"The World Best Plant Quarantine Service"

Korean Plant Quarantine Information Technology

Eonsook Do(soogi@korea.kr)

Oct 2014



Animal and Plant Quarantine Agency / MAFRA

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Ⅰ **Phytosanitary Certificate Production**

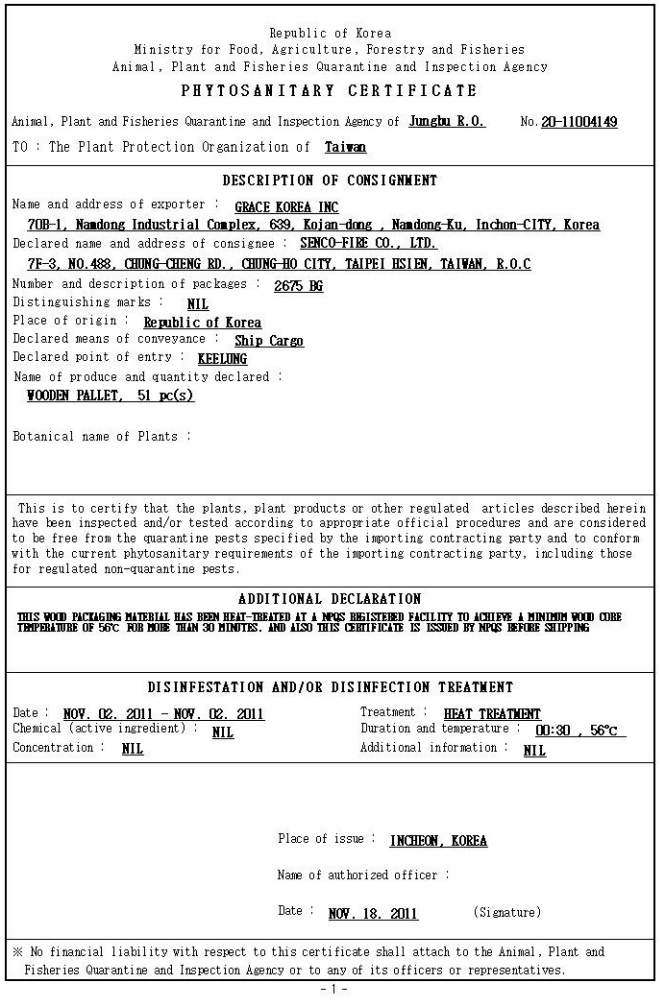
Ⅱ Plant Quarantine Information System

Ⅲ E-cert System

Ⅰ. Phytosanitary Certificate Production

➢ **Phytosanitary Certificates are issued/received annually as below**

	Export	ReExport	Import
2011	35,073	99	96,158
2012	34,243	131	108,147
2013	**33,108**	**106**	**111,706**



Republic of Korea
Ministry for Food, Agriculture, Forestry and Fisheries
Animal, Plant and Fisheries Quarantine and Inspection Agency

PHYTOSANITARY CERTIFICATE

Animal, Plant and Fisheries Quarantine and Inspection Agency of Jungbu R.O. No. 20-11004149

TO : The Plant Protection Organization of Taiwan

DESCRIPTION OF CONSIGNMENT

Name and address of exporter : GRACE KOREA INC
70B-1, Namdong Industrial Complex, 639, Kojan-dong , Namdong-Ku, Inchon-CITY, Korea
Declared name and address of consignee : SENCO-FIRE CO., LTD.
7F-3, NO.488, CHUNG-CHENG RD., CHUNG-HO CITY, TAIPEI HSIEN, TAIWAN, R.O.C
Number and description of packages : 2675 BG
Distinguishing marks : NIL
Place of origin : Republic of Korea
Declared means of conveyance : Ship Cargo
Declared point of entry : KEELUNG
Name of produce and quantity declared :
WOODEN PALLET, 51 pc(s)

Botanical name of Plants :

This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party and to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.

ADDITIONAL DECLARATION

THIS WOOD PACKAGING MATERIAL HAS BEEN HEAT-TREATED AT A NPQS REGISTERED FACILITY TO ACHIEVE A MINIMUM WOOD CORE TEMPERATURE OF 56℃ FOR MORE THAN 30 MINUTES. AND ALSO THIS CERTIFICATE IS ISSUED BY NPQS BEFORE SHIPPING

DISINFESTATION AND/OR DISINFECTION TREATMENT

Date : NOV. 02. 2011 - NOV. 02. 2011
Chemical (active ingredient) : NIL
Concentration : NIL
Treatment : HEAT TREATMENT
Duration and temperature : 00:30 , 56℃
Additional information : NIL

Place of issue : INCHEON, KOREA

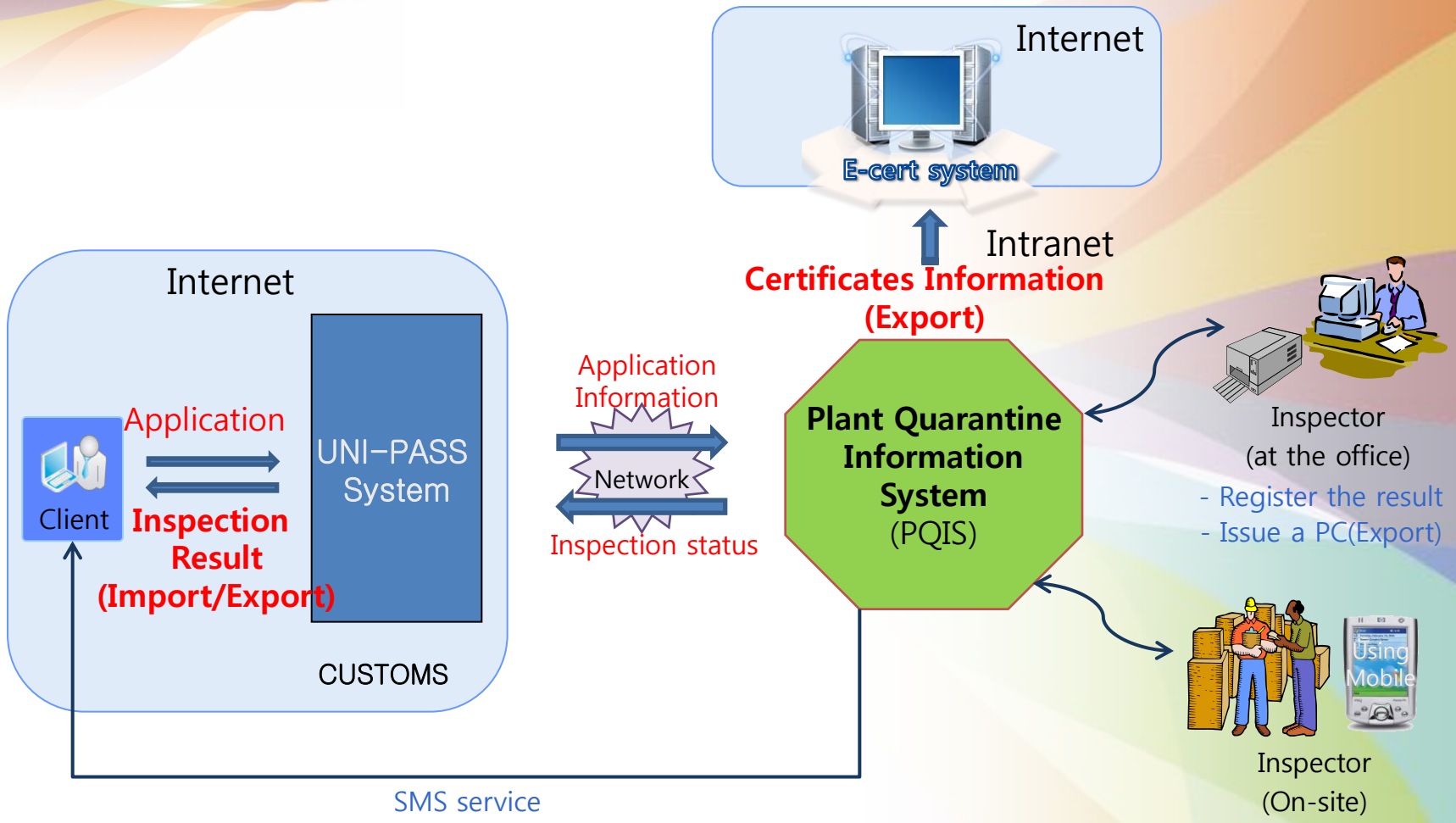
Name of authorized officer :

Date : NOV. 18. 2011 (Signature)

※ No financial liability with respect to this certificate shall attach to the Animal, Plant and Fisheries Quarantine and Inspection Agency or to any of its officers or representatives.

- 1 -

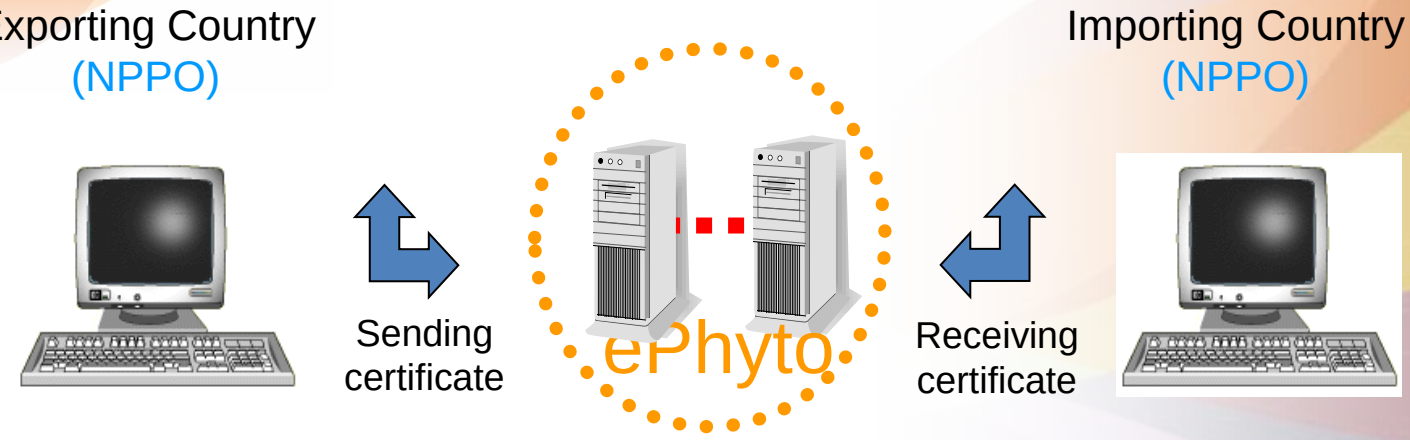
Ⅱ. Plant Quarantine Information System



Ⅲ E-cert System

1. Overview
2. E-cert System on Plant Quarantine
3. Exchange E-cert Data
   - Exchange procedures – Export / Import
   - Web Services(WSDL)
   - Business collaboration diagram
4. Security Mechanisms
5. Application of Appendix 1 of ISPM 12

Ⅲ-1. Overview



✓ Electronic phytosanitary certification is the secure and authentic transmission of phytosanitary certification data, including the certifying statement, from the NPPO of the exporting country to the NPPO of the importing country by electronic means. (definition ISPM12)

✓ Korea e-Cert System

① Search data of Phytosanitory Certificates on the E-cert website

② Exchange data of Phytosanitory Certificates using SOAP method

Ⅲ-2. E-cert System on Plant Quarantine

- URL address : **Https://ecert.pqis.go.kr**



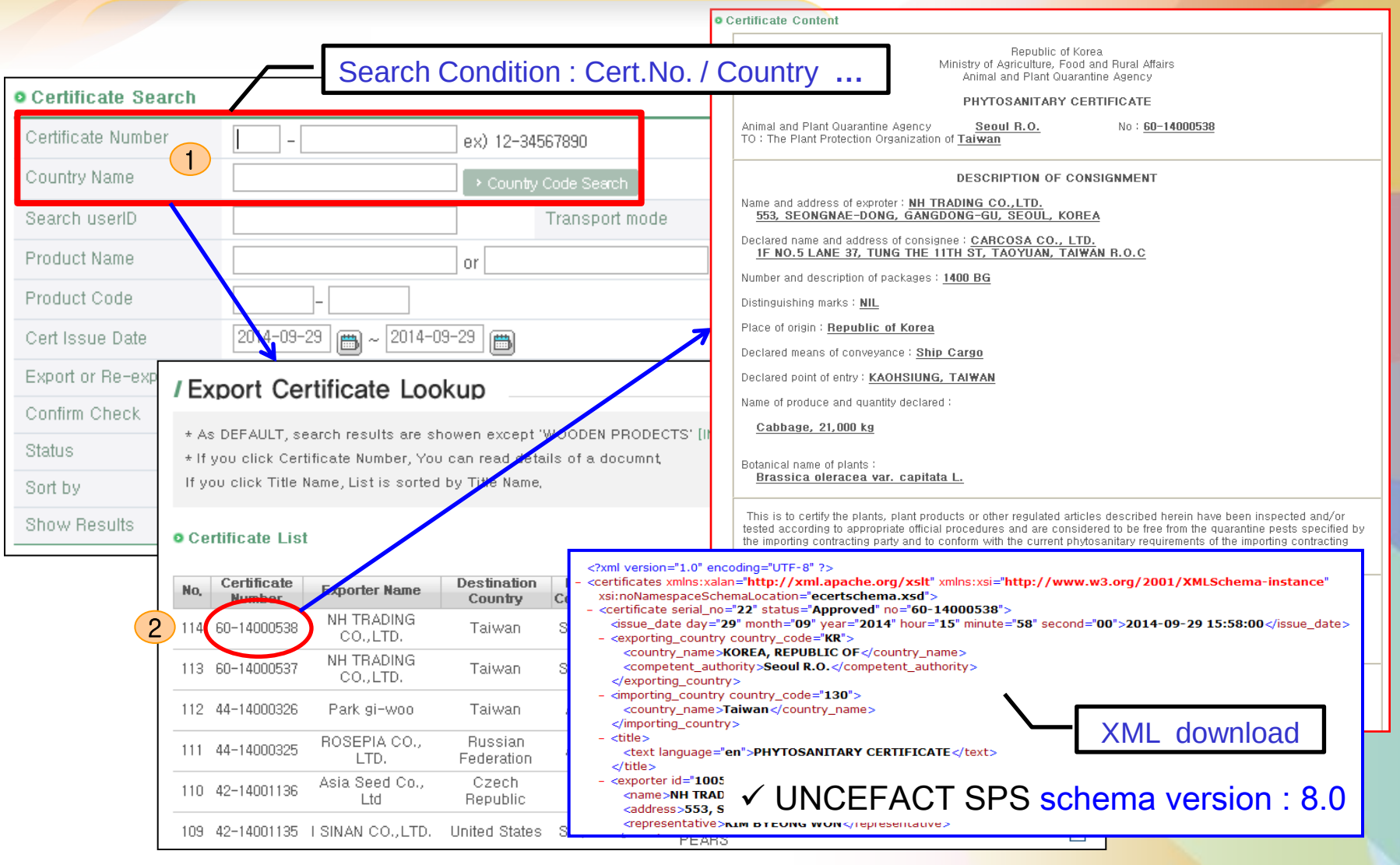
E-cert System has been developed by QIA since 2004.

➢ Coverage
-Plant

✓Pilot project with Netherlands

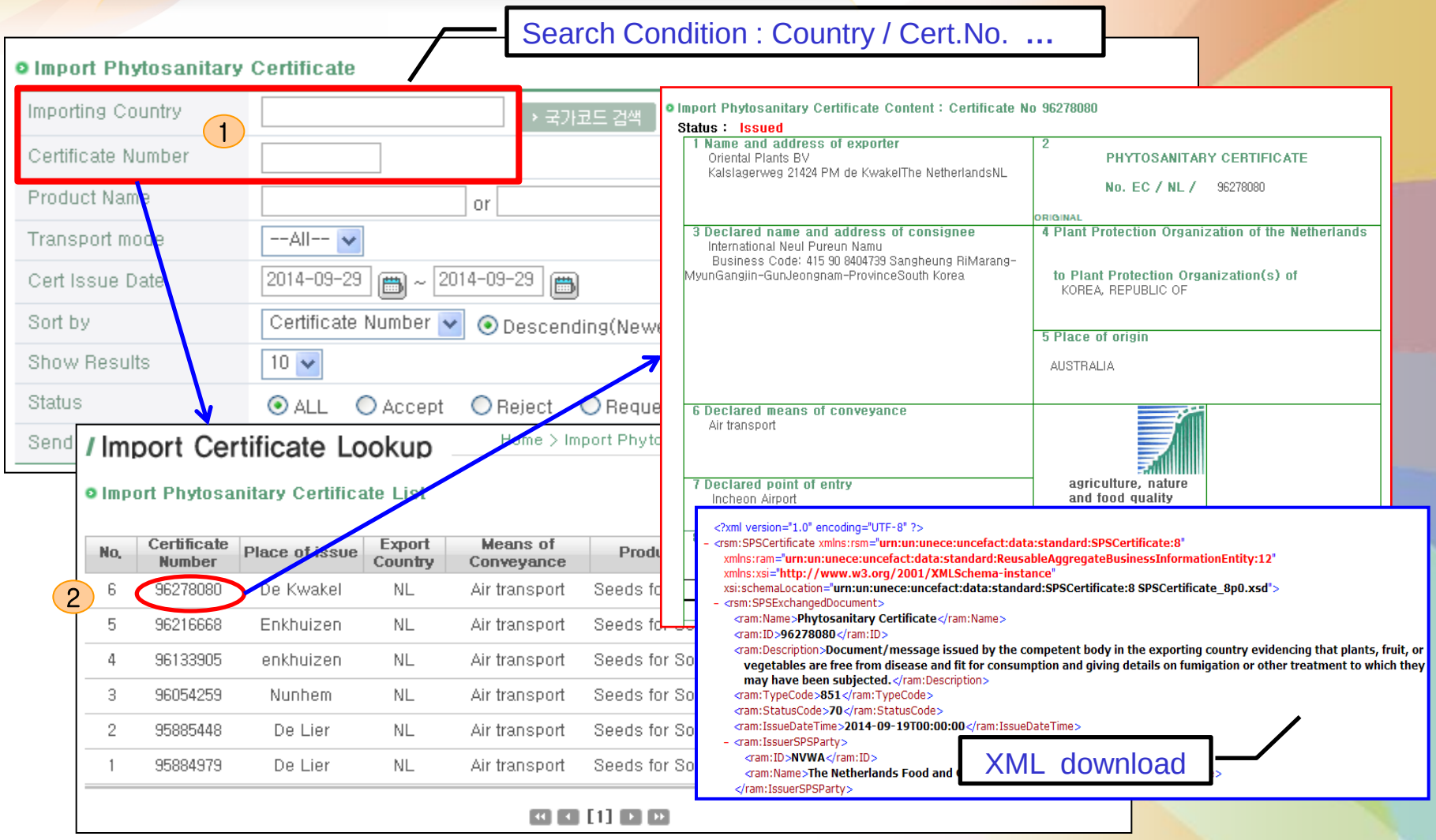
Ⅲ-2. E-cert System on Plant Quarantine

① Export Certificate Lookup



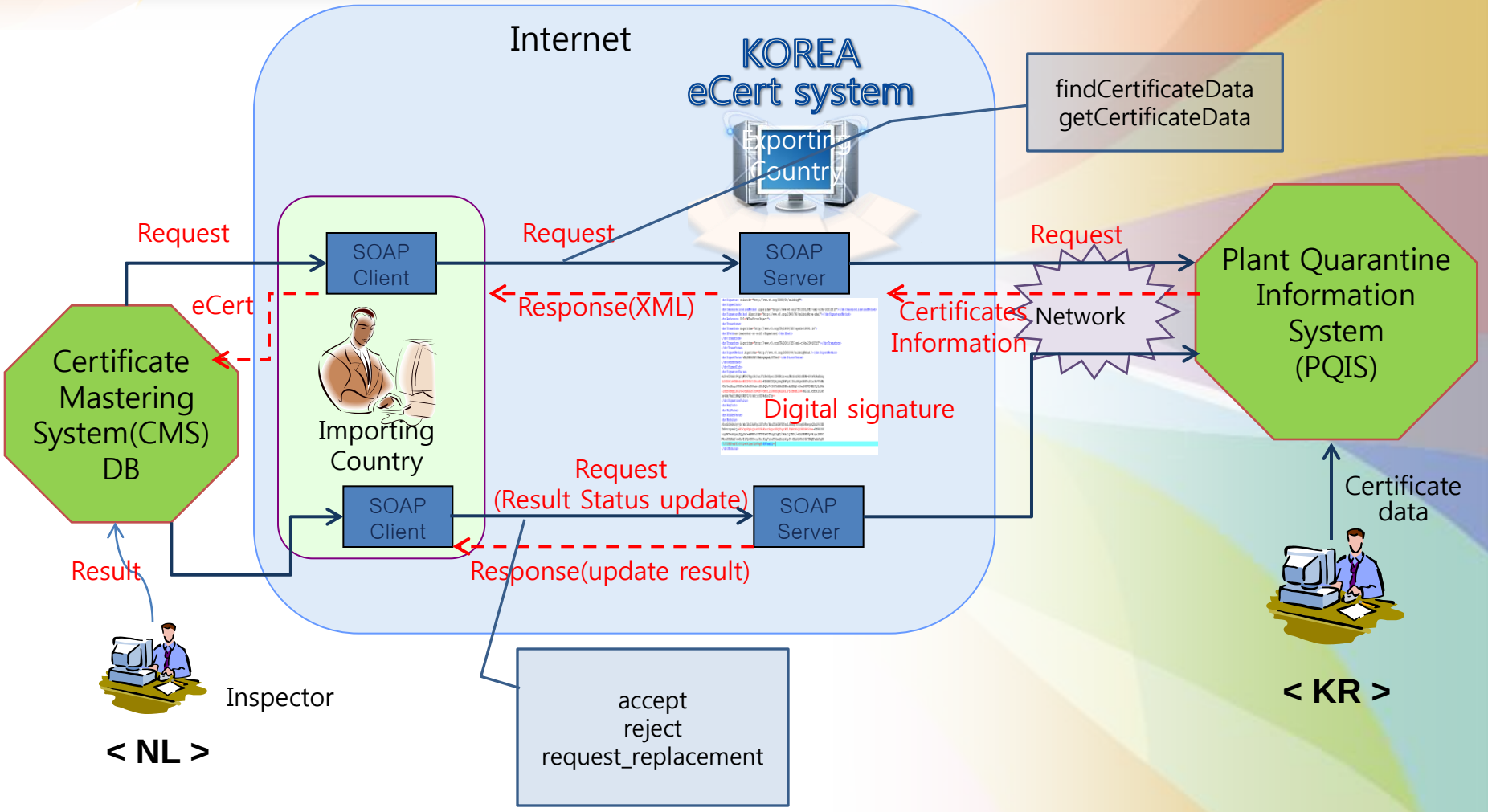
Ⅲ-2. E-cert System on Plant Quarantine

② Import Certificate Lookup



Ⅲ-3. Exchange E-cert Data

① Exchange procedures - Export



Ⅲ-3. Exchange E-cert Data

① Exchange procedures - Import



Certificate data

Internet

KOREA eCert system

Importing Country

find_certificates_by_update_date_and_status
get_signed_official_certificate_xml

Request

SOAP Server

Request

SOAP Client

Request

Plant Quarantine Information System (PQIS)

Certificates Information

Certificate Mastering System(CMS) DB

Response(XML)

eCert

Network

Exporting Country

Request (Result Status update)

SOAP Server

SOAP Client

Response(update result)

< NL >

< KR >

Result



Inspector (KR)

acknowledge_certificate
accept_certificate
reject_certificate
request_replacement_certificate

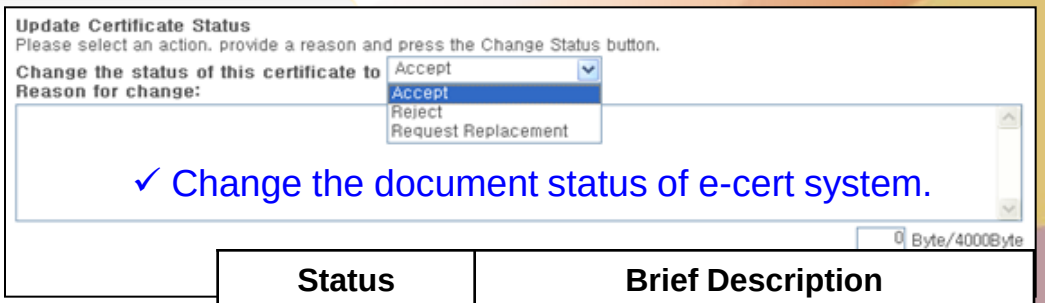
Ⅲ-3. Exchange E-cert Data

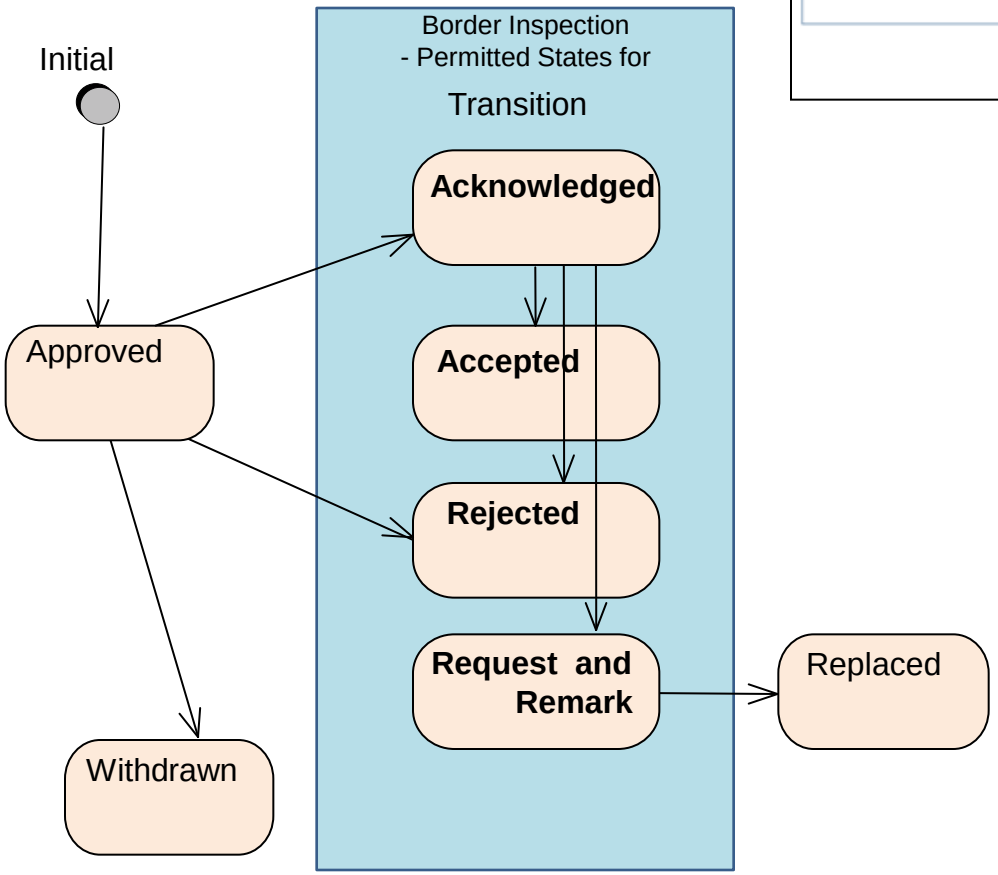
② Web Services(WSDL)

	URL(SSL)	Service Name
KR	*https://ecert.npqs.go.kr:9480/ecertsoap/EcertSOAP?wsdl*	1. **findCertificateData**(code, utc_from, utc_to) 2. **getCertificateData**(ecertNo) 3. **accept**(certNo, code, reason) 4. **reject**(certNo, code, reason) 5. **request_replacement**(certNo, code, reason)
NL	*https://client-export.minlnv.nl/CMS-Berichtenboek-context-root/APEcertPort?wsdl*	1. **find_certificates_by_update_date_and_status** (page, utc_from, utc_to, status) 2. **get_signed_official_certificate_xml** (shoulder_no) 3. **acknowledge_certificate**(shoulder_no, reason) 4. **accept_certificate**(shoulder_no, reason) 5. **reject_certificate**(shoulder_no, reason) 6. **request_replacement_certificate** (shoulder_no, reason)

Ⅲ-3. Exchange E-cert Data

③ Business collaboration diagram





Status	Brief Description
Approved	The Certificate is approved by the Export Agency (consignor inspector).
Acknowledged	The Certificate is acknowledged as having been received by the Import Agency (border inspection).
Accepted	The Certificate is accepted by the Import Agency (border inspection). This does not mean the acceptance of the actual consignment; rather it is the acceptance of the certificate data.
Rejected	The goods are refused entry by the Import Agency and the certificate is rejected
Request Replacement	When an 'Approved' Certificate is to be replaced at the request of the Import Agency.
Withdrawn	When an 'Approved' Certificate is withdrawn by the Export Agency
Replaced	When an 'Approved' Certificate has been replaced at the request of the Import Agency.

Ⅲ-4. Security Mechanisms

✓ Document Security

- XML Digital Signature of W3C (http://www.w3.org/2000/09/xmldsig#).
- Method of Sign to eCert : enveloping
- encryption algorithm : both SHA1 and SHA256 are possible
  SHA1 is used currently
  Hash algorithm : 1024 (http://www.w3.org/2000/09/xmldsig#rsa-sha1)
  2048(http://www.w3.org/2001/04/xmlenc#sha256)
  Signature algorithm : 1024(http://www.w3.org/2000/09/xmldsig#rsa-sha1)
  2048(http://www.w3.org/2001/04/xmldsig-more#rsa-sha256)
- Transform Xpath : not(ancestor-or-self::Signature)

✓ SSL (Secure Sockets Layer)

- Communication channel encryption
- authentication certificate

✓ HTTP Authentication & Authorization

- HTTP Basic Username Authentication

Ⅲ-5. Application of Appendix 1 of ISPM 12

✓ Harmonized terms

- Mapping our code onto IPPC Commodity code, Treatment code.

First level: general description of type of product	Possible Code	품목분류코드 (대분류)	Second level: further specification of type of product	설명	Possible Code	품목분류코드 (중분류)
Plants for planting (재식)	PLFPL	1	Seeds	종자류	SEE	1.종자
			Plants in-vitro with roots	뿌리가 있는 시험관내 식물	IVR	
			Plants in-vitro without roots	뿌리가 없는 시험관내 식물	IVU	
			Underground organs (e.g. bulbs, tubers, rhizoms, stolons, corms)	지하 유기체 (구근, 덩이줄기,리좀,기는줄기, 구경(알줄기)	BTR	3.구근
			Budwood	눈접용 접가지	BUD	4.접수
			Cuttings or saplings with roots	뿌리가 있는 꺾꽂이순 또는 묘목	CSR	2.묘목
			Cuttings without roots	뿌리가 없는 꺾꽂이순	CNR	5.삽수
			Other plants for planting	재식류 기타	OTH	9.기타
Plants other than plants for planting (비재식)	PLOTH	2	Grain	곡물	GRA	1.곡류
			Cut flowers, cut herbs, cut branches with foliage	잎이 있는 절화, 초류, 가지류	CBF	4.화훼류
			Cut flowers, cut herbs, cut branches without foliage	잎이 없는 절화, 초류, 가지류	CNF	
			Fruits and vegetables	과일, 야채	FRV	2.과실류 3.채소류

First level	Possible code	Second level		Possible code	약제코드
Temperature Treatment (온도 처리)	TPT	Cold Treatment	저온처리	CT	
		Heat Treatment	열처리	HT	0.열처리
		Dry Heat	건열	DR	
		Moist Heat	습열	MH	
		Vapour Heat	증기열	VH	C.증열처리
		Kiln drying	인공건조법	KD	
		Hot water treatment	온탕침법	HW	D.온탕침지
		Dielectric Heating	유전가열	DH	
Chemical Treatment (화학 처리)	CHT	Fungicide	살균제 (곰팡이방지약)	FG	5.침지소독
		Insecticide	살충제	IN	
		Nematicide	살선충제	NE	
		Other pesticide	기타 살충제	OP	
		Chemical pressure impregnation	화학적 압력 주입	CPI	
		Fumigation	훈증소독	FU	1.MB / 2.PH3 / 6.HCN / 8.EF / A.PH3(마그네슘) / B.PH3(포스틴)
		Seed coating	종자분의(종자코팅)	SC	4.분의소독

Ⅲ-5. Application of Appendix 1 of ISPM 12

✓ Webservice

- Standardization of function names and the functionalities for both countries.

	Action	Service	KR	NL
1	Find a list of certificates	**Find_certificate**	**findCertificateData**(code, utc_from, utc_to) **findReCertificateData**(code, utc_from, utc_to)	**find_certificates_by_update_date_and_status**(page, utc_from, utc_to, status)
2	Download a list of certificates	**get_certificate**	**getCertificateData**(ecertNo) **getReCertificateData**(ecertNo)	**get_signed_official_certificate_xml**(shoulder_no)
3	Change the status of a certificate	**Put_certificate_status**	**acknowledge_certificate**(certNo, code, reason) **accept**(certNo, code, reason) **reject**(certNo, code, reason) **request_replacement**(certNo, code, reason)	**acknowledge_certificate**(shoulder_no, reason) **accept_certificate**(shoulder_no, reason) **reject_certificate**(shoulder_no, reason) **request_replacement_certificate**(shoulder_no, reason)
4	Show the status of a certificate	**Show_certificate_status**		
5	Show status of the NECA	**Hart_beat**		

Thank You