Lao People's Democratic Republic

I. General information

Last updated: December 2010

Overall executive summary[1]

Lao PDR is a landlocked country. It occupies an area of 236,800 km^2 out of which approximately 75% 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 end 2010 was estimated at about say 6.8 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 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 neighboring countries create a growing demand for food and agricultural products. These can be supplied from Lao PDR, whose natural resources favor expansion of agricultural production. Improvement of the investment climate, preparation accession for 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 neighboring 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 neighboring 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 program 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

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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.

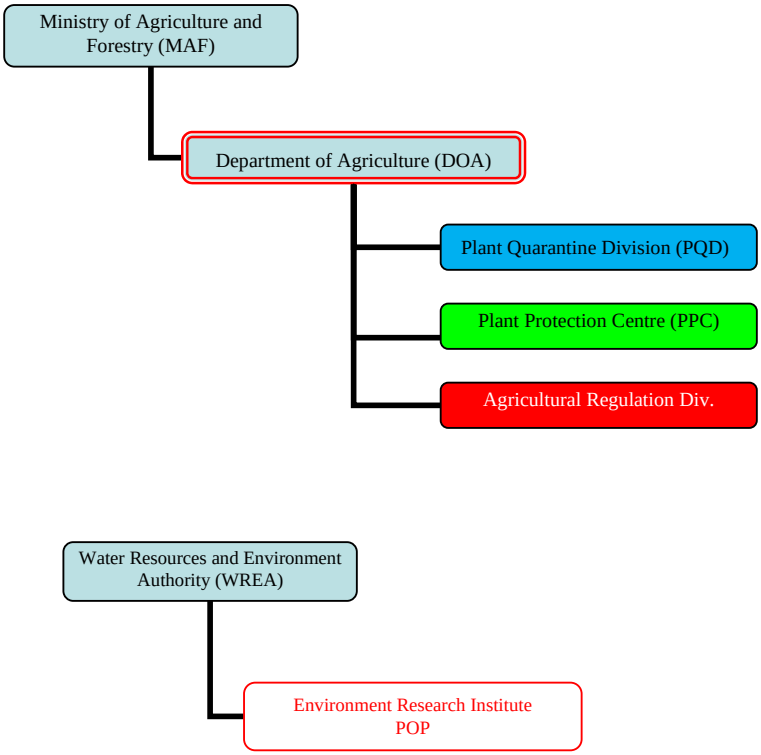
Protecting the Lao People's Democratic Republic's Plant Health Status and Facilitating Safe Trade in Plants and Plant Products, the NPPO of Lao PDR is dealing its mandates with the Prime Minister Decree on Plant Quarantine promulgated on 1993 and so far to be in compliance with the WTO-SPS Agreement 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.

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 program 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 earlier has been initially interested by STDF, but no explicit comment, the last discarded its support as priority for consideration usually depends on the willingness and policy of donors. Finally, Japan International Cooperation Agency has initiated a pilot program for narrowing the development of GAP towards ASEAN Integration as component of tripartite cooperation mechanism among Lao PDR, the ASEAN Secretariat and JICA. Project activities related to GAP development is not yet launched.

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 neighboring 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 needs 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 in accordance with real needs.

Plant protection organization chart



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

Important contact addresses

Responsible ministry/ministries

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Responsible department

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Address for nominations

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Plant protection

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Plant quarantine

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Surveillance, pest outbreaks and invasive species management
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Official international contact points

National Plant Protection Organization (NPPO) contact points (for IPPC/APPPC)
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WTO-SPS contact point
Implementing Coordination Committee for SPS and TBT related to TDF (Trade Development Facilitation under Ministry of Agriculture and Forestry), Plant Health Component
Department of Agriculture
Mr Phaydy Phiaxaysarakham, Deputy Director- General
Department of Agriculture
Ministry of Agriculture and Forestry
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Rotterdam Convention (PIC) DNA Pesticides
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Division of Agriculture Regulatory
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Stockholm Convention (POP) National Focal Point
Environment Research Institute (ERI)
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Basel Convention Competent Authority (CA)
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Montreal Protocol focal point
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Selected country statistics:
Last updated: December 2010

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 2010

Executive summary[2]

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 treaties such as International Plant Protection Convention (IPPC), which provides standards for phytosanitary measures on how to prevent the spread and introduction of pests of plants and plant products. Since the country has limited resources 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 pests of plants and plant products, and to promote appropriate measures 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 02 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" has been approved by the National Assembly on 9 December 2008 and promulgated by Presidential Decree No. 241 of 18 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 located 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 Program" to enhance SPS capacity in Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Vietnam as a part of "Asia Regional Development Cooperation Program". The project is seeking to extend its activities.

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- **JICA**

JICA is supporting an in-country and third country training program on Phytosanitary aiming to train plant quarantine staffs 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. The project is trade focused, not fully to strengthen or develop the capacity on phytosanitary development.

National goal and objectives

1. Conduct physical and instrumental awareness on newly approved Plant Protection and Quarantine Law.
2. Continue using and improving (National Phytosanitary Database) 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 national guidelines and procedural manuals 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 furbishing 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 programs 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 has also 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 ISPMs.

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	Don't know
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 assessment (PRA)	MAF/DOA/PQD/PPC/NUOL
National standards development	MAF/DOA
International notifications	MAF/DOA/PQD
Import:	
Import permits	MAF/DOA/PQD/ARD
Import inspections	MAF/DOA/PQD/PAFO
Emergency action	MAF/DOA/PQD/PAFO
Export:	
Phytosanitary certificates	MAF/DOA/PQD/PAFO
Treatment of commodities	

Infrastructure	Year: 2010
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 2010
List of target pest species and crops ISPM 10	**Number of sites in 2010**

Key situation indicators

International trade		Year: 2010
Main import plant commodities	Main countries/areas of origin	Quantity (tons)
Seed and planting material	Viet Nam, China, Thailand, India, UK, Australia	
Main export pPlant 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	Year: 2010
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	1604
Number of electronic phytosanitary certificates issued	

Number of quarantine pests intercepted		Year: 2010
Top three commodity	Top three pest/commodity	# of interceptions

List 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 (PRA)	Insects	Pathogens	Plants
Number 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 ISPMs	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								
ISPM 33 Pest free potato (Solanum spp.) micropropagative material and minitubers for international trade								
ISPM 34 Design and operation of post-entry quarantine stations for plants								
Comments/constraints See as determined in the management responsibilities requirements above.								

III. Surveillance, pest outbreaks and invasive species management

Last updated: December 2010

Executive summary[3]

Lao PDR has not established a national program for pest outbreaks and invasive species management. Moreover, beside the forecast signal of a possible 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 cause damage to their cash crop such as coffee, sugar cane and coconut

The Department of Agriculture (DOA) has recently established a network of plant protection with a role to monitor and develop a database on the pest status of economic crops, which is further reported to the NPPO to indentify proper control measures. Those mandates of the plant protection unit have been clearly defined in the Agreement of the DOA on the 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 program, 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 (remote diagnostic) 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

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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: (e.g. subsidies, etc.)			
Web source for further information: -			

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Organization of functions related to surveillance pest outbreaks and invasive species management	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	MAF/DOA/PPC
Surveillance	MAF/DOA/PPC
Control	MAF/DOA/PPC
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	Year: 2010
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 the country	Insects	Pathogens	Weeds
Total number for 2010 [most recent]			
Total number for 2009 [year before]			
Total number on record:			

Eradication or internal quarantine actions taken against economically important species			
Name of species	Brontispa longissima		
Year of first discovery	2002		
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	Coffee berry borer	Phytoplasma (sugar cane)	
Year of outbreak		2010	
Area affected [ha]	25 000	< 5,000	
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, investments, training, etc.)
• Knowledge and skill of key technical staffs on diagnostic and pest surveillance has been improved through NZAID and AusAID training programs. • Surveillance program of important crop (corn, mango, cabbage) was initiated to establish 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. • Capability development on quarantine inspection has been supported by JICA through the in-country and third –country training program. • NPQS of Republic of Korea also provided training on plant quarantine in R of Korea through ASEAN program
Main constraints (personnel, infrastructure, administrative, operational, training, etc.)
• Lack of personnel, no adequate infrastructure, no operational budget, and not enough training.

IV. Pest management

Last updated: December 2010

Executive summary[4]

Pest management is nationwide recognized in Lao PDR through the integrated pest management project (IPM) which has been implemented since 1995 under the technical cooperation programme between FAO and Lao PDR.

The national IPM project office which is based in the 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.

The strategy for pest management has focused on vegetables since 2005. The IPM activities in Lao PDR have focused on increasing the capacity of the IPM program 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 program 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 the IPM. As well, 7 officers and local trainers of the IPM program 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 Oxfam-Belgium Project on the use and production of biological control agents, a number of biological control agents have been introduced into the program 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 a FAO program. 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 the PPC.

[4] by Souliya Souvandouane, PRA team leader, Plant Quarantine Division, Department of Agriculture, Ministry of Agriculture and Forestry, Emails: Souliya_ss@yahoo.com; pq_division@yahoo.com

Based on the IPM project's activities with its achievement, the Ministry of Agriculture and Forestry as well as the Department of Agriculture have been promoting the 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	Don't know
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 pest management function	**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: 2010**
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 program)	50

Key situation and operation indicators

Pest management	Yes	No	Don't know
Does the country have a National IPM program? *If yes, give Name and Address of IPM Programme:* **PPC**	x		
Does the country have specific IPM extension programs? *If yes, in which crops:* **Vegetables**	x		

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

Market shares (estimated value, volume or area under control)	Year: 2010
Size of chemical pest control market	
Size of biopesticides market	
Size of biological control agents market	

Major 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	**Year: 2010**
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 in to FFS of IPM program. - Clean agriculture development center (CADC) was established and 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 and forestry office (PAFO).
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: March 2011

Executive summary[5]

The first regulation on the control and use of pesticide was promulgated by the Ministry of Agriculture and Forestry in 1992 and then revised in 1998 and 2000. The final version of the new Regulation on the Control of Pesticides No 2860\MAF was promulgated on 10 February 2010. The new Regulation on the Control of Pesticides is an important tool in regulating activities related to pesticide including import, export, transit, trade and use of pesticide in Lao PDR. Proper regulatory control of pesticides is an important factor in enhancing food safety and obtaining the WTO accession.

So far, 55 kinds of pesticides in Lao PDR are prohibited to use in the country. Presently, 123 trade names of the pesticides (mainly imported from Viet Nam, China and Thailand) have been registered with the DOA.

List of key legislation/regulations/rules for pesticide management

2010 Regulation on the Control of Pesticides No 2860\MAF was promulgated on 10 February 2010

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 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		

[5] by Ms Khamphoui Louanglath, Director of Division, Division of Regulatory, Department of Agriculture, Ministry of Agriculture and Forestry, Emails: doag@laotel.com; phoui2@hotmail.com

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 pesticide management function	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	MOH/FDD
Environmental monitoring	MAF/DOA/NAFRI
Health monitoring	MOH/FDD
Other Stakeholders:	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	

Infrastructure	Years: 2010
Number of registration officers	5
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	2

Key situation indicators

Pesticide trade: 2010	Tons	US$ '000 Value
Imports	<10	
Manufacture	0	
Export	0	
Domestic use/sales		
Pesticide use profile: 2010	**Tons (a.i./formulation to be specified)**	**US$ '000 Value**
Agriculture	<10	
Chem. Insecticides	1.23	
Chem. Fungicides	1.96	
Chem. Herbicides	0.30	
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	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?		x	
Source for more information: DOA			

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: DOA			

Pesticide disposal	Yes	No	Don't know
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? (eg. banned and no longer traded, but still in storage)		x	
Do you have illegal trade in pesticides? if yes: what is the estimated amount: < 50 Tons of formulated product	x		
Source for more information: DOA			

Key operation indicators

Registration/regulation/monitoring	Years: 2010	
	a.i.*	Trade names
Number of registered pesticide products	6846	123112
Number of registered bio-pesticides (Avamectrin, Bt, Neem, etc.)	2	
Number of restricted-use pesticides/formulations		
Number of banned pesticides	5526	
Number of licensed outlets		
Number of licensed applicators		
Number of licensing violations reported during year		
Number of quality control analyses conducted during year	29	
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 (2009-2010)	
Year	Name of active ingredient or hazardous formulation

Pesticides Banned in Recent Years (2009-2010)	
Year	Name of active ingredient

Cooperation Projects			
Purpose/target	Donor	Amount	Years (start-end)
Regional Program for Pesticide Risk Reduction in South East Asia	GCP/RAS/224/SWE	Unknown	2007-2013
Pesticide Regulatory Harmonization	TCP/RAS/3212	Unknown	2010-2011
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.)
• New Regulation on the Control of Pesticides in Lao PDR, No. 2860/MAF, dated 10 June 2010. • Awareness on Regulation on the Control of Pesticides.
Main constraints (personnel, infrastructure, administrative, operational, training, etc.)
• Lack of personnel, no adequate infrastructure, limited of budget, not enough training.

VI. Additional issues of interest

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