan 2010
ISPM 08 Determination of pest status in an area			x			x		Plan 2010
ISPM 09 Guidelines for pest eradication programmes			x			x		Plan 2010
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	Actual 2009
ISPM 11 Pest risk analysis for quarantine pests			x		x			Plan 2011
ISPM 12 Guidelines for phytosanitary certificates			x				x	Actual 2009
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x			x		Plan 2010
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x		x			Plan 2011
ISPM 15 Guidelines for regulating wood packaging material in international trade (export)			x				x	Actual 2005
ISPM 16 Regulated non-quarantine pests: concept and application		x				x		Plan 2010
ISPM 17 Pest reporting			x			x		Plan 2010
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x			x			Plan 2010
ISPM 19 Guidelines on lists of regulated pests			x			x		Plan 2010
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	Actual 2009
ISPM 21 Pest risk analysis for regulated non-quarantine pests		x			x			Plan 2010
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x			x		Plan 2011
ISPM 23 Guidelines for inspection			x				x	Actual 2009
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x			x		Plan 2010
ISPM 25 Consignments in transit		x				x		Plan 2010
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)		x		x				Plan 2012
ISPM 27 Diagnostic protocols for regulated pests		x			x			Plan 2012
ISPM 28 Phytosanitary treatments for regulated pests			x			x		Plan 2010
ISPM 29 Recognization of pest free areas and areas of low pest prevalence			x	x				Plan 2012
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			x	x				Plan 2012
ISPM 31 Methodologies for sampling of consignments			x	x				Plan 2012

Comments/Constraints
1. Lack of competent human resources for full implementation.
2. Require adequate budget for implementation of certain ISPMs.
3. Require training on implementation of adopted ISPMs.

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Policies (regarding invasive/migratory species management)	Yes	No	Don't know
National strategy to control serious field pest outbreaks?	x		
National strategy to control migratory or periodically occurring pests?	x		
National strategy to eradicate serious newly invaded exotic pests?	x		
Other policies: –			
List of legislation/regulations/rules for surveillance, pest reporting and emergency actions: Surveillance – None Pest reporting – Plant Quarantine Act 1976 and Plant Quarantine Regulations 1981 Emergency actions – Plant Quarantine Act 1976 and Plant Quarantine Regulations 1981			
Web source for further information: –			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field Pest Outbreaks	(e.g. BPH, boll worm, rice leaf blast, rice brown spot etc.)
Response strategy/plans	Plant Pest Management Section, Dept. of Agriculture
Surveillance	Plant Pest Management Section, Dept. of Agriculture
Control	Plant Pest Management Section, Dept. of Agriculture
Migratory Pest Outbreaks or periodically occurring pests	(e.g. locusts, birds, armyworm)
Response strategy/plans	Plant Pest Management Section, Dept. of Agriculture
Surveillance	Plant Pest Management Section, Dept. of Agriculture
Control	Plant Pest Management Section, Dept. of Agriculture
New Exotic Pest Eradication	(e.g. coconut beetle, kaphra beetle)
Response strategy/plans	DOA
Surveillance	DOA
Control/eradication	DOA
Reporting to international organizations	DOA

Infrastructure	Year: 2008
Number of designated staff for surveillance and control of field pests of national importance	162
Number of designated staff for surveillance and control of migratory and periodically occurring pests	162
Number of designated staff for surveillance and eradication of invasive species	40

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: [most recent]			
Total number for year: [year before]			
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Passway			
Location of first discovery			
Area affected [ha]			
Area treated by government [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	Papaya Dieback	Brown Plant Hopper (*Nilaparvata lugens*)	
Year of outbreak	2008	2008	
Area affected [ha]	102.8	795.13	
Estimated damage $	54 469 959		
Area treated by government [ha]	23.7	660.3	
Control method	Infected Plant Destroyed	Pesticide	
Expenditures			
Add more if necessary			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
1. National Action Plan on Invasive Species Workshop 2008.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
1. Inadequate diagnostic tools 2. Samples for identification have to be sent to other countries.

IV. PEST MANAGEMENT

Policies (regarding pest management)	Yes	No	Don't know
Do you have policies encouraging organic or low-pesticide production	x		
Is IPM specifically mentioned in laws or policy documents?		x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x		
Is pest management extension separate from general extension?		x	
Other policies: production of safe and quality food.			
List of legislation/regulations/rules for pest management: Plant Quarantine Act 1976 and Plant Quarantine Regulations 1981			
Web source for further information: http://www.doa.gov.my			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MOA/DOA
Pest management research	MARDI (Malaysia Agriculture Research Development Inst.)
Control recommendations	DOA/MARDI
Pest management extension	DOA
IPM training	DOA
GAP training	DOA

Infrastructure	Year: 2008
Number of officers for pest management	75
Number of regional offices	12
Number of field offices	10
Number of field/extension agents for pest management advice	125
Number of field/extension agents trained in IPM-FFS facilitation	200
Number of government biocontrol labs	2
Number of government biopesticide labs	2

Key Situation and Operation Indicators

Pest Management	Yes	No	Don't know
Does the country have a National IPM Programme? If yes, give Name and Address of IPM Programme: *National IPM in RICE*	x		
Does the country have specific IPM extension programmes? *If yes, in which crops?: Rice/paddy*	x		
Does the country have specific IPM research programmes? *If yes, in which crops?: vegetable*	x		
Does the country have specific GAP extension programmes? *If yes, in which crops?: vegetable, Fruits and Rice*	x		
Does the country have specific GAP research programmes? *If yes, in which crops?:*			x

Market shares (estimated value, volume or area under control)	**Year: [ ]**
Size of chemical pest control market	–
Size of biopesticides market	–
Size of biological control agents market	–

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop	Rice/Paddy	Vegetable	Cut flowers
Name(s) of pest(s)	*Pomaceae* sp.	*Plutela Xylostela*	Thrips Leaf miner
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used	Varies 6-7 rounds	Varies 3-5 rounds	Varies 5-6 rounds
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Year: 2008**
Number of farmers trained in IPM during the year	272
Number of IPM-FFS conducted during the year	–
Number of farmers trained in GAP standards during the year	239
Area under IPM/low pesticide management [ha]	9 007
Crops in which successful IPM technologies are implemented: rice, vegetables (DBM), fruit, plantation crops	
Area under organic/pesticide-free management [ha]	1 182.09
Crops grown organic/pesticide-free: leafy vegetables, banana, carambola and maize, stevia, paddy, longan, herbs	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
1. Low prevalence area (Lanchang)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
1. Lack of personnel to inspect and certify GAP farm. 2. Price incentive for GAP farm produce.

V. PESTICIDE MANAGEMENT

List of Key Legislation/Regulations/Rules

1949 Sodium Arsenate Regulations 1949

1956 Hydrogen Cyanide (Fumigation) Act 1956

1974 Pesticides Act 1974, (Amendment) 2004

i. Pesticides (Registration) Rules 1976 (Amendment 2008)
ii. Pesticides (Importation For Research and Education Purposes) Rules 1981, (Amendment) 1987
iii. Pesticides (Importation For Research and Education Purposes Rules (to be amended)
iv. Pesticides (Labeling) Regulation 1984
v. Pesticides (Licensing For Sale And Storage For Sale) Rules 1988, (Amendment 2007)
vi. Pesticides (Highly Toxic Pesticides) Regulation 1996, (Amendment 2004)
vii. Pesticides (Advertisement) Regulation 1996
viii. Pesticides (Pest Control Operators)) Rules 2004

1974 Occupational Safety & Health Act 1974

i. The Occupational Safety & Health (Use of Standard of Exposure of Chemical Hazardous to Health) Regulations 2000

1974 Environmental Quality Act 1974

i. Environmental Quality (Prescribed Premises) (Scheduled Waste Treatment and Disposal Facilities) Order 1989

1983 Food Act 1983

i. Food Regulations 1985

Web source: http://www.doa.gov.my/main.php?Content=vertsections&SubVertSectionID=17&VertSectionID=1&CurLocation=1&IID=

Policies (regarding pesticide management)	Yes	No	Don't know
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		x	
Have you ratified the Rotterdam (PIC) Convention?	x		
Have you ratified the Stockholm (POP) Convention?		x	
Have your ratified the Basel Convention? (hazardous wastes)	x		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x		
Have you adopted Good Laboratory Practices (GLP)?	x		
Pesticide Registration			
Do you require pesticides to conform to relevant FAO or WHO specifications?	x		
Do you allow the "me-too" registration and sale of generic pesticides?	x		
Do you require data on product equivalence for generic registration?	x		
Do you conduct country-specific risk assessments for…			
occupational risks?		x	
consumer risks?		x	
environmental risks?		x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labeling? (In preparation for adoption)	x		
Do you accept evaluation results from other countries?	x		

Do you accept field studies conducted in other countries? (except for Paddy, Oil palm, Rubber, Cocoa)	x		
Do you require environmental fate studies?	x		
Incentives/Disincentives			
Do you have a special tax on pesticides to cover externality costs?		x	
Do you subsidize or provide low-cost pesticides?	x		
Do you subsidize or provide low-cost biopesticides?		x	
Other policies: –			
Web source for further information: –			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	MOA/DOA/PCD (Pesticides Control Division)
Registration	MOA/DOA/PCD
Licensing of shops	MOA/DOA/PCD
Licensing of applicators (PCO only)	MOA/DOA/PCD
Enforcement/inspections	MOA/DOA/PCD
Testing of pesticide efficacy	MOA/DOA/MARDI/University Sciences Malaysia (USM)
Development of pesticide use recommendations	DOA/MARDI/FRIM/USM/MRB/MPOB
Safe use training/extension	MOA/DOA/HRDD
Food residue monitoring	MOA/DOA/PCD + MOH/DPH + NRE/DC
Environmental monitoring	NRE/DE + MOA/DOA/PCD
Health monitoring	MOH/DE
Other Stakeholders:	
Pesticide Industry Association	Malaysian Crop Care and Public Health Association
Civil Society Organizations (NGO, etc.)	PAN, Center for Environmental Technologies

Infrastructure	Year: 2008
Number of registration officers	12
Number of enforcement officers	24
Number of department quality control laboratories	1
Number of quality control laboratory personnel	11
Number of department residue analysis laboratories	5
Number of residue laboratory personnel	28

Key Situation Indicators

Pesticide Trade: [year][a]	Tons*	$ '000 Value*
Imports	48 000	
Manufacture		
Export		
Sales		
Pesticide Use Profile: [year]	**Tons**	**$ '000 Value**
Agriculture		139 660
Insecticides		27 760
Fungicides		7 500
Herbicides		100 000
Other		4 400

Veterinary		–
Public Health		–
Household		53 600
Other		2 700
TOTAL		195 960

[a] for most recent year for which data are available

* if possible, give in tons a.i.; if known, also give value in US$ or other currency

Testing, Quality Control and Effects in the Field	Yes	No	Don't know
Do you have significant problems with low-quality pesticides in the market?	x		
Do you have significant problems with pesticide resistance? (Crop protection?)			x
Do you have a list of pesticides under close observation for problems? (Tetracycline)	x		

Health and Environmental Information	Yes	No	Don't know
Do you maintain data on pesticide poisoning cases?	x		
Do you have a system to monitor pesticide residues in food?	x		
Do you have a system to monitor pesticide residues in the environment?	x		
Do you have significant problems of environmental contamination from pesticides?		x	
Do you have data on pesticides effects on wildlife and ecosystems?		x	

Pesticide Disposal	Yes	No	Don't know
Do you have services to collect and safely dispose of used containers and small quantities of left-over pesticides?	x		
Do you have an inventory of outdated and obsolete pesticides in the country?			x
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____	x		
Source for more information: Malaysia Crop Care & Public Health Association (MCPA)			

Key Operation Indicators

Registration/Regulation/Monitoring	Year: 2008	
	a.i.*	Trade Name
Number of registered pesticide products	286	425
Number of registered biopesticides	17	
Number of restricted-use pesticides	3	
Number of banned pesticides	25	
Number of licensed outlets	1 532	
Number of licensed applicators	311 (PCO)	
Number of licensing violations reported during year	17	
Number of quality control analyses conducted during year	72	
Number of food samples analyzed for pesticide residues during year	2 235	
Number of samples exceeding MRL	45	
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Years	
Years	Name of active ingredient or hazardous Formulation

Pesticides Banned in Recent Years	
Years	Name of active ingredient
2005	Endosulfan

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
1. An additional unit of pesticide residue laboratory to be establish in 2011. 2. 2 officers attended the Pesticides Risk Assessment Training in Denmark in 2008
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Request for technical assistance in capacity building in the fields of risk assessment/evaluation of chemicals, technical expertise and training in the use of the Principle of Equivalence in future pesticides evaluation as well as in developing legal expertise in the enforcement section.

2.12 MYANMAR

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

Myanmar has to rely mainly on its natural resources with its economy being based on agriculture. The agriculture contributes around 23 percent of the country's export earnings and employs about 63 percent of working population. For further development of agricultural sector, it is vital that the agricultural outputs are produced and traded in compliance with SPS requirements which are internationally accepted.

At present, 90 percent of major export crops such as pulses and maize are sold to countries with less rigorous SPS requirements. The authorities are trying their best to comply with the SPS requirements and implement ISPMs in a timely manner.

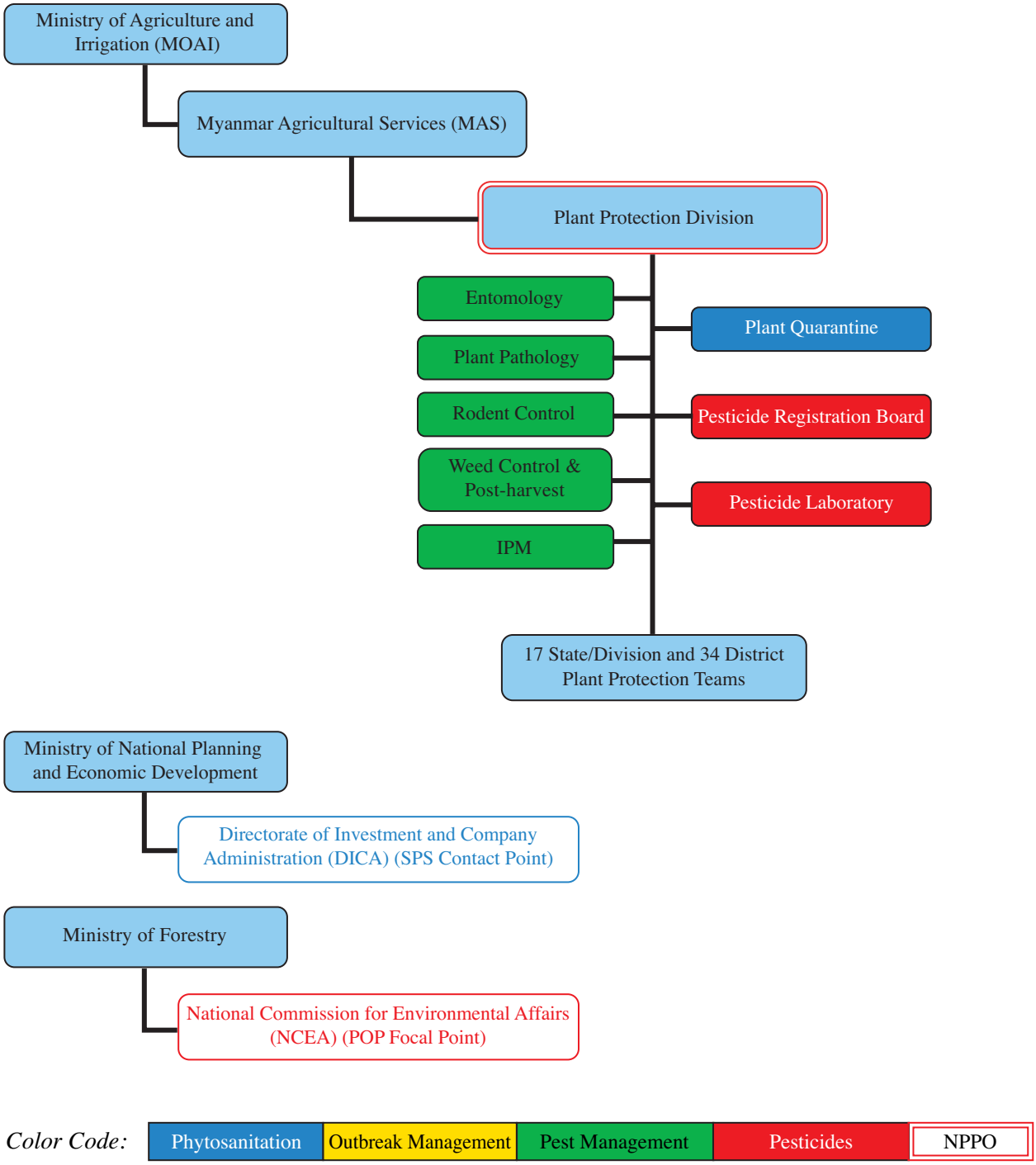
The Plant Protection Division of Myanmar Agriculture Service is playing the role of the National Plant Protection Organization (NPPO) and actively participates in the implementation of the country's plant quarantine measures in line with both Regional Standards for Phytosanitary Measures (RSPMs) and International Standards for Phytosanitary Measures (ISPMs). Whenever the drafts for the new standard are received for comments, NPPO has made every effort to cooperate and respond to the request. However, the implementation of existing international and regional standards of phytosanitary measures still needs to be further strengthened.

While no pest outbreak occurred during the period of 2007-2008, rodent outbreaks occurred in the northern part of Myanmar in 2008 but they were not of agricultural importance.

The biological control research which is part of the Integrated Pest Management (IPM) Programme is being carried out for cotton, groundnut and vegetables. While the Farmer's Field Schools (FFS) have been established since 2000, emphasis was placed only on the rice farmers during the beginning stage.

The work related to the country's pesticide management has been progressing steadily. It covers pesticide registration schemes, licensing programme, control of Persistent Organic Pollutants, disposal of toxic wastes, as well as management of transboundary movement of illegal products.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

–

Responsible Department

Myanmar Agriculture Service
Mr Ohn Than, Managing Director
Ministry of Agriculture and Irrigation
Building No. 15,
Nay Pyi Taw, Myanmar
Tel: (+95) 067-410007
Fax: (+95) 067-410118

Operational Offices:

Plant Protection

Plant Quarantine

Surveillance, Pest Outbreaks and Invasive Species Management

Pesticide Registration

Plant Protection Division
Mr Aye Tun, Deputy General Manager
Myanma Agriculture Service, Ministry of Agriculture and Irrigation
Bayintnaung Road, West Gyogone
Insein P.O. 11011
Yangon, Myanmar
Tel: (+95) 01 644214 / 640459
Fax: (+95) 01 644019
E-mail: ppmas.moai@mptmail.net.mm

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

NPPO unofficial
Plant Protection Division
Mr Aye Tun, Deputy General Manager, Head of Plant Protection
Myanma Agriculture Service, Ministry of Agriculture and Irrigation
Bayintnaung Road, West Gyogone
Insein P.O. 11011
Yangon, Myanmar
Tel: (+95) 01 644214 / 640459 /
Fax: (+95) 01 644019
E-mail: ppmas.moai@mptmail.net.mm;

WTO SPS Contact Point

Directorate of Investment and Company Administration (DICA)
Ministry of National Planning and Economic Development
Nay Pyi Taw, Myanmar
Tel: (+95) 067-41
Fax: (+95) 067-41
Tel: (+95) 067-41
Fax: (+95) 01 821 01

Rotterdam Convention (PIC) DNA Pesticides (P)

Director General,
Department of Agricultural Planning
MOAI
Nay Pyi Taw, Myanmar
Tel: (+95) 67-410005
Fax:(+95) 67- 410119
E-mail: dap.moai.@mptmail.net.mm

Stockholm Convention (POP) National Focal Point (P)

National Commission for Environmental Affairs (NCEA)
Dr San Win: Dy. Director, Joint Secretary (unofficial)
Nay Pyi Taw, Myanmar
E-mails: env.myan@mptmail.net.mm
timpert.com@mptmail.net.mm

Basel Convention Competent Authority (CA) and Focal Point

–

Selected Country Statistics

Agricultural Population	39.274 million	Agricultural Land	11.67 million ha
GDP US$15 551 million	Agric. GDP: 7.6%	GNI per capita: US$	Undernourishment: 5%
Main crops grown: Rice, Black gram, Green gram, Pigeon pea, Sesame, Groundnut, and Maize.			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

Executive Summary

The Plant Protection Division, Myanma Agriculture Service of the Ministry of Agriculture and Irrigation is legally responsible for issuing phytosanitary certificates and import certificates, according to the Plant Pest Quarantine Law.

The certificates for import and export are issued at the headquarters of the Plant Protection Division as well as at the eight border entry points and two inspection stations. As regards the consignment transits, the post entry quarantine studies have been carried out with limitations.

In relation to the ISPMs, Myanmar, as a developing country, has some technical barriers to implement the ISPMs. Myanmar has a very limited number of experts in the field of entomology, plant pathology, weed science and post-harvest quarantine. That in facts is a major obstacle for the implementation of ISPMs. Capacity building and human resource development are absolutely critical issues in Myanmar.

List of Key Legislation/Regulations/Rules

1993 Plant Pest Quarantine Law (updating in progress)

Web source for further information: –

Policies (regarding plant quarantine)	**Yes**	**No**
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?	x	
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress)		
Web source for further information: –		

Organization of Plant Quarantine Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Pest Risk Analysis	MOAI/MAS/PPD
National standards development	MOAI/MAS/PPD
International notifications	MOAI/MAS
Import:	
Import permits	MOAI/MAS/PPD
Import inspections	MOAI/MAS/PPD
Emergency action	MOAI/MAS/PPD
Export:	
Phytosanitary certificates	MOAI/MAS/PPD
Treatment of commodities	MOAI/MAS/PPD

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify	14
Total qualified personnel for plant pest risk analysis	5
Number of quarantine offices	
entry points (sea/air/land/mail = total)	10
post-entry plant quarantine containment facilities	1
other offices	
Number of quarantine service diagnosis laboratories	1
In-country recognized capability (incl. universities, etc.)	3
Number of laboratories for insect/mite (arthropod) samples	3
Number of laboratories for bacteria samples	
Number of laboratories for virus samples	
Number of laboratories for fungus samples	3
Number of laboratories for mycoplasma samples	
Number of laboratories for nematode samples	3
Number of laboratories for plant/weed samples	2
Number of laboratories for other pests (snail, slug, rodents, etc.)	

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MAS, PPD
– surveillance	PPD
– management	PPD
– certification	PPD
List of target pest species and crops ISPM 4	Number of sites in 2008
List of target pest species and crops ISPM 10	Number of sites in 2008

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Germinated oil palm seeds	Costa Rica, South Africa	865 000 units
Orchid Plant, Ornamental Plant, Vegetables and Fruits Seeds, Cut Flowers	Thailand	15 020 plant(s) 296 m. tons
Grape Cutting,	Spain	200 000 pcs
Main Export Plant Commodities	Main destination countries	
Pulses, Oil Seed Crops	India, Malaysia, Indonesia, Pakistan, China, Bangladesh Philippines, China, Japan	1 171 410 m. tons
Maize, Cereal	Malaysia, China, Singapore, Bangladesh	397 131 m. tons
Timber	India	719 257 h. tons

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Sanitary and Phytosanitary Capacity Building Programme	AusAID		2007-2009
Phytosanitary Capacity Building Project for the Mekong Region, Phase II	NZAID		2006-2009
Quality Assurances System for ASEAN Fruit and Vegetables Project	AADCP		2005-2008
In-country outreach Programme (Irrigated Rice Research Consortium)	IRRI		2006-2008
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	1 090
Number of import inspections carried out	120
Number of emergency phytosanitary treatments taken on imports	–
Number notifications of non-compliance	5
Number of conventional phytosanitary certificates issued	228
Number of electronic phytosanitary certificates issued	23 040

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodity	Top three pest/commodity	# of interceptions
Germinated Oil Palm Seeds		
Rubber Budwood		
Grape Cutting		

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests				
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: –				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Myanmar became a contracting party to IPPC in May 2006. Concerning the plant quarantine activities, plant quarantine stations have been established at the respective regions like land borders, seaport and airports since 1995. The post-entry quarantine studies have been carried out with limitations, due to shortages of plant quarantine inspectors. On-the-job trainings have been conducted every year since 1998.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
The implementation of existing international and regional standards of phytosanitary measures still needs to be further strengthened. Being faced with financial limitations, it needs infrastructure development support.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x			x		
ISPM 02 Guidelines for pest risk analysis		x			x			
ISPM 03 Code of conduct for the import and release of exotic biological control agents		x			x			
ISPM 04 Requirements for the establishment of pest free areas		x		x				
ISPM 05 Glossary of phytosanitary terms		x			x			
ISPM 06 Guidelines for surveillance		x			x			
ISPM 07 Export certification system			x			x		
ISPM 08 Determination of pest status in an area		x			x			
ISPM 09 Guidelines for pest eradication programmes		x			x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites		x			x			
ISPM 11 Pest risk analysis for quarantine pests		x			x			
ISPM 12 Guidelines for phytosanitary certificates			x			x		
ISPM 13 Guidelines for the notification of noncompliance and emergency action		x			x			
ISPM 14 The use of integrated measures in a systems approach for pest risk management		x			x			
ISPM 15 Guidelines for regulating wood packaging material in international trade		x				x		
ISPM 16 Regulated non-quarantine pests: concept and application		x			x			
ISPM 17 Pest reporting		x			x			
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x		x				
ISPM 19 Guidelines on lists of regulated pests			x		x			
ISPM 20 Guidelines for a phytosanitary import regulatory system		x				x		
ISPM 21 Pest risk analysis for regulated non-quarantine pests		x			x			
ISPM 22 Requirements for the establishment of areas of low pest prevalence		x			x			
ISPM 23 Guidelines for inspection		x				x		
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures		x				x		
ISPM 25 Consignments in transit		x			x			
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)		x				x		
ISPM 27 Diagnostic protocols for regulated pests		x			x			
ISPM 28 Phytosanitary treatments for regulated pests		x			x			
ISPM 29 Recognition of pest free areas and areas of low pest prevalence		x			x			
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)		x			x			
ISPM 31 Methodologies for sampling of consignments		x			x			

Comments/Constraints

Myanmar is trying its best to implement the ISPMs. However, in view of the human resource shortages, it makes every effort to obtain opportunities for its staff to participate in human resource development and training programmes.

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

Executive Summary

The survey of pests and diseases occurred in Myanmar has been carried out and data entries are in progress. However, due to lack of expert verification of the collected specimens, it is not feasible yet to publish the updated list of pests in Myanmar.

There were rodent outbreaks in the northern part of Myanmar in 2008. A rodent control team was dispatched to study the situation and discuss the results of the study. As the outbreaks occurred in the forestry area (bamboo), they were of no agricultural importance.

There was no insect pest outbreak in agricultural areas. There was no invasive species management in Myanmar.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

–

Web source for further information: –

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?		x
Other policies: (e.g. subsidies, etc.)		
Web source for further information: –		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	MOAI/MAS/PPD, State and Divisional Plant Protection Teams
Surveillance	MOAI/MAS/PPD, State and Divisional Plant Protection Teams
Control	MOAI/MAS/PPD, State and Divisional Plant Protection Teams
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	MOAI/MAS/PPD
Surveillance	MOAI/MAS/PPD, State and Divisional Plant Protection Teams
Control	MOAI/MAS/PPD
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MOAI/MAS/PPD
Surveillance	MOAI/MAS/PPD, State and Divisional Plant Protection Teams
Control/eradication	MOAI/MAS/PPD
Reporting to bilateral or international organizations	

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	27
Number of designated staff for **surveillance** of migratory and periodically occurring pests	17
Number of designated staff for **surveillance** of invasive species	27
Number of designated staff for **control** of field pests of national importance	27
Number of designated staff for **control** of migratory and periodically occurring pests	27
Number of designated staff for **eradication** of invasive species	–

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Rodents
Total number for year 2007:			
Total number for year 2008:			850 ha
Total number on record			850 ha

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Passway			
Location of first discovery			
Area affected [ha]			
Area treated [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	Rodents (*Bandicota spp*.)		
Year of outbreak	2008		
Area affected [ha]	850		
Estimated damage US$			
Area treated by government [ha]	850		
Expenditures by government [US$]	1 750		
Control method	Baiting, Trapping, Manual		
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Financial and technical assistance for compilation of existing quarantine pest lists in Myanmar is essential and requested for selected crops.

IV. PEST MANAGEMENT

Last updated: December 2008

Executive Summary

Myanmar has a national IPM policy. IPM is one of the main pillars to the development of the Plant Protection Division.

The Plant Protection Division was established by a steering committee in 1999. The Division advocates the need for Integrated Pest Management to be adopted as a national crop protection policy. It also makes decision on crop information exchange between Myanmar and other ASEAN countries and international association.

Currently, the IPM practices are being adopted to mitigate pest damage. The other aspect of the botanical insecticide such as neem pesticide has been tested against vegetable pests in the field condition.

The Farmer Field School has been established since 2000. However, during the beginning stage, emphasis was placed only on the rice farmers.

List of Key Legislation/Regulations/Rules for Pest Management

–

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?		x
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?	x	
Other policies: (subsidies, production inputs, etc.) Promotion of IPM programme, biopesticides, botanical pesticides, safe and environmental friendly formulation pesticides		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MOAI
Pest management research	MOAI/MAS/PPD
Control recommendations	MOAI/MAS/PPD
Pest management extension	MOAI/MAS/PPD
IPM training	MOAI/MAS/PPD
GAP training	MOAI/MAS/PPD

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	39
Number of central, regional, provincial or state offices	17
Number of district and village level field offices	71
Number of field/extension agents for pest management advice	61
Number of field/extension agents trained in IPM-FFS facilitation	17
Number of government biocontrol production/distribution facilities	2
Number of government biopesticide production/distribution facilities	3
Number of general extension staff involved in pest management	61
Number of designated plant protection technical officers for extension	17-Districts, 10-Headquarters

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:*		x
Does the country have specific IPM extension programmes? *If yes, in which crops?:*		x
Does the country have specific IPM research programmes? *If yes, in which crops?:* Biological control on Chickpea Pod Borer *Helicoperva armigera* with predator *Eocanthecona furcellata* and larval parasite *Campoletis chloridae*.	x	
Does the country have specific GAP extension programmes? *If yes, in which crops?:*	x	
Does the country have specific GAP research programmes? *If yes, in which crops?: (Just started residue survey based on GAP)* Mango, Rock Melon	x	

Market shares (estimated value, volume or area under control)	Years: 2007-2008
Size of chemical pest control market	6 185 m. tons
Size of biopesticides market	36 000 litre Neem
Size of biological control agents market	limited

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	Cotton	Pulses	Vegetable
Name(s) of pest(s)	Spodoptera, sucking, bollworms	Spodoptera, sucking, bollworms and pod borers.	Spodoptera, sucking and beetles
Estimated crop loss	No valid data	No valid data	No valid data
Affected area	No valid data	No valid data	No valid data
Number of pesticide applications or amount of pesticide used	Three times	Two times	One times
Government action taken	Train the effective use of pesticides to applicators; Field visit and recommendation.	Train the effective use of pesticides to applicators; Field visit and recommendation.	Train the effective use of pesticides to applicators; Field visit and recommendation.

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Ecology-based management of rodents in rainfed cropping systems	CSIRO (Australia Govt.)		2003-2005
Sealed storage systems for grain and milled rice	IRRI		2004-2005
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	Years: 2007-2008
Number of farmers trained in IPM during the year	945
Number of IPM-FFS conducted during the year	29
Number of farmers trained in GAP standards during the year	–
Area under IPM/low pesticide management [ha]	14 531 000 ha
Area under organic/pesticide-free management [ha]	–
Crops in which IPM or other ecology friendly programmes are successfully implemented: Rice, Pulses, Cotton	
Crops grown organic/pesticide-free: –	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
FFS training programme in rice started in 2000. During the last two years, there was no report on outbreak of major pests and disease. The country's overall pest control system also takes into consideration the ecological aspect of pest management, the biology, behaviour and taxonomy of pests symptomatology and the favourable climatic condition to the disease.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
The research activities of IPM are carried out, subject to the limited financial resources available from the government and other source of funds or from the related technical cooperation.

V. PESTICIDE MANAGEMENT

Last updated: December 2008

Executive Summary

The work related to the country's pesticide management has been progressing steadily. It covers pesticide registration schemes, licensing programme, control of Persistent Organic Pollutants, disposal of toxic wastes, as well as management of transboundary movement of illegal products.

List of Key Legislation/Regulations/Rules

1990 Pesticide Law
1991 Implementation Rules to the Pesticide Law
1995 National Food Law

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		x
Have you ratified the Rotterdam (PIC) Convention?		x
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)		x
Have your ratified the Montreal Protocol? (MeBr phasing-out)		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?		x
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?	x	
Do you require data on product equivalence for generic registration?		
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		x
Do you accept evaluation results from other countries?	x	
Do you accept field studies conducted in other countries?	x	
Do you require environmental fate studies?	x	
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	PRB
Registration	PRB
Licensing of shops	MOAI/MAS
Licensing of field applicators	MOAI/MAS/PPD
Enforcement/inspections	MOAI/MAS/PPD
Testing of pesticide efficacy	MOAI/MAS/PPD
Development of pesticide use recommendations	MOAI/MAS/PPD
Safe use training/extension	MOAI/MAS/PPD
Food residue monitoring	MOAI/MAS/PPD
Environmental monitoring	MOAI/MAS/PPD
Health monitoring	MOH
Other Stakeholders:	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2007-2008
Number of registration officers	10
Number of enforcement officers	12
Number of department quality control laboratories	1
Number of quality control laboratory personnel	5
Number of department residue analysis laboratories	1
Number of residue laboratory personnel	5

Key Situation Indicators

Pesticide Trade:	Tons	US$ '000 Value
Imports	6 185	
Manufacture		
Export		
Domestic Use/Sales		
Pesticide Use Profile:	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture		
Chem. Insecticides	3 165	
Chem. Fungicides	2 065	
Chem. Herbicides	462	
Chem. Others: e.g. molluscicide, acaricide	40	
Other: e.g. Abamectin, Bt, Neem	441	
Other purposes	12	
TOTAL	6 185	

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance?		
Do you have a list of pesticides under close observation for problems		
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?	x	
Do you have significant problems of environmental contamination from pesticides?	x	
Do you have data on pesticides effects on wildlife and ecosystems?		x
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?		x
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____ No data available_____	x	
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products		955
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)		15
Number of restricted-use pesticides/formulations	7	
Number of banned pesticides	19	
Number of licensed outlets	2 270	
Number of licensed field applicators (professional and/or farmers)	9 721	
Number of licensing violations reported during year		
Number of quality control analyses conducted during year	103	
Number of food samples analyzed for pesticide residues during year	52	
Number of samples exceeding MRL	None	
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)
The survey of pesticides use on important crops			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Myanmar now has access to the Rotterdam Convention and observes the International Code of Conduct on the Distribution and Use of Pesticides to implement the PIC procedures.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Control and monitoring mechanism including selling of extremely hazardous, low standard and banned pesticides in the market. Transboundary issues (long, open and porous border with neighbouring countries). Due to the shortage of technical staff, inadequate legal and regulatory framework have occurred.

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.13 NEPAL

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

The economy of Nepal is predominantly dependant on agriculture. Nearly 17.71 million populations are engaged in agriculture and about 17 percent of the population lives below poverty line. The total cultivated area under agriculture is 3.091 million ha. The contribution of agriculture sector to the country's GDP constitutes about 32.60 percent.

Sustainable reduction of poverty, ensuring food security taking advantage of the country's agro-climatic diversity while fulfilling its international obligations concerning biodiversity conservation and environment protection are the important priorities of the government of Nepal. The above strategies are also closely linked to the various international conventions and agreements to which Nepal is a party.

To streamline the services in the area of plant protection, the Government of Nepal has established a separate Plant Protection Directorate (PPD) in the Department of Agriculture under the Ministry of Agriculture and Cooperatives (MoAC). The Plant Protection Directorate executes and coordinates various plant protection functions such as plant quarantine and implementation of international standards on phytosanitary measures, surveillance, pest outbreaks and invasive species management, pest and pesticide management programmes through its different outfits as follows:

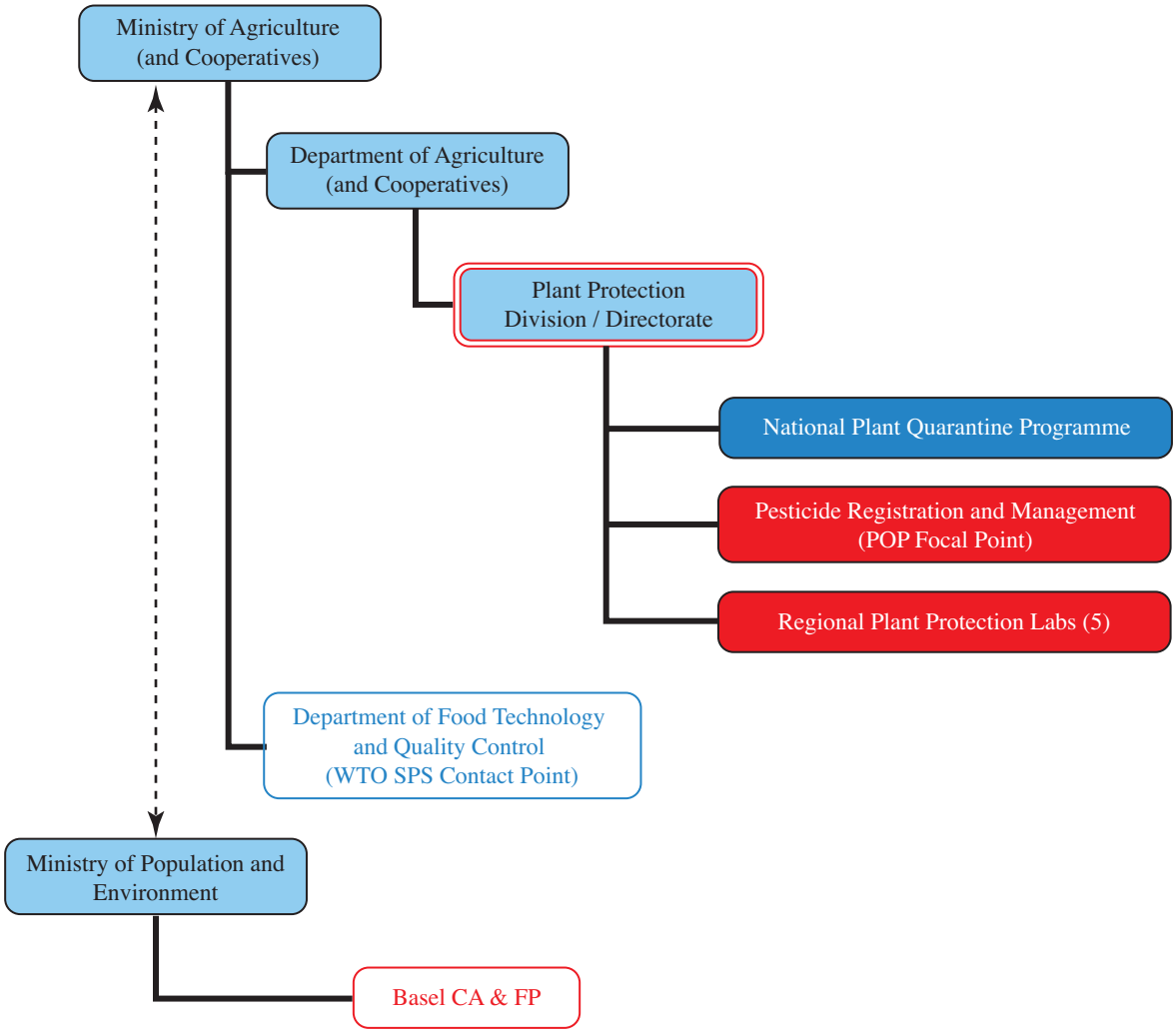
1. National Plant Quarantine Programme (with five regional plant quarantine check posts, eight check posts and two sub-check posts),
2. National IPM Programme,
3. Pesticide Registration and Management Office,
4. Five regional plant protection laboratories located in five development regions of the country.

In addition to above, each District Agriculture Development Office (DADO) (a total of 75) is posted with a Plant Protection Officer with supporting Junior Technicians and Technical Assistants, who are made responsible to coordinate and implement various plant protection functions at the district level.

In 2004, in line with the provision made by the IPPC, the Government of Nepal nominated PPD as National Plant Protection Organization (NPPO) contact point for IPPC/APPPC and the Director of the PPD was assigned as focal point for the NPPO. The Government of Nepal also nominated focal points for WTO SPS related matters *(Department of Food Technology and Quality Control under MoAC)*, international treaties and conventions such as Rotterdam Convention, Stockholm Convention *(Pesticide Registration and Management Office)* as well as a competent authority (CA) and a focal point for Basel Convention *(Ministry of population and Environment)*.

Also, Nepal has either already brought into force or is in the process of legislating laws, rules and regulations compatible with the above international treaties such as Plant Protection Act (2007), Pesticides Act (1991) and Plant Protection Regulation (2009), which is under process of approval.

Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Last updated: 4 June 2009

Ministry/Department of Agriculture

Department of Agriculture
Mr Fulgen Pradhan, Director General
Ministry of Agriculture and cooperatives
Hariharbhawan, Lalitpur
Tel: (+997 1) 552 1323
Fax: (+997 1) 552 4093
E-mail: DoA@vianet.com.np, Website: www.DoAnepal.gov.np

Plant Protection

Plant Protection Directorate
Mr Badri Bishal Karmacharya, Program Director
Ministry of Agriculture and Cooperatives
Harihar Bhawan, Lalitpur
Tel: (+997 1) 552 1597
Fax: (+997 1) 553 9376
E-mail: director@ppdnepal.gov.np
Website: ppdnepal@gov.np

Plant Quarantine

National Plant Quarantine Programme
Mr Ishwor Prasad Rijal, Program Chief
Plant Protection Directorate, Ministry of Agriculture and Cooperatives
Harihar Bhawan, Lalitpur
Tel: (+997 1) 552 4352
Fax: (+997 1) 555 3798
E-mail: rijal_I.P.@yahoo.com,

Surveillance, Pest Outbreaks and Invasive Species Management

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Pesticide Registration

Pesticide Registration and Management Section
Mr Jagadish Bhakta Shrestha, Registrar of Pesticides
Plant Protection Division, Ministry of Agriculture and Cooperatives
Harihar Bhawan, Lalitpur
Tel: (+997 1) 5010111
Fax: (+997 1) 5541601
E-mail: jagadishbshestha@gmail.com

Official International Contact Points

Last updated: 4 June 2009

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Plant Protection Directorate
Mr Badri Bishal Karmacharya
Department of Agriculture (DOA)
Ministry of Agriculture and Cooperatives
P.O. Box 45
Harihar Bhawan, Lalitpur
Tel: (+977) 1 552 1597, 555 5312
Fax: (+977) 1 553 9376
E-mails: director@ppdnepal.gov.np, karmabishal@yahoo.com

WTO SPS Contact Point

Department of Food Technology and Quality Control
Babarmahal, Kathmandu
Tel: + (977 1) 426 2369 / 425 6947
Fax: + (977 1) 426 2337
E-mail: dftqc@mail.com.np
Website: www.spsenquiry.gov.np

Rotterdam Convention (PIC) DNA Pesticides

–

Stockholm Convention (POP) National Focal Point (S)

Mr Jagadish Bhakta Shrestha
Pesticide Expert
Pesticide Registration and Management Division
Department of Agriculture
Ministry of Agriculture and Cooperatives, Kathmandu
Tel: (+977 1) 5010111
Fax: (+977 1) 5541601
E-mail: jagadishbshrestha@gmail.com

Basel Convention Competent Authority (CA) and Focal Point

Ministry of Population and Environment
Secretary
Singh Durbar, Kathmandu
Tel: (977 1) 424 15 86 or 424 15 88
Fax: (977 1) 424 21 38
E-mail: info@mope.gov.np

Selected Country Statistics:

Agricultural Population	17.71 million	Agricultural Land	3.091 million ha
GDP $10 562 million	Agric. GDP: 32.60%	GNI per capita: $240	Hunger: 17%
Main crops grown:			

GDP = Gross Domestic Product; GNI = Gross National Income; Hunger = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

List of Key Legislation/Regulations/Rules

(*year, title and possibly short description)*

2007 Plant Protection Act, 2064
2009 Plant Protection Regulation, 2066 (under process of approval)

Web source for further information: –

Policies (regarding plant quarantine)	**Yes**	**No**	**Don't know**
Does phytosanitary legislation cover both domestic and import/ export quarantine?	x		
Is plant quarantine a separate organization from animal quarantine?	x		
Does phytosanitary legislation cover non-cultivated plants (wild flora)	x		
Does phytosanitary legislation cover living modified organisms?	x		
Other policy goals:			
Web source for further information: –			

Organization of Plant Protection Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Pest Risk Assessment	MoAC/DoA/PPD
Standards development	MoAC/DoA/PPD
International notifications	MoAC/DoA/PPD
Import:	
Import permits/inspections	MoAC/DoA/PPD/NPQP
Emergency action	
Export:	
Phytosanitary certificates	NPQP
Treatment of commodities	PPD/NPQP

Infrastructure	**Year:**
Total number of plant quarantine officers	19
Total qualified personnel for plant pest risk assessment	
Number of quarantine offices/stations	16
Number of post-entry plant quarantine containment facilities	1*
Number of quarantine service diagnosis laboratories	5
Number of entry points (sea/air/land/mail = total)	15
In-country pest diagnostics capabilities (incl. universities, etc.)	10
Number of laboratories for insect samples	13
Number of laboratories for pathogen samples	13
Number of laboratories for plant/weed samples	4

* Regional Plant Quarantine Office, Birgunj

Pest Free Areas	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	
– surveillance	NPPO
– management	NPPO
– certification	NPQP

List of target pest species and crops	Number of sites in [year]
Citrus (62 Pest list)	[number]
Tea? (20 Pest list)	

Key Situation Indicators

International Trade		
Main Import Plant Commodities	Main countries of origin	No. of phytosanitary inspections
Paddy, Maize, Onion, Potato	India	[number]
Garlic, Apple	China	
Main Export Plant Commodities	Main destination countries	
Cardamom, Tea^{+}, Coffee^{O}	India, Pakistan, Japan^{O}, USA^{+}	
Ginzer, Lentil*	German, Bangladesh*	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
National Integrated Pest Management Programme in Nepal Phase II	Norway	5 million US$	2009-2013
Title of government follow-up programmes		Amount	Years (start-end)
Not yet			

Key Operation Indicators

Institutional Functions	Year: 2008
Number of import permits issued/inspections	[number]
Number of emergency phytosanitary treatments taken on imports	None
Number of pests intercepted	One (2007)**
Number notifications of non-compliance	None
Number of phytosanitary certificates issued *Do you have an electronic certification system?: Yes ✓, No_____*	

** Embellesia alli in Garlic

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of regulated quarantine pests	2006	90	45	Apple
Number of regulated non-quarantine pests	2006	3	45	Ginger
Number of regulated import commodities	2007	8	29	Lentil

Pest Risk Assessments	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			7 (Potato, Citrus, Lentil, Ginger, Garlic, Apple, Mustard)
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
New Plant Protection Act regulated since 2007, membership & IPPC since 8 May 2006
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x			x		2008
ISPM 02 Guidelines for pest risk analysis			x			x		2006
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x	x				
ISPM 04 Requirements for the establishment of pest free areas			x		x			2006
ISPM 05 Glossary of phytosanitary terms			x				x	2006
ISPM 06 Guidelines for surveillance			x			x		2008
ISPM 07 Export certification system			x			x		2005
ISPM 08 Determination of pest status in an area			x		x			2008
ISPM 09 Guidelines for pest eradication programmes			x		x			2008
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x	x				
ISPM 11 Pest risk analysis for quarantine pests			x	x				
ISPM 12 Guidelines for phytosanitary certificates			x			x		2006
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x	x				
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x		x			
ISPM 15 Guidelines for regulating wood packaging material in international trade			x		x			2006
ISPM 16 Regulated non-quarantine pests: concept and application			x	x				
ISPM 17 Pest reporting			x			x		2006
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x	x				
ISPM 19 Guidelines on lists of regulated pests			x				x	2006
ISPM 20 Guidelines for a phytosanitary import regulatory system			x			x		2006
ISPM 21 Pest risk analysis for regulated non-quarantine pests		x		x				
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x	x				
ISPM 23 Guidelines for inspection			x			x		2008
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x		x			2006
ISPM 25 Consignments in transit			x	x				
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)		x		x				
ISPM 27 Diagnostic protocols for regulated pests			x	x				
ISPM 28 Phytosanitary treatments for regulated pests			x					
ISPM 29 Recognition of pest free areas and areas of low pest prevalence			x		x			
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			x	x				
ISPM 31 Methodologies for sampling of consignments			x		x			
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

Policies (regarding invasive/migratory species management)	Yes	No	Don't know
National strategy to control serious field pest outbreaks?	x		
National strategy to control migratory or periodically occurring pests?	x		
National strategy to eradicate serious newly invaded exotic pests?			x
Other policies:			
List of legislation/regulations/rules for surveillance, pest reporting and emergency actions: Survey Surveillance Guidelines			
Web source for further information: –			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	PPD, RPPL, DADO
Surveillance	PPD, RPPL, DADO
Control	PPD, RPPL, DADO, RAD
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	PPD, RPPL, DADO
Surveillance	PPD, RPPL, DADO
Control	PPD, RPPL, DADO
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	
Surveillance	
Control/eradication	
Reporting to international organizations	NPPO, ABPSD/WTO section

Infrastructure	Year:
Number of designated staff for surveillance and control of field pests of national importance	[number]
Number of designated staff for surveillance and control of migratory and periodically occurring pests	
Number of designated staff for surveillance and eradication of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: 2007		Maize – Grey leaf spot *(Cercospora)*	
Total number for year: 2006		Colecrops – Diamond backmoth *(Plutella xylostella)*	
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Passway			
Location of first discovery			
Area affected [ha]			
Area treated by government [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species			
Year of outbreak			
Area affected [ha]			
Estimated damage $			
Area treated by government [ha]			
Control method			
Expenditures			
Add more if necessary			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: December 2008

Policies (regarding pest management)	Yes	No	Don't know
Do you have policies encouraging organic or low-pesticide production	x		
Is IPM specifically mentioned in laws or policy documents?	x		
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?		x	
Is pest management extension separate from general extension?		x	
Other policies:			
List of legislation/regulations/rules for pest management: Plant Protection Act, regulations pesticide Act, regulations.			
Web source for further information: –			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MoAC/DoA/NPPO/PPD
Pest management research	NARC
Control recommendations	NARC
Pest management extension	MoAC/DoA/PPD & NAES with DADO
IPM training	DoA/PPD/RATC/RPPL/DADO
GAP training	

Infrastructure	Year:
Number of officers for pest management	150
Number of regional offices	5
Number of field offices	75
Number of field/extension agents for pest management advice	150
Number of field/extension agents trained in IPM-FFS facilitation	1 014
Number of government biocontrol labs	None
Number of government biopesticide labs	None

Key Situation and Operation Indicators

Pest Management	Yes	No	Don't know
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* PPD	x		
Does the country have special IPM extension programmes? *If yes, in which crops?:* Rice, Vegetable, Potato, Tea, Coffee and Citrus	x		
Does the country have special IPM research programmes? *If yes, in which crops?:* Rice, Vegetables, Potato	x		

Market shares (estimated value, volume or area under control)	Year:
Size of chemical pest control market	98%
Size of biopesticides market	1.5%
Size of biological control agents market	Negligible

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	Tomato	Potato	Tea
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Support to National IPM Project, UTF/NEP/055/NEP	Norway	1.2 million	2003-2007
Support to National IPM Programme in Nepal, UTF/NEP/059/NEP	Norway	5 million	2009-2013
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Year:**
Number of farmers trained in IPM during the year till 2008	69 207
Number of IPM-FFS conducted during the year till 2008	2 623
Number of farmers trained in GAP standards during the year	None
Area under IPM/low pesticide management [ha]	NA
Crops in which successful IPM technologies are implemented: rice, vegetables, potato, fruit, tea, coffee	
Area under organic/pesticide-free management [ha]	NA
Crops grown organic/pesticide-free:	NA

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

1991 Pesticide Act
1993 Pesticide Rules
1997 Environment Protection Act
1997 Environment Protection Rules

Web source: –

Policies (regarding pesticide management)	**Yes**	**No**	**Don't know**
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		x	
Have you ratified the Rotterdam (PIC) Convention?	x		
Have you ratified the Stockholm (POP) Convention?	x		
Have your ratified the Basel Convention? (hazardous wastes)	x		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x		
Have you adopted Good Laboratory Practices (GLP)?			x
Pesticide Registration			
Do you require pesticides to conform to relevant FAO or WHO specifications?	x		
Do you allow the "me-too" registration and sale of generic pesticides?			
Do you require data on product equivalence for generic registration?	x		
Do you conduct country-specific risk assessments for…			
occupational risks?		x	
consumer risks?		x	
environmental risks?		x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labeling?		x	
Do you accept evaluation results from other countries?	x		
Do you accept field studies conducted in other countries?	x		
Do you require environmental fate studies?	x		
Incentives/Disincentives			
Do you have a special tax on pesticides to cover externality costs?	x		
Do you subsidize or provide low-cost pesticides?		x	
Do you subsidize or provide low-cost biopesticides?		x	
Other policies:			
Web source for further information: –			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	
Registration	MOAC/DOA/PPD/PRMD
Licensing of shops	MOAC/DOA/PPD/PRMD/DADO
Licensing of applicators	None
Enforcement/inspections	MOAC/DOA/PPD/PRMD & DADO
Testing of pesticide efficacy	NRAC/RPPL
Development of pesticide use recommendations	NARC
Safe use training/extension	MOAC/DOA/PPD/PRMD & DADO
Food residue monitoring	MoAC
Environmental monitoring	MoAC /DoA/PPD/PRMD
Health monitoring	MoAC/DoA/PPD/PRMD
Other Stakeholders:	
Pesticide Industry Association	Pesticide Association of Nepal
Civil Society Organizations (NGO, etc.)	Soc. of Environmental Journalist, Nepal Forum of Environmental Journalists

Infrastructure	Year:
Number of registration officers	1
Number of enforcement officers	75
Number of department quality control laboratories	1
Number of quality control laboratory personnel	4
Number of department residue analysis laboratories	1
Number of residue laboratory personnel	4

Key Situation Indicators

Pesticide Trade: 2008	Tons	$ '000 Value
Imports	(a.i.) 147.49 mt.	3.6 million
Manufacture		
Export		
Sales	(a.i.) 347.49 mt.	3.6 million
Pesticide Use Profile:	**Tons**	**$ '000 Value**
Agriculture	344.79	
Insecticides	60.28%	
Fungicides	237.38%	
Herbicides	6.57%	
Other	40.56%	
Veterinary		
Public Health	2.7	
Household		
Other		
TOTAL	347.49 mt.	3.6 million

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No	Don't know
Do you have significant problems with low-quality pesticides in the market?	x		
Do you have significant problems with pesticide resistance?	x		

Health and Environmental Information	Yes	No	Don't know
Do you maintain data on pesticide poisoning cases?	x		
Do you have a system to monitor pesticide residues in food?	x		
Do you have a system to monitor pesticide residues in the environment?	x		
Do you have significant problems of environmental contamination from pesticides?	x		
Do you have data on pesticides effects on wildlife and ecosystems?			x

Pesticide Disposal	Yes	No	Don't know
Do you have services to collect and safely dispose of used containers and small quantities of left-over pesticides?		x	
Do you have an inventory of outdated and obsolete pesticides in the country?	x		
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		x	

Key Operation Indicators

Registration/Regulation/Monitoring	Year:	
	a.i.*	Trade Name
Number of registered pesticide products	237	
Number of registered biopesticides	5	
Number of restricted-use pesticides	5	
Number of banned pesticides	14	
Number of licensed outlets	1	
Number of licensed applicators	2	
Number of licensing violations reported during year		
Number of quality control analyses conducted during year	8	
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Pesticide National policy draft is prepared and in the process of finalization. Pesticide regulation 1998 was amended in 2007. Phorate & methomyl is under the process of banning. Monocrotophous & methyl parathion has already been banned since 2007.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Lack of trained manpower in the laboratory.

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

Abbreviation

ABPSD : Agriculture Business Promotion and Statistics Division
DADO : District Agriculture Development Office
DoA : Department of Agriculture
MoAC : Ministry of Agriculture and Cooperatives
NARC : Nepal Agriculture Research Council
NPPO : National Plant Protection Organization
NPQP : National Plant Quarantine Programme
PPD : Plant Protection Directorate
RATC : Regional Agriculture Training Centre
RAD : Regional Agriculture Directorate
RPPL : Regional Plant Protection Laboratory
WTO : World Trade Organization

2.14 NEW ZEALAND

I. GENERAL INFORMATION

Last updated: June 2009

Overall Executive Summary

Since the last Session of the Asia and Pacific Plant Protection Organization, New Zealand has continued to develop and refine its Biosecurity system.

MAF Biosecurity New Zealand (MAF BNZ) is the division of the Ministry of Agriculture and Forestry (MAF) charged with leadership of the New Zealand biosecurity system. It encompasses facilitating international trade, protecting the health of New Zealanders and ensuring the welfare of our environment, flora and fauna, marine life and Maori resources.

In December 2006, the Director-General of MAF announced that MAF's two biosecurity businesses Biosecurity New Zealand (BNZ), and MAF Quarantine Service (MQS) would be structurally integrated. The new integrated organization commenced operations on the 1 of July 2007, and is now known as MAF Biosecurity New Zealand (MAF BNZ).

Around $NZ500 million is spent annually on biosecurity in New Zealand, with activities undertaken by central government, regional councils, industry and private landowners. It is estimated government agencies are responsible for $NZ304 million of this.

MAF have approximately 1 000 full-time and part-time staff, based across New Zealand and overseas. They include vets, scientists, quarantine inspectors, directors, managers, administrators, advisers, Detector Dogs and their handlers, analysts, investigators, legal experts, policy makers, communicators, strategist and business services staff.

Seventy five new organisms associated with plants and plant products were recorded as new to New Zealand by MAF BNZ in 2007-2008. MAF BNZ has officially responded to the presence of a number of these organisms.

New Zealand continues to develop and review import health standards based on pest risk assessment in accordance with the International Standards for Phytosanitary Measures. Since the 25th session of the APPC, import health standards have been developed for a range of plants and plant products.

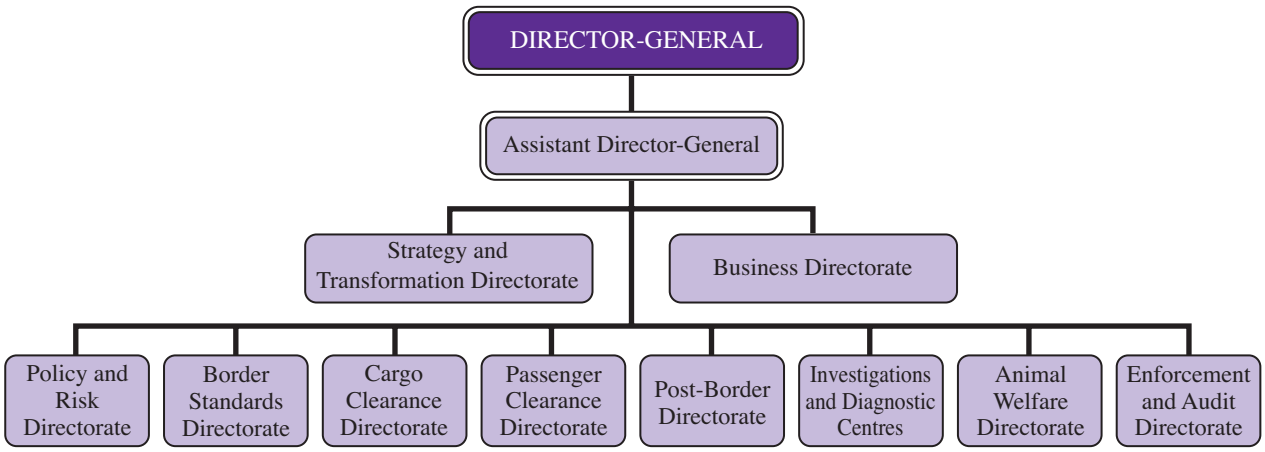
New Zealand operates an approvals framework for pesticides under the HSNO Act, developed a substance reassessment programme, and has implemented a compliance structure to support the approvals framework.

Integrated pest management continues to be an integral component of orchard management programmes in New Zealand.

New Zealand continues to be active in the development, implementation and promotion of international and regional standards.

Plant Protection Organization Chart

Last updated: June 2009



Important Contact Addresses

Responsible Ministry

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E-mail: info@maf.govt.nz
Website: http://www.maf.govt.nz/mafnet/index.htm

MAF Biosecurity New Zealand (MAF BNZ)

Border Standards Directorate

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Director
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Post Border Directorate

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Website: http://www.maf.govt.nz/mafnet/index.htm

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Mr Tim Knox
Director Border Standards

Mr John Hedley
Principal International Advisor
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Website: http://www.biosecurity.govt.nz/

Language(s): English

WTO SPS Contact Point

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SPS Coordinator
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Website: www.maf.govt.nz/biosecurity/sps/

New Zealand Food Safety Authority

Pesticide Registration

Ms Debbie Morris
Director
Approvals & ACVM Group
New Zealand Food Safety Authority (NZFSA)
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Website: http://www.nzfsa.govt.nz/

Rotterdam Convention (PIC) DNA Industrial Chemicals and Pesticides (CP)

Plant Residues

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Stockholm Convention (POP) National Focal Point

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Basel Convention Competent Authority (CA) and Focal Point

Environmental Issues, Effective Markets Branch
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II. PLANT QUARANTINE

Last updated: June 2009

Key Legislation

Biosecurity Act 1993 – is the principal legislation for the exclusion, eradication and management of pests and unwanted organisms in New Zealand. Biosecurity New Zealand administers this legislation

Web source for further information: http://www.biosecurity.govt.nz/

Hazardous Substances and New Organisms (HSNO) Act 1996 – the purpose of the HSNO Act is to achieve effective prevention or management of risks to the environment, public health and safety associated with importing or manufacturing hazardous substances and introducing new organisms (including genetically modified organisms), and their use

Web source for further information: http://www.mfe.govt.nz/ and http://www.ermanz.govt.nz/

Policies (regarding plant quarantine)	Yes	No
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?		x
Does phytosanitary legislation cover living modified organisms?	x	
Is plant quarantine a separate organization from animal quarantine?		x
Other policy initiatives (under review/progress)		
Web source for further information: http://www.maf.govt.nz/quarantine/ http://www.biosecurity.govt.nz/ http://www.biosecurity.govt.nz/pests/registers		

Organization of Plant Quarantine Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Assessment	MAF BNZ Border Standards Directorate
National standards development	MAF BNZ Border Standards Directorate
International notifications	MAF BNZ Policy and Risk
Import:	
Import permits	MAF BNZ Border Standards Directorate
Import inspections	MAF BNZ Passenger and Cargo Directorates
Emergency action	MAF BNZ
Export:	
Phytosanitary certificates	MAF BNZ Border Standards
Treatment of commodities	MAF BNZ Border Standards

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify (exports)	
Number of plant quarantine officers authorized to inspect/certify (imports)	Approximately 600
Total qualified personnel for plant pest risk assessment	8
Entry points (sea/air/land/mail = total)	21
Post-entry plant quarantine containment facilities	68
Number of quarantine service diagnosis laboratories	2
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	2
Number of laboratories for bacteria samples	2
Number of laboratories for virus samples	2
Number of laboratories for fungus samples	2
Number of laboratories for mycoplasma samples	2
Number of laboratories for nematode samples	2
Number of laboratories for plant/weed samples	2
Number of laboratories for other pests (snail, slug, rodents, etc.)	2

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MAF BNZ Border Standards
– surveillance	Independent Verification Agencies
– management	Independent Verification Agencies
– certification	MAF BNZ Border Standards

List of target pest species and crops ISPM 4	Number of sites in 2008
All fruit flies attracted to Cuelure, Methyl eugenol, and Trimedlure. All fruit fly host crops.	7 500 traps at 3 500 sites nationwide
List of target pest species and crops ISPM 10	Number of sites in 2008
Potato cyst nematodes (*Globodera rostochiensis* and *Globodera pallida*)	250
Oriental fruit moth (*Graphiolita molesta*)	50

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Produce	Australia, USA, Asia, Pacific	N/A
Nursery Stock	Australia, USA, Asia, Europe, Central/ South America	N/A
Seed/Grains	Australia, USA, Europe, South America	N/A
Main Export Plant Commodities	Main destination countries	
Kiwifruit	Japan, Europe, USA, Taiwan, Korea, Australia	368 521
Apples	USA, Europe, Taiwan	205 684
Squash	Japan, Korea,	109 068
Flowers	Japan Europe, USA, Asia	N/A
Avocado	Australia	12 358
Stone fruit	Australia, Japan, Taiwan, Europe	1 869
Onions	Europe, Japan	126 227
Vegetable seed	Europe, Asia	N/A
Forestry products	Asia, USA, Australia	7 772 000 m^3

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
N/A			
Title of government follow-up programmes		Amount	Years (start-end)
N/A			

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued (commercial consignments of nursery stock and seed)	256
Number of import inspections carried out	10 000+
Number of emergency phytosanitary treatments taken on imports	Approx 1 000
Number of conventional phytosanitary certificates issued	55 000
Number of electronic phytosanitary certificates issued	0

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodity	Top three pest/commodity	# of interceptions
		N/A

Lists of Regulated Pests	Year of last update (2009)	Insects	Pathogens	Plants
Number of quarantine pests	Refer to web page below			
Number of regulated non-quarantine pests				
Number of regulated import articles				
Website for the above information: http://www.maf.govt.nz/biosecurity/pests-diseases/registers-lists/boric/				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)	Refer to web page below		
Web source for further information: http://www.biosecurity.govt.nz/regs/imports/ihs/risk			

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	
ISPM 02 Guidelines for pest risk analysis			x				x	
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x				x	
ISPM 04 Requirements for the establishment of pest free areas			x				x	
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x				x	
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x				x	
ISPM 09 Guidelines for pest eradication programmes			x				x	
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x				x	
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application			x				x	
ISPM 17 Pest reporting			x				x	
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x	x				N/A
ISPM 19 Guidelines on lists of regulated pests			x				x	
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x				x	
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x		x			N/A
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x				x	
ISPM 25 Consignments in transit			x				x	
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x				x	
ISPM 27 Diagnostic protocols for regulated pests			x				x	
ISPM 28 Phytosanitary treatments for regulated pests			x					
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)	x			x				
ISPM 31 Methodologies for sampling of consignments			x		x			

Comments/Constraints

* Third party agencies utilised to verify compliance of export product

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: June 2009

Key Legislation

Biosecurity Act 1993

Hazardous Substances and New Organisms (HSNO) Act 1996

Web source for further information: http://www.biosecurity.govt.nz/

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?		x
National strategy to control migratory or periodically occurring pests?		x
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: • New Zealand Biosecurity Strategy http://www.biosecurity.govt.nz/files/bio-strategy/biostrategy.pdf • Policy for MAF's Responses to Risk Organisms (July 2008) http://www.biosecurity.govt.nz/files/biosec/consult/response-policy-risk-organisms.pdf		
Web source for further information: http://www.biosecurity.govt.nz/		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	
Response strategy/plans	Pest outbreaks are generally managed by the Industry or the Agency most affected. MAF Biosecurity New Zealand may take a lead or coordinating role for National Interest Pests
Surveillance	
Control	
Migratory Pest Outbreaks	
Response strategy/plans	N/A
Surveillance	
Control	
New Exotic Pest Eradication	
Response strategy/plans	MAF Biosecurity New Zealand with the support of affected industries and/or other central/local government agencies
Surveillance	
Control/eradication	
Reporting to bilateral or international organizations	MAF Biosecurity New Zealand

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	3 FTEs within MAF BNZ Surveillance Group to coordinate National Programmes for pests and diseases affecting Plant Health. **Note:** Field operations are generally contracted out and the number of staff at anyone time will depend on what programmes are currently being run.
Number of designated staff for **surveillance** of migratory and periodically occurring pests	
Number of designated staff for **surveillance** of invasive species	
Number of designated staff for **control** of field pests of national importance	15 FTEs within MAF BNZ Response (8 FTE) and Incursion Investigation Groups (6 FTE) to coordinate response programmes and operations to exotic plant pest/disease incursions. 6 FTEs within MAF BNZ Pest Management Group to coordinate programmes for National Interest Pests (already established in New Zealand). **Note:** Field operations are generally contracted out and the number of staff at anyone time will depend on what programmes are currently being run.
Number of designated staff for **control** of migratory and periodically occurring pests	
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for 2007:29	8	21	0
Total number for 2008:46	10	36	0
Total number on record:	28	57	0

Note: Numbers represent cases that have been assessed and declared established in New Zealand. Some of these may represent endemic species or species that have likely been present in the country for decades, but just never before been detected.

Eradication or internal quarantine actions taken against economically important species			
Name of species	*Ophiostoma ulmi* (Dutch Elm Disease)	*Uraba lugens* (Gum Leaf Skeletoniser)	*Coptotermes acinaciformis* (subterranean termites)
Year of first discovery	1989	1993 (Tauranga) 1999 (Auckland)	2006 (Nelson) 2007 (Auckland)
Pathway	Vector insect carrying spores of the fungus in elm wood material (e.g. packaging, dunnage, pallets) with bark present	Unknown	Railway sleepers
Location of first discovery	Auckland	Tauranga, Auckland	Nelson, Auckland

Area affected [ha]	Parts of Greater Auckland (Waitakere City, Auckland City, North Shore City, Manukau City, Papakura District)	Greater Auckland (20 000 ha), Waikato, Bay of Plenty	Nelson – 2 neighbouring residential properties Auckland – planter boxes and shed on rural property
Area treated [ha]	All	None	Nelson – the 2 affected properties plus 4 adjacent properties Auckland – affected property
Control method	Removal of diseased elms supported by surveillance and vector beetle trapping	Research into biological and chemical control methods	Hexaflumuron bait stations, surveillance of wider area, and (Auckland) netting to contain alates
Expenditure (NZD) (01 Jan 07 – 31 Dec 08)	NZ$155 968	No spend	NZ$61 679
Status	Under official control – transitioning to local control	Established	Under eradication

Eradication or internal quarantine actions taken against economically important species			
Name of species	Didymo	*Solenopsis invicta* (Red Imported Fire Ant)	Dampwood termites
Year of first discovery	2004	2006	2007
Pathway	Suspect North America	Suspect USA	Australia – suspect historically-imported hardwood timber
Location of first discovery	Southland	Napier	Kaipara Flats
Area affected [ha]	122 waterways in the South Island (March 2009)	Single nest found on property of forest products processing plant	Likely to be one or two isolated nests (not yet located)
Area treated [ha]		c.750 ha	
Control method	Social marketing, potential GEMEX tool, cleaning methods, surveillance, controlled area	Surveillance, movement controls, application of fire ant insecticidal baits	Surveillance
Expenditure (NZD) (01 Jan 07 – 31 Dec 08)	NZ$3.8 million	NZ$4.9 million	NZ$21 101
Status	Under official control	Under eradication	Under investigation

Eradication or internal quarantine actions taken against economically important species			
Name of species	Candidatus Liberibacter species (Tomato Bacteria Like Organism)		
Year of first discovery	2008		
Pathway	Vectored by insect pest, the tomato potato psyllid (Bactericera cockerelli) The vector is already established in New Zealand		
Location of first discovery	Commercial Tomato Glasshouses Auckland		
Area affected [ha]	20 sites throughout New Zealand including tomato/ capsicum glasshouses, outdoor potato fields and tamarillo orchards		
Area treated [ha]			
Control method	Commercial growers and exporters are managing the psyllid through an industry management programme. Social marketing to raise home gardener awareness		
Expenditure (NZD) (01 Jan 07 – 31 Dec 08)	NZ$250 000		
Status	Established		

Eradication or internal quarantine actions taken against economically important species			
Name of species	*Salvina molesta* Salvinia	*Eichhornia crassipes* Water hyacinth	*Sorghum halepense* Johnson grass
Year of first discovery	1963	1950	1945
Pathway	Unknown	Unknown	Possibly contaminated seed or feed
Location of first discovery	Western Springs Lake, Auckland	Hauraki Plains	Napier
Area affected [ha]	Limited	Limited	Limited
Area treated [ha]	Limited	Limited	Limited

Control method	Physical removal; herbicides	Physical removal; herbicides	Physical removal; herbicides
Expenditure (NZD) (01 Jan 07 – 31 Dec 08)	NZ$299 151 (includes Salvinia, Water hyacinty, Johnson grass & Cape Tulip – *refer next table*)		
Status	Under Eradication	Under Eradication	Under Eradication

Eradication or internal quarantine actions taken against economically important species			
Name of species	*Moraea flaccida* *(syn. Homeria collina)* Cape tulip	*Ehrharta villosa* pyp grass	*Phragmites australis* phragmites
Year of first discovery	1944	Mid 1970s	1950
Pathway	Possibly ornamental plantings	Deliberate introduction for sand dune stabilization	Unknown
Location of first discovery	Hamilton Bay, French Pass	Turakina Beach, (south of Wanganui) and Blackhead, Hawkes Bay	Napier
Area affected [ha]	Limited	Limited	Limited
Area treated [ha]	Limited	Limited	Limited
Control method	Physical removal; herbicides	Physical removal; herbicides	Physical removal; herbicides
Expenditure (NZD) (01 Jan 07 – 31 Dec 08)	*(refer pervious table)*	NZ$55 393	NZ$29 211
Status	Under Eradication	Under Eradication	Under Eradication

Eradication or internal quarantine actions taken against economically important species			
Name of species	*Hydrilla verticillata* hydrilla	*Ceratophyllum demersum* hornwort	*Bryonia cretica* subsp *dioica* white bryony
Year of first discovery	1963	1961 (North Island) 2002 (South Island)	1990
Pathway	Unknown	Aquaria trade, garden trade, deliberate	Unknown
Location of first discovery	Lake Tutira, Hawkes Bay	Napier/Hastings (NI) Moutere Stream near Motueka (SI)	Rangatikei
Area affected [ha]	Approx. 164 ha	Extensive in NI 2 small localised sites (SI)	Approx 10.5 ha
Area treated [ha]	Approx. 164 ha	2 small localised sites (SI)	Limited
Control method	Physical removal; herbicides; grass carp	Aquatic herbicides	Physical removal; herbicides
Expenditure (NZD) (01 Jan 07 – 31 Dec 08)	NZ$841 574	NZ$56 709	NZ$282 790
Status	Under Eradication	Under Eradication (in South Island only)	Under Eradication

Eradication or internal quarantine actions taken against economically important species			
Name of species	*Tricoglossus haematodus* rainbow lorikeet	*Zizania latifolia* Manchurian wild rice	Kauri PTA
Year of first discovery	Early 1990s (in the wild)	1906	1950
Pathway	Deliberate releases of captive cage birds	Ballast	Unknown
Location of first discovery	North Shore, Auckland	Northern Wairoa River, Northland	Great Barrier Island
Area affected [ha]	Widely distributed in the Auckland area (150-200 individuals by 1999) Whole of country	ca.338 ha (Northland) Various limited outlier sites (Northland; Auckland; Waikato; Wellington)	Northland, Auckland, Great Barrier
Area treated [ha]	Auckland – maintain zero density. Approx 10-30 birds escaping each year are controlled. Reports of populations outside Auckland investigated	Outlier sites treated, in all regions	Control tools in research
Control method	Traps, mist nets and hand nets	Physical removal; herbicides	Pathway management only. Hygiene and vector control.
Expenditure (NZD) (01 Jan 07 – 31 Dec 08)	NZ$44 591	NZ$249 538	NZ$41 174
Status	Feral population, control to zero density	Containment (large site) Eradication (outlier sites)	Long term management

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	N/A		
Year of first discovery			
Area affected [ha]			
Estimated damage $			
Area treated by government [ha]			
Expenditures by government [US$]			
Control method			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

SURVEILLANCE

- MAF BNZ has developed a Biosecurity Surveillance Strategy. The strategy document has completed final public consultation and final approval is being sought. The strategy develops a cohesive vision and consistent principles and approaches for the future biosecurity surveillance system. Now that the main principles have been agreed an implementation plan is being prepared to establish a path that will successfully move New Zealand from the current state to the preferred future biosecurity surveillance system.

RESPONSE

- A new MAF BNZ Response Policy has been adopted and has led to the development of a new generic Biosecurity Response Model. The Biosecurity Response Model includes web-based process maps, supporting procedures, tools and templates, and a people capability framework. The model has been progressively implemented since mid 2008 with full implementation expected by 30 June 2009.
- MAF is continuing to work towards a Government-industry agreement for joint decision-making and resourcing. It would cover biosecurity readiness (including surveillance) and response. Benefits MAF hopes to achieve from an agreement include:
  - better planning, resourcing and delivery of biosecurity readiness and response activities;
  - more accurate signals from industries on their priorities (they will identify what they most want to invest in);
  - more certainty on whether and how the govt will be involved in readiness/response activities that benefit industries; and
  - incentives for all parties to mitigate biosecurity risks within their control.

  If Government and industries decide to proceed, an agreement could be in place by December 2011. However, timing will depend on how long it takes to negotiate a final agreement, put in place levies to secure resource contributions from industry, and amend legislation to enable the agreement to operate.
- Response Foundations project. This project is to improve Response Readiness. There are two key streams of work. (1) Development of 3 year work plan that once implemented will take MAF BNZ to a desired future state of response readiness. The 3-year plan is expected to be complete and ready for implementation from 1 July 2009. (2) Implementing a new model for outsourcing operational response capability. MAF BNZ is moving to contract a single Master Supplier to manage response operations across all sectors for MAF BNZ, to develop and maintain a network capability to manage response operations, and to be a resource as part of this network for response operations into the future. The transition from the current state to the new state will start in July 2009 and will run over a period of 2-3 years.

PEST MANAGEMENT

- Eleven National Interest Pests were identified and have MAF-led responses underway. The goal for all for but three of the responses is total eradication from New Zealand, with containment/exclusion and zero density for the other three. Delivery of the responses is managed through partnerships with other biosecurity agencies.
- Pest species that are being managed on a long term basis include Didymo and Gum leaf skeletoniser. The recent outbreak of Phytophthera Taxon Agathis has affected the iconic Kauri tree (*Agathis australis*).

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: June 2009

List of Key Legislation/Regulations/Rules for Pest Management

- *Biosecurity Act 1993*
- *Hazardous Substances and New Organisms (HSNO) Act 1996*

Agricultural Compounds and Veterinary Medicines (ACVM) Act 1997 – controls agricultural compounds and veterinary medicines used in association with animals and plants, and is a *companion measure to the Hazardous Substances and New Organisms (HSNO) Act, Animal Products Act (1999) Diary Industry Act (1952), Food Act (1981), Animal Welfare Act (1993) and Biosecurity Act (1993)*

Web source for further information: http://www.nzfsa.govt.nz/

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	N/A	
Is IPM specifically mentioned in laws or policy documents?	N/A	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	N/A	
Is pest management extension separate from general extension?	N/A	
Other policies: (subsidies, production inputs, etc.)		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	N/A
Pest management research	
Control recommendations	
Pest management extension	
IPM training	
GAP training	

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	N/A
Number of central, regional, provincial or state offices	N/A
Number of district and village level field offices	N/A
Number of field/extension agents for pest management advice	N/A
Number of field/extension agents trained in IPM-FFS facilitation	N/A
Number of government biocontrol production/distribution facilities	N/A
Number of government biopesticide production/distribution facilities	N/A
Number of general extension staff involved in pest management	N/A
Number of designated plant protection technical officers for extension	N/A

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:*		x
Does the country have specific IPM extension programmes? *If yes, in which crops?*	x	
Does the country have specific IPM research programmes? *If yes, in which crops?*	x	
Does the country have specific GAP extension programmes? *If yes, in which crops?*	x	
Does the country have specific GAP research programmes? *If yes, in which crops?*	x	

Market shares (estimated value, volume or area under control)	Years: 2007-2008
Size of chemical pest control market	N/A
Size of biopesticides market	N/A
Size of biological control agents market	N/A

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	N/A		
Name(s) of pest(s)	N/A		
Estimated crop loss	N/A		
Affected area	N/A		
Number of pesticide applications or amount of pesticide used	N/A		
Government action taken	N/A		

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
N/A			
Purpose/Target of government follow-up programmes		Amount	Years (start-end)
N/A			

Pest Management Extension	Years: 2007-2008
Number of farmers trained in IPM during the year	N/A
Number of IPM-FFS conducted during the year	N/A
Number of farmers trained in GAP standards during the year	N/A
Area under IPM/low pesticide management [ha]	N/A
Area under organic/pesticide-free management [ha]	N/A
Crops in which IPM or other ecology friendly programmes are successfully implemented: N/A	
Crops grown organic/pesticide-free: N/A	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
N/A
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
N/A

V. PESTICIDE MANAGEMENT

Last updated: June 2009

List of Key Legislation/Regulations

- *Resource Management Act 1993 (RMA)* (administered by the Ministry for the Environment (MfE)
  Web source for further information: http://www.mfe.govt.nz/
- *Hazardous Substances and New Organisms (HSNO) Act 1996* (administered by MfE)
  Web source for further information: http://www.mfe.govt.nz/
  and http://www.ermanz.govt.nz/
- *Agricultural Compounds and Veterinary Medicines (ACVM) Act 1997*

Web source for further information: http://www.nzfsa.govt.nz/

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:_____*		x
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?	x	
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?	x	
Do you accept evaluation results from other countries?		x
Do you accept field studies conducted in other countries?	x	
Do you require environmental fate studies?	x	
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x
Web source for further information: http://www.nzfsa.govt.nz/		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	• New Zealand Food Safety Authority (ACVM Act) – efficacy and (Food Act) MRLs • Ministry for the Environment (HSNO Act/RMA) – human and environmental health and safety
Registration	• New Zealand Food Safety Authority and Environmental Risk Management Authority (ERMA New Zealand)
Licensing of shops	
Licensing of field applicators	• ERMA New Zealand
Enforcement/inspections	• New Zealand Food Safety Authority (ACVM & Food Acts) • Department of Labour (DoL) (HSNO Act) • Regional Councils and Territorial Authorities (RMA/HSNO Act)
Development of pesticide use recommendations	• NZFSA • ERMA New Zealand
Safe use training/extension	• ERMA New Zealand (in association with ITOs)
Food residue monitoring	• New Zealand Food Safety Authority
Environmental monitoring	• Regional Councils
Health monitoring	• Ministry of Health, District Health Boards
Other Stakeholders:	
Pesticide Industry Association	• AGCARM • ARPPA
Civil Society Organizations (NGO, etc.)	Includes: • Pesticides Action Network • Toxics Action Group • Greenpeace • Research providers

Infrastructure	Years: 2007-2008
Number of registration officers	NZFSA (20), ERMA (15)
Number of enforcement officers	NZFSA (1) plus MAF Border Inspectors (604), DoL (8)
Number of department quality control laboratories	N/A
Number of quality control laboratory personnel	N/A
Number of department residue analysis laboratories	N/A
Number of residue laboratory personnel	N/A

Key Situation Indicators

Pesticide Trade: 2007-2008	Tons	US$ '000 Value
Imports[1]	N/A	N/A
Manufacture	N/A	N/A
Export[1]	N/A	N/A
Domestic Use/Sales[2]	4 683	N/A
Pesticide Use Profile: 2007-2008	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture		
Chem. Insecticides	252	N/A
Chem. Fungicides	1 108	N/A
Chem. Herbicides	2 868	N/A
Chem. Others: e.g. molluscicide, acaricide	164	N/A
Other: e.g. Avamectrin, Bt, Neem	Included in chemicals above	N/A
Other purposes	N/A	
TOTAL		

[1] NZ Statistics for 2005/06 (figures are for all pesticides, including disinfectants, rodenticides etc.).

[2] Based on Agcarm sales data 2005/06 for active ingredient only

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?		x
Do you have significant problems with pesticide resistance?		x
Do you have a list of pesticides under close observation for problems	x	
Source for more information: http://www.ermanz.govt.nz/hs/reassessment/index.html		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?		x
Do you have significant problems of environmental contamination from pesticides?		
Do you have data on pesticides effects on wildlife and ecosystems?	x	
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? If yes: what is the estimated amount: _____		x

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products	328	1 128
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)	See above	See above
Number of restricted-use pesticides/formulations		
Number of banned pesticides	11	
Number of licensed outlets	N/A	
Number of licensed field applicators (professional and/or farmers)	~ 40 000	
Number of licensing violations reported during year	N/A	
Number of quality control analyses conducted during year	N/A	
Number of food samples analyzed for pesticide residues during year	N/A	
Number of samples exceeding MRL	N/A	
Number of environmental samples analyzed for pesticide residues	N/A	

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation
	N/A

Pesticides Banned in Recent Years	
Year	Name of active ingredient
2009	Endosulfan

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
N/A			
Purpose/Target of government follow-up programnes		Amount	Years (start-end)
N/A			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
• Funding implications to implement pesticide management and risk reduction strategies in a quicker manner.

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: June 2009

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]
No GMO crops are commercially grown in New Zealand	0

2.15 PAKISTAN

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

During the period 2007-2008, Pakistan has made steady progress in all areas of plant protection.

Under the supervision of the Ministry of Food and Agriculture (MINFA), the Department of Plant Protection (DPP) now consists of four divisions including Plant Quarantine, Locust Survey & Control, Pesticide Registration and Management and Aerial Spray.

As regards the plant quarantine, in 2008, the number of phytosanitary inspections amounted to 70 244. The country's international trade in 2008 increased significantly with the export of rice amounting to 2.7 million metric tons while the export of fresh and dry fruits amounted to almost 600 000 metric tons. The number of conventional phytosanitary certificates which were issued amounted to 70 244.

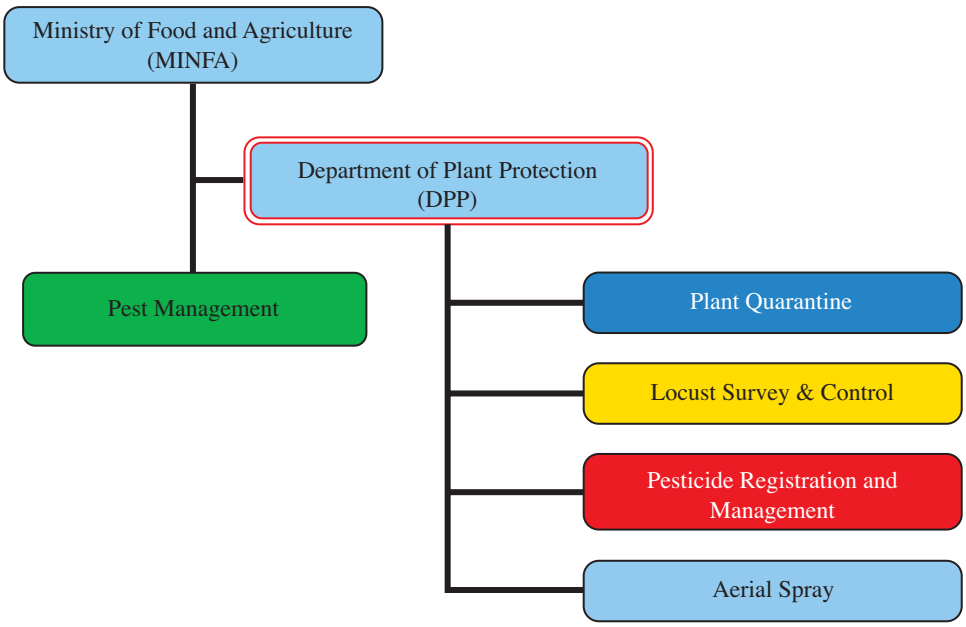
Pakistan Plant Quarantine Act and Rules are being revised. The Central Plant Quarantine Laboratory and three regional labs are being completed. Equipment is being installed and recruitment of personnel is under process. A total of 8 PRA of different crops are completed for 52 insects, 72 pathogens and 8 plants but they are being made in conformity of ISPM 4.

The main constraint faced by the country is lack of trained personnel for PRA preparation. Training of personnel is also required in collection of information and preparation of different PRA's according to ISPM and surveillance lab analysis.

In relation to the implementation of ISPMs, although many areas have been identified for full implementation, few are not fully implemented, mainly due to lack of resources and personnel.

Plant Protection Organization Chart

Last updated: December 2008



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Federal Ministry of Food and Agriculture
Mr Muhammad Zia-ur-Rehman
Secretary, Government of Pakistan, Ministry of Food and Agriculture
B-Block, Pakistan Secretariat, Islamabad
Tel: 092-051-9210351
Fax: 092-051-9210616
Website: www.pakistan.gov.pk

Address for nominations

Department of Plant Protection
Dr Tasneem Ahmad, Adviser and Director General
Ministry of Food and Agriculture
Jinnah Avenue, Malir Halt
Karachi 751000
Tel: 0092-021-9248607 & 092-021-9248612-15
Fax: 092-021-9248673
E-mail: dg1@plantprotection.gov.pk
Website: www.plantprotection.gov.pk

Operational Offices:

Plant Protection

Plant Quarantine

Office, Department of Plant Protection
Mr Zafar Ali, Deputy Director (Quarantine)
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Tel: 092-021-9248612-15
Fax: 092-021-9248673
E-mail: quarantine@plantprotection.gov.pk
Website: www.plantprotection.gov.pk

Surveillance, Pest Outbreaks and Invasive Species Management

1. Department of Plant Protection
2. Provincial Agriculture Departments

Agriculture Department, Punjab

Office, Department of Agriculture
Mr Javed Iqbal Awan, Secretary Agriculture
Punjab Secretariat
Davis Road
Lahore, Pakistan
Tel: (+92 42) 9210499
Fax: (+92 42) 9211796

Agriculture Department, Sindh

Office, Department of Agriculture
Mr Sabhago Khan Jattoi, Secretary Agriculture
Sindh Secretariat
Toghlaqe House
Karachi, Pakistan
Tel: (+92 21) 9211468
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Agriculture Department, NWFP

Office, Department of Agriculture
Mr Atta Ullah Khan, Secretary Agriculture
Civil Secretariat, N.W.F.P.
Peshawar, Pakistan
Tel: 0092-091-9210025

Agriculture Department, Balochistan

Office, Department of Agriculture
Mr Iktiar Khan, Secretary Agriculture
Civil Secretariat, Balochistan
Quetta, Pakistan
Tel: 0092-081-9201261

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Department of Plant Protection
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Ministry of Food and Agriculture
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E-mails: quarantine@plantprotection.gov.pk & zafarali_khan@hotmail.com
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WTO SPS Contact Point

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E-mail/Internet: dg1@plantprotection.gov.pk

Rotterdam Convention (PIC) DNA Pesticides (P)

Department of Plant Protection
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Ministry of Food and Agriculture
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Karachi 75100
Tel: (+92 21) 924 8607
Fax: (+92 21) 924 8673
E-mail: dg1@plantprotection.gov.pk

Stockholm Convention (POP) National Focal Point

Joint Secretary and Director General (Environment)
Ministry of Environment
Islamabad
Tel: (92 51) 920 25 74
Fax: (92 51) 920 22 11

Basel Convention Competent Authority (CA) and Focal Point

Joint Secretary and Director General (Environment)
Ministry of Environment
Islamabad
Tel: (92 51) 920 25 74
Fax: (92 51) 920 22 11
E-mail: ahameed1951@hotmail.com

Selected Country Statistics:

Agricultural Population	67.5 million	Agricultural Land	22.1 million ha
GDP $148 000 million	Agric. GDP: 22%	GNI per capita: $925	Hunger: 23%
Main crops grown:			

GDP = Gross Domestic Product; GNI = Gross National Income; Hunger = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

List of Key Legislation/Regulations/Rules

1. Pakistan Plant Quarantine Act, 1976
2. Pakistan Plant Quarantine Rules, 1967
3. Bio-Safety Rules, 2005 and Bio-Safety Guidelines

Web source for further information: –

Policies (regarding plant quarantine)	**Yes**	**No**
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?		x
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress) *Revision and updating of Pakistan Plant Quarantine Act and Rules according IPPC/SPS*		
Web source for further information: www.plantprotection.gov.pk		

Organization of Plant Protection Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Pest Risk Assessment	DPP/PLANT QUARANTINE, MINFA
Standards development	DPP/PLANT QUARANTINE, MINFA
International notifications	DPP/PLANT QUARANTINE, MINFA
Import:	
Import permits	DPP/PLANT QUARANTINE
Import inspections	DPP/PLANT QUARANTINE
Emergency action	DPP/PLANT QUARANTINE
Export:	
Phytosanitary certificates	DPP/PLANT QUARANTINE
Treatment of commodities	DPP/PLANT QUARANTINE

Infrastructure	**Years: 2008-2009**
Total number of plant quarantine officers	22
Total qualified personnel for plant pest risk assessment	3
No. of quarantine offices/stations	14
Entry points (sea/air/land/mail = total)	13
Post-entry plant quarantine containment facilities	10
Other Offices	24
No. of quarantine service diagnosis laboratories	4
In-country specialist capacity to analyze samples (incl. universities, etc.)	12
No. of laboratories for insect/mite (arthropod) samples	9*
No. of laboratories for bacteria samples	2
of laboratories for virus samples	1
of laboratories for fungus samples	9*
of laboratories for mycoplasma samples	1
of laboratories for nematode samples	3
No. of laboratories for plant/weed samples	9*
of laboratories for other pests (snail, slug, rodents, etc.)	1

* four Agriculture Universities and five (one NARC) agriculture research institutes and DPP

Pest Free Areas	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	Department of Plant Protection/Provincial Agriculture Department
– surveillance	DPP, Plant Protection
– management	DPP, Plant Protection
– certification	DPP, Plant Protection

List of target pest species and crops		Number of sites in [year]
Fruitfly (Mango, citrus, guava, melon etc.)		–
Boll worm (Cotton)	(Mealy Bug)	–
Powdry Mildew (Mango, citrus, melon etc.)		–
Weeds (Rice, wheat and cotton)	(Kernal Bunt)	–

Key Situation Indicators

International Trade		Year: 2008
Main Import Plant Commodities	Main countries of origin	No. of phytosanitary inspections
Lint Cotton	Central Independent States (CIS), USA, Egypt etc.	70 244
Pulses	Australia, Malaysia, China, India, Iran, USA and Canada etc.	
Medicinal Herbs	Indonesia, Sri Lanka, China, Thailand and India	
Vegetables Seeds	Europe, Egypt, etc.	
Main Export Plant Commodities	Main destination countries	
Rice	United Arab Emirates, U.K., African countries, Iran, China, Bahrain, Oman, Kuwait	2 749 566 m. tons
Fresh and dry Fruits	Middle East, European Countries and Russia, Far East	599 866 m. tons
Fresh Vegetables	Middle East and European Countries	
Medicinal Herbs	Indonesia, Sri Lanka	

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
None			[year – year]
Title of government follow-up programmes		Amount	Years (start-end)
None			

Key Operation Indicators

Institutional Functions	Year: 2008
No. of import permits issued/inspections	16 137
No. of import inspections carried out	16 137
No. of emergency phytosanitary treatments taken on imports	
No. notifications of non-compliance	1
No. of conventional phytosanitary certificates issued	70 244
No. of electronic phytosanitary certificates issued	None

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of regulated quarantine pests	1994*	59	68	–
Number of regulated non-quarantine pests	1994*	14	57	3
Number of regulated import commodities		15**		

* All the pests included in the A-1 List of the Asia and Pacific region are quarantine pests of Pakistan. Lists A-1 & A-2 of the Asia Pacific Plant Protection Agreement. Compiled as per the recommendation of the working group for A-1 & A-2 Pests in the 18th Session of APPPC. Pp. 181

** Pakistan Plant Quarantine Rules elaborates details of these plants

Pest Risk Assessments	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM). *A total of 8 PRA of different crops including Apple, citrus, grapes, mango, onion, potato, rice, date and wheat are completed for different insects and pathogens but they are being made in conformity ISPM 4*	52	72	8
Web source for further information: www.plantprotection.gov.pk			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

Pakistan Plant Quarantine Act and Rules are under revision. Central Plant Quarantine Laboratory and three regional labs are being completed. Equipment is being installed and recruitment of personnel is under process. A total of 8 PRA of different crops including Apple, citrus, grapes, mango, onion, potato, rice, date and wheat are completed for different insects and pathogens but they are being made in conformity ISPM. Disinfestation fruit by hot water treatment plant.

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

Lack of trained personnel is the major constraints for PRA preparation. Training of personnel is required in collection of information and preparation of different PRA's according to ISPM, surveillance lab analysis.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x			x		
ISPM 02 Guidelines for pest risk analysis		x				x		
ISPM 03 Code of conduct for the import and release of exotic biological control agents		x				x		
ISPM 04 Requirements for the establishment of pest free areas	x				x			
ISPM 05 Glossary of phytosanitary terms			x			x		
ISPM 06 Guidelines for surveillance		x				x		
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area		x			x			
ISPM 09 Guidelines for pest eradication programmes	x				x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites		x			x			
ISPM 11 Pest risk analysis for quarantine pests			x			x		
ISPM 12 Guidelines for phytosanitary certificates			x			x		
ISPM 13 Guidelines for the notification of noncompliance and emergency action		x			x			
ISPM 14 The use of integrated measures in a systems approach for pest risk management		x			x			
ISPM 15 Guidelines for regulating wood packaging material in international trade			x			x		
ISPM 16 Regulated non-quarantine pests: concept and application		x			x			
ISPM 17 Pest reporting		x			x			
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x			x			
ISPM 19 Guidelines on lists of regulated pests		x			x			
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests		x				x		
ISPM 22 Requirements for the establishment of areas of low pest prevalence		x			x			
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures		x				x		
ISPM 25 Consignments in transit			x			x		
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)		x				x		
ISPM 27 Diagnostic protocols for regulated pests		x			x			
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								

Comments/Constraints

Many areas are identified for full implementation of all ISPM. However, due to lack of resources/personnel, few areas are fully implemented.

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

List of legislation/regulations/rules for surveillance, pest reporting and emergency actions:

Pest reporting is made on weekly and fortnightly basis during the crop season and farmers are advised for rational use of pesticides for controlling of pests.

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?		x
Other policies: (e.g. subsidies, etc.) Pest outbreaks are managed by Provincial Agriculture Departments. However, Federal Government extends advice for controlling these outbreaks.		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	Provincial Agriculture Departments
Surveillance	Provincial Agriculture Departments
Control	Provincial Agriculture Departments
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	DPP
Surveillance	DPP/Locust Control
Control	DPP/Locust Control
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	DPP/Provincial Agriculture Departments
Surveillance	DPP/Provincial Agriculture Departments
Control/eradication	DPP/Provincial Agriculture Departments
Reporting to bilateral international organizations	DPP

Infrastructure	Years: 2008-2009
Number of permanent personal for **surveillance** of field pests of national importance	~ 900
Number of permanent personal for **surveillance** of migratory and periodically occurring pests	43
Number of permanent p≠rsonal for **surveillance** of invasive species	–
Number of designated staff for **control** of field pests of national importance	1 500
Number of designated staff for **control** of migratory and periodically occurring pests	43
Number of designated staff for **eradication** of invasive species	–

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 3 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year:	–	–	–
Total number for year:	–	–	–
Total number on record	–	–	–

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Passway			
Location of first discovery			
Area affected [ha]			
Area treated by government [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species			
Year of outbreak			
Area affected [ha]			
Estimated damage $			
Area treated by government [ha]			
Control method			
Expenditures			
Add more if necessary			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Survey of fruit fly in different provinces is being undertaken to identify the pests and its distribution. Plant Quarantine Rules are being updated to accommodate surveillance and eradication of different economic pests. Plant Quarantine Lab are being strengthened with new equipment. Three projects for establishment of post-entry quarantine, disinfestations of mango fruit fly through vapour heat treatment and recruitment of qualified staff for these projects are under implementation. It will enhance the capability of the department in surveillance, preparation of PRA and eradication of target pests. Huge investment in establishment atmosphere control store, heat treatment, cold treatment for export of fruit.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
There is shortage of qualified trained personnel for surveillance and PRA preparation.

IV. PEST MANAGEMENT

Last updated: December 2008

List of legislation/regulations/rules for pest management:

1997 *Punjab Agriculture Pest Ordinance*

Web source for further information: www.agripunjab.gov.pk

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?		
Is pest management extension separate from general extension?	x	
Other policies: (subsidies, production inputs, etc.) Encouragement of biopesticide and banning of extremely hazardous pesticides		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MINFA
Pest management research	NARC + Provincial Agriculture Research Departments
Control recommendations	MINFA/DPP + Provincial Agriculture Departments
Pest management extension	Agriculture Departments/Extension Dept.
IPM training	NARC + Provincial Agriculture Departments
GAP training	Provincial Agriculture Departments

Infrastructure	Years: 2008-2009
Number of technical officers for pest management	~ 150
Number of central, regional, provincial or state offices	5
Number of district and village level field offices	150
Number of field/extension agents for pest management advice	~ 1 500
Number of field/extension agents trained in IPM-FFS facilitation	627
Number of government biocontrol/distribution facilities	–
Number of government biopesticide production/distribution facilities	8
Number of general extension staff involved in pest management	3 500
Number of designated plant protection technical officers for extension	1 500

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* Dr. Iftikhar Ahmad, Dep. Dir., NARC, Park Road, Islamabad.	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?:* Cotton, Wheat, Rice, Mango, Apple, Citrus, Tomato, Okra, Onion, Peaches.	x	
Does the country have specific IPM research programmes? *If yes, in which crops?:* Cotton, Wheat, Rice, Mango, Apple, Citrus, Tomato, Okra, Onion.	x	
Does the country have specific GAP extension programmes? *If yes, in which crops?:*		
Does the country have specific GAP research programmes? *If yes, in which crops?:*		

Market shares (estimated value, volume or area under control)	**Years: 2008-2009**
Size of chemical pest control market	$173 million
Size of biopesticides market	$30 million
Size of biological control agents market	–

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop	Cotton	Rice	Sugarcane
Name(s) of pest(s)	*Helicoverpa armigera* *Earias insulana* *Earias vittella* *Pectinophora gossypiella*	*Scirpophaga incertulas* *Scirpophaga nivella*	*Scirpophaga* spp. *Pyrilla* spp.
Estimated crop loss	5-10%	2-3%	2-3%
Affected area	3 million ha	2.5 million ha	1.07 million ha
Number of pesticide applications or amount of pesticide used	6 (200-1 000 ml/ application)	2 (10 kg/ application)	1 (10 kg/ application)
Government action taken	Continuous weekly pests survey reports, guidance to farmers about weather and pests/diseases, availability of pesticide to the farmers and advised for rational use of pesticides.		

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
FAO-EU IPM Programme for Cotton in Asia	EU	US$0.660 m	2000-2004
Cotton IPM Programme	ADB	US$0.400 m	2000-2004
Purpose/Target of government follow-up programmes		Amount	Years (start-end)
National IPM Project	GOP	Rs. 197.4 mill	2004-2009
Community IPM Project for Cotton, Punjab	GOP	Rs. 201.0 mill	2004-2008
Pest Management Plan, SOFWM, Sindh	WB	Rs. 33.1 mill	2004-2008
FFS/Farm Services Centres, NWFP	GOP	Rs. 38.8 mill	2004-2009

Pest Management Extension	**Year:**
Number of farmers trained in IPM during the year	1 224
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Crops in which successful IPM technologies are implemented:	Cotton
Area under organic/pesticide-free management [ha]	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Federal Government with the coordination of provincial agriculture departments has devised different strategies for pest management of cotton, wheat and rice crop. IPM project is being implemented in cotton in Punjab and Sindh Provinces. A record production of 14.6 million bales of cotton was obtained during 2004-2005.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Cotton leaf curl virus and mealy bug are becoming main constraints in production of cotton which is spreading on all the varieties throughout cotton growing areas.

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

1971 & 73 Pesticide Ordinance and Rules.

1992 Amendment in Pesticide Ordinance; relaxation in pesticide import:

i. Introduction of generics

ii. Import of Pesticide registered in the country of origin.

1997 Amendment in the Pesticide Ordinance to strengthen the punishment provision for pesticide adulteration.

2006 Review of Pesticide Ordinance & Act and Rules for adoption

Web source: www.plantprotection.gov.pk

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target: encouragement of biopesticide and banning of extremely hazardous pesticides*	x	
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?	x	
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?	x	
Do you accept evaluation results from other countries?	x	
Do you accept field studies conducted in other countries?	x	
Do you require environmental fate studies?	x	
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?	x	
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x
Other policies: To encourage IPM		
Web source for further information: www.plantproection.gov.pk		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	MINFA
Registration	MINFA/DPP
Licensing of shops	Agriculture Departments/Provincial
Licensing of applicators	–
Enforcement/inspections	Federal/Provinces/District Government
Testing of pesticide efficacy	Agriculture Departments/Provincial
Development of pesticide use recommendations	Federal/Provinces/District Government
Safe use training/extension	Public/Private sector
Food residue monitoring	Provincial
Environmental monitoring	Federal/Provincial
Health monitoring	Federal/Provincial
Other Stakeholders:	
Pesticide Industry Association	Private sector
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2008-2009
Number of registration officers	3
Number of enforcement officers	621
Number of department quality control laboratories	8
Number of quality control laboratory personnel	~ 50
Number of department residue analysis laboratories	1
Number of residue laboratory personnel	7

Key Situation Indicators

Pesticide Trade: 2008-2009	Tons	$ '000 Value
Imports	43 577	98 000
Manufacture		
Export	0	0
Domestic Use/Sales	80 000	132 525
Pesticide Use Profile: 2008-2009	**Tons**	**$ '000 Value**
Agriculture	60 000	132 525
Chem. Insecticides	94%	
Chem. Fungicides	2%	
Chem. Herbicides	5%	
Chem. Others: e.g. mollusicide, acaricide	0%	
Other: e.g. Amamectin, Bt, Neem		
TOTAL	80 000	132 525

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?		x
Do you have significant problems with pesticide resistance?		x
Do you have a list of pesticides under close observation for problems		
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?		x
Do you have a system to monitor pesticide residues in food?		x
Do you have a system to monitor pesticide residues in the environment?		x
Do you have significant problems of environmental contamination from pesticides?		
Do you have data on pesticides effects on wildlife and ecosystems?		x
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have services to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country?	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		x
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2008-2009	
	a.i.*	Trade Name
Number of registered pesticide products	220	
Number of registered biopesticides	10	
Number of restricted-use pesticides	0	
Number of banned pesticides	25	
Number of licensed outlets	~ 2 600	
Number of licensed applicators	–	
Number of licensing violations reported during year	145 [2008]	
Number of quality control analyses conducted during year	27 90 [2008]	
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation
2008	Nil

Pesticides Banned in Recent Years	
Year	Name of active ingredient
2005	Monocrotophos and Methamidophos

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Agriculture Pesticides Ordinance is revised and ready to place before the Parliament for its approval. Agriculture Pesticides Rules have been amended and two new rules are added viz. pre-shipment inspection of pesticides in the country of origin and waiving of condition of sample analysis in registration of generic pesticide from the source/manufacturer already registered with the department. A new pesticide lab is established in Balochistan province for quality check of agriculture pesticides.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Manufacturing of pesticides in the country is still in infancy and country has to be dependent on import from China and other countries. This has resulted in shortage of pesticides during epidemic situation. Application of pesticides at appropriate stage of crop in proper dosage on vulnerable stage of pest is also needed to be guided to the farmers. Training of farmers and extension workers is required for proper application of pesticides.

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crops	Area under Cultivations [ha]
Not yet, registered	

2.16 PHILIPPINES

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

The Plant Quarantine Service (PQS) came up with a series of activities, programmes and developments during the Calendar Year 2007-2008, heading towards the three-point programme focus of improving the PQS image, technical excellence and efficiency to further strengthen the PQS' capacity to render service and carry out its mandate.

In line with the PQS' thrust of improving its image and technical excellence, PQS conducted a series of Developing Personal Excellence Seminar for all PQS personnel to develop and improve working relationship through identification of one's self-concept, clarification of one's values and goals and team building process. A series of extensive technical trainings were also facilitated by the PQS which were participated by Plant Quarantine personnel nationwide. This includes *Training on Identification of Pests and Diseases of Fresh Fruits and Vegetables, Stored Products and Wood & Non-wood Forest Products, Training on Identification of Fruit fly, Identification of Ornamental Plants and its Pests and Diseases, Training on Inspection Protocol on Musa Plantlets* and *the 6th General Plant Quarantine Training*. This is part of the technical upgrading of the PQS to equip its personnel with knowledge and learning experience for proficient performance of their duties. On top of these locally organized and funded training, PQS personnel attended numerous training conducted abroad. Moreover, part of PQS' focus of providing efficient and effective service to its clientele, new PQS buildings at the Port of Iloilo, Batangas and Bacolod were constructed and the diagnostic laboratory at the PQS South Harbor was renovated. PQS also acquired additional vehicles for smooth PQS operations. An 87 square meter treatment area was also constructed at the Central office for rapid export facilitation of cut flowers and ornamental plants.

With the Philippine Plant Quarantine's need to conform to the international quarantine standards, comply with the requirements of the importing countries and expand the Philippine market internationally, PQS formulated and modified rules and regulatory policies and lined-up plans and programmes to meet the said needs. Protocols for export were developed and amended which includes *Protocol for the Export of Fresh Asparagus to Japan, Revised Protocol for the Export of Fresh Cavendish Banana and Revised Protocol for the Export of Fresh Okra to Japan*. PQS also formulated *Guidelines for the Implementation of the Australian Fumigation Accreditation Scheme (AFAS)* in the Philippines which signifies the readiness of the PQS to implement high standard fumigation. *Rules and Regulations for the Importation, Exportation and Domestic Movement of Irradiated Plants and Plant Products and the Use of Irradiation as Phytosanitary Treatment* was also issued which provides another regulatory option for the Philippines with regard to phytosanitary treatment of fruits and vegetables for export. Recently, the PQS also set-up a total of 260 fruit fly traps all over the country. Ten sites per region were determined as strategic locations for setting of traps. Data gathered in the survey will show the population and changes of population of fruit fly within the coverage area. The survey is a continuing activity of PQS in which the information gathered will be readily available once needed by the countries importing mangoes and other fruits from the Philippines. Furthermore, additional areas were surveyed and identified by the Philippines as area free from Mango Pulp Weevil (*Sternochetus frigidus*) and Mango Seed Weevil (*Sternochetus mangiferae*). These includes the Province of Davao del Sur, Sarangani and City of General Santos. This provides a great opportunity for Philippine exporters given that there will be additional production areas as source of mangoes for export to other countries.

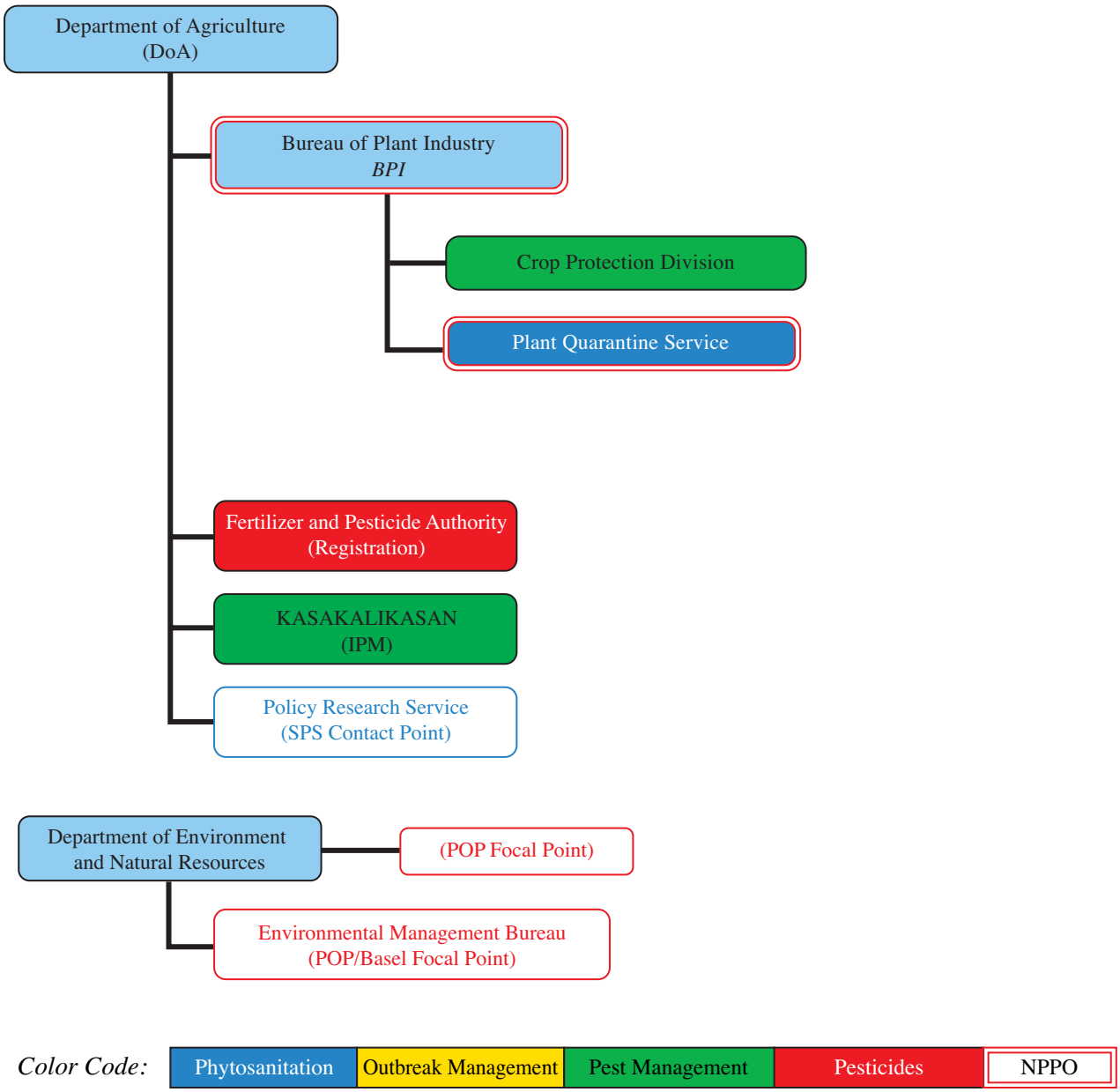
All these changes and developments reflect the Philippine Plant Quarantine's initiative of having an improved system in place, highly trained technical personnel, better buildings and laboratory facilities and good rules and regulatory policies to achieve its three-point programme focus and proficiently perform the PQS mandate.

Note:

The country's work plan is attached to this plant protection profile.

Organization Chart

Not updated



Important Contact Addresses

Ministry/Department of Agriculture

Department of Agriculture
Atty. Arthur C. Yap, Secretary
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Tel/Fax: (+632) 926-6426 / 929-8183
Website: www.da.gov.ph

Operational Offices:

BUREAU OF PLANT INDUSTRY

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Surveillance, Pest Outbreaks and Invasive Species Management

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Pesticide Residue Analysis

Laboratory Services Division/National Pesticide Analytical Laboratory
Ms Susana SG Gonzalo, Officer-In-Charge
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Tel: 5240708
Fax: 5237154
E-mail: lsdbpi@yahoo.com
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Pesticide Registration

Fertilizer and Pesticide Authority
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Website: http//fpa.da.com.ph

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

Bureau of Plant Industry
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692 San Andres St.
Malate, Manila, Philippines
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Fax: (+632) 521 7650 / 5242812
E-mail: buplant@yahoo.com
Website: www.da.bpi.gov.ph
Language(s): English
Contact point received: 2005; Source: country report

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Mr Larry R. Lacson
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WTO SPS Contact Point

Policy Research Service
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Department of Agriculture
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Tel: (+632) 926 7439 / 928 8741 local 2317, 2319 Fax: (+632) 928 0590
E-mail: epad.polreser@lycos.com
Website: The Sanitary and Phytosanitary Standards Information System (SPSIS)
spsis,da.gov.ph

Rotterdam Convention (PIC) DNA Pesticides

Department of Agriculture Compound
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Stockholm Convention (POP) National Focal Point (P)

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Basel Convention Competent Authority (CA) and Focal Point

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Fax: (+632) 920 22 63
E-mail: rq71@yahoo.com

Selected Country Statistics:

Agricultural Population	57 million	Agricultural Land	10. 2 million ha
GDP: P 6 648 billion	Agric. GDP: 14%	GNI per capita: US$1 620	Undernourishment: 16%
Main crops grown:			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement;

II. PLANT QUARANTINE

Last updated: December 2008

List of Key Legislation/Regulations/Rules

1978: Plant Quarantine Presidential Decree No. 1433
BPI Quarantine Administrative Order No. 1, Series of 1981
BPI Quarantine Administrative Order No. 5, Series of 1946
BPI Quarantine Administrative Order No. 6, Series of 1949 (Revised)
BPI Quarantine Administrative Order No. 13, Series of 1949

1963 BPI Administrative Order No. 2-3; Amending Certain Provisions of Plant Industry Administrative Order No. 2, Series of 1950 (Revised)

1968 BPI Administrative Order No. 2-5: Amending further certain Section of AO No. 2, Series of 1958 (Revised) governing the Importation and Exportation of Plant Materials into and from the Philippines.

1969 BPI Administrative Order No. 2 (Internal): Declaring the "Leaf Mottling Virus" a dangerous disease of citrus; Providing its control and placing under quarantine all the provinces where the disease already exists.

1970 BPI Administrative Order No. 118-2: Second Revision of the Standard for Philippine Bananas.

1974 BPI Administrative Order No. 3: Amending Section 7 of the AO No. 6, Series of 1949 (Revised) Entitled Declaring the Coconut "Cadang-cadang" of the Bicol Type of Dangerous diseases; providing for its control, and placing under quarantine all the provinces where the disease already exist.

1978 BPI Administrative Order No. 2: The adoption of standards administrative orders issued by the Bureau of Standards as BPI Administrative Orders on some raw agricultural crops commodities of exports.

1981 BPI Administrative Order No. 1: Rules and regulations to implement Presidential Decree No. 1433, entitled "Promulgating the Plant Quarantine Law of 1978 thereby Revising and Consolidating existing Plant Quarantine Laws to further improve and strengthen the Plant Quarantine Service of the Bureau of Plant Industry.

1982 BPI Administrative Order No. 1-1: Regulating the importation of mango plants *(Mangifera spp.)* and parts thereof from places, areas or countries infested with mango malformation of Bunchy-Top, Woody-Gall and Scaly Bark (Cuarteado). Diseases of Mango in order to prevent their introduction into the Philippines.

1982 BPI Administrative Order No. 1-2: Regulating prohibiting, except for certain purposes and under certain conditions, the importation of a coconut (*Cocos nucifera* Linn) and other palms and/or parts thereof from areas infested with the Lethal Yellowing diseases of coconut.

1982 BPI Administrative Order No. D-1: Declaring Socorro Wilt of Coconut as dangerous and injurious coconut diseases and likewise declaring the Island of Mindoro and other places where the same may be found to exist, under quarantine to infested areas.

1982 BPI Administrative Order No. D-2: Declaring Rice Black Bug (*Scotinophora spp*. Burn), a dangerous pest of rice and declaring the Palawan Group of Islands under quarantine to prevent the spread thereof to other parts of the Philippines.

1983 BPI Administrative Order No. 4: Administrative Order amending pertinent provisions of Section 1, Rule VIII of BPI Administrative Order No. 1, Series of 1981.

1985 BPI Administrative Order No. D-1: Declaring *Salvinia molesta*, D.S. Mitchell as a noxious weed and placing under quarantine the provinces of Aklan, Antique, Capiz and Iloilo; in the Island of Panay; the sub-province of Guimaras and Negros Island, to prevent its spread to other areas in the Philippines.

1987 BPI Administrative Order No. 16: Declaring Mango Pulp Weevil (*Sternochetus frigidus* Fabr.), a dangerous pest and injuring to mangoes and likewise declaring the Palawan Island Group under quarantine to prevent the spread from infested to non-infested area.

1987 BPI Administrative Order No. 18: Declaring the Mollusk *Ampularia gigas* locally known as the "Golden Kuhol", as a serious plant pest and providing measures to regulate and control its spread.

1987 BPI Administrative Order No. 20: Declaring the Mango Pulp Weevil (*Sternochetus frigidus* Fabr.), a dangerous pest and injurious and placing the Palawan Island Group under quarantine to prevent the spread of said pest.

1988 BPI Administrative Order No. 14: Declaring the Potato Golden Cyst Nematode (*Globodera rostochiensis* Woll) a dangerous pest and placing under quarantine all areas in the Philippines where they are found and known to exist.

1988 BPI Administrative Order No. 15: Modifying BPI Administrative Order No. 6, Series of 1949 (Revised) entitled "Declaring the Coconut Cadang-cadang" a dangerous disease; providing for its control and placing under quarantine all provinces where the diseases already exists and issued by the Director of Plant Industry pursuant to act 3027.

1988 BPI Administrative Order No. 23: Regulations for importation of fresh fruits and vegetables into the Philippines from countries and places infested with Mediterranean fruitfly *(Ceratitis capitata)*; the Mexican fruitfly *(Anastrepha ludens)*; the Queensland fruitfly *(Dacus tryoni)* and other fruitflies.

1989 BPI Administrative Order No. 16: Regulations governing Inter-Provincial/Regional movements of all plants species belonging to Papaya *(Carica papaya)* in order to prevent the spread of papaya ring spot virus disease (PRSV) to non-infected areas providing measures for the destruction of all infected papaya plants and plant pest thereof.

1993 DA Special Quarantine Administrative Order No. 1: Amending Section 1 of BPI Special Order No. D-2, Series of 1982, re: Declaring Rice Black Bug (*Scotinophora spp*. Burn) a dangerous pest of rice and declaring the Palawan Group of Islands under quarantine to prevent the spread thereof to other parts of the Philippines.

1996 BPI Plant Quarantine Circular No. 01: Guidelines on the Importation of White Potato.

1996 BPI Plant Quarantine Circular No. 02: Guidelines on the Importation of Garlic.

1996 BPI Plant Quarantine Circular No. 03: Guidelines on the Importation of White Onion.

1996 BPI Plant Quarantine Circular No. 04: Guidelines on the Importation of Coffee Beans.

2004 BPI Quarantine Administrative Order No. 1: Guidelines for Regulating Wood Packing Materials involved in International Trade.

2004 BPI Quarantine Administrative Order No. 13: Rules and Regulations Further Modifying BPI Administrative Order No. 15, Series of 1988 entitled "Declaring the *Cadang-Cadang* a Manageable Disease and Providing for a Containment and Quarantine Control Programme in Affected Areas"

2005 BPI Quarantine Administrative Order No. 01: Amendment to BPI Quarantine Administrative Order No. 1, Series of 1981 (Rules and Regulations to Implement Presidential Decree 1433)

2005 BPI Special Quarantine Order No. 01: Declaring American Foul Brood (AFB), a Serious Disease of European Honey Bee, *Apis mellifera*, and Providing Measures to Regulate and Prevent its Spread.

2005 BPI Special Quarantine Order No. 02: Quarantine Measures to Prevent the Introduction and Spread of Chlorotic Ringspot Virus of Oil Palm

2005 BPI Special Quarantine Order No. 03: Declaring Coconut Leaf Beetle, *Brontispa longissima* (Gestro) an Invasive Quarantine Pest of Coconut, *Cocos nucifera*, and Providing Measures to Regulate and Prevent its Spread

2005 BPI Quarantine Administrative Order No. 3: Amendment to BPI Quarantine Administrative Order No. 1, Series of 2004 (Guidelines for Regulating Wood Packaging Material Involved in International Trade)

2006 BPI Quarantine Administrative Order No. 1: Amendment to BPI Quarantine Administrative Order No. 1, Series of 2004 (Guidelines for Regulating Wood Packaging Material Involved in International Trade)

2007 BPI Special Quarantine Administrative Order No. 01: Declaring the Province of Davao del Sur as Area Free from Mango Pulp Weevil (*Sternochetus frigidus*) and Mango Seed Weevil (*Sternochetus mangiferae*)

2007 BPI Special Quarantine Order No. 01: Amendment to BPI Special Quarantine Order No. 03, Series of 2005 (Declaring Coconut Leaf Beetle, *Brontispa longissima* (Gestro) an Invasive Quarantine Pest of Coconut, *Cocos nucifera*, and Providing Measures to Regulate and Prevent its Spread)

2007 Memorandum Order No. 179: Protocol for the Export of Fresh Asparagus to Japan

2008 Memorandum Order No. 13: Amendment on the Shipment Requirement Condition for Food-Grade Soybean from USA and Canada

2008 Memorandum Order No. 22: Revised Guidelines on the Importation of Oil Palm Planting Materials

2008 Memorandum Order No. 36: Revised Protocol for the Export of Fresh Cavendish Banana

2008 Memorandum Order No. 103: Revised Protocol for the Export of Fresh Okra to Japan

2008 BPI Special Quarantine Administrative Order No. 01: Declaring the Province of Sarangani and City of General Santos as Area Free from Mango Pulp Weevil (*Sternochetus frigidus*) and Mango Seed Weevil (*Sternochetus mangiferae*)

2008 BPI Quarantine Administrative Order No. 01: Guidelines for the Implementation of the Australian Fumigation Accreditation Scheme (AFAS) in the Philippines

2008 BPI Quarantine Administrative Order No. 02: Rules and Regulations for the Importation, Exportation and Domestic Movement Irradiated Plants and Plant Products and the Use of Irradiation as Phytosanitary Treatment

Web source for further information: –

Policies (regarding plant quarantine)	**Yes**	**No**	**Don't know**
Does phytosanitary legislation cover both domestic and import/export quarantine?	x		
Is plant quarantine a separate organization from animal quarantine?	x		
Does phytosanitary legislation cover non-cultivated plants (wild flora)	x		
Does phytosanitary legislation cover living modified organisms?	x		
Other policy goals:			
Web source for further information: www.da.gov.ph			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Analysis	DA/BPI
Standards development	DA/BPI-PQS
International notifications	DA-Policy, DA/BPI
Import:	
Import permits/inspections	DA/BPI-PQS
Emergency action	DA/BPI-PQS
Export:	
Phytosanitary certificates	DA/BPI-PQS
Treatment of commodities	DA/BPI-PQS

Infrastructure	Years: 2007-2008
Total number of plant quarantine officers	164
Total qualified personnel for plant pest risk assessment	100
Number of quarantine offices/stations	30
Number of post-entry plant quarantine containment facilities	3
Number of quarantine service diagnosis laboratories	11
Number of entry points (sea/air/land/mail = total)	141/26/5/1 = 173
In-country pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect samples	11
Number of laboratories for pathogen samples	11
Number of laboratories for plant/weed samples	11

Pest Free Areas	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	
– surveillance	DA-BPI-PQS
– management	DA-BPI-PQS
– certification	DA-BPI-PQS
List of target pest species and crops ISPM 4	Number of sites in 2008
Mango Pulp and Seed Weevil (Mango)	4/year
List of target pest species and crops ISPM 10	Number of sites in 2008
Web source for further information: –	

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries of origin	Quantity (tons)
Wheat	Australia, Canada, China, USA, India, Germany	15 437 014.77/ 892 836.49
Apple	Chile, China, USA	19 714.87/30 813.47
Oranges	Australia, China, Taiwan, USA	1 825.31/2 826.94
Onion	China, Netherlands, India	1 670/54 857.75
Garlic	China, India	29 722/32 747

Grapes	Australia, Chile, USA	2 592/3 702
Pears	Australia, China, USA	1 247/3 482
Grapefruits	USA, Australia	71.70/91.76
Fresh Potato	Australia, Germany, Netherlands, New Zealand, Switzerland	5 147/3 989.65
Frozen Potato	Belgium	1 725.66/2 476.5
Frozen Vegetables	USA, Belgium, New Zealand, Canada	1 899.6/2 827.22
Lychees	China, Taiwan	914/381
Fresh Vegetables	Belgium, Netherlands, China	47 883.90/36 698.39
Main Export Plant Commodities	Main destination countries	
Fresh Banana	Japan, China, Iran, South Korea, KSA, Kuwait, New Zealand	2 776 491.969/ 1 995 584.704
Copra	South Korea, Viet Nam, Japan, New Zealand, Taiwan, Australia	215 202.519/ 1 362 019.945
Wheat	USA	
Fresh Pineapple	Japan, South Korea, New Zealand, Jebel, Ali, UAE, China	159 426.090/ 185 503.497
Desiccated Coconut	Germany, Belgium, Netherlands, Australia, New Zealand, UK, Canada, Poland, France, Russia	47 331.097/ 58 208.163
Banana Chips	China, USA, Viet Nam, Germany, Russia, UK, France, Netherlands, Australia, South Korea, Poland, Hong Kong	333 727.840/ 39 887.315
Shallots	Indonesia, Singapore	10 541.387/10 551.98
Tobacco	Thailand, South Korea, Puerto Rico, Malaysia, USA, Spain, Viet Nam, Indonesia, Sweden, Netherlands	37 976.561
Mango	Hong Kong, Japan, China, Japan, South Korea, USA, Malaysia, Singapore, Belgium, KSA, Germany, Switzerland, Canada, Greece, New Zealand, Bahrain, London, Italy, Brunei, UK, Spain, Australia, Dubai, Thailand, Netherlands, France	22 743.051/66 987.373
Rubber	China, South Korea, Germany, New Zealand, Japan, Viet Nam, China, Taiwan, Hong Kong	165 684.357/4 042.366

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Enhancing the Export Competitiveness of the Philippine Super Mango	USDA	82 M Php	July 2006 – August 2009
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued/inspections	18 556/20 999
Number of emergency phytosanitary treatments taken on imports	46/60
Number of pests intercepted	12/24
Number notifications of non-compliance? (ask APPPC)	48/60
Number of phytosanitary certificates issued *Do you have an electronic certification system?: Yes_____ No X*	59 096/65 660

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of regulated quarantine pests		4	4	
Number of regulated non-quarantine pests				
Number of regulated import commodities				
Website for the above information: –				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			3
Web source for further information: www.da.gov.ph * PRA is done by commodity			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

- Construction/repair of PQ buildings and laboratories
- Participation and meetings regarding SPS/Plant Quarantine
- Completed PRA on fresh carrot and ginger from China, Unshu orange from Korea
- Publication of Quarantine Orders/Measures
- Capacity Building

2007

1. Developing Personal Excellence
2. 6th General Plant Quarantine Training

2008

1. Identification of Pests and Diseases of Fresh Fruit and Vegetables
2. Identification of Pests and Diseases of Stored Products
3. Developing Personal Excellence
4. Identification of Pests and Diseases of Wood and Non-Wood products
5. Training on Identification of Fruit fly
6. Identification of Ornamental Plants and Its Pests and Diseases
7. Training for Plant Quarantine Personnel on Inspection Protocol on Musa Plantlets

- Fruit fly Surveillance
- National Detection Survey for Mango Pulp Weevil
- Irradiation Legislation
- National Information Dissemination (PQS Video Tale)

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

- Lack of electronic certification system
- Funding source
- Rationalization of the bureaucracy hindering hiring of highly technical personnel.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	
ISPM 02 Guidelines for pest risk analysis			x				x	
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x				x	
ISPM 04 Requirements for the establishment of pest free areas			x				x	
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x				x	
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x	x				
ISPM 09 Guidelines for pest eradication programmes			x		x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x	x				
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x				x	
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application			x		x			
ISPM 17 Pest reporting			x				x	
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x		x			
ISPM 19 Guidelines on lists of regulated pests			x		x			
ISPM 20 Guidelines for a phytosanitary import regulatory system			x		x			
ISPM 21 Pest risk analysis for regulated non-quarantine pests	x							
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x	x				
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures	x							
ISPM 25 Consignments in transit			x				x	
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x		x			
ISPM 27 Diagnostic protocols for regulated pests			x		x			
ISPM 28 Phytosanitary treatments for regulated pests			x				x	
ISPM 29 Recognition of pest free areas and areas of low pest prevalence			x				x	
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			x	x				
ISPM 31 Methodologies for sampling of consignments			x		x			
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Not updated

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

–

Web source for further information: –

Policies (regarding invasive/migratory species management)	Yes	No	Don't know
National strategy to control serious field pest outbreaks?	x		
National strategy to control migratory or periodically occurring pests?	x		
National strategy to eradicate serious newly invaded exotic pests?			x
Other policies:			
List of legislation/regulations/rules for surveillance, pest reporting and emergency actions: **Presidential Decree 936**			
Web source for further information: www.da.gov.ph			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	DA-RFU'S, PhilRice, DA, BPI
Surveillance	CPD-BPI, DA, RCPC
Control	CPD-BPI, PhilRice, CDA, LGU'S
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	CPD-BPI, DA-RCPC, LGU'S
Surveillance	CPD-BPI, DA-RFU'S, LGU'S
Control	DA-RCPC, CPD-BPI, PhilRice
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	PCA, CPD-BPI, DA-KASAKALIKASAN, LGU'S
Surveillance	CPD-BPI, PCA
Control/eradication	PCA, CPD-BPI, DA-KASAKALIKASAN
Reporting to international organizations	BPI-CPD, PQS, NCPC

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance and control** of field pests of national importance	17 plus 16 RCPC's
Number of designated staff for **surveillance and control** of migratory and periodically occurring pests	15 plus 16 RCPC's
Number of designated staff for **surveillance and eradication** of invasive species	15 plus 16 RCPC's

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year 2007:		2	
Total number for year 2008:			
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species	Brontispa longissima	Stenocranus pacificus corn plant hopper	
Year of first discovery	2004	2003	
Passway			
Location of first discovery	Luzon, Visayas, Mindanao	Whole Mindanao Region and Bicol Region	
Area affected [ha]			
Area treated by government [ha]			
Control method		Biological, cultural, chemical	
Expenditures			

Note: National Brontispa action team was set up in 2004.

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	CPH	Brontispa, coconut leaf beetle	
Year of outbreak	2003	2004	
Area affected [ha]	Mindanao, Bicol Region	Luzon, Visayas, Mindanao	
Estimated damage US$			
Area treated by government [ha]			
Expenditures by government [US$]			
Control method	Biological, physical, cultural/chemical		
Expenditures			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Not updated

List of Key Legislation/Regulations/Rules for Pest Management

–

Web source for further information: –

Policies (regarding pest management)	Yes	No	Don't know
Do you have policies encouraging organic or low-pesticide production	x		
Is IPM specifically mentioned in laws or policy documents?	x		
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x		
Is pest management extension separate from general extension?	x		
Other policies: (subsidies, production inputs, etc.) List of legislation/regulations/rules for pest management: **PD 936**			
Web source for further information: www.da.gov.ph			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	Department of Agriculture
Pest management research	BAR/SCU's/BPI/NCPC
Control recommendations	RFU's/BPI/LGU's
Pest management extension	Crop Protection Division BPI/NCPC-UPLB/LGU's
IPM training	DA-KASAKALIKASAN, RFU's, LGU's
GAP training	DA-RFU's/LGU's/BPI

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	
Number of central, regional, provincial or state offices	16
Number of district and village level field offices	11 Regions/77 provinces
Number of field/extension agents for pest management advice	
Number of field/extension agents trained in IPM-FFS facilitation	6 184 IPM-FFS facilities
Number of government biocontrol labs	47
Number of government biopesticide labs	17
Number of general extension staff involved in pest management	
Number of designated plant protection technical officers for extension	

Key Situation and Operation Indicators

Pest Management	Yes	No	Don't know
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* KASAKALIKASAN, **Department of Agriculture, Elliptical Rd. Diliman, Quezon City, Philippines**	x		
Does the country have special IPM extension programmes? *If yes, in which crops?:* **Rice, corn, vegetables, abaca, coconut, banana, citrus, cotton, IPM for individual pest**	x		

Does the country have special IPM research programmes? *If yes, in which crops?:* **Rice, corn, vegetables, cotton, banana, abaca, coconut**	x		
Does the country have specific GAP extension programmes? *If yes, in which crops?:*			
Does the country have specific GAP research programmes? *If yes, in which crops?:*			

Market shares (estimated value, volume or area under control)	**Years: 2007-2008**
Size of chemical pest control market	
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop			
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Years: 2007-2008**
Number of farmers trained in IPM during the year	
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Crops in which successful IPM technologies are implemented: rice, corn, vegetables, mango, cotton, locust	
Area under organic/pesticide-free management [ha]	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

Presidential Degree No. 114
Letter of Instruction No. 986
Magna Carta Act for Small farmers
Consumer Act of the Philippines.

Web source for further information: –

Policies (regarding pesticide management)	**Yes**	**No**	**Don't know**
Do you have national pesticide reduction targets? *If yes, what is the target:*_____			
Have you ratified the Rotterdam (PIC) Convention?			
Have you ratified the Stockholm (POP) Convention?			
Have your ratified the Basel Convention? (hazardous wastes)			
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?			
Have you adopted Good Laboratory Practices (GLP)?			
Pesticide Registration			
Do you require pesticides to conform to relevant FAO or WHO specifications?			
Do you allow the "me-too" registration and sale of generic pesticides?			
Do you require data on product equivalence for generic registration?			
Do you conduct country-specific risk assessments for…			
occupational risks?			
consumer risks?			
environmental risks?			
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labeling?			
Do you accept evaluation results from other countries?			
Do you accept field studies conducted in other countries?			
Do you require environmental fate studies?			
Incentives/Disincentives			
Do you have a special tax on pesticides to cover externality costs?			
Do you subsidize or provide low-cost pesticides?			
Do you subsidize or provide low-cost biopesticides?			
Other policies:			
Web source for further information: –			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	DA/BPI/FPA
Registration	DA/FPA
Licensing of shops	DA/FPA
Licensing of applicators	DA/FPA
Enforcement/inspections	BPI-PQS
Testing of pesticide efficacy	NCPC
Development of pesticide use recommendations	FPA
Safe use training/extension	DA/FPA
Food residue monitoring	BFAD/BPI-NPAL
Environmental monitoring	DENR
Health monitoring	DOH
Other Stakeholders:	
Pesticide Industry Association	Crop Life Philippines, Philippine Manufacturing Association
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2007-2008
Number of registration officers	
Number of enforcement officers	
Number of department quality control laboratories	
Number of quality control laboratory personnel	
Number of department residue analysis laboratories	
Number of residue laboratory personnel	

Key Situation Indicators

Pesticide Trade:	Tons	US$ '000 Value
Imports	31 735 (formulated)	
Manufacture		
Export		
Sales		
Pesticide Use Profile:	**Tons (active ingredient)**	**US$ '000 Value**
Agriculture	22 470	
Insecticides	32%	
Fungicides	33%	
Herbicides	34%	
Other		
Veterinary		
Public Health		
Household		
Other purposes	9 265	
TOTAL	31 735	

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No	Don't know
Do you have significant problems with low-quality pesticides in the market?	x		
Do you have significant problems with pesticide resistance?			x
Do you have a list of pesticides under close observation for problems			
Source for more information: –			

Health and Environmental Information	Yes	No	Don't know
Do you maintain data on pesticide poisoning cases?			x
Do you have a system to monitor pesticide residues in food?	x		
Do you have a system to monitor pesticide residues in the environment?		x	
Do you have significant problems of environmental contamination from pesticides?		x	
Do you have data on pesticides effects on wildlife and ecosystems?		x	
Source for more information: –			

Pesticide Disposal	Yes	No	Don't know
Do you have services to collect and safely dispose of used containers and small quantities of left-over pesticides?			x
Do you have an inventory of outdated and obsolete pesticides in the country?		x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____			x
Source for more information: –			

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products		
Number of registered biopesticides		
Number of restricted-use pesticides		
Number of banned pesticides	28	
Number of licensed outlets		
Number of licensed applicators		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year		
Number of food samples analyzed for pesticide residues during year		
Number of samples exceeding MRL		
Number of environmental samples analyzed for pesticide residues		

* active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]
1. Bt corn (MON810)	130 839
2. Bt corn (Bt11)	7 422
3. RR corn (NK603)	138 690
4. Stacked Corn (MON810 × NK603)	86 087

BUREAU OF PLANT INDUSTRY
Plant Quarantine Service Central Office

Work and Financial Plan (2009)

(Unit: Peso)

Plans/Programs/Activities	Key Indicators	Target				Budgetary Allocation				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Total
Regulatory Services **Enforcement of Plant Quarantine laws, rules & regulations**										
A. Responsive PQ Rules and Regulations										
A.1 Issuance of PQ Rules and Regulations	# of PQ Rules and Regulations issued	1	1	1	1	37 500	37 500	37 500	37 500	150 000
						12 500	12 500	12 500	12 500	50 000
A.2 Updating/Revising Administrative/Memo Orders	# of updated Administrative/Memo Orders	2	2	2	2	5 000	5 000	5 000	5 000	20 000
						45 000	45 000	45 000	45 000	180 000
A.3 Technical Meetings	# of technical meetings conducted	1	2	1	2	60 000	120 000	60 000	60 000	300 000
						75 000	75 000	75 000	75 000	300 000
A.4 Public/Stakeholders Consultation	# of Public/stakeholders consultation	1	1	1	1	35 000	35 000	35 000	35 000	140 000
						15 000	15 000	15 000	15 000	60 000
A.5 Conduct of PRA	# of PRA conducted									
I. Initiation		1	1	1	1	171 900	171 900	171 900	171 900	687 600
II. Risk Assessment		1	1	1	1	59 400	59 400	59 400	59 400	237 600
						5 000	5 000	5 000	5 000	20 000
III. Risk Management		1	1	1	1	100 000	100 000	100 000	100 000	400 000
A.6 Meeting of PQ Board	# of meetings conducted		1	1	1		30 000	30 000	30 000	90 000
							17 500	17 500	17 500	52 500
A.7 ManCom Meeting	# of meetings conducted	1	1	1	1	57 000	57 000	57 000	57 000	228 000
						25 000	25 000	25 000	25 000	100 000
						25 000	25 000	25 000	25 000	100 000
B. Functional Laboratory										
B.1 Upgrading of Laboratory Facilities	# of laboratory facilities upgraded	1	1	1	1	139 200	139 200	139 200	139 200	556 800
B.2 Upgrading of Laboratory Equipment	# of laboratory equipment upgraded	3	2			400 000	200 000			600 000
						280 000	240 000			520 000
B.3 Development and Printing of Laboratory Protocols	# of laboratory protocols developed	1	1	1	1	62 500	62 500	62 500	62 500	250 000
						12 500	12 500	12 500	12 500	50 000
						60 000	60 000	60 000	60 000	240 000
						15 000	15 000	15 000	15 000	60 000

Plans/Programs/Activities	Key Indicators	Target				Budgetary Allocation				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Total
C. Technically equipped Personnel										
C.1 Trainings and Workshops										
I. International	# of International trainings attended	3	3	3	3	275 000	275 000	275 000	275 000	1 100 000
						25 000	25 000	25 000	25 000	100 000
II. Local	# of local trainings attended	3	2	6	3	40 000	20 000	80 000	40 000	180 000
						60 000	50 000	100 000	60 000	270 000
						35 000	30 000	50 000	35 000	150 000
						400 000	200 000	800 000	400 000	1 800 000
						7 000	3 000	13 000	7 000	30 000
						45 000	30 000	80 000	45 000	200 000
						18 000	9 000	35 000	18 000	80 000
> Midyear Review				1				400 000		400 000
> Year-end review		1				400 000				400 000
C.2 Deputation Training for BPI & Non-BPI Staff	# of trainings for BPI & Non-BPI Staff	1			1	25 000			25 000	50 000
						25 000			25 000	50 000
						568 000				568 000
C.3 Purchase of Publication and References	# of publications and references bought	2		3		50 000		100 000		150 000
D. Support Facilities/Equipment										
D.1 Repair of VHT mini chamber	# of VHT repaired	1		1		100 000		100 000		200 000
D.2 Improvement of facilities/equipments	# of VHT facilities/equipments improved		1		1		30 000		30 000	60 000
							450 000		450 000	900 000
E. Accreditation and Registration System										
E.1 Importers										
I. Accreditation of Importers	# of importers accredited	9	9	12	9	43 000	43 000	71 000	43 000	200 000
						9 000	9 000	13 000	9 000	40 000
						112 800	112 800	112 800	112 800	451 200
II. Accreditation of Treatment Providers	# of treatment providers accredited	4	3	3	3	35 000	15 000	15 000	15 000	80 000
						40 000	20 000	20 000	20 000	100 000
						16 000	8 000	8 000	8 000	40 000
III. Accreditation of Facilities and Farms	# of facilities and farms accredited	2	2	2	2	5 000	5 000	5 000	5 000	20 000
						15 000	15 000	15 000	15 000	60 000

Plans/Programs/Activities	Key Indicators	Target				Budgetary Allocation				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Total
E.2 Exporters										
I. Accreditation of Exporters	# of accredited exporters			12	12			45 000	45 000	90 000
								50 000	50 000	100 000
II. Accreditation of Farmers	# of accredited farmers			144	144			75 000	75 000	150 000
								25 000	25 000	50 000
III. Accreditation of Farms	# of accredited farms			200	200			100 000	100 000	200 000
E.3 AFAS Accreditation/Registration										
I. Fumigation Training for AFAS Implementation	# of trainings	1		1		200 000		200 000		400 000
II.Training of Fumigation Technician & PQ Officer	# of trainings	1			1	50 000			50 000	100 000
						50 000			50 000	100 000
III. Registration of Treatment Providers	# of treatment providers registered	1		1		30 000		30 000		60 000
						20 000		20 000		40 000
IV. Accreditation of fumigation sites	# of fumigation sites accredited	1	1	1	1	15 000	15 000	15 000	15 000	60 000
						15 000	15 000	15 000	15 000	60 000
F. Surveillance of Quarantine Pests										
F.1 Brontispa	# of areas monitored		7	7	5		150 000	150 000	100 000	400 000
F.2 Oil Palm Virus	# of areas monitored	1	2	1	1	60 000	110 000	60 000	60 000	290 000
						50 000	90 000	50 000	50 000	240 000
F.3 Fruitfly	# of survey conducted	2	1	1	1	210 000	130 000	130 000	130 000	600 000
						120 000	60 000	60 000	60 000	300 000
						120 000	60 000	60 000	60 000	300 000
						50 000	50 000	50 000	50 000	200 000
G. Opening of New Export Market										
G.1 Bilateral Agreements	# of bilateral agreements formulated	1			1	10 000			10 000	20 000
G.2 Multilateral Agreements	# of multilateral agreements formulated		1	1			10 000	10 000		20 000
G.3 Development of new protocols	# of protocols developed		1		1		10 000		10 000	20 000
							10 000		10 000	20 000
H. Stakeholders Involvement										
H.1 Stakeholders meeting	# of stakeholders meeting conducted	1	1	1	1	12 500	12 500	12 500	12 500	50 000
						37 500	37 500	37 500	37 500	150 000

Plans/Programs/Activities	Key Indicators	Target				Budgetary Allocation				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Total
E.2 Exporters										
I. Accreditation of Exporters	# of accredited exporters			12	12			45 000	45 000	90 000
								50 000	50 000	100 000
II. Accreditation of Farmers	# of accredited farmers			144	144			75 000	75 000	150 000
								25 000	25 000	50 000
III. Accreditation of Farms	# of accredited farms			200	200			100 000	100 000	200 000
E.3 AFAS Accreditation/Registration										
I. Fumigation Training for AFAS Implementation	# of trainings	1		1		200 000		200 000		400 000
II.Training of Fumigation Technician & PQ Officer	# of trainings	1			1	50 000			50 000	100 000
						50 000			50 000	100 000
III. Registration of Treatment Providers	# of treatment providers registered	1		1		30 000		30 000		60 000
						20 000		20 000		40 000
IV. Accreditation of fumigation sites	# of fumigation sites accredited	1	1	1	1	15 000	15 000	15 000	15 000	60 000
						15 000	15 000	15 000	15 000	60 000
F. Surveillance of Quarantine Pests										
F.1 Brontispa	# of areas monitored		7	7	5		150 000	150 000	100 000	400 000
F.2 Oil Palm Virus	# of areas monitored	1	2	1	1	60 000	110 000	60 000	60 000	290 000
						50 000	90 000	50 000	50 000	240 000
F.3 Fruitfly	# of survey conducted	2	1	1	1	210 000	130 000	130 000	130 000	600 000
						120 000	60 000	60 000	60 000	300 000
						120 000	60 000	60 000	60 000	300 000
						50 000	50 000	50 000	50 000	200 000
G. Opening of New Export Market										
G.1 Bilateral Agreements	# of bilateral agreements formulated	1			1	10 000			10 000	20 000
G.2 Multilateral Agreements	# of multilateral agreements formulated		1	1			10 000	10 000		20 000
G.3 Development of new protocols	# of protocols developed		1		1		10 000		10 000	20 000
							10 000		10 000	20 000
H. Stakeholders Involvement										
H.1 Stakeholders meeting	# of stakeholders meeting conducted	1	1	1	1	12 500	12 500	12 500	12 500	50 000
						37 500	37 500	37 500	37 500	150 000

Plans/Programs/Activities	Key Indicators	Target				Budgetary Allocation				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Total
B. EXPORT										
1. Issuance of Phytosanitary Permits Issued (pcs)	# of Phytosanitary Permits issued	850	1 200	400	200	60 000	30 000	70 000	40 000	200 000
						120 000	60 000	140 000	80 000	400 000
2. Commodity Inspected										
a. Plants (pcs)	# of plants inspected	300	200	300	150	25 000	20 000	25 000	10 000	80 000
b. Plants (mt)	Volume of plants inspected	0.01	0.01	0.01	0.01	1 000	1 000	1 000	1 000	4 000
c. Plant Products (pcs)	# of plant products inspected	10	10	20	10	3 000	3 000	3 500	3 000	12 500
d. Plant Products (mt)	Volume of plant products inspected	0.002	0.002	0.002	0.001	1 500	1 500	1 500	1 000	5 500
e. Planting Materials (pcs)	# of planting materials inspected	100	100	150	150	1 000	1 000	1 500	1 500	5 000
f. Planting Materials (mt)	Volume of plant materials inspected	0.001	0.001	0.001	0.002	1 500	1 500	1 500	2 000	6 500
g. Seeds (mt)	Volume of grains and seeds for feeds	0.01	0.01	0.01	0.01	2 000	2 000	2 000	2 000	8 000
h. Others	# of potential pests, etc. inspected	20	20	25	30	2 000	2 000	2 500	3 000	9 500
C. DOMESTIC										
1. Number of Domestic Permit issued		16	14	20	12	2 000	1 500	2 000	1 000	6 500
2. Commodiy Inspected										
a. Plants (pcs)	# of plants inspected	150	175	175	150	1 000	1 500	1 500	1 000	5 000
b. Plant Products (pcs)	# of plant products inspected	5 000	5 000	10 000	5 000	1 000	1 000	2 000	1 000	5 000
c. Planting Materials (pcs)	# of planting materials inspected	5 000	5 000	10 000	5 000	1 000	1 000	2 000	1 000	5 000
d. Planting Materials (mt)	Volume of plant materials inspected	1 000	1 000	2 000	1 500	1 000	1 000	2 000	1 500	5 500
										21 995 600

2.17 REPUBLIC OF KOREA

I. GENERAL INFORMATION

Last Updated: December 2008

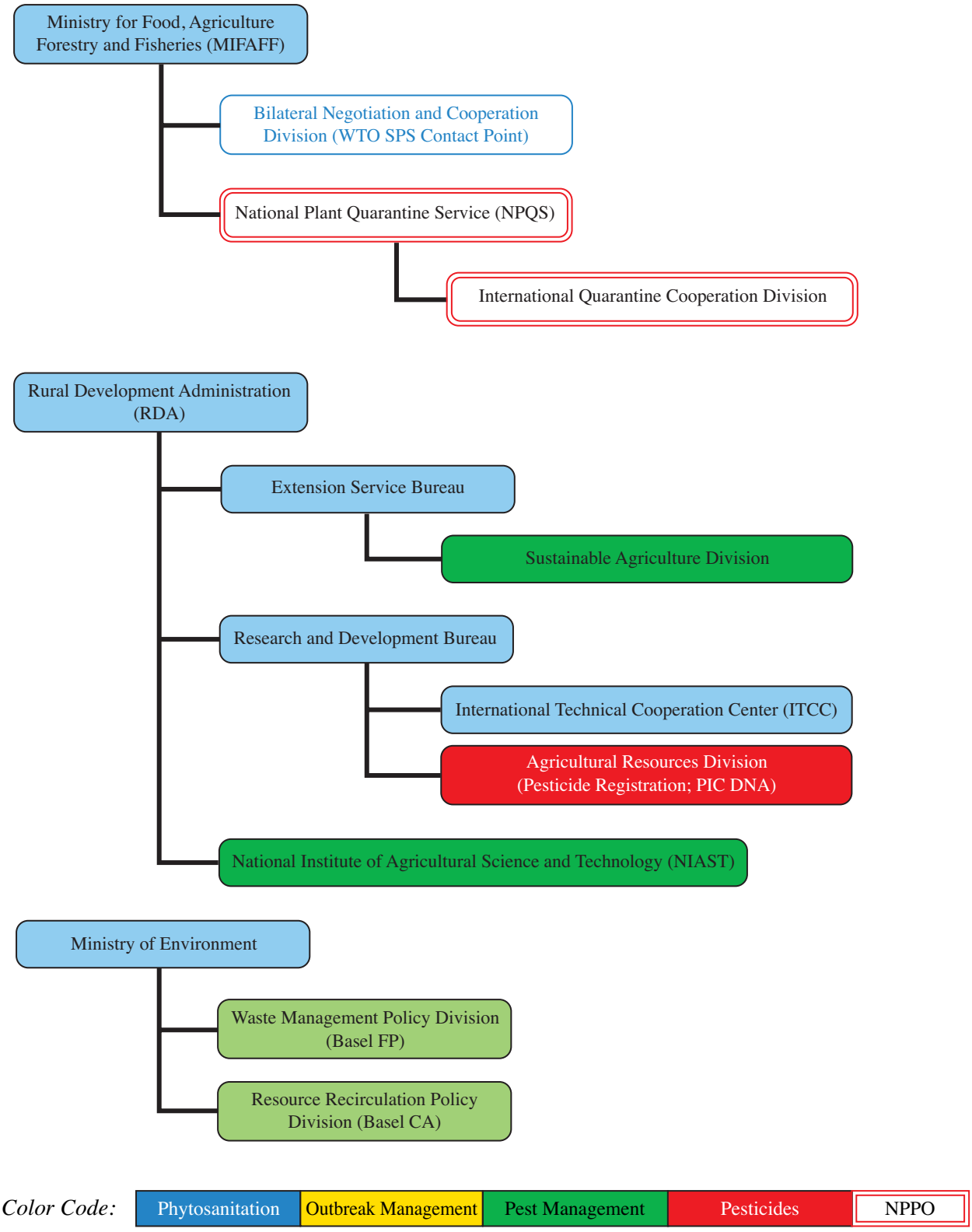
Overall Executive Summary

One of the government goals to achieve for the next five years is 'profit-making agriculture and fisheries and lively rural society'. In the line with the government commitment, the Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF) aims to upgrade agriculture from primary production-based industry into advanced industry which encompasses processing and marketing so that our agriculture and fisheries can compete in a global arena. MIFAFF also drives production of environmentally-friendly, safe and high quality agro-good products.

The former Ministry of Agriculture and Forestry has been enlarged into Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF) and substantive restructuring happened. A new bureau for Food Safety and Consumer Affairs Policy is developed in the Ministry and a new division for Labelling, Quarantine and Inspection was developed under the new bureau which may mean strengthening food safety and quarantine.

However, major implementation organizations regarding plant protection such as National Plant Quarantine Service, Rural Development Administration, are unchanged.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Ministry for Food, Agriculture, Forestry and Fisheries
Government Complex Gwacheon, Jungang-dong 1, Gwacheon, Gyeonggi-do
Republic of Korea
Tel: 82-2-500-1868
E-mail: www.maffaf.go.kr

Responsible Department

Bilateral Negotiation and Cooperation Division
Government Complex Gwacheon, Jungang-dong 1, Gwacheon, Gyeonggi-do
Republic of Korea
Tel: & Fax: 82-2-504-6659

National Plant Protection Organization

National Plant Quarantine Service
Division of International Quarantine Cooperation
433-1, Anyang 6-dong, Manan-gu
Anyang-City, Kyunggi-do
Tel: +82-31-420-7664
Fax: +82-31-420-7605
E-mail: jcheong@npqs.go.kr
Website: www.npqs.go.kr

Operational Offices:

Plant Quarantine

National Plant Quarantine Service (NPQS)
Ministry of Agriculture and Forestry
433-1, Anyang 6 Dong, Manan Gu
Anyang City (430-016)
Tel: (+82) 31 420-7664
Fax: (+82) 31 420-7605
E-mails: npqs@npqs.go.kr; ycjeong@npqs.go.kr
Website: http://www.npqs.go.kr (en)

Surveillance, Pest Outbreaks and Invasive Species Management

MAF/NPQS (see above for exotic pests)
For other outbreaks:
Rural Development Administration
250 Seo-dun dong
Suwon

Pesticide Registration

Agricultural Resources Division
Research Management Bureau
Rural Development Administration
251 Seo-dun dong
Suwon

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

International Quarantine Cooperation Division,
Mr Chang-Yong PARK, Director
National Plant Quarantine Service (NPQS)
Ministry of Agriculture and Forestry
433-1, Anyang 6 Dong, Manan Ku
Anyang-City (430-016)
Tel: (+82) 31 420-7660
Fax: (+82) 31 420-7605
E-mails: npqs@npqs.go.kr; ycjeong@npqs.go.kr
Website: http://www.npqs.go.kr (en)
Language(s): English
Contact point received: January 2009 Source: Government Correspondence

International Technical Center
Dr Hyun-Soon KIM, Director
250 Seodung Dong, Kwonsun Ku,
Suwon City (441-707), Gyeong Gi Province
Tel: +82 31 299 2279
Fax: +82 31 293 9359
E-mail: wskim2@rda.go.kr

WTO SPS Contact Point

Bilateral Cooperation Division
Ministry of Agriculture and Forestry (MAF)
1 Joongang-dong, Kwacheon
Kyunggi-do, 427-719
Tel: + (822) 500 1877
Fax: + (822) 504 6659
E-mail/Internet: bcd@maf.go.kr

Rotterdam Convention (PIC) DNA Pesticides (P)

Agricultural Resources Division
MrIn Ahn, Director
Research & Development Bureau, RDA
250 Seodundong, Kwonsun Ku,
Suwon City (441-707) Gyeong Gi Province
Tel: +82 31 299 2590
Fax: +82 31 299 2607
E-mail: ahnin@rda.go.kr

Stockholm Convention (POP) National Focal Point

–

Basel Convention Competent Authority (CA) and Focal Point (FP)

Resource Recirculation Bureau (CA)
Resource Recirculation Policy Division
Ministry of Environment
Gwacheon Government Complex
Gwacheon Si
Gyeonggi-Do 427-729
Republic of Korea
Tel: (82 2) 504 92 88
Fax: (82 2) 504 60 68

Waste Management Policy Division (FP)
Ministry of Environment
1 Joonang-dong
Kwacheon-Si, Kyunggi-do
Tel: (82 2) 504 92 59
Fax: (82 2) 504 92 80
E-mail: djuca2@me.go.kr

Montreal Protocol Focal Point

–

Selected Country Statistics:

Agricultural Population	3.4 million	Agricultural Land	1.8 million ha
GDP US$887 400 million	Agric. GDP: 4.0%	GNI per capita: US$18 372	Undernourishment: 0%
Main crops grown: Rice			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last Updated: December 2008

Executive summary

National Plant Quarantine Service (NPQS) of MIFAFF developed a '10-year plan for plant quarantine development' in 2007. There are 3 goals: prevention of exotic pest, protection of agricultural and natural resources and contribution to agricultural competitiveness and national development.

Since 2008, NPQS has placed strong emphasis on increasing work efficiency with differentiation of inspection methods according to pest risk and adaptation of IT to plant quarantine management system. NPQS has also facilitated export of agricultural products through active negotiation with trading partners and customer friendly inspection for export.

List of Key Legislation/Regulations/Rules

1961 Plant Quarantine Act (30 December 1961)
2004 Guidelines for PRA for Import permission on prohibited plants and plant products
2005 Quarantine requirements on wood packing materials of imported consignments
2009 Revision of plant quarantine act.

Web source for further information: –

Policies (regarding plant quarantine)	Yes	No
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?		x
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress): LMO inspection at entry port		
Web source for further information: http://www.npqs.go.kr(en)		

Organization of Plant Quarantine Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Assessment	MIFAFF/NPQS
National standards development	MIFAFF/NPQS
International notifications	MIFAFF/NPQS
Import:	
Import permits	MIFAFF/NPQS
Import inspections	MIFAFF/NPQS
Emergency action	MIFAFF/NPQS
Export:	
Phytosanitary certificates	MIFAFF/NPQS
Treatment of commodities	MIFAFF/NPQS

Infrastructure	Years: 2007-2008
Number of plant quarantine officers authorized to inspect/certify	425
Total qualified personnel for plant pest risk assessment	13
Number of quarantine offices	30
entry points (sea/air/land/mail = total)	27
post-entry plant quarantine containment facilities	2
other offices	1
Number of quarantine service diagnosis laboratories	7
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	More than 50
Number of laboratories for insect/mite (arthropod) samples	More than 30
Number of laboratories for bacteria samples	More than 20
Number of laboratories for virus samples	More than 30
Number of laboratories for fungus samples	More than 30
Number of laboratories for mycoplasma samples	More than 10
Number of laboratories for nematode samples	More than 10
Number of laboratories for plant/weed samples	More than 10
Number of laboratories for other pests (snail, slug, rodents, etc.)	More than 10

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	
– surveillance	NPQS/MIFAFF, RDA
– management	NPQS/MIFAFF, RDA
– certification	NPQS/MIFAFF
List of target pest species and crops ISPM 4	Number of sites in 2008
List of target pest species and crops ISPM 10	Number of sites in 2008

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Banana	Philippines	272 697
Orange	USA	125 919
Hay		599 763
Main Export Plant Commodities	Main destination countries	
Bell pepper	Japan	13 898
Sand pear	various	19 493
Pepper	various	832

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
ASEAN plant quarantine expert training programme	NPQS/MAF	$100 000	2006, 2008
ISPM workshop in APPPC	NPQS/MAF	$80 000	2006, 2008
Title of government follow-up programmes		Amount	Years (start-end)

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	N/A
Number of import inspections carried out	3 829 543
Number of emergency phytosanitary treatments taken on imports	23 414
Number notifications of non-compliance	175
Number of conventional phytosanitary certificates issued	81 510
Number of electronic phytosanitary certificates issued	

Number of quarantine pests intercepted		Years: 2007-2008
Top three commodity	Top three pest/commodity	# of interceptions
Banana fruit	*Dysmicoccus neobrevipes*	998
	Aspidiotus excisus	297
	Dysmicoccus brevipes	12
Pineapple fruit	*Dysmicoccus brevipes*	783
	Dysmicoccus neobrevipes	3
	Dolichotetranychus floridanus	2
Lauan lumber	*Brachypeplus sp*	51
	Silvanus bidentatus	42
	Xyleborus cognatus	35

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests	2008	1 474	446	13
Number of regulated non-quarantine pests	2005	2	42	16
Number of regulated import articles				
Website for the above information: www.NPQS.go.kr(en)				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)	1 476	488	29
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
• Revision of Plant Protection Act • 3rd Training Programme on Plant Quarantine for ASEAN Countries • 9th IPPC ISPM draft workshop for APPPC
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	
ISPM 02 Guidelines for pest risk analysis			x				x	
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x				x	
ISPM 04 Requirements for the establishment of pest free areas			x				x	
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x				x	
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x				x	
ISPM 09 Guidelines for pest eradication programmes			x				x	
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x				x	
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	2005
ISPM 16 Regulated non-quarantine pests: concept and application			x				x	
ISPM 17 Pest reporting			x			x		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x		x				
ISPM 19 Guidelines on lists of regulated pests			x				x	
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x				x	
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x				x	
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x				x	
ISPM 25 Consignments in transit			x				x	
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x				x	
ISPM 27 Diagnostic protocols for regulated pests			x				x	
ISPM 28 Phytosanitary treatments for regulated pests			x				x	
ISPM 29 Recognition of pest free areas and areas of low pest prevalence			x			x		
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (tephritidae)		x				x		
ISPM 31 Methodologies for sampling of consignments			x				x	
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

Executive Summary

Rural Development Administration (RDA) monitored and observed the pest outbreaks and invasive species. Total 690 observation stations located in 137 cities and counties have been operational.

Two species of insect, a katydid *Paratlanticus ussuriensis* and a cicada *Lycorma delicatula,* broke out both in 2007 and 2008. And an invasive disease, TYLCV, broke out in a limited area and it was under official control.

Provincial governments, RDA and KFS collaborated to manage these pests and disease employing all sorts of methods currently in use. They also tried to develop an effective strategy.

In 2007 a rice pest, smaller brown planthopper *Laodelphax striatellus*, occurred in extraordinarily high population causing severe damage in areas in vicinity of western coast because of the rice stripe virus disease it transmits. In 2008 the disease incidence decreased greatly in comparison to that of 2007, even though it was still severe showing 205 percent occurrence compared to average year.

List of Key Legislation/Regulations/Rules for surveillance, pest reporting and emergency actions

(year, title and possibly short description)

Web source for further information: –

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.)		
Web source for further information: –		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	RDA NAQS
Surveillance	RDA NAQS
Control	RDA NAQS
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	RDA
Surveillance	RDA
Control	RDA
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	NPQS/MIFAFF
Surveillance	MAF/NPQS with 201 farmers; declaration center for exotic pests: www.npqs.go.kr
Control/eradication	NPQS/MIFAFF
Reporting to bilateral or international organizations	NPQS/MIFAFF

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	unspecified
Number of designated staff for **surveillance** of migratory and periodically occurring pests	
Number of designated staff for **surveillance** of invasive species	
Number of designated staff for **control** of field pests of national importance	
Number of designated staff for **control** of migratory and periodically occurring pests	
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year 2007:	–	–	
Total number for year 2008:	–	–	
Total number on record	33	22	

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Pathway			
Location of first discovery			
Area affected [ha]			
Area treated [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	*Laodelphax striatellus*	*Paratlanticus ussuriensis*	*Lycorma delicatula*
Year of outbreak	2007	2007	2008
Area affected [ha]	14 300	30	91
Estimated damage US$			
Area treated by government [ha]			
Expenditures by government [US$]			
Control method	Chemical spray	Chemical spray	Chemical spray
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

IV. PEST MANAGEMENT

Last updated: December 2008

Executive Summary

RDA conducted the demonstration projects for rice and citrus to distribute IPM practice. Demonstration farms operated in 2008 consisted of 284 sites for rice and 16 sites for citrus and contributed to reduce the chemical spray times by 4 from 12 times to 8 times in average for citrus, and for rice the chemical application reduced to 2 times from 3 times as well.

MIFAFF started a supporting programme in 2005 for the growers who used natural enemies to control insect pests occurring in 9 greenhouse crops including strawberry. The Government gives a subsidy (about 50 percent of the cost for purchasing natural enemies) to the growers who satisfy the requirement set by the programme with a goal that 50 percent of horticultural crop area use biological control methods by 2013.

RDA carried out research to determine economic threshold levels for about 13 major pests, 11 major diseases and 7 major weeds in cooperation with 8 provincial research institutes in 2008.

List of Key Legislation/Regulations/Rules for Pest Management

–

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?		x
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: –		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MIFAFF
Pest management research	RDA
Control recommendations	RDA
Pest management extension	Local government
IPM training	RDA/local gov
GAP training	MIFAFF

Infrastructure	Years: 2007-2008
Number of technical officers for pest management	300
Number of central, regional, provincial or state offices	169 incl country level
Number of district and village level field offices	600
Number of field/extension agents for pest management advice	159
Number of field/extension agents trained in IPM-FFS facilitation	40 *per annum*
Number of government biocontrol production/distribution facilities	23
Number of government biopesticide production/distribution facilities	–
Number of general extension staff involved in pest management	170
Number of designated plant protection technical officers for extension	170

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* *MAF, Extension Service Bureau of RDA*	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?: Rice, citrus, and other crops*	x	
Does the country have specific IPM research programmes? *If yes, in which crops?:Pepper, tomato, strawberry, apple*	x	
Does the country have specific GAP extension programmes? *If yes, in which crops?:* *Training programme for 96 agri. Crops and 4 forest products*	x	
Does the country have specific GAP research programmes? *If yes, in which crops?:Horticultural crops*	x	

Market shares (estimated value, volume or area under control)	Years: 2007-2008
Size of chemical pest control market	$1 074
Size of biopesticides market	$2.6 mil
Size of biological control agents market	$5.8 mil

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	Rice	Rice	Rice
Name(s) of pest(s)	Brown planthopper	Smaller Brown planthopper	Rice leaf folder
Estimated crop loss	0.06%	0.01% (RSV)	0.20%
Affected area	16 429 ha	18 490 ha (SBPH) 6 006 ha (RSV)	85 176 ha
Number of pesticide applications or amount of pesticide used	3	3	3
Government action taken	–	–	–

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Economic threshold level/ 31 major crop	RDA	$0.6 million/2008	2006
Purpose/Target of government follow-up programmes		Amount	Years (start-end)
Extension of Technology/Demonstration project of IPM		$0.12 million/2008	2005

Pest Management Extension	Years: 2007-2008
Number of farmers trained in IPM during the year	15 846
Number of IPM-FFS conducted during the year	464
Number of farmers trained in GAP standards during the year	5 800 (2007)
Area under IPM/low pesticide management [ha]	2 842
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented: Rice and citrus	
Crops grown organic/pesticide-free: Rice (field crop), Strawberry, Red pepper, Tomato, Cucumber, Watermelon, Vegetables including Lettuce etc. (green house crops)	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

Executive Summary

Agro-chemical production increased 11.3 percent from 22 847 ton to 25 428 ton in 2007. Among the 1 287 chemicals enlisted in Korea as pesticide, above 98 percent is low or moderate toxic. Hazardous chemicals including high toxic pesticides are specifically regulated through many measures including a restriction standard on handling those materials.

In case of agro-chemicals which are toxic to live organisms in nature, pictorial warning-mark and cautionary directions should be clearly printed on the label of the container. Especially, nowadays the safety standard for Korean ecological indicators including fish and loach has been strengthened.

RDA deposited the instrument of ratification to the Rotterdam Convention on the Prior Informed Consent (PIC) Procedures for Certain Hazardous Chemicals and Pesticides on International Trade in August 2003, and improved related regulations or systems. As such, Korea has been fulfilling its duties as a contracting party.

Also, RDA signed the Stockholm Convention on the production, usage and discharge prohibition of organic pollutants (POPs) in 2001, and ratified in Jan. 2007.

List of Key Legislation/Regulations/Rules

1957 Pesticide Management Act

- Hazardous Material Management Law

Web source: –

Policies (regarding pesticide management)	Yes*	No
Do you have national pesticide reduction targets? *If yes, what is the target:*_____	x	
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?	x	
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?	x	
Do you accept evaluation results from other countries?	x	
Do you accept field studies conducted in other countries?	x	
Do you require environmental fate studies?	x	

Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?	x	
Do you subsidize or provide low-cost pesticides?	x	
Do you subsidize or provide low-cost biopesticides?	x	
Other policies:		
Web source for further information: http://www.koreacpa.org, http://www.rda.go.kr		

* if yes/no is not appropriate, please insert a note in italics under the question

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	RDA/Res. & Dev. Bureau/Agricultural Resources Div.
Registration	RDA/Res. & Dev. Bureau/Agricultural Resources Div.
Licensing of shops	RDA/Res. & Dev. Bureau/Agricultural Resources Div.
Licensing of field applicators	
Enforcement/inspections	RDA/Natl. Inst. of Agric. Science and Technology (NIAST), MAF/Nat. Agric. Prod. Qual. Management Ser. (NAPQMS)
Testing of pesticide efficacy	RDA/NIAST/Pesticide Evaluation Div.
Development of pesticide use recommendations	RDA/NIAST/Pesticide Evaluation Div.
Safe use training/extension	RDA/RDB/Agricultural Resources Div., Extension Bureau
Food residue monitoring	Korea Food and Drug Admin. (KFDA)
Environmental monitoring	RDA/NIAST
Health monitoring	RDA/NIAST
Other Stakeholders:	
Pesticide Industry Association	Korea Crop Protection Assoc. (KCPA)
Civil Society Organizations (NGO, etc.)	Consumers Korea

Infrastructure	Years: 2007-2008
Number of registration officers	26
Number of enforcement officers	4
Number of department quality control laboratories	24
Number of quality control laboratory personnel	120
Number of department residue analysis laboratories	20
Number of residue laboratory personnel	130

Key Situation Indicators

Pesticide Trade: 2007-2008[a]	Tons*	US$ '000 Value*
Imports	25 880	362 105
Manufacture	23 969	1 113 524 (1 000 Won/US$)
Export	2 277	19 231
Domestic Use/Sales	24 506	1 023 010 (1 000 Won/US$)
Pesticide Use Profile: 2007-2008	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture	24 250	842 638
Chem. Insecticides	31%	36%
Chem. Fungicides	37%	35%
Chem. Herbicides	22%	25%
Chem. Others: e.g. molluscicide, acaricide	10%	4%
Other: e.g. Avamectrin, Bt, Neem	Trace amount	Trace amount

Other purposes		
TOTAL		

[a] for most recent year for which data are available

* if possible, give in tons a.i.; if known, also give value in US$ or other currency

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?		x
Do you have significant problems with pesticide resistance?		x
Do you have a list of pesticides under close observation for problems		
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?		x
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?		
Do you have significant problems of environmental contamination from pesticides?		x
Do you have data on pesticides effects on wildlife and ecosystems?	x	
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)		x
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		x
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Years: 2007-2008	
	a.i.*	Trade Name
Number of registered pesticide products		300
Number of registered bio-pesticides (Avamectrin, Bt, Neem, etc.)		11
Number of restricted-use pesticides/formulations		6
Number of banned pesticides		
Number of licensed outlets		
Number of licensed field applicators (professional and/or farmers)		
Number of licensing violations reported during year	More than 5	
Number of quality control analyses conducted during year	1 800	
Number of food samples analyzed for pesticide residues during year	1 500	
Number of samples exceeding MRL	Less than 20	
Number of environmental samples analyzed for pesticide residues	1 000	

* active ingredient

Pesticides Restricted in Recent Years (2007-2008)	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years (2007-2008)	
Year	Name of active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]
None	N/A

2.18 SRI LANKA

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

Some key organizational changes took place during 2007-2008. Some senior officers were transferred to other work places while some retired or were promoted.

Discussions were held to revise the regulations made under the Plant Protection Act. The draft on the revised regulations was submitted to the World Trade Organization. Incorporating comments from stakeholders, the draft was now under review for consistency with the Act. As some loopholes were found, the National Committee was appointed to revise the Plant Protection Act No. 35 of 1999. The purpose was to make necessary changes to reflect the current requirements, ensuring that the regulations were consistent with IPPC recommendations.

Noteworthy in the revised regulations was the control of Coconut Leaf Rot Disease and Weligama Cococnut Wilt Disease in the southern region of Sri Lanka.

A number of quarantine pests were intercepted during the import of planting materials. In 2008, almost 800 questionable consignments were intercepted and destroyed. The pest reference collection at the NPQS was upgraded with 80 more specimens added.

Pest Risk Analysis (PRA) on powdery scab on potato was completed while PRAs on import of dragon fruit and mangosteen from Thailand and in vitro cultures of banana from the Philippines were started.

A new exotic invasive species namely Papaya Mealy Bug – Paracoccus marginatus was first observed in the country's western region in August 2008. The bug caused significant losses to the papaya plants. A package of control practices was recommended and the biological control agent Acerophagus papayae was imported from Puerto Rico APHIS and released into several infested locations. The damage is currently under control.

The country embarked on several pest management programmes for control of specific pests. While shortage in resources always hindered the progress of the programme, most targets were achieved.

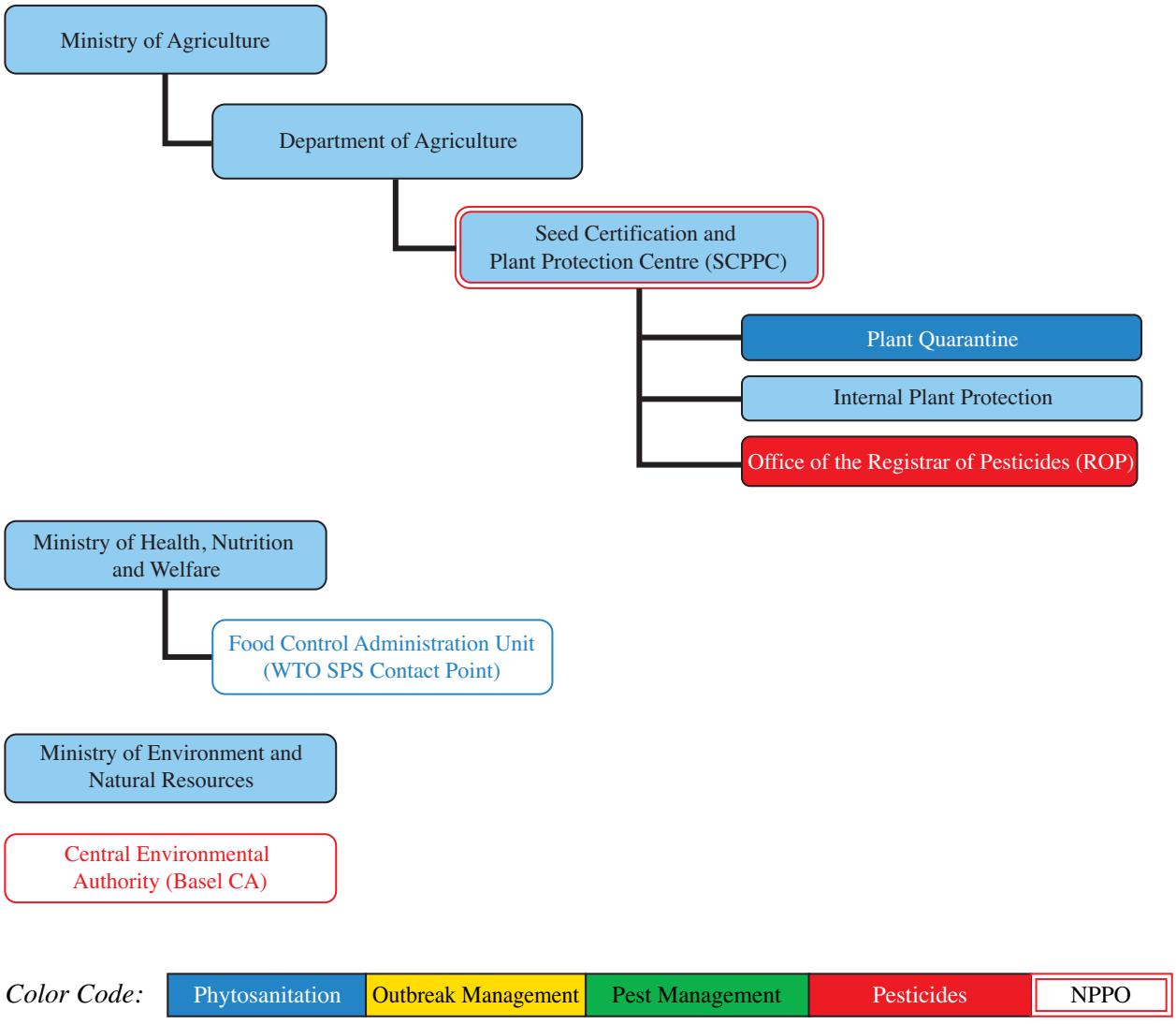
The Integrated Pest Management (IPM) strategy on rice cultivation is now extended to vegetables and other crops, using Farmer Field School (FFS) training approach.

Funded by UNEP, a new programme namely Integrated Pest and Vector Management (IPVM) Programme was initiated. Due to its multidisciplinary nature, the programme involved several stakeholders including the Department of Agriculture, the Department of Health and Mahaweli Authority of Sri Lanka (MASL). This represented a unique experience of integrating agriculture with health, with an aim of improving the livelihoods of rural communities.

The mandate of the Office of the Registrar of Pesticides is to execute statutory provisions of the Control of Pesticides Act No. 33 of 1980. The pesticides registration is the key provision in the course of life cycle management of pesticides in the country from importation through marketing

of crops treated with pesticides. The issuance of import approvals is entertained on certain quality assuring protocols for pesticide products entering into the country. Apart from procedural control measures, more than 2 000 formulation analyses were carried out, prior to marketing.

Plant Protection Organization Chart



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Ministry/Department of Agriculture

Seed Certification and Plant Protection Centre
Dr D.H. Muthukudaarachchi, Director
Department of Agriculture, Ministry of Agricultural Development
P.O. Box 74, Gannoruwa, Peradeniya, Sri Lanka
Tel: (+94) 81 2388044
Fax: (+94) 81 2388077
E-mail: scppc@sltnet.lk
Website: www.agridept.gov.lk

Plant Protection

Plant Protection Service
Mr K. Piyasena, Deputy Director
Seed Certification and Plant Protection Centre
Department of Agriculture, Ministry of Agricultural Development
Gannoruwa, Peradeniya, Sri Lanka
Tel: (+94) 81 2388316
Fax: (+94) 81 2388316
E-mail: ppsdoa@sltnet.lk
Website: www.agridept.gov.lk

Plant Quarantine

National Plant Quarantine Service
Mr R.S.Y. de Silva, OIC
Seed Certification and Plant Protection Centre
Department of Agriculture, Ministry of Agricultural Development
Canada Friendship Road, Katunayake, Sri Lanka
Tel: (+94) 11 2253709
Fax: (+94) 11 2253709
Website: www.agridept.gov.lk

Surveillance, Pest Outbreaks and Invasive Species Management

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Pesticide Registration

Office of the Registrar of Pesticides
Dr G.K. Manuweera, Registrar of Pesticides
Department of Agriculture
P.O. Box 49
Peradeniya 20400, Sri Lanka
Tel: (+94) 81 238 8134
E-mail: pest@slt.lk

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC) unofficial

Seed Certification and Plant Protection Centre
D.H. Muthukudaarachchi, Director
Ministry of Agriculture, Livestock, Land and Irrigation
P.O. Box 74, Gannoruwa
Peradeniya, Sri Lanka
Tel: (+94) 81 238 4226 / 238 8044
Fax: (+94) 81 238 8077
E-mails: scppc@sltnet.lk; nimik@sltnet.lk
Website: http://www.agridept.gov.lk (en)
Language(s): English
Contact point received: 07/07/2004 Source: Government Correspondence/country report

WTO SPS Contact Point

Food Control Administration Unit
Mr S. Nagiah
Ministry of Health, Nutrition and Welfare
385, Baddegama Wimalawansa Mawatha
Colombo 10, Sri Lanka
Tel: (+94) 11 267 2073
Fax: (+94) 11 267 2073
E-mails: foodadmin@sltnet.lk; nagiah.s@health.gov.lk
Website: www.health.gov.lk

Rotterdam Convention (PIC) DNA Pesticides

Registrar of Pesticides
Pesticides Registration Office
Getambe
P.O. Box 49
Peradeniya 20400, Sri Lanka
Tel: (+94) 81 2388135 / 2388076
Fax: (+94) 81 2388635
E-mail: pest@slt.lk

Stockholm Convention (POP) National Focal Point

–

Basel Convention Competent Authority (CA) and Focal Point

Central Environmental Authority
Chairman
No. 104 Denzil Kobbekaduwa
Mawatha, Battaramulla, Sri Lanka
Tel: (+94) 11 287 23 48
Fax: (+94) 11 287 23 47
E-mails: kgdband@cea.lk or
manelj@cea.lk or
chaircea@cea.lk

Ministry of Environment and Natural Resources
Secretary
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E-mails: pops@sltnet.lk or
scefe@sltnet.lk or
envpolmg@sltnet.lk

Selected Country Statistics:

Agricultural Population	8.6 million	Agricultural Land	1.9 million ha
GDP US$286 billion	Agric. GDP: 16.5%	GNI per capita: US$1 600	Under nourishment: 15%
Main crops grown:			

GDP = Gross Domestic Product; GNI = Gross National Income; Undernourishment = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: December 2008

Executive Summary

There were some important changes in the organization during the period under review. Dr D.H. Muthukudaarachchi was appointed as the Director of the Seed Certification and Plant Protection Centre and thus became the official contact point person for IPPC. The most senior officers working in plant quarantine stations were transferred out of their work places giving way to new officers. There was a policy decision to replace two most senior officers every three years by other competent officials. The officer holding the Deputy Director post of the National Plant Quarantine Service (NPQS) retired from public service in 2007 and the following year, Mr R.S.Y. De Silva was appointed as the Deputy Director.

Necessary discussions and the consultations were held to revise the regulations made under the Plant Protection Act. The draft was submitted to the World Trade Organization to revise comments from stakeholders. The required changes were made and the draft of regulations is under review for consistency with the Act. Legal implications on certain decision taken under the provisions of the Plant Protection Act resulted in discovery of some loopholes and the authorities appointed a committee to revise the act. The committee had several discussions on changes to meet the present day requirements and to make the act and the regulations consistent with IPPC recommendations.

Quarantine pest intercepted during the import of planting material included *Phoma foveata, Clavieacter michiganensis spp., scpedonicus*, and *Geotrichum candidum*, on sweet potato *Ralastonia solanacearum* on ginger. In 2008, 757 questionable consignments were intercepted and destroyed due to unacceptable phytosanitary states. Upgrading of pest reference collection at the NPQS was done adding 80 specimens of insect pests found in the country.

Pest Risk Analysis (PRA) on powdery scab on potato was completed and PRAs on import of dragon fruit and mangosteen from Thailand and in vitro cultures of banana from the Philippines were started. After careful study and bilateral negotiations fresh grapes from Chile were allowed to enter into the country.

List of Key Legislation/Regulations/Rules

1999 Plant Protection Act No. 35
New regulations under preparation

Web source for further information: www.agridept.gov.lk

Policies (regarding plant quarantine)	**Yes**	**No**	**Don't know**
Does phytosanitary legislation cover both domestic and import/export quarantine?	x		
Is plant quarantine a separate organization from animal quarantine?	x		
Does phytosanitary legislation cover non-cultivated plants (wild flora)	x		
Does phytosanitary legislation cover living modified organisms?		x	
Other policy initiatives: (under review/progress)			
Web source for further information: –			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Pest Risk Analysis	MOA, SCPPC, NPQS
National Standards development	MOA, DOA, SCPPC, NPQS
International notifications	MOA, DOA, SCPPC
Import:	
Import permits /inspections	MOA/DOA/SCPPC MOA/DOA/SCPPC/NPQS/Entry points
Emergency action	MOA, DOA, SCPPC, Entry points (Seaport, Airport)
Export:	
Phytosanitary certificates	MOA/DOA/SCPPC/Plant Quarantine
Treatment of commodities	MOA, DOA, SCPPC, NPQS, PQU (Seaport, Airport), Private

Infrastructure	Years: 2007-2008
Total number of plant quarantine officers legally authorized to inspect & certify	80
Total qualified personnel for plant pest risk analysis	2
Number of quarantine offices/stations	5
Number of post-entry plant quarantine containment facilities	2
Number of quarantine service diagnosis laboratories	1
Number of entry points (sea/air/land/mail = total)	2
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect samples	~10
Number of laboratories for pathogen samples	~10
Number of laboratories for plant/weed samples	~4

Pest Free Areas	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MOA, DOA, SCPPC
– surveillance	MOA, DOA, SCPPC, PPS
– management	MOA, DOA, SCPPC, PPS
– certification	MOA, DOA, SCPPC
List of target pest species and crops ISPM 4	Number of sites in 2008
*Synchytrium endobioticum (*in ornamental plants)	Not available
Rhadopholus similes (in foliage plants)	Not available
Globoderapallida pallida, Globodera rostochiensis	Not available
Bemisia tabasi, Thrips palmi, Liriomyza sativai	Not available
List of target pest species and crops ISPM 10	Number of sites in 2008

Key Situation Indicators

International Trade		Years: 2007-2008
Main Import Plant Commodities	Main countries of origin	No. of phytosanitary inspections
Plants and planting materials	Thailand, Netherlands, India, France, China, Germany, USA	Not available
Plant products	India, USA, China	Not available

Animal feed and fresh fruits	India, Pakistan, USA, Italy, China, Thailand, Australia, New Zealand, Iran, Israel, France, South Africa, USA	Not available
Main Export Plant Commodities	Main destination countries	
Vegetables	Middle East, Europe	600/month
Ornamental plants	Middle East, Europe, Japan, South Korea	500/month
Tea, coir products	Middle East, Europe, New Zealand	75/month

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Pest surveillance and compilation of data	Local funds	SL Rs. 2 million	2006 August to 2006 December
IPVM	FAO	SL Rs. 1 274 732	2002-2006
Title of government follow-up programmes		Amount	Years (start-end)
Development of scientific information for quality seed production		SL Rs. 0.5 million	2007

Key Operation Indicators

Institutional Functions	**Years: 2007-2008**
Number of import permits issued/inspections	2 443
Number of emergency phytosanitary treatments taken on imports	15
Number of quarantine pests intercepted	
Number notifications of non-compliance	18
Number of phytosanitary certificates issued *Number of electronic certificates issued: Yes_____ No ✓* *Number of conventional certificates issued: Yes ✓ No_____*	63 634 0 50 000

Lists of Regulated Pests	**Year of last update**	**Insects**	**Pathogens**	**Plants**
Number of regulated quarantine pests	1994	132		
Number of regulated non-quarantine pests	1994	81		
Number of regulated import commodities		41		
Website for the above information: –				

Pest Risk Assessments	**Insects**	**Pathogens**	**Plants**
No. of PRA completed and documented (according to ISPM)	1	10	1
Web source for further information: –			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Legislation, policies and infrastructure have been improved in recent years.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Administrative, operational, training, etc. could be considered as main constraints.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	
ISPM 02 Guidelines for pest risk analysis			x			x		
ISPM 03 Code of conduct for the import and release of exotic biological control agents		x			x			
ISPM 04 Requirements for the establishment of pest free areas								
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x			x		
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area		x			x			
ISPM 09 Guidelines for pest eradication programmes		x			x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites		x			x			
ISPM 11 Pest risk analysis for quarantine pests			x			x		
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action		x			x			
ISPM 14 The use of integrated measures in a systems approach for pest risk management								
ISPM 15 Guidelines for regulating wood packaging material in international trade			x			x		
ISPM 16 Regulated non-quarantine pests: concept and application								
ISPM 17 Pest reporting								
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x				x		
ISPM 19 Guidelines on lists of regulated pests								
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x			x		
ISPM 22 Requirements for the establishment of areas of low pest prevalence								
ISPM 23 Guidelines for inspection			x			x		
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures								
ISPM 25 Consignments in transit								
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)								
ISPM 27 Diagnostic protocols for regulated pests								
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

Executive Summary

During the period under review, a new exotic invasive species was reported from the western region of Sri Lanka. It was first observed in August 2008 by field extension officers of Gampaha District, and species was identified as Papaya Mealy Bug – *Paracoccus marginatus* and confirmed by a senior biosystematician of the Plant Pest Diagnostic Center, USA. This species was observed in the host plant more than sixty and it caused significant losses to the papaya plants and ornamental plants in home garden.

A detailed survey of the area was carried out with the assistance of extension officers of the relevant district. A package of control practices were recommended and biological control agent *Acerophagus papayae* was imported from Puerto Rico APHIS and released into several infested locations. At present damage is under control.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

–

Web source for further information: –

Policies (regarding invasive/migratory species management)	**Yes**	**No**	**Don't know**
National strategy to control serious field pest outbreaks?	x		
National strategy to control migratory or periodically occurring pests?		x	
National strategy to eradicate serious newly invaded exotic pests?	x		
Other policies:			
List of legislation/regulations/rules for surveillance, pest reporting and emergency actions:			
Web source for further information: –			

Organization of Plant Protection Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Field Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	MOA/DOA/SCPPC/PPS
Surveillance	MOA, DOA, SCPPC, PPS, DD (District)
Control	MOA, DOA, SCPPC, PPS, DD (District)
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	MOA, DOA, SCPPC, PPS, MOE, CEA
Surveillance	MOE
Control	MOA, DOA, SCPPC, PPS, DD (District)
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MOA, DOA, SCPPC, PPS, MOE, CEA, MOP
Surveillance	MOA, DOA, SCPPC, PPS, CRI
Control/eradication	MOA, DOA, SCPPC, PPS, CRI
Reporting to international organizations	

Infrastructure	Years: 2007-2008
Number of designated staff for **surveillance** of field pests of national importance	
Number of designated staff for **surveillance** of migratory and periodically occurring pests	
Number of designated staff for **surveillance** of invasive species	
Number of designated staff for **control** of field pests of national importance	
Number of designated staff for **control** of migratory and periodically occurring pests	
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year 2007:			
Total number for year 2008:			
Total number on record	–	–	–

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Pass way			
Location of first discovery			
Area affected [ha]			
Area treated [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	*Paracoccus marginatus* (Papaya Mealy Bug)		
Year of outbreak	2008		
Area affected [ha]	600 ha		
Estimated damage $			
Area treated [ha]			
Control method	*		
Expenditures			
Add more if necessary			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Lack of trained staff and infrastructure.

*
- Remove & burn heavily infested plants & plant parts
- Collect & burn leaves and debris found under infested cultivations
- Wash off the insects from slightly infested plants using a garden horse
- Spray a mixture of 2 tsp of washing powder, 1 tsp of kerosene oil in 1 ltre of water for valuable foliage plants
- Released parasitoid (*Acerophagus papaye*) in 2009 May

IV. PEST MANAGEMENT

Last updated: December 2008

Executive Summary

During the period under review the most significant change in the pest management in Sri Lanka, is the appointment of National Committee to revise the Plant Protection Act No. 35 of 1999, to make necessary changes to meet the present day requirements and submission of a new set of regulations under the Act.

The country has embarked on several pest management programmes for control of specific pests. Shortage in resource like funds, trained staff, machinery, and equipments always hinders the progress of the programme. Despite the problems encountered the centre has achieved most of the targets.

The Integrated Pest Management (IPM) strategy that was practiced in rice cultivation is now extended to vegetable and other plantation crops by using Farmer Field School (FFS) training approach. After the successful implementation of IPM Programme, a new programme was initiated in the country incorporating mosquito vector management into the IPM Programme, called Integrated Pest and Vector Management (IPVM) Programme, funded by UNEP.

Due to multidisciplinary nature of the programme it required the involvement of several stakeholder departments, like the Department of Agriculture, the Department of Health and Mahaweli Authority of Sri Lanka (MASL) . This itself was a unique experience, integrating agriculture with health for the purpose of providing a better service and upgrading the livelihoods of rural communities.

In order to sustain the programme, IPVM clubs were formed in village where FFS training activities were conducted so that farmers themselves could continue the activities they learnt at the FFS while disseminating that knowledge to other farmers.

Another development in the past two years is the preparation of regulations under Plant Protection Act No. 35, 1999, to control of Coconut Leaf Rot Disease and Weligama Cococnut Wilt Disease in southern region of Sri Lanka.

Water hyacinth and Salvinea molesta have been identified as principal invasive weeds that require adoption of biological control methods. Rearing facilities of biocontrol agent *Cytobagous salviniae* has been improved and four regional rearing units were also established during the last two years for biological control programme of salvinea.

In addition, biocontrol agent of water hyacinth, *Neochatina bruchi* was imported from Thailand and introduced into water bodies after completing the necessary host specific test.

List of Key Legislation/Regulations/Rules for Pest Management

–

Web source for further information: –

Policies (regarding pest management)	Yes	No	Don't know
Do you have policies encouraging organic or low-pesticide use	x		
Is IPM specifically mentioned in laws or policy documents?	x		
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x		
Is pest management extension separate from general extension?		x	
Other policies:			
List of legislation/regulations/rules for pest management: 1999 Plant Protection Act No. 35			
Web source for further information: www.agridept.gov.lk			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MOA, DOA, SCPPC, PPS, ROP
Pest management research	HORDI, RRI
Control recommendations	MOA, DOA, SCPPC, PPS, ROP, HORDI, RRI
Pest management extension	MOA, DOA, SCPPC, PPS, D/Extension, DD/Extension (District)
IPM training	MOA, DOA, SCPPC, PPS
GAP training	MOA, DOA, SCPPC, PPS, ROP

Infrastructure	Years: 2007-2008
Number of officers for pest management	15
Number of regional offices	2
Number of field/provincial/state	
Number of field/extension agents for pest management advice	4 200
Number of field/extension agents trained in IPM-FFS facilitation	300
Number of government biocontrol facilities	3
Number of government biopesticide production facilities	01

Key Situation and Operation Indicators

Pest Management	Yes	No	Don't know
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* PPS	x		
Does the country have special IPM extension programmes? *If yes, in which crops?: Rice, vegetables*	x		
Does the country have special IPM research programmes? *If yes, in which crops?: Leafy vegetables*	x		

Market shares (estimated value, volume or area under control)	Years: 2007-2008
Size of chemical pest control market	
Size of biopesticides market	
Size of biological control agents market	Not available

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	Chilli	Potato	Bitter gourd
Name(s) of pest(s)	Leaf curl, Pod borer, Blight, Anthracnose	Blight, Aphids, Cutworm, Leaf miner	Fruit fly, Curling of leaves, Mites, Leaf miner
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used	14	15.2	14
Government action taken			

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
REAP – Vegetable IPM	FAO	SL Rs.1 000 000	1984-2003
IPVM – Rice	UNEP		2002-2007
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Years: 2007-2008**
Number of farmers trained in IPM during the year	4 500
Number of IPM-FFS conducted during the year	250
Number of farmers trained in GAP standards during the year	60
Area under IPM/low pesticide management [ha]	Not available
Crops in which successful IPM Programmes are implemented: paddy, cabbage, tomato	
Area under organic/pesticide-free management [ha]	
Crops grown organic/pesticide-free: Tea, Fruits, most of vegetables	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Training in IPM has been increased Number of crops adopting IPM has been increased. Integrated Pest and Vector Management (IPVM) Programme has been implemented.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Lack of trained staff and technical knowledge.

V. PESTICIDE MANAGEMENT

Last updated: December 2008

Executive Summary

The mandate of the Office of the Registrar of Pesticides is to execute statutory provisions of the Control of Pesticides Act No. 33 of 1980. The pesticide registration is the key provision in the course of life cycle management of pesticides in the country from importation through marketing of crops treated with pesticides. During the period, 182 registration applications and 319 re-registrations have been completed conforming to the international guidelines and test protocols ensuring acceptability on safety, efficacy and environmental grounds.

The issuance of import approvals is entertained on certain quality assuring protocols for pesticide products entering into the country. Apart from procedural control measures, 2 093 formulation analyses have been carried out, prior to marketing, covering 1 118 import consignments during the above period. Under the National Organic Standard Certification Project, the laboratory was upgraded with a number of analytical and ancillary instruments including GCs and GCMS for over Rs. 20 mn. Further, Rs. 11.3 million was contracted for lab space expansion which is under construction.

Regulatory decisions were taken to phase out two insecticides (viz., dimethoate and fenthion) and a weedicide (viz., paraquat) based on unacceptable risks, especially acute poisoning associated with liberal use of these pesticides within the country.

List of Key Legislation/Regulations/Rules

1989 Control of Pesticides Act. No. 33
1994 Control of Pesticides (Amendment) Act No. 06.

Web source for further information: –

Policies (regarding pesticide management)	Yes	No	Don't know
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		x	
Have you ratified the Rotterdam (PIC) Convention?	x		
Have you ratified the Stockholm (POP) Convention?	x		
Have your ratified the Basel Convention? (hazardous wastes)	x		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x		
Have you adopted Good Laboratory Practices (GLP)?		x	
Pesticide Registration			
Do you require pesticides to conform to relevant FAO or WHO specifications?	x		
Do you allow the "me-too" registration and sale of generic pesticides?		x	
Do you require data on product equivalence for generic registration?	x		
Do you conduct country-specific risk assessments for…			
occupational risks?		x	
consumer risks?	x		
environmental risks?	x		
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labeling?		x	

Do you accept evaluation results from other countries?	x		
Do you accept field studies conducted in other countries?	x		
Do you require environmental fate studies?	x		
Incentives/Disincentives			
Do you have a special tax on pesticides to cover externality costs?		x	
Do you subsidize or provide low-cost pesticides?		x	
Do you subsidize or provide low-cost biopesticides?		x	
Other policies:			
Web source for further information: agridept.gov.lk			

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	MOA/DOA/SCPPC/ROP
Registration	MOA/DOA/SCPPC/ROP
Licensing of shops	MOA/DOA/SCPPC/ROP
Licensing of field professional applicators	MOA/DOA/SCPPC/ROP
Enforcement/inspections	MOA/DOA/SCPPC/ROP
Testing of pesticide efficacy	MOA/DOA/SCPPC/ROP and Research Institutes
Development of pesticide use recommendations	MOA/DOA/SCPPC/ROP
Safe use training/extension	MOA/DOA
Food residue monitoring	MOA/DOA, MOH
Environmental monitoring	MOA/DOA, MOE, CEA
Health monitoring	MOH
Other Stakeholders:	
Pesticide Industry Association	Crop Life Sri Lanka
Civil Society Organizations (NGO, etc.)	VIKALPANI Federation; Centre for Environmental Justice

Infrastructure	Years: 2007-2008
Number of registration officers	28 (total)
Number of enforcement officers	380
Number of department quality control laboratories	01
Number of quality control laboratory personnel	02
Number of department residue analysis laboratories	01
Number of residue laboratory personnel	02

Key Situation Indicators

Pesticide Trade: 2007	Tons	US$ '000 Value
Imports (Agro-pesticides)	6 265.13	23 151.03
Manufacture (Agro-pesticides)	205.45	1 367.43
Export	480	37.38
Sales (Agro-pesticides)	7 615.85	

Pesticide Use Profile: 2007	Tons	US$ '000 Value
Agriculture		
– Chemical pesticides Insecticides	1 309.39	Not available
Fungicides	723.75	Not available
Herbicides	4 231.94	Not available
– Other (Biopesticides)	Not available	Not available
Veterinary	Not available	Not available
Public Health	Not available	Not available
Household	Not available	Not available
Other	Not available	Not available
TOTAL	6 265.13	Not available

Testing, Quality Control and Effects in the Field	Yes	No	Don't know
Do you have significant problems with low-quality pesticides in the market?	x		
Do you have significant problems with pesticide resistance?	x		
Do you have a list of pesticides under close observation for problems			
Source for more information: –			

Health and Environmental Information	Yes	No	Don't know
Do you maintain data on pesticide poisoning cases?	x		
Do you have a system to monitor pesticide residues in food?	x		
Do you have a system to monitor pesticide residues in the environment?		x	
Do you have significant problems of environmental contamination from pesticides?			x
Do you have data on pesticides effects on wildlife and ecosystems?		x	
Source for more information: –			

Pesticide Disposal	Yes	No	Don't know
Do you have services to collect and safely dispose of used containers and small quantities of left-over pesticides?		x	
Do you have an inventory of outdated and obsolete pesticides in the country?	x		
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		x	
Source for more information: –			

Key Operation Indicators

Registration/Regulation/Monitoring	Year: 2008	
	a.i.*	Trade Name
Number of registered pesticide products	259	1 093
Number of registered biopesticides (Abamectrin, BT)	02	05
Number of restricted-use pesticides	53	110
Number of banned pesticides	43	185
Number of licensed outlets	1 454	
Number of licensed field applicators (Professionals or farmers)	32	
Number of licensing violations reported during year	Not available	

Number of quality control analyses conducted during year	1 333
Number of food samples analyzed for pesticide residues during year	121
Number of samples exceeding MRL	None
Number of environmental samples analyzed for pesticide residues	07

* active ingredient

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

- Decision to phase out paraquat, dimethoate, fenthion
- Prohibition of use of chlorpyrifos in household environment
- Regulations on pest control operators

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

- Technical staff for registration evaluations, and chemical analysis
- Financial support for chemical analyses and field enforcements

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.19 THAILAND

I. GENERAL INFORMATION

Last updated: June 2009

Overall Executive Summary

The Plant Quarantine Act B.E. 2507 (1952) amended by the Plant Quarantine Act (No. 2) B.E. 2542 (1999) and Plant Quarantine Act (No. 3) B.E. 2551 (2008) have been enforced by the Department of Agriculture (DOA). The Plant Quarantine Act (No. 3) provides specifications and criteria for notification of plants, plant pests and carriers as prohibited articles. DOA has recently given a number of notifications to strengthen the quarantine practices for both export plants and plant products and import prohibited articles.

In 2008, the outbreak of an unknown species of mealybug occurred in some cassava plantations. The new pest caused more severe damage to cassava than striped mealybug, *Ferrisia vergata*.

DOA has recently conducted a detection survey of mango seed weevil, *Sternochetus mangiferae*. The purpose is to confirm that Thailand is free from this weevil and to expand the export market for Thai mango.

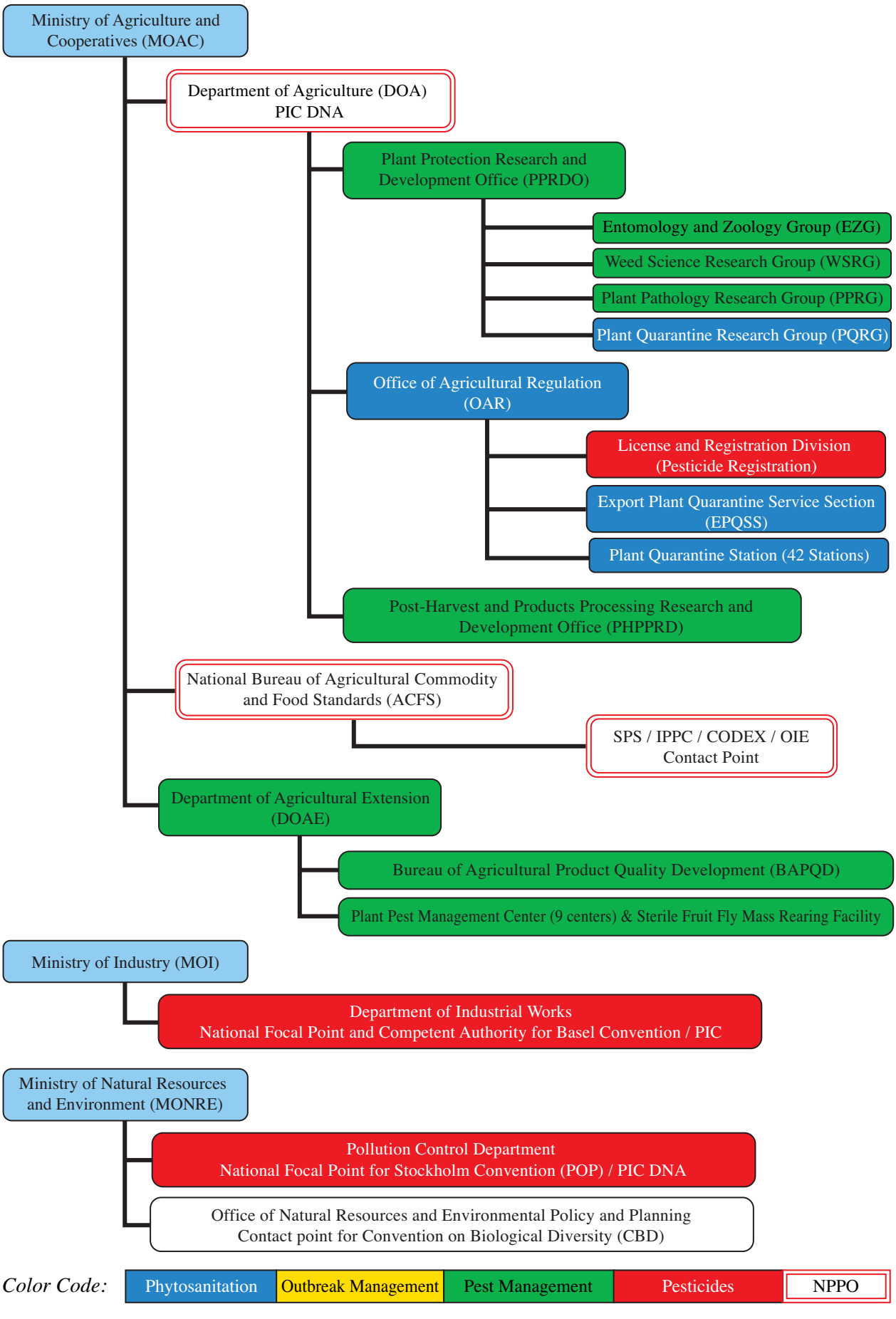
During 2007-2008, the Department of Agricultural Extension (DOAE) has not changed the national policy on IPM Programme. However, a number of IPM training programmes and farmer field schools had to be curtailed, due to the budget constraint. Farmers' education placed emphasis on changing the attitude of the farmers who applied highly toxic pesticides and on helping them understand the good principles of Good Agricultural Practices (GAPs). The farmers were also encouraged to use bio-agents to replace or alternate with chemical pesticides.

Since the end of 2007, under the project entitled "Using Integrated Pest Management for Decreasing Risk of Plant Pest Infestation", DOAE has put efforts to develop farmers into "Pests Management Professionals in IPM", to reduce damage to farmers crops, to encourage less investment, and to enhance community participation.

Area-wide IPM of fruit fly control programme using the Sterile Insect Technique (SIT) has been carried out over a large area. However, its success largely depends on adequate and timely financial support from the government.

The Hazardous Substances Act B.E. 2535 (1992) was amended in 2008 and is enforced. DOA gave a notification on registration and licensing, which requires pesticide companies or laboratories to adopt the Good Laboratory Practices (GLPs).

Plant Protection Organization Chart



Important Contact Addresses

Responsible Ministry/Ministries

Ministry of Agriculture and Cooperatives (MOAC)
Permanent Secretary
Ministry of Agriculture and Cooperatives
Rajadamnern Nok Rd., Bangkok 10200
Tel: 662-281-5955 # 206, 662-281-0858 # 259
Fax: 662-281-3513
Website: www.moac.go.th

Responsible Department

Department of Agriculture (DOA)
Director General,
Department of Agriculture
50 Phaholyothin Rd., Chatuchak, Bangkok 10900
Tel: 662-579-9636
Fax: 662-940-5528
Website: www.doa.go.th

Address for nominations

–

National Plant Protection Organisation (NPPO) of Thailand

Department of Agriculture (DOA)
Ministry of Agriculture and Cooperatives
Director General,
Department of Agriculture
50 Phaholyothin Rd., Chatuchak, Bangkok 10900
Tel: 662-579-9636
Fax: 662-940-5528
Website: www.doa.go.th

Operational Offices of Plant Protection in DOA:

Plant Quarantine

Director, Office of Agricultural Regulation (OAR)
Department of Agriculture
Ministry of Agriculture and Cooperatives
50 Phaholyothin Rd., Chatuchak, Bangkok 10900
Tel: 662-579-8576
Fax: 662-579-5084
Website: www.doa.go.th

Technical Support Group of plant quarantine

Plant Quarantine Research Group (PQRG)
Plant Protection Research and Development Office (PPRDO)
Department of Agriculture
50 Phaholyothin Rd., Chatuchak, Bangkok 10900
Tel: 662-579-8516
Fax: 662-561-0744
Website: www.doa.go.th

Contact Point (for IPPC/APPPC)

Director, Office of Commodity and System Standards
National Bureau of Agricultural Commodity and Food Standards (ACFS)
Ministry of Agriculture and Cooperatives
50 Phaholyothin Rd., Chatuchak, Bangkok 10900
Tel: 662-561-2277
Fax: 662-561-3373, 662-561-3357
E-mail: ippc@acfs.go.th
Website: www.acfs.go.th

Surveillance, Pest Outbreaks and Invasive Species Management

1. Director, Plant Protection Research and Development Office (PPRDO)
   Department of Agriculture
   Ministry of Agriculture and Cooperatives
   50 Phaholyothin Rd., Chatuchak, Bangkok 10900
   Tel: 662-579-5583 # 249
   Fax: 662-940-5396
   Website: www.doa.go.th

2. Director, Post-Harvest and Products Processing Research and Development Office (PHPPRD)
   Department of Agriculture
   Ministry of Agriculture and Cooperatives
   50 Phaholyothin Rd., Chatuchak, Bangkok 10900
   Tel: 662-940-6362
   Fax: 662-940-6364
   Website: www.doa.go.th

3. Director, Bureau of Agricultural Product Quality Development (BAPQD)
   Department of Agricultural Extension
   2143/1 Phaholyothin Rd., Chatuchak, Bangkok 10900
   Tel: 662-940-6190
   Fax: 662- 940-6190
   Website: www.doae.go.th

Pest Management

1. Director, Plant Protection Research and Development Office (PPRDO)
   Department of Agriculture
   Ministry of Agriculture and Cooperatives
   50 Phaholyothin Rd., Chatuchak, Bangkok 10900
   Tel: 662-579-5583 # 249
   Fax: 662-940-5396
   Website: www.doa.go.th

2. Director, Post-Harvest and Products Processing Research and Development Office (PHPPRD)
   Department of Agriculture
   Ministry of Agriculture and Cooperatives
   50 Phaholyothin Rd., Chatuchak, Bangkok 10900
   Tel: 662-940-6362
   Fax: 662-940-6364
   Website: www.doa.go.th

3. Director, Bureau of Agricultural Product Quality Development (BAPQD)
   Department of Agricultural Extension
   2143/1 Phaholyothin Rd., Chatuchak, Bangkok 10900
   Tel: 662-940-6190
   Fax: 662 940-6190
   Website: www.doae.go.th

Pesticide Management

License and Registration Division
Director, Office of Agricultural Regulation (OAR)
Department of Agriculture
Ministry of Agriculture and Cooperatives
50 Phaholyothin Rd., Chatuchak, Bangkok 10900
Tel: 662-579-8576
Fax: 662-579-5084
Website: www.doa.go.th

Official International Contact Points

WTO SPS Contact Point

National Bureau of Agricultural Commodity and Food Standards (ACFS)
Ministry of Agriculture and Cooperatives
50 Phaholyothin Rd., Chatuchak, Bangkok 10900
Tel: 662-561-4034
Fax: 662-561-4204
E-mail/Internet: sps@acfs.go.th
Website: www.acfs.go.th

Rotterdam Convention (PIC) DNA Pesticides (P)

Director, Office of Agricultural Regulation (OAR)
Department of Agriculture
Ministry of Agriculture and Cooperatives
50 Phaholyothin Rd., Chatuchak, Bangkok 10900
Tel: 662-579-8576
Fax: 662-579-5084
Website: www.doa.go.th

Stockholm Convention (POP) National Focal Point (P)

Pollution Control Department
Ministry of Natural Resources and Environment
92 Soi Phaholyothin 7 Sam Sen Nai, Phayathai, Bangkok 10400
Tel: 662-298-2457 / 298-2766
Fax: 662-298-2425
Website: www.pcd.go.th

Basel Convention Competent Authority (CA) and Focal Point (FP)

1. Department of Industrial Works
   Ministry of Industry
   75/6 Rama VI Road, Ratchatewi
   Bangkok 10400
   Tel: 662-202-4228 or 662-245-7874
   Fax: 662-202-4015
   Website: www.diw.go.th

2. Pollution Control Department
   Ministry of Natural Resources and Environment
   92 Soi Phaholyothin 7, Phaholyothin Rd.
   Phayathai District
   Bangkok 10400
   Tel: 662-298-2238, 2427 or 2447
   Fax: 662-298-2425
   Website: www.pcd.go.th

The Montreal Protocol

1. Director, Office of Agricultural Regulation (OAR)
   Department of Agriculture
   Ministry of Agriculture and Cooperatives
   50 Phaholyothin Rd., Chatuchak, Bangkok 10900
   Tel: 662-579-8576
   Fax: 662-579-5084
   Website: www.doa.go.th

2. Department of Industrial Works
Ministry of Industry
75/6 Rama VI Road, Ratchatewi
Bangkok 10400
Tel: 662-202-4228 or 245-7874
Fax: 662-202-4015
E-mail: basel@narai.diw.go.th

Selected Country Statistics (2007)

Agricultural Population	29.7 million	Agricultural Land	20.85 million ha
GDP $121 703 million	Agric. GDP: 11.40%	GNI per capita: $3 400	Undernourishment: 20%
Main crops grown: rice, para rubber tree, orchids, corn			

GDP = Gross Domestic Product; GNI = Gross National Income; Hunger = Population below minimum energy requirement

II. PLANT QUARANTINE

Last updated: June 2009

Executive Summary

The Plant Quarantine Act B.E. 2507 (1952) amended by the Plant Quarantine Act (No. 2) B.E. 2542 (1999) and Plant Quarantine Act (No .3) B.E. 2551 (2008) have been enforced by the Department of Agriculture (DOA), the Ministry of Agriculture and Cooperatives (MOAC).

The Plant Quarantine Act (No. 3) B.E. 2551 (2008) which was published in the Royal Gazette in May 2008 contains 26 Sections which provide specifications and criteria for notification of plants, plant pests and carriers as prohibited articles, adding power to control the exportation of specific controlled plants, as well as enhancing power of plant quarantine officers toward an effective prevention of exotic plant pests and diseases.

During 2007-2008, the Department of Agriculture (DOA) issued five of Notifications of the Ministry of Agriculture and Cooperatives and eight of its own Notifications to strengthen the quarantine practices for both export plants and plant products and import prohibited articles.

List of Key Legislation/Regulations/Rules

1. Plant Quarantine Act. B.E. 2507 (1964) amended by Plant Quarantine Act (No. 2) B.E. 2542 (1999) Plant Quarantine Act. (No. 3) B.E. 2551 (2008)
2. Notification of Ministry of Agriculture and Cooperatives on
   - 2.1 Specification of plants and carriers from certain sources as prohibited articles, of exceptions and conditions under the Plant Quarantine Act B.E. 2507 (1964) (No. 5) B.E. 2550 (2007)
   - 2.2 Specification of plants from certain sources as restricted articles, of exceptions and conditions under the Plant Quarantine Act B.E. 2507 (1964) B.E. 2550 (2007)
   - 2.3 Specification of plant pests as prohibited articles under the Plant Quarantine Act B.E. 2507 (1964) (No. 6) B.E. 2550 (2007)
   - 2.4 Specification of plant pests as prohibited articles under the Plant Quarantine Act B.E. 2507 (1964) (No. 7) B.E. 2550 (2007)
   - 2.5 Specification of plant from certain sources as prohibited articles, of exceptions and conditions under the Plant Quarantine Act B.E. 2507 (1964) (No. 8) B.E. 2550 (2007)
3. Notification of Department of Agriculture on
   - 3.1 Specifications, methods and conditions of pest risk analysis for the importation of prohibited articles
   - 3.2 Request for issuance of phytosanitary certificate for export fresh fruit and vegetable to European Union B.E. 2550 (2007)
   - 3.3 Criteria, procedures and conditions for the request for and issuance of phytosanitary certificate for export fresh fruits and vegetables to European Union B.E. 2550 (2007)
   - 3.4 Criteria, procedures and conditions for the request for and issuance of phytosanitary certificate for export fresh fruits and vegetables to Norway B.E. 2551 (2008)
   - 3.5 Specifications, methods and conditions for the importation of bat feces B.E. 2551 (2008)
   - 3.6 Criteria, procedures and conditions for the importation or bringing in transit of prohibited, restricted and unprohibited articles B.E. 2551 (2008)
   - 3.7 Criteria procedure and condition for the request for and issuance of phytosanitary certificate and phytosanitary certificate for re-export B.E. 2551 (2008)

3.8 Criteria, procedures and conditions for the importation of prohibited articles after the completion of pest risk analysis B.E. 2551 (2008)

Web source for further information: http://www.doa.go.th

Policies (regarding plant quarantine)	**Yes**	**No**
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?	x	
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress)		
Web source for further information: http://www.doa.go.th, http://www.acfs.go.th		

Organization of Plant Quarantine Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Pest Risk Assessment	MOAC/DOA/PPRDO/PQRG
National standards development	MOAC/DOA/OAR, PPRDO MOAC/ACFS
International notifications	MOAC/DOA/OAR, PPRDO/PQRG MOAC/ACFS
Import:	
Import permits	MOAC/DOA/OAR
Import inspections	MOAC/DOA/OAR/PQ Stations MOAC/DOA/PPRDO/PQRG
Emergency action	MOAC/DOA/OAR/PPRDO/PQ Stations
Export:	
Phytosanitary certificates	MOAC/DOA/OAR/Export PQ Service, PQ Stations MOAC/DOA/PPRDO/PQRG
Treatment of commodities	MOAC/DOA/OAR/Export PQ Service, PQ Stations MOAC/DOA/PPRDO/PQRG

Infrastructure	**Year: 2009**
Number of plant quarantine officers authorized to inspect/certify	90
Total qualified personnel for plant pest risk assessment	7
Number of quarantine offices	
entry points (sea/air/land/mail = total)	42
post-entry plant quarantine containment facilities	5
other offices	–
Number of quarantine service diagnosis laboratories	9
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	7
Number of laboratories for bacteria samples	6
Number of laboratories for virus samples	6
Number of laboratories for fungus samples	7
Number of laboratories for mycoplasma samples	3
Number of laboratories for nematode samples	6
Number of laboratories for plant/weed samples	7
Number of laboratories for other pests (snail, slug, rodents, etc.)	2

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MOAC/DOA/PPRDO
– surveillance	MOAC/DOA/PPRDO
– management	MOAC/DOA/PPRDO
– certification	MOAC/DOA/PPRDO

List of target pest species and crops ISPM 4	Number of sites in 2009
–	–
List of target pest species and crops ISPM 10	**Number of sites in 2009**
Xanthomonas axonopodis pv. *citri*, pummelo	1

Key Situation Indicators

International Trade		Year: 2009
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Soybean	Brazil, USA, Argentina	1 723 273
Maize	Laos, Cambodia	424 963
Wheat	USA, Australia, Canada	N/A
Main Export Plant Commodities	Main destination countries	Quantity (tons)
Rice	Iran, Iraq, USA	12 988 996
Cassava	People Republic of China, Spain	3 098 313
Maize	Indonesia	339 504

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Cooperation for the Improvement of Phytosanitary Capacity in Asian Countries through capacity building (GCP/RAS/226/JPN) "The FAO Regional Training Workshop on Pest Risk Analysis"	FAO		2008-2009
Plant Biosecurity: Technological research and training for improved pest diagnostics in Thailand and Australia	Australia		2008-2010
Title of government follow-up programmes		Amount	Years (start-end)
–			

Key Operation Indicators

Institutional Functions	Year: 2009
Number of import permits issued	158 (2008)
Number of import inspections carried out	43 692
Number of emergency phytosanitary treatments taken on imports	6
Number notifications of non-compliance	53
Number of conventional phytosanitary certificates issued	255 153
Number of electronic phytosanitary certificates issued	–

Number of quarantine pests intercepted		Year:
Top three commodity	Top three pest/commodity	# of interceptions

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests	2009	128	193	39
Number of regulated non-quarantine pests	–	–	–	–
Number of regulated import articles	2009	Prohibited articles: 1. Fresh fruits of plants in 23 species, 25 genus and 2 families 2. Any part of plants in 8 species, 11 genus and 1 families 3. Soil, organic fertilizer, agricultural micro-organisms, animal pests of plant, earthworms, insects, mites, nematodes, snails, slugs, weeds, parasites and predators. Restricted articles: 1. Dry tea leave, fresh coffee beans, cotton lint, white rice, broken rice, parboil rice Any part of plants in 20 species, 18 genus and 1 family		
Web source for further information: www.doa.go.th				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)	–	–	2
PRA in process for tomato seed, onion, apple, shallot, corn seed, grape and garlic Web source for further information: http://www.doa.go.th			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
1. Irradiation as a phytosanitary treatment training (22-27 January 2006) 2. SPS awareness and Plant diseases specimen preservation, curation and data management (9-12 April 2006) 3. Operation of radiation machine, dose mapping in irradiation treatment facility (4-8 September 2006) 4. Workshop on Plant Disease specimen preservation, curation and data management (19 January – 2 February 2007) 5. Workshop on diagnostics of key plant pathogenic fungi (29 January – 2 February 2007) 6. Detection method of potato mop top virus in potato tuber (20-25 October 2007) 7. Commercial irradiation treatment facility for treat fresh fruits to the United States. (2007) 8. Risk mitigation workshop for plant quarantine (26-30 May 2008) 9. Workshop on SPS awareness (19 January – 2 February 2007, 18-25 August 2008) 10. Workshop on diagnostics of key arthropod pest (21-25 August 2008) 11. Setting two Thai Agricultural Standards entitled Phytosanitary measure: Diagnostic protocols for regulated pests and Diagnostic protocols for *Pantoea stewartii* subsp. stewartii bacterial wilt of maize. (2008)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Skilled personnel, SPS capacity building, PQ. Treatment facilities, communication network (international and domestic), diagnosis facilities, and administration.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x			x		
ISPM 02 Guidelines for pest risk analysis			x	x				
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x				x	
ISPM 04 Requirements for the establishment of pest free areas	x			x				
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x		x			
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area		x			x			
ISPM 09 Guidelines for pest eradication programmes		x			x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management	x			x				
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application	x			x				
ISPM 17 Pest reporting		x				x		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x				x	
ISPM 19 Guidelines on lists of regulated pests			x				x	
ISPM 20 Guidelines for a phytosanitary import regulatory system			x				x	
ISPM 21 Pest risk analysis for regulated non-quarantine pests	x			x				
ISPM 22 Requirements for the establishment of areas of low pest prevalence	x			x				
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures	x			x				
ISPM 25 Consignments in transit		x		x				
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)	x			x				
ISPM 27 Diagnostic protocols for regulated pests		x			x			
ISPM 28 Phytosanitary treatments for regulated pests		x				x		
ISPM 29 Recognition of pest free areas and areas of low pest prevalence	x			x				
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)		x			x			
ISPM 31 Methodologies for sampling of consignments	x			x				
ISPM 32 Categorization of commodities according to their pest risk	x			x				
Comments/Constraints – **Translation ISPM into Thai version**								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: June 2009

Executive Summary

A new pest outbreak was detected in some cassava plantations in early 2008. The unknown species of mealybug caused more severe damage to cassava than striped mealybug, *Ferrisia vergata*. The new pest was collected for taxonomic identification.

The Department of Agriculture (DOA) conducts the detection survey of mango seed weevil, *Sternochetus mangiferae* in order to provide information supporting that Thailand is free from this weevil. This enables the country to expand the export market for Thai mango.

List of Key Legislation/Regulations/Rules for surveillance, pest reporting and emergency actions

- Plant Quarantine Act. B.E. 2507 (1964) Amended by Plant Quarantine Act (2nd edition) B.E. 2542 (1999) and Plant Quarantine Act (3rd edition) B.E. 2551 (2008)

Web source for further information: www.doa.go.th

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.) Alien invasive species, Ministry of Natural Resources and Environment		
Web source for further information: www.pcd.go.th		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, boll worm, etc.)
Response strategy/plans	MOAC/DOA/PPRDO, PHPPRD MOAC/DOAE/BAPQD
Surveillance	MOAC/DOA/PPRDO MOAC/DOAE/BAPQD
Control	MOAC/DOA/PPRDO, PHPPRD MOAC/DOAE/BAPQD
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	MOAC/DOA/PPRDO
Surveillance	MOAC/DOA/PPRDO MOAC/DOAE/BAPQD
Control	MOAC/DOA/PPRDO MOAC/DOAE/BAPQD
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MOAC/DOA/PPRDO, OAR
Surveillance	MOAC/DOA/PPRDO MOAC/DOAE/BAPQD
Control/eradication	MOAC/DOA/PPRDO MOAC/DOAE/BAPQD
Reporting to bilateral or international organizations	MOAC/DOA MOAC/ACFS

Infrastructure	Year: 2009
Number of designated staff for **surveillance** of field pests of national importance	Staffs from DOA/PPRDO – Entomology and Zoology Group, – Weed Science Research Group, – Plant Pathology Group Total = 112 staffs DOAE/BAPQD, trained Staff on plant pest surveillance and control over 76 provinces, 9 plant pest management center, 1 fruit fly control group including volunteer growers over 300 persons.
Number of designated staff for **surveillance** of migratory and periodically occurring pests	
Number of designated staff for **surveillance** of invasive species	
Number of designated staff for **control** of field pests of national importance	
Number of designated staff for **control** of migratory and periodically occurring pests	
Number of designated staff for **eradication** of invasive species	

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: [most recent]	–	–	–
Total number for year: [year before]	–	–	–
Total number on record	–	–	–

Eradication or internal quarantine actions taken against economically important species			
Name of species			
Year of first discovery			
Pass way			
Location of first discovery			
Area affected [ha]			
Area treated [ha]			
Control method			
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species			
Year of outbreak			
Area affected [ha]			
Estimated damage $			
Area treated by government [ha]			
Expenditures by government [$]			
Control method			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Detection Survey for Mango Seed Weevil, *Sternochetus mangiferae* (Fabricius) (Insecta: Coleoptera: Curculionidae) in Thailand (2009)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
Skilled personnel, experiences, identification

IV. PEST MANAGEMENT

Last updated: June 2009

Executive Summary

During 2007-2008, MOAC did not change the national policy on IPM Programme. The country's key economic crops included rice, okra, asparagus, fruit crops, vegetables, field crops, and orchids.

However, the budget constraint had an impact on IPM activities. The Department of Agricultural Extension (DOAE) had to decrease the number of training programmes and farmer field schools (FFS). As regards the main IPM Programme, DOAE still encouraged the farmers' education and knowledge development, with focus on the change of attitude of farmers using highly toxic pesticides. The education helped them understand the principles and the framework of Good Agricultural Practices (GAPs).

The main component of the IPM implementation is to encourage farmers to use biological control. A number of bio-agents are introduced to replace or alternate with chemical pesticides.

Since the end of 2007, DOAE has set the project entitled "Using Integrated Pest Management for Decreasing Risk of Plant Pest Infestation" as the main activity of the Community Plant Pest Management Center. The objects of the project are to develop farmers into "Pests Management Professionals in IPM", to reduce damage to farmers crops, to encourage less investment, and to enhance community participation in the project.

Technology transfer in the project mainly relies on the adaptation process of FFS. To ensure the product safety for consumers from pesticide residues, products will be tested for chemical residues before being harvested.

Area-wide IPM of fruit fly control programme using the Sterile Insect Technique (SIT) has been carried out over a large area, and sometimes involves a major facility and a lot of equipment. The required financial resource may also be large. Even though a programme might be economical on a benefit/cost basis, it is not always affordable. Obtaining operating funds can be the most important issue facing a programme. Adequate financial resource affects the programme strategy and operations as well as the duration and reliability of programme support. In the case of Thailand's programme, financial support from the government is essential for the stability and success of the programme. Sometimes the government support is unreliable or not delivered in a timely manner. For a biological programme, this can easily cause delays, uncertainty, unnecessary repetitions of work, and even a programme failure.

The basic requirements for scaling up the pilot project to a national level include not only a complex procedure of incorporating new and better technologies but also the support of the government officials who have to be convinced. This often poses a huge challenge.

List of Key Legislation/Regulations/Rules for Pest Management

Pesticide Act:

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or ***policy documents***?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?	x	
Other policies: (subsidies, production inputs, etc.) IPM, control of pesticide use, reduction of pesticide use.		
Web source for further information: www.doa.go.th, www.doae.go.th		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MOAC/DOA, MOAC/DOAE/BAPQD MOAC/ACFS
Pest management research	MOAC/DOA/PPRDO
Control recommendations	MOAC/DOA/PPRDO
Pest management extension	MOAC/DOA MOAC/DOAE/BAPQD
IPM training	MOAC/DOA MOAC/DOAE/BAPQD
GAP training	MOAC/DOA MOAC/DOAE/BAPQD

Infrastructure	Year: 2009
Number of technical officers for pest management	DOAE = 67
Number of central, regional, provincial or state offices	DOAE = 10, 6, 76
Number of district and village level field offices	DOAE = 780 districts
Number of field/extension agents for pest management advice	DOAE = 7 111
Number of field/extension agents trained in IPM-FFS facilitation	DOAE = 7 111
Number of government biocontrol production/distribution facilities	DOAE = 9 plant pest management centers and 1 sterile fruit fly mass rearing facility
Number of government biopesticide production/distribution facilities	DOAE = 9 plant pest management centers
Number of general extension staff involved in pest management	DOAE = 7 111
Number of designated plant protection technical officers for extension	DOAE = 67

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* IPM Programme 1: IPM development on economic crops Address: MOAC/DOA/PPRDO IPM Programme 2: Area-wide Integrated Control of fruit flies Address: MOAC/DOAE/BAPQD IPM Programme 3: Establishment of Community Plant Pest Management Center Address: MOAC/DOAE/BAPQD	x	

Does the country have specific IPM extension programmes? *If yes, in which crops?:* baby corn, orchid, rice, sugarcane, mango, okra, mangosteen, asparagus, chilli and pomelo	x	
Does the country have specific IPM research programmes? *If yes, in which crops?:* pumelo, tangerine, longan, ginger.	x	
Does the country have specific GAP extension programmes? *If yes, in which crops?:* mango, longan, chilli, mangosteen, pomelo, rice, green leaf vegetable, asparagus, orchid, baby corn, pineapple, fruit crops and field crops.	x	
Does the country have specific GAP research programmes? *If yes, in which crops?:* (Durian, longan, orchid, fresh orchid cut flower, pineapple, pomelo, coffee, non-heading type chinese cabbage, tomato, asparagus, chinese kale, onion, cabbage, chilli, yard long bean, sugar pea, baby corn, chinese cabbage, shallot, cassava, rubber, mango, tangerine, curcuma)	x	

Market shares (estimated value, volume or area under control)	**Year: 2009**
Size of chemical pest control market	98%
Size of biopesticides market	1%
Size of biological control agents market	1%

Major pest control requiring crops (requiring most pesticide applications)	**1st**	**2nd**	**3rd**
Affected crop	Para rubber tree	Oil Palm tree	Tangerine
Name(s) of pest(s)	Annual weed	Annual weed	Leave minor
Estimated crop loss	Unestimatable	Unestimatable	Unestimatable
Affected area	Unestimatable	Unestimatable	Unestimatable
Number of pesticide applications or amount of pesticide used	2-3/yr	2-3/yr	5/7 days spray interval (70/48/yr)
Government action taken	Appropriated Application techniques		

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	**Year:**
Number of farmers trained in IPM during the year	13 600 (2008-2009)
Number of IPM-FFS conducted during the year	13 600 (2008-2009)
Number of farmers trained in GAP standards during the year	310 000 (2008-2009)
Area under IPM/low pesticide management [ha]	N/A
Area under organic/pesticide-free management [ha]	Over 12 provinces 440 farm owners
Crops in which IPM or other ecology friendly programmes are successfully implemented: asparagus, baby corn, orchid cut flowers, okra	
Crops grown organic/pesticide-free: rice, banana	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
There are a large number of small farmers/growers in Thailand, therefore it is very difficult for implementation.

V. PESTICIDE MANAGEMENT

Last updated: June 2009

Executive Summary

The Hazardous Substances Act B.E. 2535 (1992) was amended in B.E. 2551 (2008) and is enforced. Under this Act, the Department of Agriculture (DOA), the Ministry of Agriculture and Cooperatives, gave the Notification on Registration and Licensing with DOA responsible for issuing hazardous substances certificates. The main purpose of this Notification is to require pesticide companies or laboratories to adopt the Good Laboratory Practices (GLPs).

List of Key Legislation/Regulations/Rules

(year, title and possibly short description)

1. The Hazardous Substances Act B.E. 2535 (1992) amended by The Hazardous Substances Act (No. 3) B.E. 2551 (2008)
2. Ministerial Regulation (B.E. 2537/1994) (3 regulations issued under Hazardous Substances Act B.E. 2535 (1992))
3. Notification of Ministry of Industry on
   - 3.1. List of Hazardous Substances
   - 3.2. Hazardous Substances According to Section 3 "Civil Obligation and Responsibility" B.E. 2538/1995
4. Notification of Ministry of Agriculture and Cooperatives on
   - 4.1. Registration of Hazardous Substances under Responsibility of Department of Agriculture B.E. 2551 (2008)
   - 4.2. Determination of Deviation from the Specified Quantity of Active Ingredient Hazardous Substance
   - 4.3. Label and Toxicity Level of Hazardous Substances
   - 4.4. Criteria and Procedure for Production, Import and Possession of Hazardous Substances under Responsibility of Department of Agriculture
   - 4.5. Appointment of Hazardous Substances Act B.E. 2535 (1992) Officials
   - 4.6. Exemption for Implementation of Hazardous Substances Act B.E. 2535 (1992)
   - 4.7. Managing of Type IV (Banned) Hazardous Substances
   - 4.8. Determination of Storage Site for Possession of Hazardous Substances
   - 4.9. Specification of Hazardous Substances (One Notification for one pesticide, already done on paraquat dichloride and sodium nitrate)
5. Notifications of Department of Agriculture on
   - 5.1. Determination on Details, Criteria and Procedure for Pesticide Registration
   - 5.2. Notification on Action Made concerning Type II Hazardous Substances
   - 5.3. Criteria, procedure and condition on determination of trade name of hazardous substances
   - 5.4. Determination of experimental design and report on efficacy test of hazardous substances
   - 5.5. Efficacy test areas
6. Rules of Department of Agriculture
   - 6.1. Application for Possession of Hazardous Substances in Provinces other than Bangkok B.E. 2539 (1996)

Web source: www.doa.go.th, www.diw.go.th

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:* ***25% in 2009***	x	
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (CH_3Br phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?	x	
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?	x	
consumer risks?	x	
environmental risks?	x	
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?	x	
Do you accept evaluation results from other countries?	x	
Do you accept field studies conducted in other countries?	x	
Do you require environmental fate studies?	x	
Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?		x
Other policies:		
Web source for further information: www.doa.go.th, www.diw.go.th		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	MOAC/DOA/OAR MOI
Registration	MOAC/DOA/OAR
Licensing of shops	MOAC/DOA/OAR
Licensing of field applicators	MOAC/DOA/OAR
Enforcement/inspections	MOAC/DOA/OAR
Testing of pesticide efficacy	MOAC/DOA/PPRDO, PHPPRD
Development of pesticide use recommendations	MOAC/DOA/PPRDO, PHPPRD
Safe use training/extension	MOAC/DOA MOAC/DOAE TABA TCPA
Food residue monitoring	MOAC/DOA MOPH/FDA
Environmental monitoring	MOAC/DOA MONRE/DOPC
Health monitoring	MOPH

Other Stakeholders:	
Pesticide Industry Association	Thai Agri-Business Assoc (TABA); Thai Crop Protection Assoc (TCPA)
Civil Society Organizations (NGO, etc.)	

Infrastructure	Year: 2009
Number of registration officers	8
Number of enforcement officers	234
Number of department quality control laboratories	9
Number of quality control laboratory personnel	10
Number of department residue analysis laboratories	13
Number of residue laboratory personnel	18

Key Situation Indicators

Pesticide Trade:	Tons	$ '000 Value
Imports	62 870	548 049
Manufacture	N/A	N/A
Export	930.77	N/A
Domestic Use/Sales	N/A	N/A
Pesticide Use Profile:	**Tons (a.i./formulation to be specified)**	**$ '000 Value**
Agriculture	62 022	542 011
Chem. Insecticides	9 470 (15.06%)	130 784 (23.86%)
Chem. Fungicides	7 098 (11.29%)	72 486 (13.23%)
Chem. Herbicides	44 063 (70.09%)	328 201 (59.89%)
Chem. Others: e.g. molluscicide, acaricide	1 391 (2.21%)	10 540 (1.92%)
Other: e.g. Avamectrin, Bt, Neem	–	–
Other purposes e.g. PGR	848 (1.35%)	6 038 (1.10%)
TOTAL	***62 870***	***548 049***

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance?	x	
Do you have a list of pesticides under close observation for problems	x	
Source for more information:		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?	x	
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?	x	
Do you have significant problems of environmental contamination from pesticides?		x
Do you have data on pesticides effects on wildlife and ecosystems?		x
Source for more information: www.doa.go.th , www.pcd.go.th		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____	x	
Source for more information:		

Key Operation Indicators

Registration/Regulation/Monitoring	Year: 2009	
	a.i.*	Trade Name
Number of registered pesticide products	416	22 920
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)	9	N/A
Number of restricted-use pesticides/formulations	11	N/A
Number of banned pesticides	96	
Number of licensed outlets	11 009	
Number of licensed field applicators (professional and/or farmers)	1 290	
Number of licensing violations reported during year	165	
Number of quality control analyses conducted during year	3 677	
Number of food samples analyzed for pesticide residues during year	10 123	
Number of samples exceeding MRL	–	
Number of environmental samples analyzed for pesticide residues	21	

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation
2009	According to annex II of country report

Pesticides Banned in Recent Years	
Year	Name of active ingredient
2009	According to annex I of country report

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
National Methyl Bromide Phase-out Plan	Multilateral Fund		
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
List of banned/prohibited pesticides in 2005
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

VI. ADDITIONAL ISSUES OF CONCERN (Last updated: June 2009)

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.20 VIET NAM

I. GENERAL INFORMATION

Overall Executive Summary

Outstanding Issues

During the last two years (2007-2008), Viet Nam continued to strengthen and improve its plant health system. The Plant Protection Department (PPD) is the National Plant Protection Organization (NPPO) responsible for carrying out the functions specified in the International Plant Protection Convention (IPPC), and for overseeing the agricultural plant safeguarding system. The mission statement of PPD for this new period is *"to become a highly effective, efficient and professional NPPO with the capacities and competencies to protect the nation's plant health status and biodiversity and promote market access for plant and plant products in compliance with international agreements and standards"*.

Plant Protection

The plant health functional responsibilities in Viet Nam are delegated to 2 layers: central and provincial levels. PPD has a substantial network at the provincial level with Plant Protection Sub Departments (PPSDs) in 63 cities and provinces, managing and implementing plant health programme.

The National IPM Programme has IPM trainers in all 63 provinces of Viet Nam, IPM FFSs have been conducted in more than 95 percent of the communes growing rice nationwide involving over 10 percent of farm households. IPM has been expanded to vegetables, cotton, maize, sweet potato, tea and citrus. FFS have been followed-up with various forms of community activities including establishment of IPM clubs and farmer groups, application of System of Rice Intensification at field level. The National IPM Programme actively supports the National Safe Vegetable Programme by developing IPM aligned to principles of GAP, thereby contributing to improving food safety.

During 2007-2009, brown plant hoppers and associated stunt virus diseases have been successfully controlled with improved cropping patterns. Viet Nam has also strengthened technical cooperation with neighbouring countries in surveillance and control of rice migratory pests for effective management of these pests at regional level. Sugarcane grassy shoot disease has recently emerged and become a serious problem in sugarcane plantations. In 2008 alone, more than 5 000 ha of sugarcane were infested with this disease. Viet Nam is seeking international support to address this problem.

Viet Nam has ratified and implemented all conventions related to pesticides and pesticide regulations/decisions have been amended in compliance with the International Code of Conduct on the Distribution and Use of Pesticides. Up until March of 2009, 877 a.i. with 2 537 trade names have been registered for use, 16 a.i. including 29 trade names restricted and another 29 a.i. have been banned for use.

Plant Quarantine

Pest record/identification

During the period from 2007-2008, 104 cases of quarantine pest interception were reported, including:

- Bacterial wilt of maize (*Pantoea stewartii* (Smith) Mergaert et al) intercepted on maize imported into Viet Nam from Thailand.
- Potato tuber moth (*Phthorimaea operculella* (Zeller 1873) intercepted on potato imported from China.
- Khapra beetle (*Trogoderma granarium* Everts) intercepted on coconut oil-cake of Indonesia, wheat bran of Srilanca.

New regulations/decisions:

- Decree No. 02/2007/ND-CP of the government on plant quarantine dated 5 January **2007**.
- Decision No. 34/2007/QD-BNN of 23 April **2007** publishing the list of regulated articles subject to pest risk analysis before importing into Viet Nam.
- Decision No. 48/2007/QD-BNN of 29 May **2007**, Regulation on Procedure for the issuance of the phytosanitary import permit for articles subject to pest risk analysis before importing into Viet Nam.
- Decision No. 89/QD-BNN of 29 October **2007** of Minister of Agriculture and Rural Development promulgating regulations on state management on fumigation practice for regulated articles.
- New Law on Plant Protection is being drafted and will be submitted to the National Assembly by the end of 2010 for endorsement.

Projects/programme cooperation:

- Improvement of Plant Quarantine treatment against Fruit Fly on fresh fruits (JICA), finished 2008.
- Dragon fruit has been approved and entered into U.S. market since October 2008.
- Two irradiation treatment facilities established in ABC Company and Son Son Company.
- One vapor heat treatment facility is being built.
- Viet Nam Methyl bromide phase out plan: ongoing with World Bank funding.
- NZAID phytosanitary capacity building in the Mekong region: going to terminate, (NPD development still ongoing).

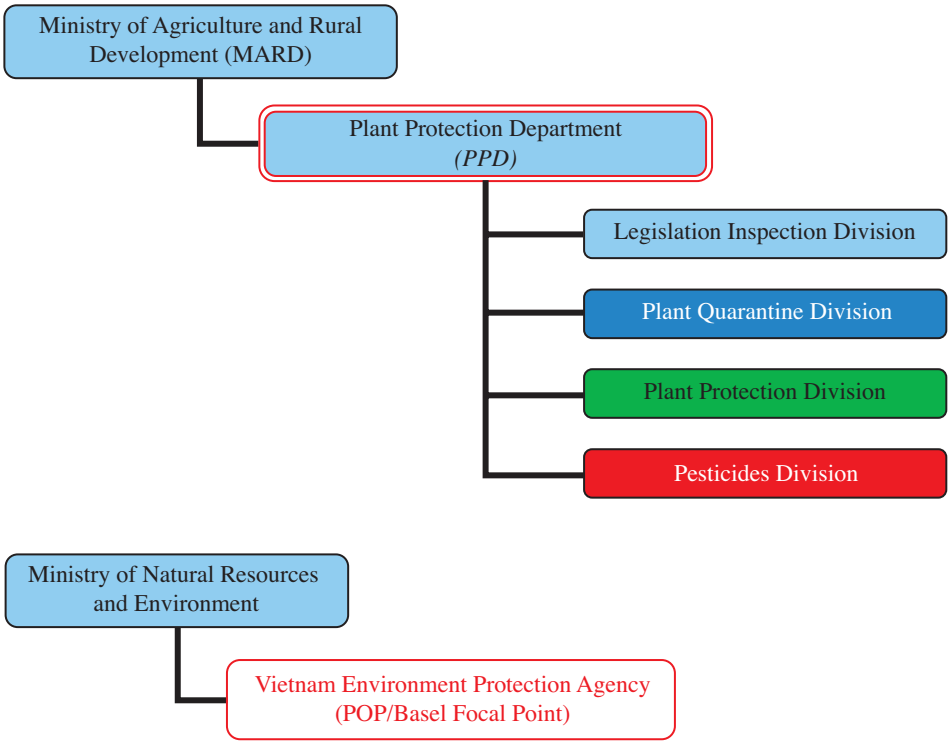
Achievements:

- BPH and Grassy stunt viruses were successfully control in past two years by using IPM Community approach for BPH control/management with assistance from FAO/TCP Project.
- Coconut beetle was also under controlled by introduction of new parasites from Samoa under FAO/TCP Project.
- Many quarantine pests found in two years (104 times).
- Successful Technical Market Access to U.S., Japan.
- Established equipment of vapor heat treatment and irradiation for fresh fruits exported.
- National Capacity building in Phytosanitary was put in high priority in agriculture sector.

Viet Nam is the process of drafting a Bill on Plant Protection. The draft bill will be submitted to the National Assembly (Parliament) by the end of 2010. Once enacted, the new law will have a substantial impact on the plant protection in Viet Nam. As a result, the following plant protection profile of Viet Nam is **not yet updated**.

Plant Protection Organization Chart

The information presented below is not updated and is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.



Color Code: Phytosanitation | Outbreak Management | Pest Management | Pesticides | NPPO

Important Contact Addresses

Responsible Ministry

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Mr Le Van Minh, Director General
International Cooperation Department
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Hanoi, Viet Nam
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Fax: (+84) 4 7330752
E-mail: icd.mard@fpt.vn
Website: http://210.245.60.189/en/

National Plant Protection Organization

Plant Protection Department
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Ministry of Agriculture and Rural Development
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Hanoi, Viet Nam
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Fax: (+84) 4 8574719 / 5330043
E-mail: trudq@fpt.vn
Website: http://www.ppd.gov.vn

Address for nominations

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Tel: (+84) 4 8518198
Fax: (+84) 4 8574719 / 5330043
E-mail: trudq@fpt.vn
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Operational Offices:

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Surveillance, Pest Outbreaks and Invasive Species Management

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Pesticide Registration

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Website: http://www.ppd.gov.vn

Official International Contact Points

National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)

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WTO SPS Contact Point

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Rotterdam Convention (PIC) DNA Pesticides (P)

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Stockholm Convention (POP) National Focal Point (P)

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Basel Convention Competent Authority (CA) and Focal Point

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Montreal Protocol Focal Point

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Website: http://www.noccop.org.vn/

Selected Country Statistics

Agricultural Population	63.15 million	Agricultural Land	9.0 million ha
GDP $45.2 billion	Agric. GDP: 21.8%	GNI per capita: $620	Undernourishment: 17%
Main crops grown:			

GDP = Gross Domestic Product; GNI = Gross National Income; Hunger = Population below minimum energy requirement

II. PLANT QUARANTINE

The information presented below is not updated and is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.

List of Key Legislation/Regulations/Rules

2001 Ordinance on the Plant Protection and Quarantine, Order No. 11/2001/L of 8 August 2001

2002 Regulation on Plant Protection, the Regulation on Plant Quarantine and the Regulation on Management of Plant Protection chemical, Decree No. 58/2002/ND-CP of 3 June 2002

2004 Decision 16/2004/BNN-BVTV of 20 July 2004 of the Minister of Agriculture and Rural Development providing Procedures for Plant Quarantine Inspection and Recording of Regulated Articles.

2005 List of Regulated Articles of the S.R.Vietnam, Decision No. 73/2005/QD-BNN of 14 November 2005 (MARD).

2005 List of Plant Quarantine Pests of the S.R.Vietnam, Decision No. 72/2005/QD-BNN of 14 November 2005 (MARD).

Web sources for further information: https://www.ppd.gov.vn; https://www.ippc.int

Policies (regarding plant quarantine)	**Yes**	**No**
Does phytosanitary legislation cover domestic quarantine?	x	
Does phytosanitary legislation cover import quarantine?	x	
Does phytosanitary legislation cover export quarantine?	x	
Does phytosanitary legislation cover living modified organisms?		x
Is plant quarantine a separate organization from animal quarantine?	x	
Other policy initiatives (under review/progress)		
Web source for further information:		

Organization of Plant Quarantine Functions	**Responsible Organizational Unit** (Ministry/Department/Unit)
Pest Risk Analysis	MARD/PPD
National standards development	MARD/PPD
International notifications	MARD
Import:	
Import permits	MARD/PPD
Import inspections	MARD/PPD
Emergency action	MARD/PPD
Export:	
Phytosanitary certificates	MARD/PPD
Treatment of commodities	Fumigation companies under PPD'authorization.

Infrastructure	**Year: 2005**
Number of plant quarantine officers authorized to inspect/certify	413
Total qualified personnel for plant pest risk analysis	14
Quarantine offices	
entry points (sea/air/land/mail = total)	67
post-entry plant quarantine containment facilities	2
other offices	12
Quarantine service diagnosis laboratories	12

In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	15
Number of laboratories for bacteria samples	10
Number of laboratories for virus samples	2
Number of laboratories for fungus samples	15
Number of laboratories for mycoplasma samples	12
Number of laboratories for nematode samples	15
Number of laboratories for plant/weed samples	13
Number of laboratories for other pests (snail, slug, rodents, etc.)	5

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MARD/PPD
– surveillance	MARD/PPD
– management	MARD/PPD
– certification	MARD/PPD
List of target pest species and crops ISPM 4	Number of sites in [year]
List of target pest species and crops ISPM 10	Number of sites in [year]

Key Situation Indicators

International Trade		Year: 2005
Main Import Plant Commodities	Main countries/areas of origin	Quantity (tons)
Malt	French, Australia, Denmark, Belgium, England, Germany	158 614
Wheat	USA, Australia, China, Russia, India	719 117
Maize	USA, China, Japan, India	55 000
Main Export Plant Commodities	Main destination countries	
Coffee	USA, Belgium, England, Germany, French, Italy, Poland, Japan, Korea, Spain.	974 759
Rice	Indonesia, Philippines, Malaysia Nigeria, Algeri, Congo...	4 059 738
Pepper	India, Pakistan, EU...	111 913

Cooperation Projects			
Title (Purpose/Target)	Donor	Amount	Years (start-end)
Phytosanitary Capacity Building Project for the Mekong Region	NZAID		2002-2005
Improvement of Plant Quarantine treatment against Fruit Fly on fresh fruits	JICA		2005-2007
Intergrating effective phosphine fumigation practices into grain storage system in China, Viet Nam and Australia	ACIAR		2001-2004

Title of government follow-up programmes	Amount	Years (start-end)
National Programme for surveying and detecting early quarantine pests	$10 000 per year	2005
National pests survey programme for plants and plant products in Viet Nam	$100 000	2005-2007

Key Operation Indicators

Institutional Functions	Year: 2005
Number of import permits issued	400
Number of import inspections carried out	1 259
Number of emergency phytosanitary treatments taken on imports	1 259
Number notifications of non-compliance	
Number of conventional phytosanitary certificates issued	100 643
Number of electronic phytosanitary certificates issued	

Number of quarantine pests intercepted		Year:
Top three commodity	Top three pest/commodity	# of interceptions

Lists of Regulated Pests	Year of last update	Insects	Pathogens	Plants
Number of quarantine pests	2005	25	21	11
Number of regulated non-quarantine pests				
Number of regulated import articles				
Web source for further information:				

Pest Risk Analysis	Insects	Pathogens	Plants
No. of PRA completed and documented (according to ISPM)			5
Web source for further information: https://www.ppd.gov.vn			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

- There were several legal documents, phytosanitary standards/procedures reviewed and established in accordance with International Regulations.
- Maintaining cooperation with other countries in managing pests, training, exchanging information, supporting technical equipment, etc.

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

- Human resources shortage, including lack of leading and experienced experts in applying international phytosanitary standards, carrying out PRA, qualified staff for inspecting, testing and verify the equivalence of phytosanitary measures, etc.
- Database to serve phytosanitary operations is not adequate
- Legal document system is inadequate and inconsistent
- Infrastructure and equipment is still poor.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
International Measures	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade		x				x		2001
ISPM 02 Guidelines for pest risk analysis			x		x			2001
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x	x				2008
ISPM 04 Requirements for the establishment of pest free areas		x			x			2006
ISPM 05 Glossary of phytosanitary terms			x		x			2007
ISPM 06 Guidelines for surveillance			x				x	2007
ISPM 07 Export certification system			x		x			2007
ISPM 08 Determination of pest status in an area			x				x	2006
ISPM 09 Guidelines for pest eradication programmes			x	x				2008
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x		x			2007
ISPM 11 Pest risk analysis for quarantine pests			x		x			2007
ISPM 12 Guidelines for phytosanitary certificates		x			x			2007
ISPM 13 Guidelines for the notification of noncompliance and emergency action		x		x				2008
ISPM 14 The use of integrated measures in a systems approach for pest risk management		x		x				2009
ISPM 15 Guidelines for regulating wood packaging material in international trade		x			x			2008
ISPM 16 Regulated non-quarantine pests: concept and application		x		x				2009
ISPM 17 Pest reporting		x		x				2008
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x		x				2010
ISPM 19 Guidelines on lists of regulated pests			x	x				2009
ISPM 20 Guidelines for a phytosanitary import regulatory system			x	x				2008
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x	x				2010
ISPM 22 Requirements for the establishment of areas of low pest prevalence		x		x				2010
ISPM 23 Guidelines for inspection		x		x				2008
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures		x			x			2009
ISPM 25 Consignments in transit		x		x				2010
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)		x		x				2010
ISPM 27 Diagnostic protocols for regulated pests			x	x				2008
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								

Comments/Constraints

Up to now, there are 27 ISPMs published by IPPC and several specifications are also developed accordingly. These are key documents for member countries to implement their standard harmonization.The implementation of ISPM in many countries is facing difficulties. Particularly, developing countries like Viet Nam. In general, requirements and regulation of ISPMs are normally higher than national standards. After comparative assessment between ISPMs and phytosanitary legal documents, the main gaps indicated that the awareness of stakeholders in respect to ISPMs is limited and there is not yet legal framework for some ISPMs so that the implementation of ISPMs could not apply at present condition of Viet Nam. Furthermore, human resources, technical capacity and technical information are big gaps in question, particularly existing capacity of PPD does not meet adequately requirements of these standards such as ISPM No. 4, 10, 11 and others.

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

The information presented below is not updated and is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.

List of Key Legislation/Regulations/Rules for Surveillance, Pest Reporting and Emergency Actions

2001 Ordinance on the Plant Protection and Quarantine, Order No. 11/2001/L of 8 August 2001

2002 Regulation on Plant Protection under Decree No. 58/2002/ND-CP of 3 June 2002

2005 Decision No. 82/2005/QD-BNN of 10 November 2005 (MARD) Pest surveying Procedure for crops.

Web source for further information: –

Policies (regarding invasive/migratory species management)	Yes	No
National strategy to control serious field pest outbreaks?	x	
National strategy to control migratory or periodically occurring pests?	x	
National strategy to eradicate serious newly invaded exotic pests?	x	
Other policies: (e.g. subsidies, etc.)		
Web source for further information: https://www.ppd.gov.vn		

Organization of Outbreak Management Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Field/Storage Pest Outbreaks	(e.g. BPH, bollworm, etc.)
Response strategy/plans	MARD/PPD
Surveillance	MARD/PPD
Control	MARD/PPD
Migratory Pest Outbreaks	(e.g. locusts, birds, armyworm)
Response strategy/plans	MARD/PPD
Surveillance	MARD/PPD
Control	MARD/PPD
New Exotic Pest Eradication	(e.g. coconut beetle)
Response strategy/plans	MARD/PPD
Surveillance	MARD/PPD/Plant Protection Sub-Departments
Control/eradication	MARD/PPD/Plant Protection Sub-Departments
Reporting to bilateral or international organizations	MARD/PPD

Infrastructure	Year: 2005
Number of designated staff for **surveillance** of field pests of national importance	1 200
Number of designated staff for **surveillance** of migratory and periodically occurring pests	800
Number of designated staff for **surveillance** of invasive species	100
Number of designated staff for **control** of field pests of national importance	2 000
Number of designated staff for **control** of migratory and periodically occurring pests	2 500
Number of designated staff for **eradication** of invasive species	100

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

New exotic species found established in country	Insects	Pathogens	Weeds
Total number for year: [most recent]			
Total number for year: 2004-2005	3		
Total number on record			

Eradication or internal quarantine actions taken against economically important species			
Name of species	Mexican Bean Weevil *Zabrotes subfasciatus*		
Year of first discovery	2005		
Passway	Commercial Bean		
Location of first discovery	Markets		
Area affected [ha]	Small		
Area treated [ha]	Small		
Control method	Fumigation		
Expenditures			

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	Brown planthopper *Nilaparvata lugens*		
Year of outbreak	2005		
Area affected [ha]	209.039 ha		
Estimated damage $			
Area treated by government [ha]	33 494		
Expenditures by government [$]	Insecticide		
Control method			
More information			

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

- Applying Geographical Information System (GIS) for pests surveillance and warning.
- There are several farmers and officers trained by IPM Programme.

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

- Fund for surveillance is limited.
- Knowledge of farmers needs to be improved.
- Lack of technical equipment.

IV. PEST MANAGEMENT

The information presented below is not updated and is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.

List of Key Legislation/Regulations/Rules for Pest Management

2001 Ordinance on the Plant Protection and Quarantine, Order No. 11/2001/L of 8 August 2001

2002 Regulation on Plant Protection, the Regulation on Plant Quarantine and the Regulation on Management of Plant Protection Drugs, Decree No. 58/2002/ND-CP of 3 June 2002

Web source for further information: https://www.ppd.gov.vn; https://www.ippc.int

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?	x	
Other policies: (subsidies, production inputs, etc.)		
Web source for further information: https://www.ppd.gov.vn		

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Policy development	MARD/PPD
Pest management research	MARD/PPD + National Inst. of Plant Protection (NIPP), Viet Nam Academy of Agriculture Sciences, Southern Fruit Research Institute (SOFRI)
Control recommendations	MARD/PPD + Institutes, Academy
Pest management extension	MARD/PPD
IPM training	MARD/PPD
GAP training	MARD/PPD

Infrastructure	Year: 2006
Number of technical officers for pest management	500
Number of central, regional, provincial or state offices	4 regions + 64 provinces
Number of district and village level field offices	1 000
Number of field/extension agents for pest management advice	64
Number of field/extension agents trained in IPM-FFS facilitation	90
Number of government biocontrol production/distribution facilities	2
Number of government biopesticide production/distribution facilities	2
Number of general extension staff involved in pest management	128
Number of designated plant protection technical officers for extension	128

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? *If yes, give Name and Address of IPM Programme:* National IPM Coordinator, PPD, Tel: 84 4 533 0778 E-mail: ipmppd@fpt.vn	x	
Does the country have specific IPM extension programmes? *If yes, in which crops?: Rice, cotton, vegetable, green tea, citrus, maize, sweet potato*	x	
Does the country have specific IPM research programmes? *If yes, in which crops?: Rice, cotton, vegetable*	x	
Does the country have specific GAP extension programmes? *If yes, in which crops?: Dragon fruit*	x	
Does the country have specific GAP research programmes? *If yes, in which crops?: vegetable*	x	

Market shares (estimated value, volume or area under control)	Year:
Size of chemical pest control market	
Size of biopesticides market	
Size of biological control agents market	

Major pest control requiring crops (requiring most pesticide applications)	1st	2nd	3rd
Affected crop	Rice		
Name(s) of pest(s)	Brown planthopper *Nilaparvata lugens*		
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken	Yes		

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
IPM on rice	Denmark		2000-2006
IPM on Vegetable	FAO		1996-2007
IPM on cotton	FAO-EU		1996-2004
IPM on tea	CIDSE (Norway)		1996 to now
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Pest Management Extension	Year: 2005
Number of farmers trained in IPM during the year	94 700
Number of IPM-FFS conducted during the year	176 *(vegetable)* 40 (cotton)
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	> 29 provinces (DANIDA)
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented: *Rice, cotton, vegetable*	
Crops grown organic/pesticide-free:	

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)

- IPM Training: 2 620 Trainers (Training of Trainers); 5 918 farmer trainers (training of farmer trainers); 31 185 FFS; 944 119 trained farmers (FFS).
  - Farmer analysis skills and critical thinking improved.
  - Farmers have become more independent in decision-making.
  - Positive impact on human health and environment. Farmer trainers play important role in developing district and commune agricultural development plans.
  - IPM field studies have had significant impact on provincial decision-maker in determining policy regarding recommendations on pesticide management, seed rates and nitrogen application.
- Impact of IPM: insecticides (-60%); all pesticides (-30%); seed rate (-16%); nitrogen (-15%); yield (+8%); input cost (-8%); income (16%).

Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

- It is difficult to control pests in the field.
- There is no method for controlling effectively BPH and stunt disease in practical conditions of Viet Nam.

V. PESTICIDE MANAGEMENT

The information presented below is not updated and is the same as the information presented earlier in the previous edition of the plant protection profiles from Asia-Pacific countries, which was published in 2007.

List of Key Legislation/Regulations/Rules

2002 Regulation on Management of Pesticide, issued together with the Government's Decree No. 58/2002/ND-CP of 3 June 2002

2002 Regulations on Procedures for Registration, Production, Formulating, Re-Packaging, Export, Import, Trading, Storage, Transport, Usage, Disposal, Labeling, Seminars and Advertisement of Pesticides, issued 18 December 2002 together with Decision No. 145/2002/QD-BNN issuance.

2003 Regulations on Control of Pesticide Quality and Residue and Field Trial of Pesticides for Registration in Viet Nam; Issued in conjunction with Decision No. 50/2003/QD-BNN dated 25 March 2003 by the Ministry of Agriculture and Rural Development.

2002 Regulation on the Issue Professional Certificate for Production, Formulation, Re-Packaging and Business of Pesticide, issued in conjunction with Decision No. 91/2002/QD-BNN on 11 October 2002 by the Ministry of Agriculture and Rural Development.

2005 List of Pesticide allowed to use, restriction and prohibition of usage in Viet Nam, issued with Decision No. 22/2005/QD-BNN of 22 April 2005 by the Ministry of Agriculture and Rural Development.

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? *If yes, what is the target:*_____		x
Have you ratified the Rotterdam (PIC) Convention?		x
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?		x
Have you adopted Good Laboratory Practices (GLP)?	x	
Pesticide Registration		
Do you require pesticides to conform to relevant FAO or WHO specifications?	x	
Do you allow the "me-too" registration and sale of generic pesticides?	x	
Do you require data on product equivalence for generic registration?	x	
Do you conduct country-specific risk assessments for…		
occupational risks?		x
consumer risks?		x
environmental risks?		x
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?	x	
Do you accept evaluation results from other countries?		x
Do you accept field studies conducted in other countries?		x
Do you require environmental fate studies?	x	

Incentives/Disincentives		
Do you have a special tax on pesticides to cover externality costs?		x
Do you subsidize or provide low-cost pesticides?		x
Do you subsidize or provide low-cost biopesticides?	x	

Organization of Plant Protection Functions	Responsible Organizational Unit (Ministry/Department/Unit)
Legislation	MARD/PPD
Registration	MARD/PPD
Licensing of shops	MARD/ State PPD
Licensing of field applicators	MARD/PPD
Enforcement/inspections	MARD/PPD/Inspection Division
Testing of pesticide efficacy	MARD/PPD/Pesticides Div/Pesticides Control Center North
Development of pesticide use recommendations	MARD/PPD
Safe use training/extension	MARD/PPD
Food residue monitoring	MARD/PPD
Environmental monitoring	Ministry of Natural Resources and Environment
Health monitoring	Ministry of Health
Other Stakeholders:	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	Vietnam Plant Protection Assoc. (VPPA)

Infrastructure	Year: 2005
Number of registration officers	6
Number of enforcement officers	2
Number of department quality control laboratories	2
Number of quality control laboratory personnel	24
Number of department residue analysis laboratories	2
Number of residue laboratory personnel	24

Key Situation Indicators

Pesticide Trade:	Tons	$ '000 Value
Imports	35 000	231 875
Manufacture		
Export		
Domestic Use/Sales		
Pesticide Use Profile: 2005	**Tons (a.i./formulation to be specified)**	**$ '000 Value**
Agriculture	35 000	
Chem. Insecticides	33%	
Chem. Fungicides	32%	
Chem. Herbicides	29%	
Chem. Others: e.g. molluscicide, acaricide	1%	
Other: e.g. Avamectrin, Bt, Neem		
Other purposes	328	
TOTAL	35 328	> 231 875

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance?	x	
Do you have a list of pesticides under close observation for problems		x
Source for more information: –		

Health and Environmental Information	Yes	No
Do you maintain data on pesticide poisoning cases?		x
Do you have a system to monitor pesticide residues in food?	x	
Do you have a system to monitor pesticide residues in the environment?	x	
Do you have significant problems of environmental contamination from pesticides?	x	
Do you have data on pesticides effects on wildlife and ecosystems?		x
Source for more information: –		

Pesticide Disposal	Yes	No
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	
Do you have an inventory of outdated and obsolete pesticides in the country? (e.g. banned and no longer traded, but still in storage)	x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____		x
Source for more information: –		

Key Operation Indicators

Registration/Regulation/Monitoring	Year:	
	a.i.*	Trade Name
Number of registered pesticide products	590	1 743
Number of registered biopesticides (Avamectrin, Bt, Neem, etc.)		60
Number of restricted-use pesticides/formulations	17	29
Number of banned pesticides	29	
Number of licensed outlets	updating	
Number of licensed field applicators (professional and/or farmers)	updating	
Number of licensing violations reported during year	>2 000	
Number of quality control analyses conducted during year	2 000	
Number of food samples analyzed for pesticide residues during year	updating	
Number of samples exceeding MRL	updating	
Number of environmental samples analyzed for pesticide residues	updating	

* active ingredient

Pesticides Restricted in Recent Years	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years	
Year	Name of active ingredient
2005-2006	updating

Cooperation Projects			
Purpose/Target	Donor	Amount	Years (start-end)
Purpose/Target of government follow-up programmes		Amount	Years (start-end)

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
• Legal document of pesticide management is more and more comprehensive • Number of Biopesticide increased • New equipments
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
• Lack of equipments for pesticide residue and quality analysis • Lack of human resource for this area • Pesticide resistance • Pesticide residue level on agricultural products is big issue

VI. ADDITIONAL ISSUES OF INTEREST

Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

Appendix I

Tables showing analyses of 25th session country reports

At the 25th Session of the Asia and Pacific Plant Protection Commission held in Beijing, China, from 27-31 August 2007, 19 country reports were presented by representatives of the Commission's member countries and Japan. The member countries were requested to follow the established guidelines for country reports. The topics covered by the reports were analyzed separately with details as follows:

CONTENTS

Analysis of Each Topic Covered by the Country Reports

1. Introduction

2. Outbreaks of Major Pests
- 2.1 General Reporting According to Guidelines
- 2.2 Crop with Pest Outbreaks
- 2.3 Causal Organism
- 2.4 New Invasive Species

3. Integrated Pest Management
- 3.1 National IPM Policy
- 3.2 IPM Programmes
- 3.3 Results from IPM Research
- 3.4 International Cooperation
- 3.5 Development of Pest Control
- 3.6 Pest Control Extension

4. Plant Quarantine
- 4.1 NPPO Structure and Organization
- 4.2 Implementation of ISPM ISPM 15: Wood Treatment
- 4.3 ISPM 2/11: Progress of Risk Assessment
- 4.4 ISPM 19: List of Regulated Pests
- 4.5 ISPM 10: Pest-free Places
- 4.6 Use of IPP for Information Exchange
- 4.7 Phytosanitary Capacity Evaluation and Training
- 4.8 Proposals for RSPMs and ISPMs

5. Pesticides
- 5.1 List of Regulations and Legislation
- 5.2 Status of Ratification and Implementation of Rotterdam Convention, Challenges and Opportunities
- 5.3 Implementation of International Code of Conduct
- 5.4 Monitoring and Management of Pesticide Residues
- 5.5 Development and Application Status of Biopesticides Including Botanical Pesticides
- 5.6 List of Banned/Prohibited Pesticides (Year, Insecticides, Fungicide, Herbicide)
- 5.7 Name and Address of National Authority for Pesticide Registration

6. Development of International Cooperation Projects or Programme for Plant Protection

7. Name of National Plant Protection Organization

8. Conclusion

Table 1: Report Guideline Topics Covered by the Country Reports

Table 2: Conclusion (in the Country Reports)

Guidelines for Country Report

1. Introduction

Guidelines for Country Report:

General review of progress including technical, policy/legal, infrastructural and institutional development and challenges in national plant protection since 2003.

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
1.1 Highlights																				
General Introduction			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	17
Highlights of progress																				
technical progress	IRA	IPM	x		x		x			x	x					x	x	x		10
new projects	x		x		x		x		x	x	x	x			x	x	x	x	x	13
policy/legal																				
new legislation			x	x		x	x	x	x	x	x	x				x	x	x	x	13
new policies			x	x			x	x	x	x	x	x			x	x	x	x	x	13
new infrastructure	x		x			x	x		x	x	x	x		x	x	x	x			12
institutional changes	x	x	x	x		x	x		x	x			x		x		x			11
challenges																				
lack of facilities		x				x			x	x	x						x			6
lack of qualif. pers.		x				x			x	x	x						x			6
lack of tech. assist.				x					x		x						x			4
global warming			x																	1

* Japan is not a member country of APPPC.

2. Outbreaks of Major Pests

Guidelines for Country Report:

Infested crops, causal organism, estimated loss; actions and areas covered by control measures; management of invasive species

2.1 General Reporting According to Guidelines

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
2.1 Responses																				
No response				x				x				x	x			x				5
infested crops		x	x		x	x	x			x	x				x			x	x	10
causal organisms		x	x		x	x	x		x	x	x			x				x	x	11
estimated loss		x																		1
control measures/area		x	x		x	x												x	x	6
invasive species	x	x	x			x								x	x		x	x	x	9

* Japan is not a member country of APPPC.

2.2 Crops with Pest Outbreaks

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
2.2 Crops																				
No response				x				x	x			x	x			x	x			7
Rice		x	x				x			x	x			x				x	x	8
Fruit					x	x					x			x						4
Vegetables											x			x						2
Corn																				
Coconut palms		x													x				x	3
Cotton											x			x						2
Sugarcane														x						1
Wheat			x																	1
Soy-/Mungbean																				
Potato						x					x									2
Peanut																				
Cassava																				
Sweet potato																				
Jute																				
Oil palms																				
Date Palm																				
Ornamental palms																				
Aquatic weeds																				
Mangoes					x						x			x				x		4
Others	x										x									2

* Japan is not a member country of APPPC.

2.3 Causal Organism

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
2.3 Pests																				
No response				x				x				x	x		x					5
No outbreaks																	x			1
BPH		x	x			x				x						x	x		x	7
rice stem borer			x																	1
Rodents										x										1
Armyworm																				0
Helicoverpa amigera																				0
Grasshopper/Locust			x		x	x														3
rice blast			x				x									x				3
rice leave beetle																				0
sheath blight																x				1
corn stem borer																				0
Diamond back moth		x						x												2
Swarm. caterpillar/rice																				0
rice water weevil																				0
rice sheath brown rot																				0
rice tungo virus																				0
potato 28-spotted beetle																				0
potato late blight																				0
red spider mite																				0
fruit fly					x	x								x				x		4
Golden Apple Snail		x								x										2
rhinoceros beetle																				0
Wooly aphid/sugarcane																				0
Others	x		x		x	x	x	x		x	x			x		x			x	11

* Japan is not a member country of APPPC.

2.4 New Invasive Species

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
2.4 Invasive Pests																				
Brontispa (Coconut beetle)		x							x						x				x	4
Citrus cancer																				
Current lettuce aphid																				
European house borer																				
Willow Sawfly																				
Stenocranus pacificus																				
Partenium weed																	x			1
Leaf miner Liriomyza																				
Phoma black stem sunfl.																				
coconut mite																				
White peach scale																				
Bean weevil																				
Mexican bean weevil																				
Salvinia																	x			1
Water Hyacinth																	x			1
Weedy rice																		x		1
# Species Reported		1			9				1						1		3	1	1	17

* Japan is not a member country of APPPC.

3. Integrated Pest Management

Guidelines for Country Report:

3.1 National IPM Policy

3.2 IPM Programmes
sources
amount of inputs
impact of implementation

3.3 Results from research
programmes concerned

3.4 International cooperation

3.5 Development of pests control
insect
diseases
nematodes
weeds

3.6 Pest control extension
small farmers

3.1 National IPM Policy

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
3.1 IPM Policy																				
no/vague response	x		x	x				x		x			x							6
IPM Policy/Planning			x			x	x		x		x	x		x	x	x	x	x	x	12
IPM legislation									x		x									2
IPM expert group:			x																	1
IPM Section/Stations		x	x		x						x									4
Natl. IPM funding						x												x		2
IPM practice guidelines							x													1
Policies promoting…																				0
End to pesticide subsidy																				0
Pesticide reduction targets			x		x	x										x		x		5
GAP standards			x			x					x			x	x		x	x		7
Organic product standards																	x			1
IPM accreditation												x								1

* Japan is not a member country of APPPC.

3.2 IPM Programmes

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
3.2 IPM Programme																				
no response	x			x						ICM			x							4
IPM Activities		x	x		x		x	x	x		x	x		x	x	x	x	x	x	14
National IPM Programme		x	x		x		x		x		x	x		x	x	x		x		11
IPM stations		x	x		x				x		x				x					6
Sources																				0
external support									x		x	x							x	4
only internal																				0
																				0
Impact																				0
Farm. pestic. reduct.		x	x		x									x		x	x	x		7
Yield/income increase		x	x		x												x	x		5
control/produc. efficency		x	x								x									3
reduced outbreaks			x														x			2
biopesticide increase			x		x			x	x							x	x			6
nat. pesticide reduction		x			x			x						x		x	x	x		7

* Japan is not a member country of APPPC.

3.3 Results from IPM Research

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
3.3 IPM Research																				
no response	x	x		x				x		ICM	x	x	x	x	x				x	11
Institutions																				0
ARC																				0
national IPM center					x				x											2
University																				0
Other/Project																				0
web database					x															1
Research Areas																				0
Invasive Species									x								x			2
Weed IPM																	x			1
Vector IPM																				0
Key pest density																		x		1
Biocontrol			x		x	x										x	x	x		6
Biopesticides			x		x	x										x	x	x		6
Chemical Control																x	x			2
Cultural control																	x			1
Resistance																	x			1
Biodiversity																				0
GM																				0
Crops, general			x		x	x			x							x	x			6
vegetables					x												x			2
fruits					x											x				2
rice					x				x							x				3
cotton																				0
corn																				0
sun flowers																				0
wheat																				0
sugarcane																				0
potato							x													1
soybean							x													1
tomato							x													1
strawberry							x													1
Others (okra, asparagus, orchid, etc.)																x		x		2

* Japan is not a member country of APPPC.

3.4 International Cooperation

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
3.4 International																				
no response													x	x						2
Internat. coop	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	17
external support		x	x		x	x			x		x	x					x		x	9
FAO									x	x	x	x					x		x	6
EU																	x			1
DANIDA																			x	1
Norway												x								1
ADB																				0
WB												x								1
IFAD																				0
Pacific Community				x																1
Reg. IPM Veg. Programme		x							x										x	3
Others (WTO, ASEAN, etc.)			x		x	x			x	x	x					x	x	x	x	10

* Japan is not a member country of APPPC.

3.5 Development of Pest Control

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
3.5 Pest Control																				
no response				x								x	x							3
insect	x		x		x	x	x		x	x	x			x		x	x	x		12
diseases	x		x		x				x	x	x			x		x	x	x		10
weeds																	x	x		2
nematodes						x														1
locust					x															1
																				0
Methods																				0
Biological control		x	x		x	x			x	x						x	x	x		9
Chemical		x				x			x	x	x			x		x	x	x	x	10
Biopesticides			x		x	x		x		x	x			x		x	x	x		10
Cultural/sanitation						x											x			2
Surveillance/Forecasting			x		x	x			x	x						x	x			7
Resistance			x							x					x		x			4
Mechanical/Physical			x							x				x	x					4
Natural control			x			x										x	x		x	5
Pheromones																x				1
Sterile insect technique																		x		1
Crops, general			x		x	x	x		x	x							x	x	x	9
rice		x	x		x		x		x	x				x		x	x	x	x	11
vegetables			x		x		x		x	x				x			x	x	x	9
fruits			x		x	x	x			x				x		x				7
cotton					x									x						2
plantation																				0
corn															x			x		2
flowers																				0
wheat																				0
sugarcane														x						1
coffee																				0
coconut		x																	x	2
strawberry							x													1
citrus																x		x		2

* Japan is not a member country of APPPC.

3.6 Pest Control Extension

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
3.6 Extension																				
no response	x			x			x			x			x		x					6
FFS		x	x		x	x		x	x		x	x				x	x	x		11
Master/IPM Trainers		x	x						x			x					x	x		6
Farmer trainers		x	x									x					x	x		5
Media, etc.			x								x			x		x		x		5
IPM demonstration																x				1
pest control service			x																	1
spray services/demos			x		x											x				3
biocontrol facilities					x											x		x	x	4
Neem factories											x							x		2

* Japan is not a member country of APPPC.

4. Plant Quarantine

Guidelines for Country Report:

1. *NPPO organization*
    a. *New or reorganized national plant protection organization (NPPO) structure with functions;*
    b. *Plant quarantine (external and domestic if appropriate) network;*
    c. *List of plant protection legislation, regulations, etc. with years promulgated;*
    d. *Highlights of significant updates of new or revised plant protection legislation and regulations;*
    e. *Name(s) and address of national plant quarantine authority-director general(s) and institution(s).*
2. *Status of Implementation of International Standards for Phytosanitary Measures (ISPMs) and APPPC Regional Standards for Photosanitary Measures (RSPMs), constraints; Planned time frame for implementation of ISPM 15.*
3. *Progress of pest risk analysis.*
4. *Progress in preparation of lists of regulated pests in accordance with ISPM 19.*
5. *Establishment of pest free places of production and pest free production sites.*
6. *Use of International Phytosanitary Portal (IPP) for information exchange, setting up national phytosanitary information website; other forms of distribution for the information.*
7. *Phytosanitary capacity evaluation (PCE); training on phytosanitary capacity building.*
8. *Proposal on Regional Standards for Phytosanitary Measures (RSPMs) and ISPMs to be set or revised; possible contribution for RSPM development to the Commission.*

4.1 NPPO Structure and Organization

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
4.1 NPPO																				
no response																			x	1
a. NPPO structure																				
Description of PQ	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		18
Description of PO			x																	1
organization chart										x			x							2
year of reorganization										x			x							2
b. Plant quarantine																				
personnel	x		x			x	x		x	x		x		x		x	x			10
facilities	x		x						x	x	x	x		x		x	x			9
c. Legislation/year		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x		15
d. Updates / plans	x		x	x		x	x		x	x	x	x		x	x	x	x	x		14
e. Quarantine address																				
(different from IPP point)																x				1

* Japan is not a member country of APPPC.

4.2 Implementation of ISPM

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
4.2 Status of ISPM																				
No answer				x				x				x						x		4
Vague answer	x	x	x			x			x		x		x		x	x			x	10
No problem																				0
details																				0
																				0
ISPM 01 – Principles										x										1
ISPM 02 – PRA	x										x		x	x			x			5
ISPM 03 – biocontrol										x										1
ISPM 04 – pest free areas																				0
ISPM 05 – glossery										x										1
ISPM 06 – surveillance										x	x									2
ISPM 07 – export certif										x										1
ISPM 08 – pest status										x										1
ISPM 09 – pest eradicatio										x										1
ISPM 10 – pest free sites			x							x			x		x					4
ISPM 11 – quaran pests	x																			1
ISPM 12 – phytosan certif										x										1
ISPM 13 – notif non-com										x				x						2
ISPM 14 – IPM										x										1
ISPM 15 – wood pack			x				x			x							x			4
ISPM 16 – regul non-quar										x										1
ISPM 17 – pest reporting										x										1
ISPM 18 – irradiation																				0
ISPM 19 – list of reg pest			x				x			x	x						x			5
ISPM 20 – import reg sys										x										1
ISPM 21 – regul non-quar			x		x		x													3
ISPM 22 – low pest										x										1
ISPM 23 – inspection										x										1
ISPM 24 – equivalence										x										1
ISPM 25 – consignments										x										1
ISPM 26 – fruit flies																				
ISPM 27 – protocols																				
RSPM 01 heat treatm																				
RSPM 02 training																				
RSPM 03 Tephritid free																				
RSPM 04 Thephritid stat																				
NSPM																				
preparation																				

* Japan is not a member country of APPPC

ISPM 15: Wood Treatment

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
ISPM 15							x													
No answer	x	x	x	x	x	x		x	x		x	x	x	x	x	x		x	x	16
import										x										1
export										x							x			2
treatment by MeBr																	x			1
treatment by heat treatm.																				

* Japan is not a member country of APPPC.

4.3 ISPM 2/11: Progress of PRA

Definition

Pest Risk Analysis: The process of evaluating biological or other scientific and economic evidence to determine whether a pest should be regulated and the strength of any phytosanitary measures to be taken against it [FAO, 1990; revised IPPC, 1997]

Pest Risk Analysis (PRA) consists of three stages: initiating the process for analyzing risk, assessing pest risk, and managing pest risk.

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
4.3 PRA																				
No answer/none		x		x				x	x	x		x			x	x			x	9
General response	x		x		x	x	x				x		x					x		8
Have used PRA	x		x		x		x						x	x			x	x		8
too difficult/lack experts																				0
Status																				0
Qua. Commodities																				0
Import Comm/origin	x				x															2

* Japan is not a member country of APPPC.

4.4 ISPM 19: List of Regulated Pests

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
4.4 ISPM 19 lists																				
No info	x	x		x	x			x	x			x		x	x			x	x	11
No list											x									1
List of Regulated pests			x			x	x			x			x				x			6
List quarantine pests														x		x				2
List non-quarantine pests																				

* Japan is not a member country of APPPC.

4.5 ISPM 10: Pest free Places

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
4.5 Pest free areas																				
No response	x	x		x	x		x	x	x					x		x		x	x	11
No sites						x				x		x					x			4
Have sites		x									x		x		x					4
NPPO verification																				0
external verification																				0
"private" sites																				0
Free of:																				
fruit fly		x								x										2
papaya ringspot virus																				0
white rust/chrysanthemum																				0
mango weevil															x					1
Apple/codling moth		x																		1
Others															x					1
Crops																				
pineapple																	x			1
tomato													x							1
potato													x							1
onions																				0
ornamentals																				0
cirus																				0
mangoes											x				x					2

* Japan is not a member country of APPPC.

4.6 Use of IPP for information exchange (updated in July 2009)

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
4.6 Use of IPP for information exchange **																				
IPPC contact point	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	18
IPP editor	1	1	1	3	1	2	5	2	3	9	4	2	1	1	1	1	1	2	1	42
Official pest report	25		2			2						1								30
Description of NPPO	1	1	1		3	1	1			1			1		1			1	1	13
Emergency actions	3																			3
Entry points	3				1		2			1		1	2					1		11
List of regulated pests	5	3	1										1			1			1	12
Phytosanitary restrictions	6	1	1		1	2	2			5			2		6			5	1	32
Rationale for phytosanitary requirements	5																			5
Non-compliance										1									2	3
Organizational arrangements													3							3
Pest status												1	1							2
Publications	10	4	2	3	2	2	2	2	2	9	2	2	3	2	2	1	3	2	12	67
News	8	1																		9
Websites	17	1	1		1	1				3			9		3		1		3	40
Projects	5	7	6	6	4	19		1	3	2	2	1		1	13	1	1	17	12	101
Members	3			2	2	2	2						5			6			1	23

* Japan is not a member country of APPPC.

** https://www.ippc.int/IPP/En/nppo.jsp

4.7 Phytosanitary Capacity Evaluation and Training

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
4.7 PCE																				
No answer	x	x	x	x	x	x		x	x			x	x	x	x	x		x	x	15
PCE conducted							x				x						x			3
Training needs assessm.																				0
Training																				
organized							x			x							x			3
participated										x							x			2
international							x			x							x			3
national																				0
Topics																				
PCE/building										x										1
pest risk analysis																				0
Phyto treatment										x										1
legislation										x										1
biosecurity																				

* Japan is not a member country of APPPC.

4.8 Proposals for RSPMs and ISPMs

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
4.8 Proposals																				
No proposal	x	x		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	17
RSPM			x							x										2
ISPM			x																	1
able to contribute	x						x			x	x						x			5

* Japan is not a member country of APPPC.

5. Pesticides

Guidelines for Country Report:

5.1 List of regulations and legislation

5.2 Status of ratification and implementation of Rotterdam Convention, challenges and opportunities

5.3 Implementation of International Code of Conduct

5.4 Monitoring and management of pesticide residues

5.5 Development and application status of biopesticides incl botanical pesticides

5.6 List of banned/prohibited pesticides (year, insecticide, fungicide, herbicide)

5.7 Name and address of national authority for pesticide registration

5.1 List of Regulations and Legislation

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
5.1 Legislation																				
No response	x			x									x							3
General response			x		x			x			x	x			x	x		x	x	9
List of legislation		x				x	x		x	x		x		x				x		8
																				0
Manufacture/export							x							x						2
Registered products							x			x	x			x		x		x	x	7
																				0
Consumption data											x	x								2
Local formulation																				0
Illegal import																				0

* Japan is not a member country of APPPC.

5.2 Status of Ratification and Implementation of Rotterdam Convention, Challenges and Opportunities

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
5.2 Rotterdam																				
No response	x	x	x	x	x	x						x	x	x				x		10
Vague/unknown								x	x		x				x				x	5
Rotterdam ratified							x			x						x	x			4
Rotterdam implemented							x			x	x					x	x			5
Actual ratification																				
Challenges																				
enforcement capacities																				0
risk assessment expertise																				0
stakeholder consensus																				0
m-parathion; monochrot.																				0

* Japan is not a member country of APPPC.

5.3 Implementation of International Code of Conduct

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
5.3 Code of Cond.																				
No/vague response	x	x	x	x		x		x	x			x	x	x	x	x			x	13
Implemented					x		x			x	x						x	x		6
																				0
GAP										x	x						x	x		4
Safe use training																	x	x		2
Product stewardship							x											x		2
Licensing of handlers										x										1
Pesticide standards										x								x		2
Pesticide recommendations																				0
Pesticide disposal																		x		1

* Japan is not a member country of APPPC.

5.4 Monitoring and Management of Pesticide Residues

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
5.4 Residues																				
No response	x			x		x			x				x	x		x			x	8
Vague response		x						x			x	x								4
Residue laboratory					x												x	x		3
annual analyses			x																	1
exceeding MRL			x															x		2
Enforcement linkage																				0
Registration / MRL setting		x													x			x		3
Import/export											x				x					2
Post-registration / policy										x										1
Blood																				0
Water							x			x								x		3
Resistance																				0
Food							x			x							x			3
Fruits										x										1
Vegetables										x										1
Treated crops																	x			1
Others (soil, sediment, etc.)																		x		1

* Japan is not a member country of APPPC.

5.5 Development and Application Status of Biopesticides Including Botanical Pesticides

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
5.5 Biopesticides																				
No/vague response	x	x		x				x		x		x	x	x	x				x	10
used			x		x	x	x				x					x	x	x		8
registered			x		x		x				x					x		x		6

* Japan is not a member country of APPPC.

5.6 List of Banned/Prohibited Pesticides (Year, Insecticide, Fungicide, Herbicide)

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
5.6 List Banned																				
No response	x	x	x	x	x	x		x				x	x		x					10
No of banned a.i.									x		x			x			x	x	x	6
List of banned							x			x								x		3
insecticide										x										1
fungicide										x										1
herbicide										x										1
rodenticide										x										1
fumigants										x										1
No. of restricted											x			x						2
Cancelled registrations										x	x						x		x	4

* Japan is not a member country of APPPC.

5.7 Name and Address of National Authority for Pesticide Registration

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
5.7 Registration		x			x		x		x	x	x	x		x	x		x	x		11
No response	x		x	x		x		x					x						x	7
Address																x				1
Same as NPQO																				

* Japan is not a member country of APPPC.

6. Development of International Cooperation Projects or Programme for Plant Protection

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
6. Cooperation																				
No response	x			x				x					x	x		x				6
Coop. needs					x				x	x	x	x								5
Intern. memberships							x		x	x	x	x			x		x		x	8
Bilateral cooperation					x	x	x			x	x						x			6
PQ Courses/workshops										x		x								2
Donors																				0
Denmark																				0
World Bank									x			x							x	3
EU																				0
ASEAN						x			x											2
CFC																				0
Germany			x																	1
NRI/CAB																				0
Australia						x			x	x	x								x	5
New Zealand									x		x								x	3
Japan						x			x										x	3
China						x			x	x										3
South Korea						x			x	x										3
USA						x														1
Netherlands			x																	1
FAO Vegetable/FAO		x	x							x		x							x	5
Oxfam									x											1
Others											x							x	x	3
Projects												x								1
IPM											x	x							x	3
Plant Quarantine						x					x	x							x	4
PP											x						x			2
Pesticide			x				x				x									3
Migratory locust & Kaz																				0
Migratory pests –S. Korea																				0
Cotton IPM/EU																				0
Cotton bollworm/CFC																				0
Cotton Bt/NRI Cabi																				0
Obsolete pestic./GTZ																				0
ACIAR fruit fly/Austr																				0
ASEAN IPM Knowledge																				0
Fruit fly treatment																			x	1
NZAID-Mekong																				0

* Japan is not a member country of APPPC.

7. Name of National Plant Protection Organization:

Guidelines for Country Report:

Name of the Chief:
Designation:
Office Address:
Phone and Fax:
E-mail:
Website:

In addition, please provide name and address of ***head and institutions*** *who should be* ***officially contacted*** *for future consultation, nomination, invitation, etc. if necessary for administrative procedures.*

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
7. NPPO		x				x			x											3
No response	x			x															x	3
NPP Organization			x		x		x	x		x	x	x	x	x	x	x	x	x		13
Contact(s)													x			x				2
different from IPP																				0

* Japan is not a member country of APPPC.

8. Conclusion

Table 1: Report Guideline Topics Covered by the Country Reports

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
1. Introduction																				
1.1 Highlights	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	19
2. Outbreaks																				
2.1 Infested crops		x	x			x	x			x	x				x			x	x	9
2.2 Causal organisms		x	x		x	x	x		x	x	x						x		x	10
2.3 Estimated loss		x	x																	2
2.4 Control Measures	x	x	x			x	x			x	x				x			x	x	10
2.5 Invasive species	x	x	x			x									x		x	x	x	8
3. IPM																				
3.1 IPM policy		x	x		x	x	x	x	x		x	x		x	x	x		x	x	14
3.2 IPM programmes		x	x		x	x	x	x	x		x	x		x	x	x	x	x	x	15
3.3 IPM research							x		x									x		3
3.4 Cooperation		x	x		x		x		x		x	x						x	x	9
3.5 Pest control		x	x		x	x		x	x		x					x	x	x	x	11
3.6 Extension		x	x				x		x		x	x				x		x		8
4. Plant Quarantine																				
4.1 NPPO structure	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x		17
PQ network		x	x			x	x													4
Legislation		x	x	x		x	x	x	x	x	x	x	x	x	x	x		x		15
Updates	x	x	x	x		x	x		x	x	x	x	x		x	x	x	x		15
Address													x			x				2
4.2 ISPM		x	x			x	x		x	x	x		x	x	x	x	x			12
ISPM 15			x							x							x			3
4.3 PRA	x		x		x		x				x		x	x				x		8
4.4 Regulated pests			x			x	x	x		x	x		x				x			8
4.5 Pest free places			x			x				x	x	x	x				x			7
4.6 IPP			x			x	x			x	x		x				x			7
4.7 PCE							x			x	x						x			4
4.8 Proposals			x							x	x						x			4
5. Pesticides													x		x	x		x	x	5
5.1 Regulations		x	x			x	x		x	x	x	x		x		x	x	x	x	13
5.2 Rotterdam							x		x	x	x					x	x			6
5.3 Code					x		x			x	x						x	x		6
5.4 Residues		x	x		x		x			x	x	x			x		x	x		10
5.5 Biopesticides			x		x	x	x	x		x	x					x	x	x		10
5.6 Banned							x		x	x	x			x			x	x	x	8
5.7 Address																				0
6. Cooperation	x	x	x		x	x	x		x	x	x	x			x		x	x	x	14
7. NPPO Address													x			x				2
8. Conclusion				x					x	x					x	x	x	x		7

* Japan is not a member country of APPPC.

Table 2: Conclusion (in the Country Reports)

	Australia	Cambodia	China	Fiji Islands	India	Indonesia	Japan*	Korea, DPR	Lao PDR	Malaysia	Myanmar	Nepal	New Zealand	Pakistan	Philippines	Rep. of Korea	Sri Lanka	Thailand	Viet Nam	TOTAL
8. Conclusion																				
No response	x	x	x		x	x	x	x			x	x	x	x					x	12
Importance of																				
WTO/trade									x	x					x					3
Intern. coordination									x											1
IPM/environment/GAP									x						x	x	x			4
Pesticides/food safety										x						x	x			3
PP&Q/Challenges				x					x							x				3
Quality control										x										1
Biodiversity									x											1
Production/poverty																				0
Control of weedy rice																		x		1
Need to strengthen																				
Infrastructure				x					x	x										3
Human resources									x	x										2
Laws/enforcement				x												x		x		3
SPS standards									x	x					x					3
PRA									x											1
Pesticide reduction																	x			1
Pest diagnosis									x	x										2
Extension																				0
Farmer decision-making																				0
High farm productivity																				0
international coop										x										1
IPM/GAP															x		x	x		3
biocontrol																	x			1
APPPC info exchange																x				1
ISPM implementation										x										1
GAP implementation										x					x		x	x		4

* Japan is not a member country of APPPC.

Implementation of International Standards for Phytosanitary Measures (ISPMs)

(Period 2007-2008)

Relevance: (1) l = low; (2) me = medium; and (3) h = high.
Implementation: (1) N = none; (2) P = partial; (3) M = most; and (4) F = full.

Implementation of ISPMs during the period 2007-2008		Australia		Bangladesh		Cambodia		China		Fiji Islands		India		Indonesia		Japan**		Korea, DPR		Lao PDR		Malaysia		Myanmar		Nepal		New Zealand		Pakistan		Philippines		Republic of Korea		Sri Lanka		Thailand		Viet Nam		Responses from 19+1 profiles submitted (2007-2008)							
																																								Relevance			Implementation				
No.	International Standards for Phytosanitary Measures (ISPMs)	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	l (low)	me (medium)	h (high)	N (None)	P (Partial)	M (Most)	F (Full)
01	Principles of plant quarantine as related to international trade	h	F	h	F	me	-	h	F	h	P	h	F	h	M	h	M	h	M	l	N	h	P	h	M	h	M	h	F	h	M	h	F	h	F	h	F	h	M	me	M	1	2	17	1	2	8	8
02	Guidelines for pest risk analysis	h	F	h	F	-	P	h	F	h	M	h	F	h	F	h	F	h	P	l	N	h	M	me	P	h	M	h	F	me	M	h	F	h	F	h	M	h	N	h	P	1	2	16	2	4	5	9
03	Code of conduct for the import and release of exotic biological control agents	h	F	h	M	-	P	me	M	h	M	h	M	h	F	me	M	me	M	me	P	me	P	me	P	h	N	h	F	me	M	h	F	h	F	me	P	h	F	h	N	0	8	11	2	5	7	6
04	Requirements for the establishment of pest free areas	h	F	h	P	-	N	me	P	h	P	h	P	h	N	h	F	me	N	l	N	h	P	me	N	h	P	h	F	l	P	h	F	h	F	-	-	l	N	me	P	3	4	11	6	8	0	5
05	Glossary of phytosanitary terms	h	F	h	F	me	-	h	F	h	F	h	F	h	M	h	F	h	F	me	P	h	F	me	P	h	F	h	F	h	M	h	F	h	F	h	F	h	F	h	P	0	3	17	0	3	2	14
06	Guidelines for surveillance	h	F	h	P	-	P	h	F	h	F	h	M	h	P	h	F	h	M	l	N	h	M	me	P	h	M	h	F	me	M	h	F	h	F	h	M	h	P	h	F	1	2	16	1	5	6	8
07	Export certification system	h	F	h	F	-	M	h	F	h	F	h	F	h	F	h	F	h	F	h	M	h	M	h	M	h	M	h	F	h	F	h	F	h	F	h	F	h	F	h	P	0	0	19	0	1	5	14
08	Determination of pest status in an area	h	F	h	P	-	P	h	F	h	F	h	M	h	F	h	F	h	F	l	N	h	M	me	P	h	P	h	F	me	P	h	N	h	F	me	P	me	P	h	F	1	4	14	2	7	2	9
09	Guidelines for pest eradication programmes	h	F	h	P	-	P	h	F	h	P	h	M	me	P	h	F	me	N	l	N	h	M	me	P	h	P	h	F	l	P	h	P	h	F	me	P	me	P	h	N	2	5	12	3	10	2	5
10	Requirements for the establishment of pest free places of production and pest free production sites	h	F	h	P	-	N	h	F	h	P	h	M	me	N	h	F	h	F	l	N	h	F	me	P	h	N	h	F	me	P	h	N	h	F	me	P	h	F	h	P	1	4	14	5	6	1	8
11	Pest risk analysis for quarantine pests	h	F	h	F	-	P	h	F	h	M	h	F	h	F	me	M	h	P	me	N	h	P	me	P	h	N	h	F	h	M	h	F	h	F	h	M	h	F	h	P	0	3	16	2	5	4	9
12	Guidelines for phytosanitary certificates	h	F	h	F	-	M	h	F	h	F	h	F	h	F	h	F	h	F	h	P	h	F	h	M	h	M	h	F	h	M	h	F	h	F	h	F	h	F	me	P	0	1	18	0	2	4	14
13	Guidelines for the notification of noncompliance and emergency action	h	F	h	F	-	N	h	F	h	P	h	F	h	M	h	F	h	F	l	N	h	M	me	P	h	N	h	F	me	P	h	F	h	F	me	P	h	F	me	N	1	4	14	4	4	2	10
14	The use of integrated measures in a systems approach for pest risk management	h	F	h	M	-	P	h	F	h	F	h	M	l	N	h	F	h	N	l	N	h	P	me	P	h	P	h	F	me	P	h	F	h	F	-	-	l	N	me	N	3	3	12	5	5	2	7

Implementation of ISPMs during the period 2007-2008		Australia		Bangladesh		Cambodia		China		Fiji Islands		India		Indonesia		Japan**		Korea, DPR		Lao PDR		Malaysia		Myanmar		Nepal		New Zealand		Pakistan		Philippines		Republic of Korea		Sri Lanka		Thailand		Viet Nam		Responses from 19+1 profiles submitted (2007-2008)							
																																								Relevance			Implementation				
No.	International Standards for Phytosanitary Measures (ISPMs)	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	Relevance	Implementation	l (low)	me (medium)	h (high)	N (None)	P (Partial)	M (Most)	F (Full)
15	Guidelines for regulating wood packaging material in international trade	h	F	h	F	-	N	h	F	me	M	h	F	h	F	h	F	h	M	h	F	h	F	me	M	h	P	h	F	h	M	h	F	h	F	h	M	h	F	me	P	0	3	16	1	2	5	12
16	Regulated non-quarantine pests: concept and application	h	F	h	M	-	N	h	P	me	P	h	M	h	N	me	M	h	N	l	N	me	M	me	P	h	N	h	F	me	P	h	P	h	F	-	-	l	N	me	N	2	6	10	7	5	4	3
17	Pest reporting	h	F	h	F	-	P	h	F	h	M	h	M	h	M	h	M	h	M	l	N	h	M	me	P	h	M	h	F	me	P	h	F	h	M	-	-	me	M	me	N	1	4	13	2	3	9	5
18	Guidelines for the use of irradiation as a phytosanitary measure	h	F	h	P	-	N	me	P	l	N	h	M	h	N	me	-	h	N	l	N	me	P	me	N	h	N	h	N	me	P	h	P	me	N	me	M	h	F	me	N	2	8	9	10	5	2	2
19	Guidelines on lists of regulated pests	h	F	h	M	-	P	h	F	-	-	h	M	h	F	me	M	h	P	l	N	h	M	h	P	h	F	h	F	me	P	h	P	h	F	-	-	h	F	h	N	1	2	14	2	5	4	7
20	Guidelines for a phytosanitary import regulatory system	h	F	h	F	-	N	h	F	h	F	h	M	h	M	h	M	h	F	l	N	h	F	me	M	h	M	h	F	h	F	h	P	h	F	h	F	h	F	h	N	1	1	17	3	1	5	11
21	Pest risk analysis for regulated non-quarantine pests	h	F	h	P	-	N	h	M	h	P	h	M	h	-	me	M	h	P	l	N	me	P	me	P	me	N	h	F	me	M	l	-	h	F	h	M	l	N	h	N	3	5	11	5	5	5	3
22	Requirements for the establishment of areas of low pest prevalence	h	F	h	P	-	N	me	P	h	N	h	P	me	P	h	F	h	F	l	N	h	M	me	P	h	N	h	P	me	P	h	N	h	F	-	-	l	N	me	N	2	5	11	7	7	1	4
23	Guidelines for inspection	h	F	h	F	-	P	h	F	h	F	h	F	h	M	h	F	h	M	l	N	h	F	me	M	h	M	h	F	h	F	h	F	h	F	h	M	h	F	me	N	1	2	16	2	1	5	12
24	Guidelines for the determination and recognition of equivalence of phytosanitary measures	h	F	me	P	-	N	h	F	h	F	me	P	me	P	h	F	h	M	l	N	h	M	me	M	h	P	h	F	me	M	l	-	h	F	-	-	l	N	me	P	3	6	9	3	5	4	6
25	Consignments in transit	l	N	me	P	-	N	h	F	h	F	me	P	me	M	h	M	h	M	l	N	me	M	me	P	h	N	h	F	h	M	h	F	h	F	-	-	me	N	me	N	2	7	9	6	3	5	5
26	Establishment of pest free areas for fruit flies (Tephritidae)	h	F	h	P	-	N	h	P	h	M	h	M	h	N	h	F	h	P	l	N	me	N	me	M	me	N	h	F	me	M	h	P	h	F	-	-	l	N	me	N	2	5	11	7	4	4	4
27	Diagnostic protocols for regulated pests	h	F	h	P	-	N	h	M	me	P	h	M	h	M	h	F	h	P	l	N	me	P	me	P	h	N	h	F	me	P	h	P	h	F	-	-	me	P	h	N	1	5	12	4	8	3	4
28	Phytosanitary treatments for regulated pests	h	-	-	-	-	-	h	F	h	M	-	-	h	N	h	F	-	-	h	N	h	M	me	P	h	-	h	-	-	-	h	F	h	F	-	-	me	M	-	-	0	2	11	2	1	3	4
29	Recognition of pest free areas and areas of low pest prevalence	h	-	-	-	-	-	h	M	-	-	-	-	l	N	h	F	-	-	h	N	h	N	me	P	h	P	-	-	-	-	h	F	h	M	-	-	l	N	-	-	2	1	8	4	2	2	2
30	Establishment of areas of low pest prevalence for fruit flies (tephritidae)	h	-	-	-	-	-	h	M	-	-	-	-	me	N	h	F	-	-	h	N	h	N	me	P	h	N	l	N	-	-	h	N	me	M	-	-	me	P	-	-	1	4	7	6	2	2	1
31	Methodologies for sampling of consignments	h	-	-	-	-	-	h	F	-	-	-	-	h	P	h	F	-	-	h	N	h	N	me	P	h	P	h	P	-	-	h	P	h	F	-	-	l	N	-	-	1	1	10	3	5	0	3

** **Note:**
Japan is not a member of APPPC.

Implementation of International Standards for Phytosanitary Measures (ISPMs)
(period before 2007 vs period 2007-2008)

Relevance: (1) l = low; (2) me = medium; and (3) h = high.
Implementation: (1) N = none; (2) P = partial; (3) M = most; and (4) F = full.

| Implementation of ISPMs (period before 2007 vs period 2007-2008) | | Australia | | | | Bangladesh | | | | Cambodia | | | | China | | | | Fiji Islands | | | | India | | | | Indonesia | | | | Japan** | | | | Korea, DPR | | | | Lao PDR | | | | Malaysia | | | | Myanmar | | | | Nepal | | | | New Zealand | | | | Pakistan | | | | Philippines | | | | Republic of Korea | | | | Sri Lanka | | | | Thailand | | | | Viet Nam | | | |
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Implementation of International Standards for Phytosanitary Measures (ISPMs)

Summary Responses for the period before 2007 and the period 2007-2008

Relevance: (**1**) l = low; (2) me = medium; and (3) h = high.
Implementation: (1) N = none; (2) P = partial; (3) M = most; and (4) F = full.

		Responses from 14 profiles submitted (before 2007)							Responses from 19+1 profiles submitted (2007-2008)							Differences between the period before 2007 and the period 2007-2008						
Implementation of ISPMs (Responses before and after 2007)		Relevance			Implementation				Relevance			Implementation				Relevance			Implementation			
No.	International Standards for Phytosanitary Measures (ISPMs)	l (low)	me (medium)	h (high)	N (None)	P (Partial)	M (Most)	F (Full)	l (low)	me (medium)	h (high)	N (None)	P (Partial)	M (Most)	F (Full)	l (low)	me (medium)	h (high)	N (None)	P (Partial)	M (Most)	F (Full)
01	Principles of plant quarantine as related to international trade	1	2	9	1	1	4	5	1	2	17	1	2	8	8	0	0	8	0	1	4	3
02	Guidelines for pest risk analysis	1	3	8	2	3	2	6	1	2	16	2	4	5	9	0	-1	8	0	1	3	3
03	Code of conduct for the import and release of exotic biological control agents	0	5	6	1	4	3	4	0	8	11	2	5	7	6	0	3	5	1	1	4	2
04	Requirements for the establishment of pest free areas	3	3	5	5	5	0	2	3	4	11	6	8	0	5	0	1	6	1	3	0	3
05	Glossary of phytosanitary terms	0	3	9	0	3	3	5	0	3	17	0	3	2	14	0	0	8	0	0	-1	9
06	Guidelines for surveillance	1	3	8	1	5	3	4	1	2	16	1	5	6	8	0	-1	8	0	0	3	4
07	Export certification system	0	0	12	0	1	5	7	0	0	19	0	1	5	14	0	0	7	0	0	0	7
08	Determination of pest status in an area	2	2	7	2	5	1	4	1	4	14	2	7	2	9	-1	2	7	0	2	1	5
09	Guidelines for pest eradication programmes	3	2	6	3	5	2	2	2	5	12	3	10	2	5	-1	3	6	0	5	0	3
10	Requirements for the establishment of pest free places of production and pest free production sites	1	3	7	4	4	1	3	1	4	14	5	6	1	8	0	1	7	1	2	0	5
11	Pest risk analysis for quarantine pests	0	2	10	2	3	2	5	0	3	16	2	5	4	9	0	1	6	0	2	2	4
12	Guidelines for phytosanitary certificates	0	1	11	1	1	4	7	0	1	18	0	2	4	14	0	0	7	-1	1	0	7
13	Guidelines for the notification of noncompliance and emergency action	1	3	7	3	3	2	4	1	4	14	4	5	2	10	0	1	7	1	1	0	6
14	The use of integrated measures in a systems approach for pest risk management	3	3	5	3	5	1	3	3	3	12	5	5	2	7	0	0	7	2	0	1	4
15	Guidelines for regulating wood packaging material in international trade	0	4	8	1	2	3	7	0	3	16	1	2	5	12	0	-1	8	0	0	2	5
16	Regulated non-quarantine pests: concept and application	2	4	5	5	4	2	1	2	6	10	7	5	4	3	0	2	5	2	1	2	2
17	Pest reporting	1	4	6	2	4	3	3	1	4	13	2	3	9	5	0	0	7	0	-1	6	2
18	Guidelines for the use of irradiation as a phytosanitary measure	2	5	4	7	3	1	1	2	8	9	10	5	2	2	0	3	5	3	2	1	1
19	Guidelines on lists of regulated pests	1	1	9	2	4	2	4	1	2	14	2	5	4	7	0	1	5	0	1	2	3
20	Guidelines for a phytosanitary import regulatory system	1	1	9	3	1	5	3	1	1	17	3	1	5	11	0	0	8	0	0	0	8
21	Pest risk analysis for regulated non-quarantine pests	3	3	6	4	3	3	1	3	5	11	5	5	5	3	0	2	5	1	2	2	2
22	Requirements for the establishment of areas of low pest prevalence	2	4	5	4	5	2	1	2	5	11	7	7	1	4	0	1	6	3	2	-1	3
23	Guidelines for inspection	1	3	8	2	1	5	5	1	2	16	2	1	5	12	0	-1	8	0	0	0	7
24	Guidelines for the determination and recognition of equivalence of phytosanitary measures	3	5	2	2	5	2	2	3	6	9	3	5	4	6	0	1	6	1	0	2	4
25	Consignments in transit	2	7	2	5	3	2	2	2	7	9	6	3	5	5	0	0	7	1	0	3	3
26	Establishment of pest free areas for fruit flies (Tephritidae)	2	4	5	5	3	3	1	2	5	11	7	4	4	4	0	1	6	2	1	1	3
27	Diagnostic protocols for regulated pests	1	4	6	4	4	3	1	1	5	12	4	8	3	4	0	1	6	0	4	0	3
28	Phytosanitary treatments for regulated pests	0	0	0	0	0	0	0	0	2	11	2	1	3	4	0	2	11	2	1	3	4
29	Recognition of pest free areas and areas of low pest prevalence	0	0	0	0	0	0	0	2	1	8	4	2	2	2	2	1	8	4	2	2	2
30	Establishment of areas of low pest prevalence for fruit flies (Tephritidae)	0	0	0	0	0	0	0	1	4	7	6	2	2	1	1	4	7	6	2	2	1
31	Methodologies for sampling of consignments	0	0	0	0	0	0	0	1	1	10	3	5	0	3	1	1	10	3	5	0	3

Membership and partnership status of APPPC and FAO member countries in Asia and the Pacific in International Conventions and Agreements

Updated: 9 June 2009

No.	Country	Rotterdam Convention (PIC)[a]				Stockholm Convention[b]			Basel Convention[c]			CODEX	WTO[d]
	I. 24 member nations of APPPC and FAO in the Asia region	Signature	Ratification, Acceptance (A), Approval (AA), Accession (a)			Signature	Ratification, Acceptance (A), Approval (AA), Accession (a)		Signature	Ratification, Acceptance (A), Approval (AA), Accession (a)			
1.	Australia	6 Jul 99	20 May 04		**	23 May 01	20 May 04			5 Feb 92	a	Yes	1 Jan 95
2.	Bangladesh				*	23 May 01	12 Mar 07			1 Apr 93	a	Yes	1 Jan 95
3.	Cambodia				*	23 May 01	25 Aug 06			2 Mar 01	a	Yes	13 Oct 04
4.	China	24 Aug 99	22 Mar 05		*	23 May 01	13 Aug 04		22 Mar 90	17 Dec 91		Yes	11 Dec 01
5.	DPR Korea		6 Feb 04	a	*		26 Aug 02	a		10 Jul 08		Yes	
6.	Fiji				**	14 Jun 01	20 Jun 01					Yes	14 Jan 96
7.	France	11 Sep 98	17 Feb 04	AA	**	23 May 01	17 Feb 04	AA	22 Mar 89	7 Jan 91	AA	Yes	1 Jan 95
8.	India		24 May 05	a	*	14 May 02	13 Jan 06		15 Mar 90	24 Jun 92		Yes	1 Jan 95
9.	Indonesia	11 Sep 98			*	23 May 01				20 Sep 93	a	Yes	1 Jan 95
10.	Lao PDR				*	5 Mar 02	28 Jun 06					Yes	
11.	Malaysia		4 Sep 02	a	*	16 May 02				8 Oct 93	a	Yes	1 Jan 95
12.	Myanmar				*		19 Apr 04	a				Yes	1 Jan 95
13.	Nepal		9 Feb 07	a	*	5 Apr 02	6 Mar 07			15 Oct 96	a	Yes	23 Apr 04
14.	New Zealand	11 Sep 98	23 Sep 03		**	23 May 01	24 Sep 04		18 Mar 89	20 Dec 94		Yes	1 Jan 95
15.	Pakistan	9 Sep 99	14 Jul 05		*	6 Dec 01	17 Apr 08			26 Jul 94	a	Yes	1 Jan 95
16.	Papua New Guinea				**	23 May 01	7 Oct 03			1 Sep 95	a	Yes	9 Jun 96
17.	Philippines	11 Sep 98	31-Jul-06		*	23 May 01	27 Feb 04		22 Mar 89	21 Oct 93		Yes	1 Jan 95
18.	Republic of Korea	7 Sep 99	11 Aug 03		*	4 Oct 01	25 Jan 07			28 Feb 94	a	Yes	1 Jan 95
19.	Samoa		30 May 02	a	**	23 May 01	4 Feb 02			22 Mar 02	a	Yes	
20.	Solomon Islands				**		28 Jul 04	a				Yes	26 Jul 96
21.	Sri Lanka		19 Jan 06	a	*	5 Sep 01	22 Dec 05			28 Aug 92	a	Yes	1 Jan 95
22.	Thailand		19 Feb 02	a	*	22 May 02	31 Jan 05		22 Mar 90	24 Nov 97		Yes	1 Jan 95
23.	Tonga				**	21 May 02						Yes	27 Jul 07
24.	Viet Nam		07-May-07	a	*	23 May 01	22 Jul 02			13 Mar 95	a	Yes	11 Jan 07

No.	Country	Rotterdam Convention (PIC)[a]				Stockholm Convention[b]			Basel Convention[c]			CODEX	WTO[d]
	II. FAO's other 19 member nations in the Asia region	Signature	Ratification, Acceptance (A), Approval (AA), Accession (a)			Signature	Ratification, Acceptance (A), Approval (AA), Accession (a)		Signature	Ratification, Acceptance (A), Approval (AA), Accession (a)			
1.	Afghanistan				***				22 Mar 89			Yes	
2.	Bhutan				*					26 Aug 02	a	Yes	
3.	Cook Islands		29 Jun 04	a	**		29 Jun 04	a		29 Jun 04	a	Yes	
4.	Iran	17 Feb 99	26 Aug 04		*	23 May 01	6 Feb 06			5 Jan 93	a	Yes	
5.	Japan	31 Aug 99	15 Jun 04	A	*		30 Aug 02	a		17 Sep 93	a	Yes	1 Jan 95
6.	Kazakhstan		1 Nov 07	a	*	23 May 01	9 Nov 07			3 Jun 03	a	Yes	
7.	Kiribati				**	4 Apr 02	7 Sep 04			7 Sep 00	a	Yes	
8.	Maldives		17 Oct 06	a	*		17 Oct 06	a		28 Apr 92	a	Yes	31 May 95
9.	Marshall Islands		27 Jan 03	a	**		27 Jan 03	a		27 Jan 03	a		
10.	Micronesia				**	31 Jul 01	15 Jul 05			6 Sep 95	a	Yes	
11.	Mongolia	11 Sep 98	8 Mar 01		*	17 May 02	30 Apr 04			15 Apr 97	a	Yes	29 Jan 97
12.	Nauru				**	9 May 02	9 May 02			12 Nov 01	a		
13.	Niue				**	12 Mar 02	2 Sep 05						
14.	Palau				**	28 Mar 02							
15.	Timor-Leste				*								
16.	Tuvalu				**		19 Jan 04	a					
17.	United States of America	11 Sep 98			?	23 May 01			22 Mar 90			Yes	1 Jan 95
18.	Uzbekistan				***					7 Feb 96	a	Yes	
19.	Vanuatu				**	21 May 02	16 Sep 05					Yes	

Remarks: (a) The Rotterdam Convention
PIC Regions as adopted by the first meeting of the Conference of the Parties
* ==> Asia region
** ==> Southwest Pacific region
*** ==> Near East region
(b) The Stockholm Convention
(c) The Basel Convention
(d) World Trade Organization.

The above membership status is based on information collected early June 2009. For more updated information, please visit the following websites:
(1) **www.fao.org/world/regional/rap/member_countries.asp** for FAO
(2) **www.pic.int** (for the Rotterdam Convention or PIC)
(3) **http://chm.pops.int/** for the Stockholm Convention or POPS
(4) **www.basel.int** for the Basel Convention
(5) **www.codexalimentarius.net** for CODEX alimentarius
(6) **www.wto.org** for World Trade Organization.

Websites or weblinks for information about plant protection of APPPC member countries and other countries in Asia and Pacific

(Updated: July 2009)

Country	No.	Particulars	Websites/Weblinks	Remarks
Australia	1.	Australian Government Department of Agriculture, Fisheries and Forestry	www.daff.gov.au	
	2.	Australian Government: Animal and Plant Health	http://www.daffa.gov.au/animal-plant-health	
	3.	Exporting goods from Australia	http://www.daffa.gov.au/aqis/export	
	4.	Importing goods to Australia	http://www.daffa.gov.au/aqis/import	
	5.	Atlas of Living Australia	http://www.ala.org.au/	
	6.	Australasian Plant Disease Notes	http://www.publish.csiro.au/nid/208.htm	
	7.	Australian Centre for International Agricultural Research (ACIAR)	http://www.aciar.gov.au/home	
	8.	Australian national pests and disease outbreaks	http://www.outbreak.gov.au/	
	9.	Australian Plague Locust Commission (APLC)	http://www.daffa.gov.au/animal-plant-health/locusts	
	10.	Australian Quarantine and Inspection Service (AQIS)	http://www.daff.gov.au/aqis	
	11.	Biosecurity Australia	http://www.daff.gov.au/ba	
	12.	Commonwealth Scientific and Industrial Research Organisation (CSIRO)	http://www.csiro.au/	
	13.	Alerts: Hot topics or major changes to AQIS import requirements	http://www.aqis.gov.au/icon32/asp/ex_alertscontent.asp	
	14.	Office of the Chief Plant Protection Officer (OCPPO), Department of Agriculture, Fisheries and Forestry (DAFF)	http://www.daffa.gov.au/about/contactus/piaph/ocppo	
	15.	Pest and Diseases Image Library (PaDIL)	http://www.padil.gov.au/	
	16.	Plant Biosecurity	http://www.daffa.gov.au/ba/about/plant	
	17.	Plant Health Australia	http://www.planthealthaustralia.com.au/site/index.asp	
	18.	Quarantine information translated into Languages other than English (Multilanguages)	http://www.daffa.gov.au/languages	
	19.	Concise overview of Australia's plant biosecurity system (The National Plant Health Status Report 07/08)	H:\000 NEW plant protection profiles 2008\Australia\Australia – National Plant Health Status Report.htm	

Country	No.	Particulars	Websites/Weblinks	Remarks
Bangladesh	1.	Department of Agricultural Extension	http://www.dae.gov.bd	
	2.	Ministry of Agriculture	http://www.moa.gov.bd	
	3.	Department of Environment	http://www.doe-bd.org	
Cambodia		Ministry of Agriculture, Forestry and Fisheries	http://www.maff.gov.kh/eng/	
China	1.	Ministry of Agriculture	http://english.agri.gov.cn/	
	2.	The Plant Protection & Quarantine of China	http://www.PPQ.gov.cn/	In Chinese
	3.	General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)	http://english.aqsiq.gov.cn/	
	4.	State Forestry Administration	http://www.forestry.gov.cn/	In Chinese
Fiji Islands	1.	Fiji Quarantine & Inspection Division, Ministry of Agriculture and Primary Industries (MAPI)	http://www.quarantine.gov.fj/	
	2.	Ministry of Primary Industries (MPI)	http://www.agriculture.org.fj/	
India	1.	http://www.plantquarantineindia.org/(en)	http://www.plantquarantineindia.org/	Indian website for Plant Quarantine
	2.	Department of Agriculture and Cooperation	http://agricoop.nic.in	
	3.	Central Insecticides Board and Registration Committee	http://www.cibrc.nic.in/	
Indonesia	1.	Center for Plant Quarantine (Agency of Agriculture Quarantine)	http://karantina.deptan.go.id/eng/index.php	Mostly in Indonesian
Japan (Not APPPC member)	1.	Plant Protection Station	http://www.pps.go.jp/english/index.html	
	2.	Agricultural Chemicals Inspection Station	http://www.acis.famic.go.jp/eng/hourei/index.htm	
Malaysia	1.	International Centre for Management of Pest Fruit Flies (ICMPFF)	http://www.icmpff.org/index_main.asp?s=1	
	2.	Crop Protection & Plant Quarantine Division (PQNet)	http://www.doa.gov.my/pqnet/	
	3.	Malaysian Import Condition	http://www.doa.gov.my/pqnet/eng/import_export/import_conditions.pdf	In Malay
Nepal	1.	Department of Agriculture, Ministry of Agriculture and Cooperatives (MOAC)	http://www.doanepal.gov.np/	
	2.	Department of Food Technology and Quality Control (SPS Enquiry Point)	www.spsenquiry.gov.np	
New Zealand	1.	Landcare Research New Zealand Limited	http://www.landcareresearch.co.nz/databases/index.asp	
	2.	Museum of New Zealand Te Papa Tongarewa	http://www.tepapa.govt.nz/TePapa/English/CollectionsAndResearch/Collections/Plants/?filter=none	
	3.	New Zealand biodiversity	http://www.biodiversity.govt.nz/	
	4.	New Zealand Department of Conservation	http://www.doc.govt.nz/	
	5.	New Zealand Food Safety Authority	http://www.nzfsa.govt.nz/plant/index.htm	
	6.	New Zealand Ministry of Fisheries	http://www.fish.govt.nz/en-nz/default.htm	
	7.	New Zealand museums with natural history collections	http://www.nzmuseums.co.nz/	
	8.	New Zealand National Forestry Herbarium	http://www.scionresearch.com/national+forestry+herbarium.aspx?PageContentID=156	
	9.	New Zealand pest management strategies	http://www1.maf.govt.nz/pms/cgi/pms.pl	

Country	No.	Particulars	Websites/Weblinks	Remarks
Pakistan	1.	Department of Plant Protection, Ministry of Food, Agriculture and Livestock	http://www.plantprotection.gov.pk/	
Philippines	1.	Department of Agriculture – Bureau of Plant Industry (BPI)	http://www.bpi.da.gov.ph/	
	2.	SPS Information System (en)	http://www.spsis.da.gov.ph/	
	3.	Fertilizer and Pesticide Authority	http://www.fadinap.org/philippines/	
Republic of Korea	1.	National Plant Quarantine Service (NPQS)	http://www.npqs.go.kr/homepage/english/	
Sri Lanka		Department of Agriculture	http://www.agridept.gov.lk/	
Thailand	1.	National Bureau of Agricultural Commodity and Food Standards	http://www.acfs.go.th/eng/index.php	
	2.	Safety of Chemical Substances and Products	http://www.chemtrack.org/	In Thai
	3.	Ministry of Agriculture and Cooperatives	http://www.moac.go.th/eng/	
	4.	Department of Agricultural Extension	http://www.doae.go.th/englishversion/indexhome.asp	
	5.	Pollution Control Department (PCD)	http://www.pcd.go.th/indexEng.cfm	
	6.	Department of Industrial Works	http://www4.diw.go.th:8080/	
Viet Nam	1.	Ministry of Agriculture & Rural Development (MARD)	http://xttmnew.agroviet.gov.vn/TestE/	
	2.	Plant Protection Department (PPD)	http://www.ppd.gov.vn/?lang=english	
Others	1.	Food and Agriculture Organization of the U.N.	www.fao.org	
	2.	International Plant Protection Convention	www.ippc.int	International Phytosanitary Portal
	3.	Rotterdam Convention (PIC)	www.pic.int	
	4.	Stockholm Convention (POPS)	http://chm.pops.int/	
	5.	Basel Convention	www.basel.int	
	6.	Codex Alimentarius	www.codexalimentarius.ent	
	7.	World Trade Organization	www.wto.org	
	8.	Convention on Biological Diversity	www.cbd.int	
	9.	Pesticide Action Network (PAN)	http://www.pesticideinfo.org/Search_Countries.jsp #Asia%20and%20the%20Pacific	PAN Pesticides Database – Pesticide Registration Status

Appendix V

Notifications and import responses

Table 1: Parties to the Rotterdam Convention in Asia and the Southwest Pacific (as well as numbers of their official contact points and designated national authorities)

Sources: (1) http://www.pic.int/home.php?type=t&id=63&sid=17
(2) http://www.pic.int/reports/countryprofiles.asp

Updated: July 2009

No.	Parties to Rotterdam Convention in Asia and the Southwest Pacific	PIC Region	Signature	Ratification, Acceptance (A), Approval (AA), Accession (a)	Number of Official Contact Points	Number of Designated National Authorities (DNAs)
1	Australia	Southwest Pacific	6-Jul-99	20-May-04	1	2
2	China	Asia	24-Aug-99	22-Mar-05	4	2
3	Cook Islands	Southwest Pacific		29 Jun 2004 a	3	2
4	Democratic People's Republic of Korea	Asia		6 Feb 2004 a	3	2
5	India	Asia		24 May 2005 a	2	2
6	Iran (Islamic Republic of)	Asia	17-Feb-99	26-Aug-04	5	2
7	Japan	Asia	31-Aug-99	15 Jun 2004 A	2	1
8	Kazakhstan	Asia		1 Nov 2007 a	3	1
9	Malaysia	Asia		4 Sep 2002 a	2	2
10	Maldives	Asia		17 October 2006 a	2	1
11	Marshall Islands	Southwest Pacific		27 Jan 2003 a	2	1
12	Mongolia	Asia	11-Sep-98	8-Mar-01	3	2
13	Nepal, Federal Democratic Republic of	Asia		9 Feb 2007 a	3	2
14	New Zealand	Southwest Pacific	11-Sep-98	23-Sep-03	4	2
15	Pakistan	Asia	9-Sep-99	14 Jul 2005	5	2
16	Philippines	Asia	11-Sep-98	31-Jul-06	5	2
17	Republic of Korea	Asia	7-Sep-99	11-Aug-03	3	2
18	Samoa	Southwest Pacific		30 May 2002 a	3	2
19	Singapore	Asia		24 May 2005 a	2	1
20	Sri Lanka	Asia		19 Jan 2006 a	4	2
21	Thailand	Asia		19 Feb 2002 a	1	3
22	Viet Nam	Asia		7 May 2007 a	1	2

Note:
For more details and updates of all Parties to the Rotterdam Convention, please visit the following website (http://www.pic.int/home.php?type=t&id=63&sid=17).

Table 2: Rotterdam Convention (RC) Implementation in Asia and the Pacific

Sources: (1) http://www.fao.org/world/regional/rap/member_countries.asp (FAO member countries in Asia and the Pacific)
(2) http://www.pic.int/home.php?type=t&id=7&sid=16 (Countries in PIC regions – Asia and Southwest Pacific)
(3) http://www.pic.int/home.php?type=t&id=63&sid=17 (Parties to the Rotterdam Convention)
(4) http://www.pic.int/Reports/FRA-Parties-List-AnnexIII.asp (Notifications of Final Regulatory Actions for Annex III chemicals)
(5) http://www.pic.int/Reports/FRA-Parties-List.asp (Notifications of Final Regulatory Actions for Non Annex III chemicals)
(6) http://www.pic.int/Reports/06-ICRs-Country-Parties.asp (Import Response by Parties)
(7) http://www.pic.int/Reports/06-ICRs-Country-NON-Parties.asp (Import Response by Non Parties)

Updated: July 2009

No.		PIC Region (Asia, Europe, Near East, North America or Southwest Pacific)	22 RC Parties in Asia & the Southwest Pacific	Notifications of Final Regulatory Action for Annex III chemicals by 22+1 RC Parties	Notifications of Final Regulatory Action for Non Annex III chemicals by 22+1 RC Parties	Import Responses by 22+1 RC Parties	Import Responses by RC Non-Parties (22 countries)
	I. 24 member nations of APPPC and FAO in Asia and the Pacific						
1.	Australia	Southwest Pacific	✔	5 chemicals	4 chemicals	39 chemicals	
2.	Bangladesh	Asia	Not RC Party				11 chemicals
3.	Cambodia	Asia	Not RC Party				No response
4.	China	Asia	✔	No notification	No notification	39 chemicals	
5.	DPR of Korea	Asia	✔	No notification	No notification	25 chemicals	
6.	Fiji	Southwest Pacific	Not RC Party				11 chemicals
7.	France	Europe	*	No notification	No notification	39 chemicals	
8.	India	Asia	✔	No notification	1 chemical	39 chemicals	
9.	Indonesia	Asia	Not RC Party				17 chemicals
10.	Lao PDR	Asia	Not RC Party				27 chemicals
11.	Malaysia	Asia	✔	1 chemical	1 chemical	39 chemicals	
12.	Myanmar	Asia	Not RC Party				3 chemicals
13.	Nepal, Federal Democratic Republic of	Asia	✔	No notification	No notification	11 chemicals	
14.	New Zealand	Southwest Pacific	✔	No notification	1 chemical	39 chemicals	
15.	Pakistan	Asia	✔	No notification	No notification	28 chemicals	
16.	Papua New Guinea	Southwest Pacific	Not RC Party				5 chemicals
17.	Philippines	Asia	✔	No notification	No notification	24 chemicals	
18.	Republic of Korea	Asia	✔	7 chemicals	14 chemicals	33 chemicals	
19.	Samoa	Southwest Pacific	✔	No notification	No notification	29 chemicals	
20.	Solomon Islands	Southwest Pacific	Not RC Party				2 chemicals
21.	Sri Lanka	Asia	✔	No notification	1 chemical	24 chemicals	
22.	Thailand	Asia	✔	9 chemicals	44 chemicals	39 chemicals	
23.	Tonga	Southwest Pacific	Not RC Party				No response
24.	Viet Nam	Asia	✔	No notification	No notification	24 chemicals	
	II. FAO's other 19 member nations in Asia and the Pacific						
1.	Afghanistan	Near East	Not RC Party				No response
2.	Bhutan	Asia	Not RC Party				6 chemicals
3.	Cook Islands	Southwest Pacific	✔	No notification	No notification	25 chemicals	
4.	Iran, Islamic Republic of	Asia	✔	7 chemicals	No notification	34 chemicals	
5.	Japan	Asia	✔	20 chemicals	25 chemicals	39 chemicals	
6.	Kazakhastan	Asia	✔	No notification	No notification	16 chemicals	
7.	Kiribati	Southwest Pacific	Not RC Party				No response
8.	Maldives	Asia	✔	No notification	No notification	No response	
9.	Marshall Islands	Southwest Pacific	✔	No notification	No notification	No response	
10.	Micronesia, Federated States of	Southwest Pacific	Not RC Party				No response
11.	Mongolia	Asia	✔	No notification	No notification	11 chemicals	
12.	Nauru	Southwest Pacific	Not RC Party				No response
13.	Niue	Southwest Pacific	Not RC Party				No response
14.	Palau	Southwest Pacific	Not RC Party				No response
15.	Timor-Leste	Asia	Not RC Party				No response
16.	Tuvalu	Southwest Pacific	Not RC Party				No response
17.	United States of America	North America	Not RC Party				No response
18.	Uzbekistan	Near East	Not RC Party				No response
19.	Vanuatu	Southwest Pacific	Not RC Party				20 chemicals
	III. Other countries (not FAO members) in Asia and the Pacific						
1.	Brunei Darussalam	Asia	Not RC Party				No response
2.	Singapore	Asia	✔	No notification	No notification	39 chemicals	

* **Notes**
France is Party to the Rotterdam Convention in Europe (based on the PIC Regions).

Table 3.1: Notifications of Final Regulatory Actions for Annex III Chemicals

(22 Parties in Asia and the Southwest Pacific and 1 Party [France] in Europe)

Source: http://www.pic.int/reports/FRA-Parties-List-AnnexIII.asp

Updated: July 2009

The following table shows information about the Notifications of Final Regulatory Actions for Annex III Chemicals of the Rotterdam Convention
The date shown in the cell is the date of the circular on the notifications.

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
1	2, 4, 5-T	2																12/12/03	12/12/04						
2	Aldrin	3										12/12/04						12/12/00	12/12/04						
3	Amosite asbestos	1																	12/06/05						
4	Captafol	1																	12/12/04						
5	Chlordane	4										12/12/04			12/12/04			12/12/00	12/12/04						
6	Chlordimeform	0																							
7	Chlorobenzilate	1													12/12/04										
8	Crocidolite	1																	12/06/05						
9	DDT	1																	12/12/04						
10	Dieldrin	3										12/12/04						12/12/00	12/12/04						
11	Dinoseb	1																12/12/03							
12	DNOC and its salts	1													12/12/01										
13	EDB	2	12/12/00									12/12/04													
14	Ethylene dichloride	1													12/06/00										
15	Ethylene oxide	1													12/12/04										
16	Fluoroacetamide	1																	12/12/04						

Table 3.1: *(continued)*

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
17	HCH	1																12/12/00							
18	Heptachlor	2										12/12/04							12/12/04						
19	Hexachlorobenzene	2													12/12/04				12/12/04						
20	Lindane	3					12/06/02								12/12/04				12/12/04						
21	Mercury compounds	2																12/12/00	12/12/04						
22	Methyl parathion	2													12/06/05				12/12/04						
23	Monocrotophos (BSI, E-ISO)	2	12/12/00												12/12/04										
24	Parathion	2	12/12/00																12/12/04						
25	Pentachlorophenol	1																	12/12/04						
26	Polychlorinated Biphenyls (PCBs)	3	12/06/00									12/12/04							12/06/05						
27	Polychlorinated Terphenyls (PCTs)	1	12/06/00																						
28	Tetraethyl lead	1																	12/06/05						
29	Tetramethyl lead	1																	2/06/05						
30	Toxaphene (Camphechlor)	1																	12/12/04						
31	Tris (2, 3 dibromopropyl) phosphate	1										12/12/04													
	Total	**49**	5	0	0	0	0	1	0	0	0	0	7	0	0	9	0	0	7	20	0	0	0	0	0

Table 3.2: Notifications of Final Regulatory Actions for Non Annex III Chemicals

(22 Parties in Asia and the Southwest Pacific and 1 Party [France] in Europe)

Source: http://www.pic.int/Reports/FRA-Parties-List.asp

Updated: July 2009

The following table shows information about the Notifications of Final Regulatory Actions for Non Annex III Chemicals of the Rotterdam Convention
The date shown in the cell is the date of the circular on the notifications.

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
1	2, 4, 5-TP (Fenoprop)	1													12/12/01										
2	2, 4, 6-tri-tert-butylphenol	1																12/06/05							
3	2-Ethyl-1, 3-hexanediol	1													12/12/04										
4	2-naphthylamine	2										12/12/04						12/06/05							
5	4-nitrobipnenyl	1																12/06/05							
6	Aluminium phosphide	1																12/12/04							
7	Amitrole	1													12/12/04										
8	Asbestos (Amphibole forms)	1	12/06/00																						
9	Aramite	1													12/12/01										
10	Arsenic pentoxide	1										12/12/04													
11	Azinphos-ethyl	1													12/12/01										
12	Azinphos-methyl	1													12/12/01										
13	Benzidine and its salts	3				12/12/04						12/12/04						12/06/05							
14	beta HCH	1													12/12/04										
15	biphnyl-4-ylamine	2										12/12/04						12/06/05							
16	Bis (2-chloromethyl) ether	1										12/12/04													
17	Bis (chloromethyl) ether	2										12/12/04						12/06/05							
18	Bromochloromethane	1													12/12/06										

Table 3.2: *(continued)*

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
19	Cadmium	1													12/12/04										
20	Calcium arsenate	1													12/12/01										
21	Carbon tetrachloride	2										12/12/04			12/12/04										
22	Chlordecone	1													12/12/01										
23	Chlornitrofen	1																12/12/04							
24	Chlorthiophos	1													12/12/01										
25	Chrysotile (white asbestos)	2	12/06/04															12/06/07							
26	Copper arsenate hydroxide	1													12/12/04										
27	Cycloheximide	1													12/12/01										
28	Cyhexatin	1																12/12/04							
29	DDD	1													12/12/04										
30	Demephion-O	1													12/12/01										
31	Demeton-S-methyl	1																12/12/04							
32	DBCP	1													12/12/01										
33	Dichlorophen	1													12/12/01										
34	Dicofol	1																12/12/05							
35	Dimefox	1													12/12/01										
36	Dinoterb	1													12/12/01										
37	Disulfoton	1													12/12/01										
38	Endosulfan	2							12/06/09						12/06/05										

Table 3.2: *(continued)*

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
39	Endrin	2										12/12/04							12/12/04						
40	Fentin acetate	1													12/12/01										
41	Fluoroacetic acid	1																	12/12/04						
42	Folpet	1					12/12/00																		
43	Fonofos	1													12/12/01										
44	Hexachlorobutadiene	1																	12/12/05						
45	Lead arsenate	2													12/12/04				12/12/04						
46	MCPA-thioethy (phenothiol)	1													12/12/01										
47	Mcpb	1													12/12/01										
48	Mecoprop	1													12/12/01										
49	Mephosfolan	1													12/12/01										
50	Methamidophos	1													12/12/04										
51	Methazole	1	12/12/00																						
52	Methyl bromide	1										12/12/04													
53	mevinphos	1													12/12/01										
54	MGK Repellent 11	1													12/12/04										
55	Mirex	2													12/12/04				12/06/05						
56	Naphthalene polychlorinated	1																	12/06/05						
57	Paraquat	1												12/12/08											
58	Paris green	1													12/12/01										
59	Phenol, 2-(2H-benzotriazol-2-yl)-4, 6-bis (1, 1-dimethylethyl)-	1																	12/06/08						

Table 3.2: *(continued)*

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
60	Phorate	1													12/12/01										
61	Phosphamidon	2													12/12/01				12/12/04						
62	Polybromobiphenyls	1										12/12/04													
63	Polychloroterpenes	1													12/12/04										
64	Prothoate	1													12/12/01										
65	Pyrinuron	1													12/12/04										
66	Quintozene	1																	12/12/04						
67	Safrole	1													12/12/04										
68	Schradan	2													12/12/01				12/12/04						
69	S, S, S-Tributylphosphorotrithioate	1	12/12/00																						
70	Styrene rubber antioxidant	1																	12/06/05						
71	Sulfotep	1													12/12/01										
72	TEPP	1																	12/12/04						
73	Thallium acetate	1										12/12/04													
74	Thallium nitrate	1										12/12/04													
75	Thallium sulphate	2										12/12/04			12/12/04										
76	Tributyltin*****	1										12/12/04													
	including Tributyltin oxide	2										12/12/04							12/06/05						
	Total	**92**	4	0	0	0	1	1	0	1	0	0	14	0	1	44	0	0	0	25	0	0	0	0	0

*****Note:**

Tributyltin benzoate, Tributyltin chloride, Tributyltin fluoride, Tributyltin linoleate, Tributyltin methacrylate, Tributyltin naphtenate, Tributyltin oxide

Table 4: Chemicals covered by import responses by Parties and Non Parties to the Rotterdam Convention in Asia and the Pacific

(22 Parties in Asia and the Southwest Pacific and 1 Party [France] in Europe as well as 22 Non Parties)

Sources: (1) http://www.pic.int/Reports/06-ICRs-Country-Parties.asp (Import Response by Parties)
(2) http://www.pic.int/Reports/06-ICRs-Country-NON-Parties.asp (Import Response by Non Parties)

Updated: July 2009

The following show information about the import response decisions (consent, no consent, consent under conditions, or 'response did not address importation') on various chemicals by the parties and non parties to the Rotterdam Convention.

No.	Chemical	First Date of Response	Latest Date of Response	# of Parties (A)	# of Non Parties (B)	Total (A + B = C)	Parties/Total or A/C (in %)	Non Parties/Total or B/C (in %)	(A) compared to 22 Parties in Asia and Southwest Pacific (in %)
1	2, 4, 5-T & its salts and estes	12/01/98	12/12/04	18	3	21	85.71%	14.29%	81.82%
2	Actinolite abestos	12/12/04	12/12/08	11	0	11	100.00%	0.00%	50.00%
3	Aldrin	12/07/93	12/06/05	21	6	27	77.78%	22.22%	95.45%
4	Amosite, asbestos	12/12/04	12/12/08	11	0	11	100.00%	0.00%	50.00%
5	Anthophyllite	12/12/04	12/12/08	11	0	11	100.00%	0.00%	50.00%
6	Binapacryl	12/06/00	12/06/06	17	1	18	94.44%	5.56%	77.27%
7	Captafol	12/01/98	12/06/06	18	3	21	85.71%	14.29%	81.82%
8	Chlordane	12/07/93	12/12/05	21	5	26	80.77%	19.23%	95.45%
9	Chlordimeform	12/07/93	12/06/05	20	5	25	80.00%	20.00%	90.91%
10	Chlorobenzilate	12/01/98	12/06/06	18	3	21	85.71%	14.29%	81.82%
11	Crocidolite	12/01/95	12/06/06	15	2	17	88.24%	11.76%	68.18%
12	DDT	12/07/93	12/06/06	20	6	26	76.92%	23.08%	90.91%
13	Dieldrin	12/07/93	12/06/05	21	6	27	77.78%	22.22%	95.45%
14	Dinitro-ortho-cresol (DNOC) and its salts	12/12/04	12/12/08	12	0	12	100.00%	0.00%	54.55%
15	Dinoseb & Dinoseb Salts	12/07/93	12/06/05	21	6	27	77.78%	22.22%	95.45%
16	Dustable powder formuations *****	12/12/04	12/12/08	13	0	13	100.00%	0.00%	59.09%
17	EDB (1, 2-dibromoethane)	12/07/93	12/06/06	21	5	26	80.77%	19.23%	95.45%
18	Ethylene dichloride	12/06/01	12/06/06	16	1	17	94.12%	5.88%	72.73%
19	Ehylene oxide	12/06/01	12/06/06	15	1	16	93.75%	6.25%	68.18%
20	Fluoroacetamide	12/07/93	16/06/05	20	6	26	76.92%	23.08%	90.91%
21	HCH (mixed isomers)	12/07/93	12/06/05	20	6	26	76.92%	23.08%	90.91%
22	Heptachlor	12/07/93	12/12/04	21	5	26	80.77%	19.23%	95.45%
23	Hexachlorobenzene	12/01/98	12/12/05	17	3	20	85.00%	15.00%	77.27%
24	Lindane (gamma-HCH)	12/01/98	12/06/06	18	3	21	85.71%	14.29%	81.82%
25	Mercury compounds	12/07/93	12/12/04	21	5	26	80.77%	19.23%	95.45%
26	Methamidophos	12/01/98	12/06/06	17	3	20	85.00%	15.00%	77.27%
27	Methyl-parathion	12/01/98	12/06/06	17	3	20	85.00%	15.00%	77.27%
28	Monocrotophos	12/06/03	12/06/06	14	0	14	100.00%	0.00%	63.64%
29	Parathion	12/01/98	12/12/06	12	0	12	100.00%	0.00%	54.55%
30	Pentachlorophenol & its salts and esters	12/01/98	12/06/06	18	3	21	85.71%	14.29%	81.82%
31	Phosphamidon	12/01/98	12/06/06	17	3	20	85.00%	15.00%	77.27%
32	Polybrominated Biphenyls (PBBs)	12/01/95	12/06/07	13	2	15	86.67%	13.33%	59.09%
33	Polychlorinated Biphenyls (PCBs)	12/01/95	12/12/08	15	2	17	88.24%	11.76%	68.18%
34	Polychlorinated Terphenyls (PCTs)	12/01/95	12/12/06	14	2	16	87.50%	12.50%	63.64%
35	Tetraethyl lead	12/12/05	12/06/08	10	0	10	100.00%	0.00%	45.45%
36	Tetramethyl lead	12/12/05	12/06/08	10	0	10	100.00%	0.00%	45.45%
37	Toxaphene (Camphechlor)	12/06/00	12/06/06	17	1	18	94.44%	5.56%	77.27%
38	Tremolite	12/12/04	12/06/08	10	0	10	100.00%	0.00%	45.45%
39	Tris (2, 3 dibromopropyl) phosphate	12/01/95	12/06/07	14	2	16	87.50%	12.50%	63.64%
	Total Import Responses			**635**	**102**	**737**			

*****Notes:**

Dustable powder formulations containing combination of benomyl at or above 7%, carbonfuran at or above 10% and thiram at or above 15%.

Table 5.1: Dates of import responses – Parties to the Rotterdam Convention in Asia and the Pacific

(22 Parties in Asia and the Southwest Pacific and 1 Party [France] in Europe)

Source: http://www.pic.int/Reports/06-ICRs-Country-Parties.asp

Updated: July 2009

The date shown in the cell is the date the import response decision (consent, no consent, consent under conditions, or 'response did not address importation') on the chemical was published.

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
1	2, 4, 5-T & its salts and estes	18	12/12/04	12/01/98	12/12/04	12/12/03	12/01/98		12/01/98	12/07/98	12/01/98	12/01/98	12/01/98	12/12/00	12/01/98	12/06/99		12/12/00	12/12/04	12/01/98				12/07/94	12/12/03
2	Actinolite abestos	11	12/12/04	12/06/08		12/12/04	12/12/05	12/12/06		12/06/05					12/12/05	12/06/06		12/12/08	12/12/04					12/12/04	12/12/04
3	Aldrin	21	12/12/04	12/07/93	12/12/04	12/06/05	12/07/93	12/12/00	12/07/93	12/07/93	12/07/95	12/01/94	12/01/97	12/01/98	12/07/94	12/12/99	12/07/93	12/01/95	12/12/00	12/12/04	12/07/96			12/07/94	12/12/03
4	Amosite, asbestos	11	12/12/04	12/06/08		12/12/04	12/12/05	12/12/06		12/06/06					12/12/05	12/06/06	12/06/06	12/12/08	12/12/04						12/12/04
5	Anthophyllite	11	12/12/04	12/06/08		12/12/04	12/12/05	12/12/06		12/06/05					12/12/05	12/06/06	12/06/06	12/12/08	12/12/04						12/12/04
6	Binapacryl	17	12/12/04	12/12/04	12/12/04	12/12/00	12/06/06	12/12/00		12/06/06	12/06/06		12/06/04	12/12/00	12/12/01	12/06/00	12/06/01	12/06/06	12/12/04	12/12/04					12/12/03
7	Captafol	18	12/12/04	12/01/98	12/12/04	12/12/00	12/01/98	12/12/00		12/06/06	12/01/98	12/07/98	12/01/98	12/01/98	12/12/00	12/01/98	12/06/99		12/12/04	12/12/04	12/01/98				12/12/03
8	Chlordane	21	12/12/04	12/07/93	12/12/04	12/06/05	12/07/95	12/12/00	12/01/95	12/07/93	12/06/06	12/01/98	12/07/93	12/07/93	12/12/00	12/12/05	12/07/93	12/01/95	12/12/03	12/12/04	12/07/96				12/12/03
9	Chlordimeform	20	12/12/04	12/07/94		12/06/05	12/07/98	12/01/94	12/01/95	12/07/93	12/07/95	12/01/94	12/01/97	12/07/93	12/07/93	12/07/93	12/01/94	12/01/95	12/12/00	12/12/04	12/07/96			12/07/94	12/12/03
10	Chlorobenzilate	18	12/12/04	12/01/98	12/12/04	12/12/03	12/01/98	12/01/98		12/06/06	12/01/98	12/07/98	12/01/98	12/01/98	12/06/99	12/12/05	12/06/01		12/12/03	12/12/04	12/01/98				12/12/03
11	Crocidolite	15	12/06/02	12/01/95	12/12/04	12/12/04	12/01/95	12/01/98		12/06/06		12/07/96	12/06/02	12/01/96	12/12/05	12/01/95			12/12/03	12/12/04					12/12/03
12	DDT	20	12/12/04	12/07/93		12/06/05	12/07/93	12/12/00	12/07/93	12/07/93	12/07/95	12/01/94	12/01/97	12/07/93	12/01/98	12/06/06	12/07/93	12/01/95	12/06/05	12/12/04	12/07/96				12/12/03
13	Dieldrin	21	12/12/04	12/07/93	12/12/04	12/06/05	12/07/93	12/12/00	12/07/93	12/07/93	12/07/95	12/01/94	12/01/97	12/01/98	12/07/94	12/07/93	12/07/93	12/01/95	12/12/00	12/12/04	12/07/96			12/07/94	12/12/03
14	Dinitro-ortho-cresol (DNOC) and its salts	12	12/12/04	12/12/04		12/12/04	12/12/04	12/12/08		12/06/06	12/06/06		12/12/05			12/12/05	12/06/06	12/06/06		12/12/04					12/12/04
15	Dinoseb & Dinoseb Salts	21	12/12/04	12/07/93	12/12/04	12/06/05	12/07/93	12/07/93	12/07/93	12/07/93	12/07/95	12/01/94	12/01/97	12/07/93	12/07/94	12/07/93	12/01/94	12/01/95	12/12/00	12/12/04	12/07/96			12/07/94	12/12/03
16	Dustable powder formuations[1]	13	12/12/04	12/12/04		12/12/04	12/12/04	12/12/08		12/06/06	12/06/06		12/12/05			12/06/06	12/06/06	12/12/05	12/12/04	12/12/04					12/12/04
17	EDB (1, 2-dibromoethane)	21	12/12/04	12/07/93	12/12/04	12/06/05	12/07/95	12/01/94	12/01/95	12/06/06	12/07/95	12/01/94	12/01/97	12/12/99	12/07/94	12/07/93	12/01/94	12/07/95	12/12/00	12/12/04	12/07/96			12/07/94	12/12/03
18	Ethylene dichloride	16	12/06/02	12/12/04	12/12/04	12/12/01	12/12/01	12/06/01		12/06/06	12/06/06		12/06/04	12/12/01	12/12/05	12/06/01	12/06/06	12/06/05	12/06/05	12/12/04				12/07/94	12/12/03
19	Ehylene oxide	15	12/12/04	12/12/04		12/06/05	12/12/01	12/06/01		12/06/06	12/06/06		12/06/04	12/12/01		12/06/01	12/06/06	12/06/05	12/12/04	12/12/04					12/12/03
20	Fluoroacetamide	20	12/12/04	12/07/93	12/12/04	12/06/05	12/07/98	12/01/94	12/07/93	12/07/93	12/07/95	12/01/94	12/01/97	12/01/98	12/07/93	12/07/93	12/01/94	12/01/95	12/12/00	12/12/04				12/07/94	12/12/03

Table 5.1: *(continued)*

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
21	HCH (mixed isomers)	20	12/12/04	12/07/93		12/06/05	12/07/93	12/07/93	12/07/93	12/07/95	12/01/94	12/01/97	12/07/93	12/07/93	12/07/93	12/07/93	12/01/95	12/12/00	12/12/04	12/07/96				12/07/94	12/12/03
22	Heptachlor	21	12/12/04	12/07/93	12/12/04	12/06/05	12/07/95	12/01/94	12/01/95	12/07/93	12/01/94	12/01/97	12/07/94	12/07/93	12/07/93	12/07/93	12/01/95	12/12/00	12/12/04	12/07/96				12/07/94	12/12/03
23	Hexachlorobenzene	17	12/12/04	12/01/98		12/06/05	12/01/98	12/01/98		12/07/93	12/01/98	12/01/98	12/01/98	12/06/99	12/06/01	12/07/93		12/12/00	12/12/04	12/01/98					12/12/03
24	Lindane (gamma-HCH)	18	12/06/02	12/01/98	12/12/04	12/06/05	12/01/98	12/12/98		12/06/06	12/01/98	12/07/98	12/12/00	12/12/00	12/06/99			12/06/05	12/12/04	12/01/98					12/12/03
25	Mercury compounds	21	12/12/04	12/07/93	12/12/04	12/07/95	12/07/98	12/01/94	12/01/95	12/07/93	12/07/95	12/01/94	12/01/97	12/01/96	12/07/94	12/07/93	12/01/95	12/12/00	12/12/04	12/07/96				12/07/94	12/12/03
26	Methamidophos	17	12/12/04	12/01/98	12/12/04	12/06/05	12/06/06	12/07/98		12/07/98	12/07/98	12/07/98	12/12/00	12/12/00	12/12/05	12/06/00		12/06/05	12/12/04						12/12/03
27	Methyl-parathion	17	12/12/04	12/01/98	12/12/04	12/12/03	12/12/00	12/07/98		12/06/06	12/07/98	12/01/98	12/07/98	12/06/01	12/12/05	12/06/00		12/12/04	12/12/04						12/12/03
28	Monocrotophos	14	12/12/03	12/12/04	12/12/04	12/12/03	12/06/06	12/12/03		12/12/03	12/06/06		12/06/04		12/06/03		12/06/06	12/06/05	12/12/04						12/12/03
29	Parathion	12	12/12/06	12/06/06		12/12/05	12/06/06	12/12/06		12/06/06	12/06/06		12/12/05		12/01/98		12/06/06		12/06/06						12/12/04
30	Pentachlorophenol & its salts and esters	18	12/12/04	12/01/98	12/12/04	12/06/05	12/01/98	12/12/08		12/06/06	12/07/98	12/01/98	12/01/98	12/12/00	12/01/98	12/06/01		12/12/00	12/12/04	12/01/98					12/12/03
31	Phosphamidon	17	12/12/04	12/01/98	12/12/04	12/12/03	12/06/06	12/07/98		12/01/98	12/07/98	12/07/98	12/07/98	12/12/01	12/12/05	12/06/00		12/06/05	12/12/04						12/12/03
32	Polybrominated Biphenyls (PBBs)	13	12/12/06	12/01/95	12/12/04	12/12/03	12/01/95	12/01/98		12/12/04			12/06/02	12/01/96				12/12/03	12/12/04						12/12/03
33	Polychlorinated Biphenyls (PCBs)	15	12/06/02	12/01/95	12/12/04	12/06/05	12/01/95	12/01/98		12/12/04		12/07/96	12/06/02	12/01/96	12/12/08	12/01/95			12/12/04						12/12/03
34	Polychlorinated Terphenyls (PCTs)	14	12/06/02	12/01/95	12/12/04	12/06/05	12/01/95	12/01/98		12/12/04		12/07/96	12/06/02	12/01/96		12/12/06		12/12/03	12/12/04						12/12/03
35	Tetraethyl lead	10	12/12/06	12/06/08		12/12/05	12/12/05	12/06/06		12/06/06						12/12/05		12/06/06							
36	Tetramethyl lead	10	12/12/06	12/06/08		12/12/05	12/12/05	12/06/06		12/06/06						12/12/05		12/06/06	12/12/05						
37	Toxaphene (Camphechlor)	17	12/12/01	12/12/04	12/12/04	12/06/05	12/06/06	12/12/00		12/06/00	12/06/06		12/06/04	12/12/00	12/12/01	12/06/00		12/12/04	12/12/04						12/12/03
38	Tremolite	10	12/12/04	12/06/08		12/12/04	12/12/05	12/12/06		12/06/05							12/06/06		12/12/04						12/12/04
39	Tris (2, 3 dibromopropyl) phosphate	14	12/12/04	12/01/95	12/12/04	12/01/95	12/01/95	12/01/98		12/12/04		12/07/96	12/06/02	12/01/96		12/06/07		12/12/03	12/12/04						12/12/03
	Total	**635**	39	39	25	39	39	39	11	39	28	24	33	29	24	39	24	25	34	39	16	0	0	11	39

Notes:

[1] Dustable powder formulations containing combination of benomyl at or above 7%, carbonfuran at or above 10% and thiram at or above 15%.

Table 5.2: Import responses – Parties to the Rotterdam Convention in Asia and the Pacific

(22 Parties in Asia and the Southwest Pacific and 1 Party [France] in Europe)

Source: http://www.pic.int/Reports/06-ICRs-Country-Parties.asp

Updated: July 2009

The information in the cell shows the import response decision: consent (c), no consent (nc), consent under conditions (cuc) or 'response did not address importation (r-im)' on the chemical.

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
1	2, 4, 5-T & its salts and estes	18	cuc	nc	nc	nc	nc	nc		nc	nc	nc	nc	nc	nc	nc	nc		nc	nc	nc				cuc
2	Actinolite abestos	11	cuc	nc		nc	cuc	nc		c						nc		nc	nc	nc	c				nc
3	Aldrin	21	nc	nc	cuc	nc	nc	nc	c	nc	nc	nc	nc	nc	cuc	nc	nc	nc	nc	nc	nc	nc			nc	cuc
4	Amosite, asbestos	11	cuc	nc		nc	cuc	nc		nc						nc		nc	nc	nc	nc				nc
5	Anthophyllite	11	cuc	nc		nc	cuc	nc		c						nc		nc	nc	nc	c				nc
6	Binapacryl	17	cuc	nc	nc	nc	nc	nc		nc	nc		nc	nc	nc	nc	nc	nc	nc	nc					cuc
7	Captafol	18	cuc	nc	nc	nc	cuc	nc		nc	nc	nc	nc	nc	nc	nc	nc		nc	nc	nc				cuc
8	Chlordane	21	nc	nc	cuc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc			nc	cuc
9	Chlordimeform	20	cuc	nc		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	cuc	nc			nc	cuc
10	Chlorobenzilate	18	cuc	nc	nc	nc	cuc	nc		nc	nc	nc	nc	nc	nc	nc	nc		nc	cuc	nc				cuc
11	Crocidolite	15	cuc	nc	c	nc	cuc	nc		nc		cuc	nc	nc	nc	nc			nc	nc					cuc
12	DDT	20	nc	nc		nc	c	nc	c	nc	nc	cuc	nc	nc	nc	nc	c	nc	nc	nc	nc			nc	cuc
13	Dieldrin	21	nc	nc	cuc	nc	c	nc	c	nc	nc	nc	nc	nc	cuc	nc	nc	nc	nc	nc	nc			nc	cuc
14	Dinitro-ortho-cresol (DNOC) and its salts	12	cuc	nc		nc	nc	nc		cuc	nc		nc			nc		nc		cuc					cuc
15	Dinoseb & Dinoseb Salts	21	cuc	nc	cuc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	cuc	nc			nc	cuc
16	Dustable powder formuations[1]	13	cuc	nc		nc	nc	nc		cuc	nc		cuc			cuc		nc	nc	cuc					cuc
17	EDB (1, 2-dibromoethane)	21	cuc	nc	cuc	nc	c	nc	nc	cuc	nc	nc	nc	nc	nc	nc	nc	cuc	nc	cuc	nc			nc	cuc
18	Ethylene dichloride	16	cuc	nc	cuc	nc	cuc	nc		nc	nc		nc	nc		nc	nc	nc	cuc	cuc					cuc
19	Ehylene oxide	15	cuc	nc		cuc	nc	nc		cuc	nc		nc	nc		nc	nc	nc	cuc	cuc					cuc
20	Fluoroacetamide	20	cuc	nc	cuc	cuc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	cuc				nc	cuc
21	HCH (mixed isomers)	20	cuc	nc		cuc	c	nc	c	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc			nc	cuc

Table 5.2: *(continued)*

No.	Chemical	# of Countries addressing the chemical	Australia	China	DPR Korea	France	India	Malaysia	Nepal, Federal Democratic Republic of	New Zealand	Pakistan	Philippines	Republic of Korea	Samoa	Sri Lanka	Thailand	Viet Nam	Cook Islands	Iran, Islamic Republic of	Japan	Kazakhstan	Maldives	Marshall Islands	Mongolia	Singapore
22	Heptachlor	21	nc	nc	cuc	nc	nc	nc	nc	nc	c	nc	nc	nc	nc	nc	nc	nc	nc	nc			nc		cuc
23	Hexachlorobenzene	17	nc	nc		nc	nc	nc		nc	nc	nc	nc	nc	nc	nc	nc		nc	nc	nc				cuc
24	Lindane (gamma-HCH)	18	cuc	cuc	c	cuc	cuc	cuc		cuc	nc	cuc	nc	nc	nc	nc	nc		nc	nc	nc				cuc
25	Mercury compounds	21	cuc	nc	nc	nc	r-im	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc			nc	cuc
26	Methamidophos	17	cuc	cuc	cuc	cuc	nc	cuc		nc	nc	nc	cuc	nc	nc	nc	nc		nc	cuc					cuc
27	Methyl-parathion	17	cuc	cuc	cuc	nc	c	nc		cuc	cuc	nc	nc	nc	nc	nc	nc		nc	nc					cuc
28	Monocrotophos	14	cuc	c	c	nc	cuc	c		nc	nc		c			nc		nc	nc	cuc					cuc
29	Parathion	12	cuc	c		nc	nc	nc		nc	nc		c			nc		nc		nc					nc
30	Pentachlorophenol & its salts and esters	18	cuc	cuc	cuc	cuc	nc	nc		nc	nc	nc	nc	nc	nc	nc	c		nc	nc	nc				cuc
31	Phosphamidon	17	cuc	cuc	cuc	nc	nc	nc		nc	nc	nc	cuc	nc	nc	nc	nc		nc	nc					cuc
32	Polybrominated Biphenyls (PBBs)	13	cuc	cuc	cuc	cuc	cuc	nc		nc			nc	nc		nc			nc	cuc					cuc
33	Polychlorinated Biphenyls (PCBs)	15	nc	cuc	cuc	nc	cuc	nc		nc		cuc	nc	nc	nc	nc			nc	nc					cuc
34	Polychlorinated Terphenyls (PCTs)	14	cuc	cuc	nc	nc	cuc	nc		nc		cuc	cuc	nc		nc			nc	cuc					cuc
35	Tetraethyl lead	10	cuc	cuc		cuc	cuc	cuc		cuc						cuc		nc		cuc					cuc
36	Tetramethyl lead	10	cuc	cuc		cuc	cuc	cuc		nc						cuc		nc		cuc					cuc
37	Toxaphene (Camphechlor)	17	nc	nc	cuc	nc	nc	nc		nc	nc		nc	nc	nc	nc	nc	nc	nc	nc					cuc
38	Tremolite	10	cuc	nc		nc	cuc	nc		c						nc		nc		c					nc
39	Tris (2, 3 dibromopropyl) phosphate	14	cuc	cuc	c	cuc	cuc	nc		nc		cuc	nc	nc		nc			nc	c					cuc
	Total	**635**	39	39	25	39	39	39	11	39	28	24	33	29	24	39	24	25	34	39	16	0	0	11	39

Notes:

[1] Dustable powder formulations containing combination of benomyl at or above 7%, carbonfuran at or above 10% and thiram at or above 15%.

Table 6.1: Dates of import responses – Non Parties (22 countries) to the Rotterdam Convention in Asia and the Pacific

Source: http://www.pic.int/Reports/06-ICRs-Country-NON-Parties.asp

Updated: July 2009

The date shown in the cell is the date the import response decision (consent, no consent, consent under conditions, or 'response did not address importation') on the chemical was published.

No.	Chemical	# of Countries addressing the chemical	Bangladesh	Cambodia	Fiji	Indonesia	Lao PDR	Myanmar	Papua New Guinea	Solomon Islands	Tonga	Afghanistan	Bhutan	Kiribati	Micronesia, Federated States of	Nauru	Niue	Palau	Timor-Leste	Tuvalu	United States of America	Uzbekistan	Vanuatu	Brunei Darussalam
1	2, 4, 5-T & its salts and estes	3				12/07/98	12/12/99																12/01/98	
2	Aldrin	6	12/01/95		12/01/94	12/07/95	12/12/99					12/07/93											12/01/98	
3	Binapacryl	1					12/12/99																	
4	Captafol	3				12/07/98	12/12/99																12/01/98	
5	Chlordane	5	12/01/98		12/01/94	12/01/96	12/12/99																12/01/98	
6	Chlordimeform	5	12/01/98		12/01/94	12/07/95	12/12/99																12/01/98	
7	Chlorobenzilate	3				12/07/98	12/12/99																12/01/98	
8	Crocidolite	2					12/12/99		12/07/96															
9	DDT	6	12/01/98		12/01/94	12/07/95	12/12/99					12/07/93											12/01/98	
10	Dieldrin	6	12/01/98		12/01/94	12/01/96	12/12/01					12/07/93											12/01/98	
11	Dinoseb & Dinoseb Salts	6	12/01/98		12/01/94	12/07/95	12/12/99					12/07/93											12/01/98	
12	EDB (1, 2-dibromoethane)	5	12/01/98		12/01/98	12/07/95	12/12/99																12/01/98	
13	Ethylene dichloride	1							12/06/01															
14	Ehylene oxide	1							12/06/01															
15	Fluoroacetamide	6	12/01/98		12/01/94	12/07/95	12/12/99					12/07/93											12/01/98	
16	HCH (mixed isomers)	6	12/01/98		12/01/94	12/01/96	12/12/99					12/07/93											12/01/98	
17	Heptachlor	5	12/01/98		12/01/94	12/07/95	12/12/99																12/01/98	
18	Hexachlorobenzene	3				12/07/98	12/12/99																12/01/98	

Table 6.1: *(continued)*

No.	Chemical	# of Countries addressing the chemical	Bangladesh	Cambodia	Fiji	Indonesia	Lao PDR	Myanmar	Papua New Guinea	Solomon Islands	Tonga	Afghanistan	Bhutan	Kiribati	Micronesia, Federated States of	Nauru	Niue	Palau	Timor-Leste	Tuvalu	United States of America	Uzbekistan	Vanuatu	Brunei Darussalam
19	Lindane (gamma-HCH)	3				12/07/98	12/12/99															12/01/98		
20	Mercury compounds	5	12/01/98		12/01/98	12/07/95	12/12/99															12/01/98		
21	Methamidophos	3					12/12/01	12/07/98														12/01/98		
22	Methyl-parathion	3					12/12/01	12/07/98														12/01/98		
23	Pentachlorophenol & its salts and esters	3				12/07/98	12/12/99															12/01/98		
24	Phosphamidon	3					12/12/01	12/07/98														12/01/98		
25	Polybrominated Biphenyls (PBBs)	2					12/12/99		12/07/96															
26	Polychlorinated Biphenyls (PCBs)	2					12/12/99		12/07/96															
27	Polychlorinated Terphenyls (PCTs)	2					12/12/99		12/07/96															
28	Toxaphene (Camphechlor)	1					12/12/99																	
29	Tris (2, 3 dibromopropyl) phosphate	2					12/12/99		12/07/96															
	Total	**102**	**11**	**0**	**11**	**17**	**27**	**3**	**5**	**2**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**

Table 6.2: Import Responses – Non Parties (22 countries) to the Rotterdam Convention in Asia and the Pacific

Source: http://www.pic.int/Reports/06-ICRs-Country-NON-Parties.asp

Updated: July 2009

The information in the cell shows the import response decision: consent (c), no consent (nc), consent under conditions (cuc) or 'response did not address importation (r-im)' on the chemical.

No.	Chemical	# of Countries addressing the chemical	Bangladesh	Cambodia	Fiji	Indonesia	Lao PDR	Myanmar	Papua New Guinea	Solomon Islands	Tonga	Afghanistan	Bhutan	Kiribati	Micronesia, Federated States of	Nauru	Niue	Palau	Timor-Leste	Tuvalu	United States of America	Uzbekistan	Vanuatu	Brunei Darussalam
1	2, 4, 5-T & its salts and estes	3				nc	nc																nc	
2	Aldrin	6	nc		nc	nc	nc					nc											nc	
3	Binapacryl	1					nc																	
4	Captafol	3				nc	nc																nc	
5	Chlordane	5	cuc		nc	nc	nc																nc	
6	Chlordimeform	5	c		nc	nc	nc																nc	
7	Chlorobenzilate	3				nc	nc																nc	
8	Crocidolite	2					nc		r-im															
9	DDT	6	nc		nc	nc	nc					c											nc	
10	Dieldrin	6	c		nc	nc	nc					nc											nc	
11	Dinoseb & Dinoseb Salts	6	r-im		nc	nc	nc					nc											nc	
12	EDB (1, 2-dibromoethane)	5	r-im		cuc	nc	nc																nc	
13	Ethylene dichloride	1							nc															
14	Ehylene oxide	1							nc															
15	Fluoroacetamide	6	r-im		nc	nc	nc					nc											nc	
16	HCH (mixed isomers)	6	r-im		nc	nc	nc					c											nc	
17	Heptachlor	5	nc		nc	nc	nc																nc	
18	Hexachlorobenzene	3				nc	nc																nc	
19	Lindane (gamma-HCH)	3				nc	nc																nc	
20	Mercury compounds	5	r-im		nc	nc	nc																nc	
21	Methamidophos	3					c	nc															nc	
22	Methyl-parathion	3					nc	nc															nc	
23	Pentachlorophenol & its salts and esters	3				nc	nc																nc	
24	Phosphamidon	3					nc	nc															nc	
25	Polybrominated Biphenyls (PBBs)	2					nc		r-im															
26	Polychlorinated Biphenyls (PCBs)	2					nc		r-im															
27	Polychlorinated Terphenyls (PCTs)	2					nc		r-im															
28	Toxaphene (Camphechlor)	1					nc																	
29	Tris (2, 3 dibromopropyl) phosphate	2					nc		r-im															
	Total	**102**	**11**	**0**	**11**	**17**	**27**	**3**	**5**	**2**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**

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