

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
	low	medium	high	none	partial	most	full	
International Measures								
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)
<i>Field/Storage Pest Outbreaks</i>	(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
<i>Migratory Pest Outbreaks</i>	(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
<i>New Exotic Pest Eradication</i>	(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	<i>Dryocosmus Kuriphilus</i>	<i>Trialeurodes vaporariorum</i>	<i>Lissorhoptrus oryzophilus</i>
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? <i>If yes, give Name and Address of IPM Programme:</i>		
Does the country have specific IPM extension programmes? <i>If yes, in which crops?:</i>	Maize IPM	
Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i>	Rice Maize Vegetables	
Does the country have specific GAP extension programmes? GAP <i>If yes, in which crops?:</i>	All crops	
Does the country have specific GAP research programmes? <i>If yes, in which crops?:</i>	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)	1 st	2 nd	3 rd
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/permited 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? <i>If yes, what is the target: _____</i>	x	
Have you ratified the Rotterdam (PIC) Convention?	x	
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?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
<i>Pesticide Registration</i>		
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	

<i>Incentives/Disincentives</i>		
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
<i>Other Stakeholders:</i>	
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.)
<p>Updated the regulation on Registration and management of pesticides.</p> <p>Encourage to use as much as possible environmental friendly pesticides.</p> <p>Training workshops on safe using and effect increasing of pesticides were conducted by CABI and other international organizations.</p>
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
<p>Lack of techniques and means for pesticide residue monitoring.</p> <p>Lack of information on effective pesticides</p>

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 km², 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.

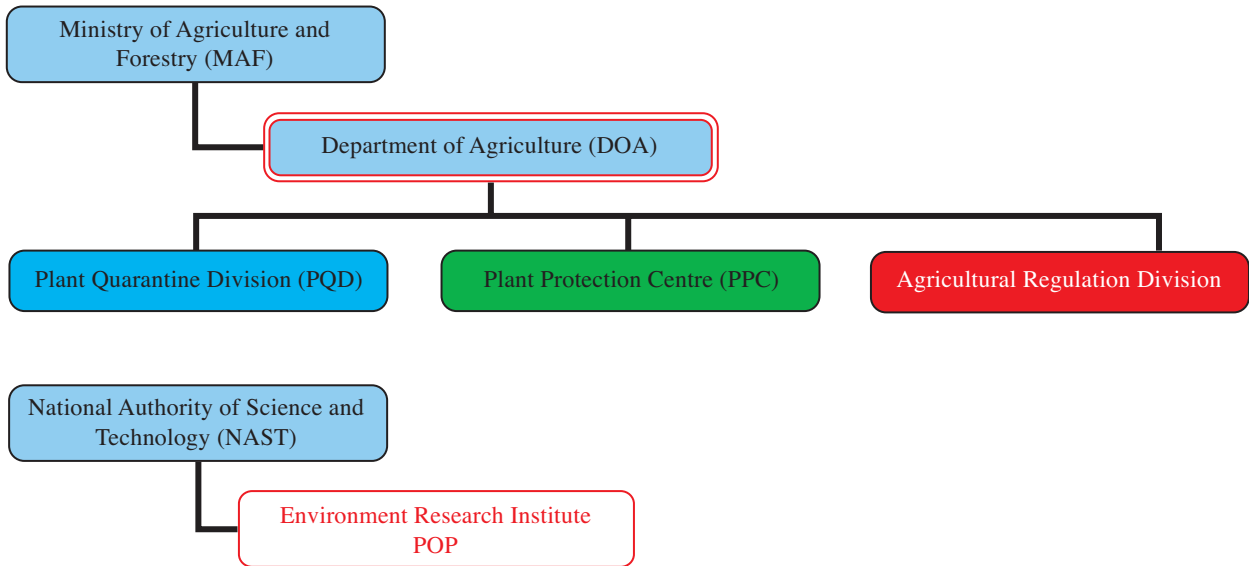
Protecting the Lao People's Democratic Republic's Plant Health Status and Facilitating Safe Trade in Plants and Plant Products, the NPPO of Lao PDR is dealing its mandates with the Prime Minister Decree on Plant Quarantine promulgated in 1993 and so far to be in compliance with the WTO SPS Agreement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

Responsible Ministry/Ministries

Ministry of Agriculture and Forestry

Mr Sitaheng Rasphone, Minister

P.O. Box 811

Vientiane 0100, Lao PDR

Tel: (+856) 21 412340

Fax: (+856) 21 412344

Responsible Department

Department of Agriculture

Mr Viravanh Phannourath, Director General

Ministry of Agriculture and Forestry

Lanexang Avenue, Patuxay Square; P.O. Box 811

Vientiane, Lao PDR

Tel: (+856) 21 412 350

Fax: (+856) 21 412 349

E-mail: doag@laotel.com

viravanh_doa@yahoo.com

Address for nominations

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Operational Offices:**Plant Protection**

Plant Protection Center

Mr Khamtanh Thadavong, Director of Center

Department of Agriculture, MAF

Thadeua Rd, Km 13

Vientiane, Lao PDR

Fax: (+ 856) 21 812164

E-mail: khamtanhthadavong@yahoo.com

Plant Quarantine

Department of Agriculture

Mr Phaydy Phiaxaysarakham, Director of Division

Division of Plant Quarantine,

Department of Agriculture, Ministry of Agriculture and Forestry

Lanexang Avenue, Patuxay Square, P.O. Box. 811

Vientiane, Lao PDR

Tel: (+856) 21 412350

Fax: (+856) 21 412349

E-mails: doag@laotel.com

phaydy8@yahoo.com

Surveillance, Pest Outbreaks and Invasive Species Management

Plant Protection Centre

Mr Khamtanh Thadavong, Director of Plant Protection Centre

Department of Agriculture, MAF

Thadeua Rd, Km 13

Vientiane, Lao PDR

Fax: (+856) 21 812164

E-mail: khamtanhthadavong@yahoo.com

Pesticide Registration

Mr Khamphoui Louanglath, Director of Division

Division of Agriculture Regulatory

Department of Agriculture, Ministry of Agriculture and Forestry

Lanexang Avenue, Patuxay Square, P.O. Box 811

Vientiane, Lao PDR

Tel: (+856) 21 412350

Fax: (+856) 21412349

E-mail: doag@laotel.com

phoui2@hotmail.com

Official International Contact Points**National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)**

(1) Department of Agriculture

Mr Viravanh Phannourath, Director General

Department of Agriculture

Ministry of Agriculture and Forestry

Lanexang Avenue, Patuxay Square; P.O. Box 811

Vientiane, Lao PDR

Tel: (+856) 21 412 350

Fax: (+856) 21 412 349

E-mail: doag@laotel.com

viravanh_doa@yahoo.com

(2) Department of Agriculture

Mr Phaydy Phixaysarakham, Director of Division

Division of Plant Quarantine, Department of Agriculture

Ministry of Agriculture and Forestry

Lanexang Avenue, Patuxay Square; P.O. Box 811

Vientiane, Lao PDR

Tel: (+856) 21 412 350

Fax: (+856) 21 412 349

E-mail: doag@laotel.com

phaydy8@yahoo.com

WTO SPS Contact Point**Implementing Coordination Committee for SPS and TBT related to TDF (Trade Development Facility)**

Department of Agriculture

Mr Viravanh Phannourath, Director General

Department of Agriculture

Ministry of Agriculture and Forestry

Lanexang Avenue, Patuxay Square; P.O. Box 811

Vientiane, Lao PDR

Tel: (+856) 21 412 350

Fax: (+856) 21 412 349

E-mail: doag@laotel.com

viravanh_doa@yahoo.com

Rotterdam Convention (PIC) DNA Pesticides

Department of Agriculture

Ms Khamphoui Louanglath, Director of Division

Division of Agriculture Regulatory

Department of Agriculture, Ministry of Agriculture and Forestry

Lanexang Avenue, Patuxay Square

P.O. Box 811, Vientiane, Lao PDR

Tel: (+856) 21 412350

Fax: (+856) 21 412349

E-mails: doag@laotel.com

phoui2@hotmail.com

Stockholm Convention (POP) National Focal Point

Environment Research Institute (ERI)

Mrs Monemany Nhoibouakong, Acting Director General

Vientiane, Lao PDR

Tel: (+856 21) 213 470

Fax: (+856 21) 213 472

E-mail: mone_many@yahoo.com

Basel Convention Competent Authority (CA)

-

Montreal Protocol Focal Point

-

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 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 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 furnished 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
<i>Import:</i>	
Import permits	MAF/DOA/PQD
Import inspections	MAF/DOA/PQD/PAFO
Emergency action	MAF/DOA/PQD/PAFO
<i>Export:</i>	
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	Unknown	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
	low	medium	high	none	partial	most	full	
International Measures								
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)
<i>Field/Storage Pest Outbreaks</i>	(e.g. BPH, bollworm, etc.)
Response strategy/plans	MAF/DOA/PPC
Surveillance	MAF/DOA/PPC
Control	MAF/DOA/PPC
<i>Migratory Pest Outbreaks</i>	(e.g. locusts, birds, armyworm)
Response strategy/plans	
Surveillance	
Control	

<i>New Exotic Pest Eradication</i>	(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, investments, 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 established 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? <i>If yes, give Name and Address of IPM Programme:</i> PPC	x	
Does the country have specific IPM extension programmes? <i>If yes, in which crops?:</i> Vegetables	x	
Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i>	x	
Does the country have specific GAP extension programmes? <i>If yes, in which crops?:</i>	x	
Does the country have specific GAP research programmes? <i>If yes, in which crops?:</i>	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)	1 st	2 nd	3 rd
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.)
<ul style="list-style-type: none"> • 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. <p>Frame work on pest management was newly defined in the function and role of provincial agricultural office (PAO).</p>
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? <i>If yes, what is the target: _____</i>		x
Have you ratified the Rotterdam (PIC) Convention?		x
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)		
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
<i>Pesticide Registration</i>		
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	
<i>Incentives/Disincentives</i>		
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
<i>Other Stakeholders:</i>	
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.

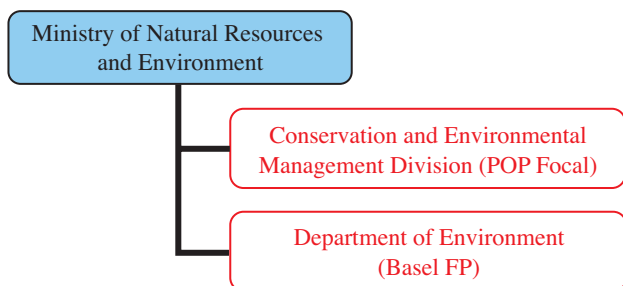
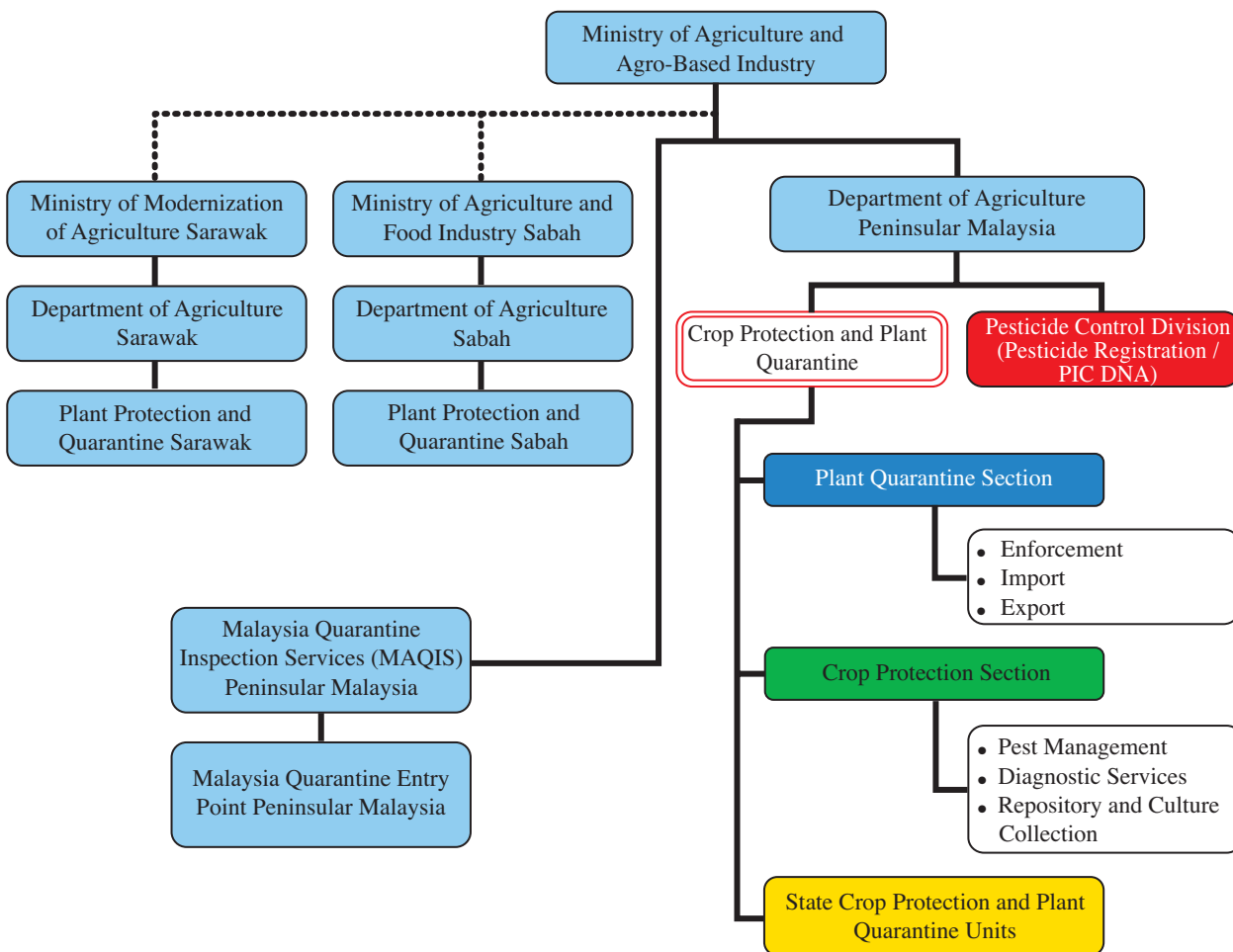
Malaysia has amended the Pesticides Licensing Regulation of the Pesticides Act in 2008, to increase the license fee for the sale of more toxic class of pesticides. Similarly, the fee for the registration of pesticides has also been increased for more toxic class of pesticides. Malaysia is in the process 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.

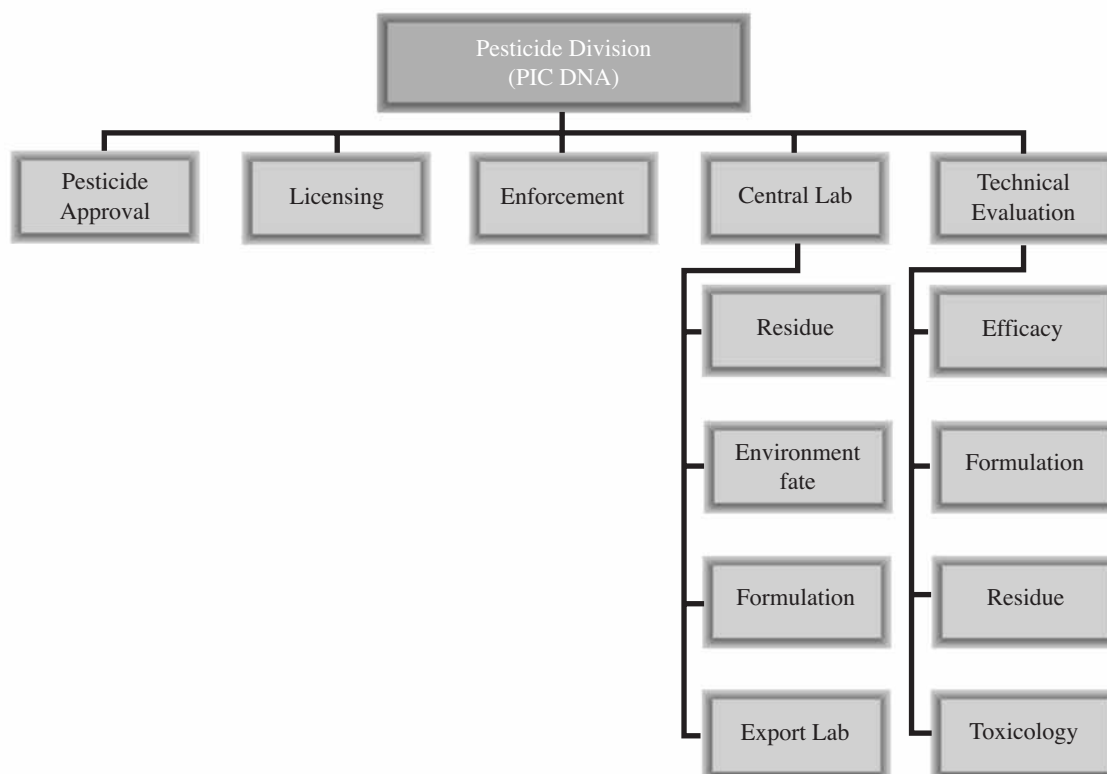
Under the implementation of international conventions, Malaysia has also initiated a review on the registration of tributyltin compound, in line with the inclusion of tributyltin compound in Annex III of the Rotterdam Convention in 2008. To ensure compliance to the Phase-out Schedule for methyl bromide 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

Datuk Roseley Dato' Hj. Khalid, Director General of Agriculture

Department of Agriculture
 Aras 17, Wisma Tani, Lot 4G2, Presint 4
 Pusat Pentadbiran Persekutuan
 62623 Putrajaya, Malaysia
 Tel: 6 03 8888 4069
 Fax: 6 03 8888 5069
 E-mail: roseley@doa.gov.my
 Website: <http://www.doa.gov.my>

Plant Protection Office

Ms Wan Normah Wan Ismail, Director

Crop Protection and Plant Quarantine Division
 Department of Agriculture
 3rd Floor Wisma Tani Kuala Lumpur
 Jalan Sultan Salahuddin
 50632 Kuala Lumpur
 Tel: 6 03 20301401
 Fax: 6 03 26913530
 E-mail: wanis@doa.gov.my
 Website: <http://www.doa.gov.my/pqnet>

Crop Protection Office

Ms Wan Normah Wan Ismail, Director

Crop Protection and Plant Quarantine Division
Department of Agriculture
3rd Floor Wisma Tani Kuala Lumpur
Jalan Sultan Salahuddin
50632 Kuala Lumpur
Tel: 6 03 20301401, Fax: 6 03 26913530
E-mail: wanis@doa.gov.my
Website: <http://www.doa.gov.my/pqnet>

Surveillance, Pest Outbreaks and Invasive Species Management

(if handled by different agencies, give each contact address)

Ms Wan Normah Wan Ismail, Director

Crop Protection and Plant Quarantine Division
Department of Agriculture
3rd Floor Wisma Tani Kuala Lumpur
Jalan Sultan Salahuddin
50632 Kuala Lumpur
Tel: 6 03 20301401, Fax: 6 03 26913530
E-mail: wanis@doa.gov.my
Website: <http://www.doa.gov.my/pqnet>

Pesticide Registration

Pesticides Board, Secretary
Pesticides Control Division
Department of Agriculture
4th Floor Wisma Tani
Jalan Sultan Salahuddin
50632 Kuala Lumpur
Tel: (+603) 20301504, Fax: (+603) 26917551
E-mail: nursiah@doa.gov.my

Official International Contact Points**National Plant Protection Organisation (NPPO) Contact Point (for IPPC/APPPC)**

Crop Protection and Plant Quarantine Division

Ms Wan Normah Wan Ismail, Director Crop Protection and Plant Quarantine Division

Department of Agriculture
3rd Floor, Wisma Tani Kuala Lumpur
Jalan Sultan Salahuddin
50632 Kuala Lumpur
Tel: 6 03 20301401, Fax: 6 03 26913530
E-mail: wanis@doa.gov.my
Website: <http://www.doa.gov.my/pqnet>
Language(s): English
Contact point received: 30/05/2005 Source: Government Correspondence

WTO SPS Contact Point

Strategic Planning and International Division

Secretary General

Ministry of Agriculture and Agro-Based Industry
Aras 17, Wisma Tani, Lot 4, G 1,
No. 28, Persiaran Perdana, Percint 4
62623 Putrajaya, Malaysia
Tel: + (603) 88701000
Fax: + (603) 88886020
Website: <http://www.moa.gov.my/>

Rotterdam Convention (PIC) DNA Pesticides (P)

Pesticides Board, Secretary
Pesticides Control Division
Department of Agriculture
4th Floor Wisma Tani
Jalan Sultan Salahuddin
50632 Kuala Lumpur
Tel: (+603) 20301504
Fax: (+603) 26917551
E-mail: nursiah@doa.gov.my

Stockholm Convention (POP) National Focal Point (S)

Conservation and Environmental Management Division

Teddy Lian Kok Fei, Undersecretary

Ministry of Natural Resources and Environment
6th Floor, Tower Block 4G3, Precint 4
Federal Government Administrative Center
62574 Putrajaya
Tel: (+603) 8886 1111 / 1125
Fax: (+603) 8888 4473
E-mail: drlian@nre.gov.my

Basel Convention Competent Authority (CA) and Focal Point (FP)

Department of Environment

Director General

Ministry of Natural Resources and Environment
Level 3-7, Block C4,
Federal Government Administrative Centre
82662 Putrajaya,
Tel: (603) 88 71 20 00
Fax: (603) 88 89 10 36
E-mail: zat@doe.gov.my

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)
<i>Import:</i>	
Import permits/inspections	CPPQ Malaysia Quarantine Inspection Services (MAQIS)
Emergency action	DOA, CPPQ
<i>Export:</i>	
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
<i>In-country recognize pest diagnostics capabilities (incl. universities, etc.)</i>	
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
<i>Sternochetus mangiferae</i> – 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	54 125
<i>Do you have an electronic certification system?: Yes _____ No _____</i>	

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.)
<p>Legislation: A Bill named as Plant Protection Act has been drafted to replace the existing Plant Quarantine Act 1976</p> <p>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</p> <p>Investments: Three units of VHT with capacity of 5 tons each have been purchased in 2008.</p> <ol style="list-style-type: none"> 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.)
<p>Personnel: Lack of technically qualified PRA personnel.</p>

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
	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 Recognition 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)
<i>Field Pest Outbreaks</i>	(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
<i>Migratory Pest Outbreaks or periodically occurring pests</i>	(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
<i>New Exotic Pest Eradication</i>	(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 (<i>Nilaparvata lugens</i>)	
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: <i>National IPM in RICE</i>	x		
Does the country have specific IPM extension programmes? <i>If yes, in which crops?: Rice/paddy</i>	x		
Does the country have specific IPM research programmes? <i>If yes, in which crops?: vegetable</i>	x		
Does the country have specific GAP extension programmes? <i>If yes, in which crops?: vegetable, Fruits and Rice</i>	x		
Does the country have specific GAP research programmes? <i>If yes, in which crops?:</i>			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)	1 st	2 nd	3 rd
Affected crop	Rice/Paddy	Vegetable	Cut flowers
Name(s) of pest(s)	<i>Pomaceae</i> sp.	<i>Plutela Xylostela</i>	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? <i>If yes, what is the target:_____</i>		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		
<i>Pesticide Registration</i>			
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		
<i>Incentives/Disincentives</i>			
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
<i>Other Stakeholders:</i>	
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.)
<ol style="list-style-type: none"> 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.

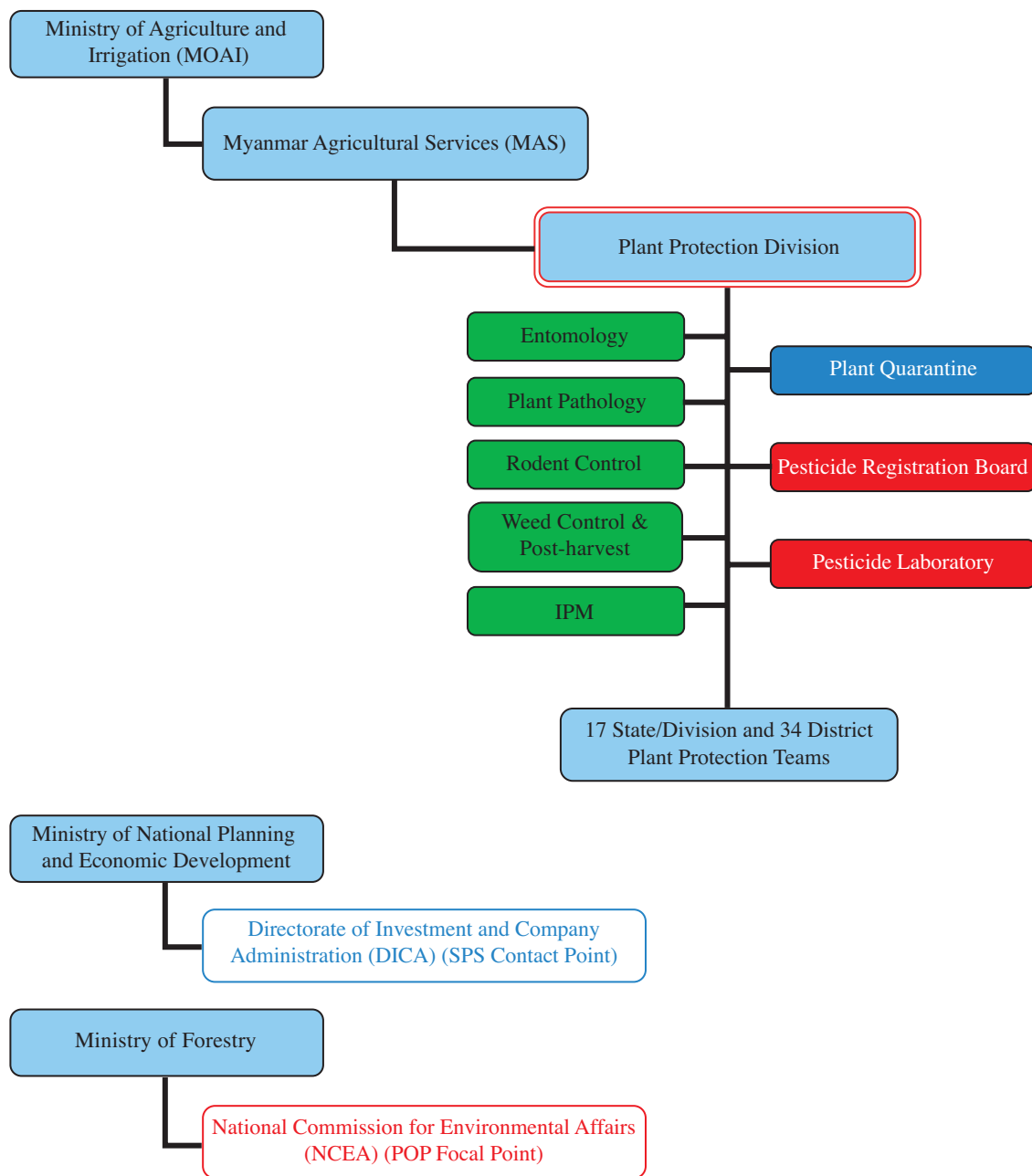
The Plant Protection Division of Myanmar Agriculture Service is playing the role of the National Plant Protection Organization (NPPO) and actively participates in the implementation of the country's plant quarantine measures in line with both Regional Standards for Phytosanitary Measures (RSPMs) and 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
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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, Myanmar 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 fact 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
<i>Import:</i>	
Import permits	MOAI/MAS/PPD
Import inspections	MOAI/MAS/PPD
Emergency action	MOAI/MAS/PPD
<i>Export:</i>	
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
	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)
<i>Field/Storage Pest Outbreaks</i>	(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
<i>Migratory Pest Outbreaks</i>	(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
<i>New Exotic Pest Eradication</i>	(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 (<i>Bandicota spp.</i>)		
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? <i>If yes, give Name and Address of IPM Programme:</i>		x
Does the country have specific IPM extension programmes? <i>If yes, in which crops?:</i>		x
Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i> Biological control on Chickpea Pod Borer <i>Helicoverpa armigera</i> with predator <i>Eocanthecona furcellata</i> and larval parasite <i>Campoletis chloridae</i> .	x	
Does the country have specific GAP extension programmes? <i>If yes, in which crops?:</i>	x	
Does the country have specific GAP research programmes? <i>If yes, in which crops?: (Just started residue survey based on GAP)</i> 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)	1 st	2 nd	3 rd
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? <i>If yes, what is the target: _____</i>		x
Have you ratified the Rotterdam (PIC) Convention?		x
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)		
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	
<i>Pesticide Registration</i>		
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	
<i>Incentives/Disincentives</i>		
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
<i>Other Stakeholders:</i>	
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:

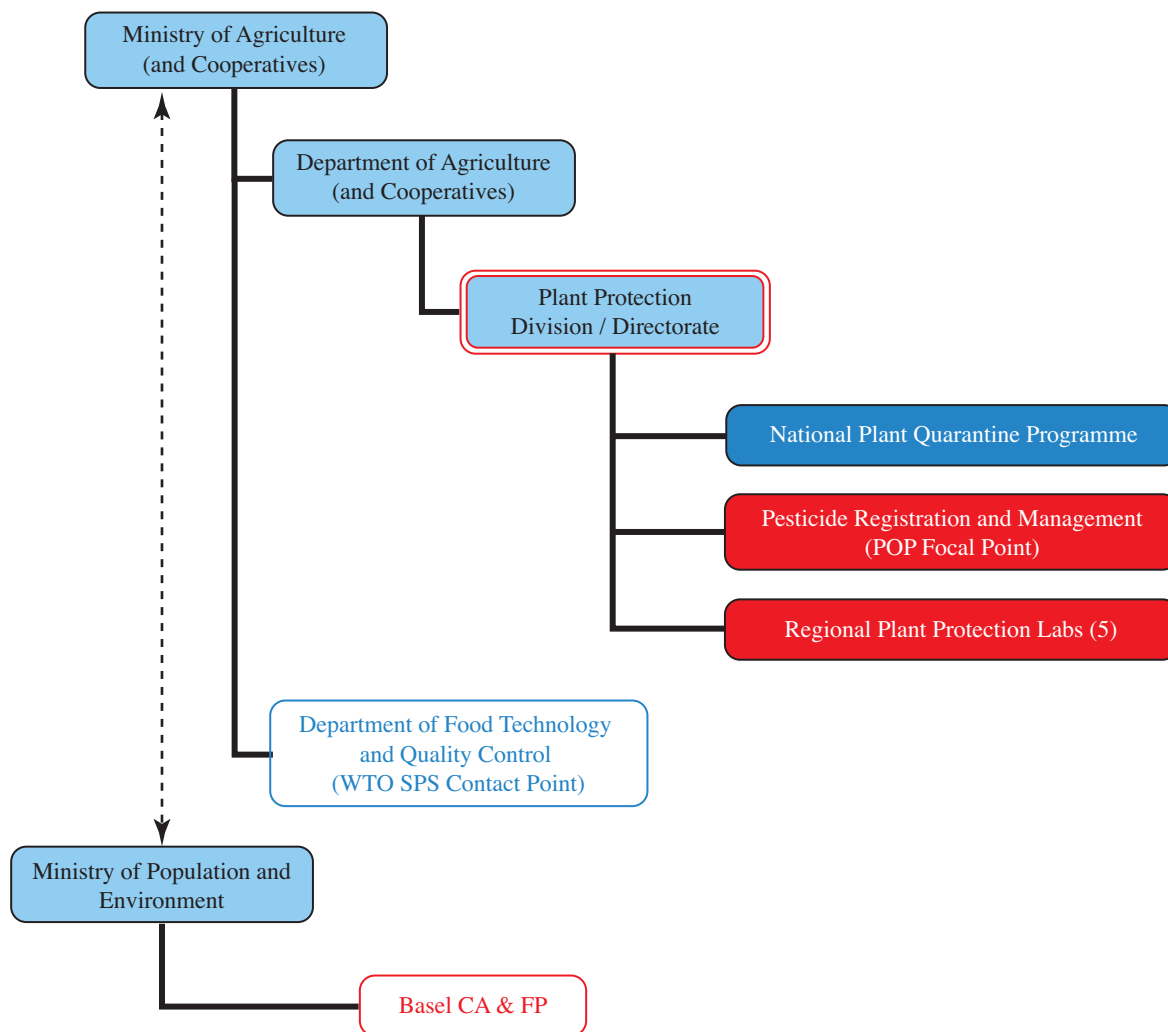
1. National Plant Quarantine Programme (with five regional plant quarantine check posts, eight check posts and two sub-check posts),
2. National IPM Programme,
3. Pesticide Registration and Management Office,
4. Five regional plant protection laboratories located in five development regions of the country.

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

-

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: jagadishbshrestha@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
<i>Import:</i>	
Import permits/inspections	MoAC/DoA/PPD/NPQP
Emergency action	
<i>Export:</i>	
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	
<i>Do you have an electronic certification system?: Yes ✓, No _____</i>	

** 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
	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)
<i>Field Pest Outbreaks</i>	(e.g. BPH, boll worm, etc.)
Response strategy/plans	PPD, RPPL, DADO
Surveillance	PPD, RPPL, DADO
Control	PPD, RPPL, DADO, RAD
<i>Migratory Pest Outbreaks</i>	(e.g. locusts, birds, armyworm)
Response strategy/plans	PPD, RPPL, DADO
Surveillance	PPD, RPPL, DADO
Control	PPD, RPPL, DADO
<i>New Exotic Pest Eradication</i>	(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 (<i>Cercospora</i>)	
Total number for year: 2006		Colecrops – Diamond backmoth (<i>Plutella xylostella</i>)	
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? <i>If yes, give Name and Address of IPM Programme: PPD</i>	x		
Does the country have special IPM extension programmes? <i>If yes, in which crops?: Rice, Vegetable, Potato, Tea, Coffee and Citrus</i>	x		
Does the country have special IPM research programmes? <i>If yes, in which crops?: Rice, Vegetables, Potato</i>	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)	1 st	2 nd	3 rd
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? <i>If yes, what is the target: _____</i>		x	
Have you ratified the Rotterdam (PIC) Convention?	x		
Have you ratified the Stockholm (POP) Convention?	x		
Have you 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
<i>Pesticide Registration</i>			
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		
<i>Incentives/Disincentives</i>			
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
<i>Other Stakeholders:</i>	
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.

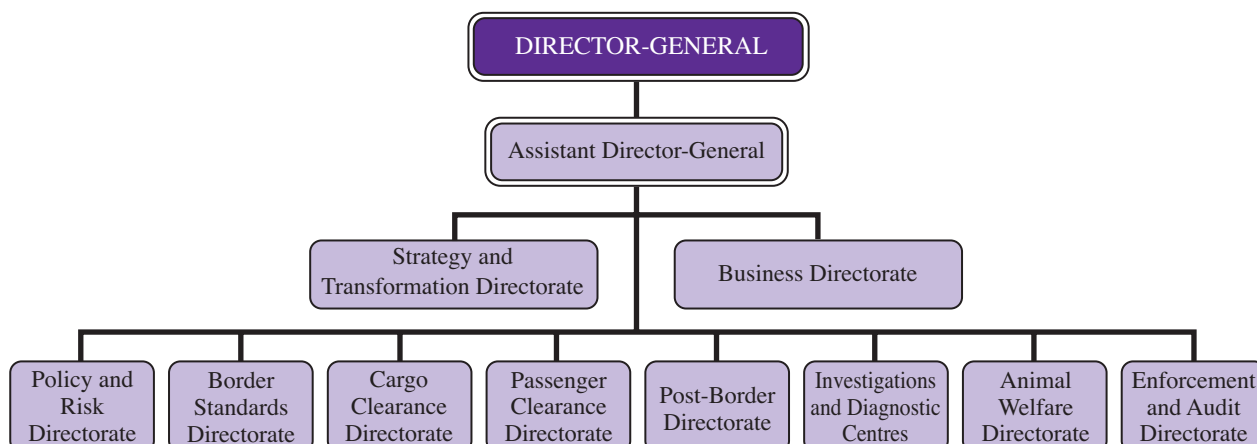
New Zealand operates an approvals framework for pesticides under the HSNO Act, developed a substance reassessment programme, and has implemented a compliance structure to support the approvals framework.

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

Ministry of Agriculture and Forestry (MAF)
 P.O. Box 2526
 Wellington
 Tel: +64 4 894 0100
 Fax: +64 4 894 0720
 E-mail: info@maf.govt.nz
 Website: <http://www.maf.govt.nz/mafnet/index.htm>

MAF Biosecurity New Zealand (MAF BNZ)

Border Standards Directorate

Mr Tim Knox

Director
 P.O. Box 2526
 Wellington
 Tel: +64 4 894 0100
 Fax: +64 4 894 0720
 E-mail: tim.knox@maf.govt.nz
 Website: <http://www.biosecurity.govt.nz/>

Post Border Directorate

Mr Peter Thomson

Director
 MAF Biosecurity New Zealand
 P.O. Box 2526
 Wellington
 Tel: +64 4 894 0100
 Fax: +64 4 894 0728
 E-mail: peter.thomson@maf.govt.nz
 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

MAF Biosecurity New Zealand

P.O. Box 2526

Wellington

Tel: +64 4 894 0428 (JH); +64 4 894 0165 (TK)

Fax: +64 4 894 0731 (JH); +64 4 894 0720 (TK)

E-mail: nppo@maf.govt.nzWebsite: <http://www.biosecurity.govt.nz/>

Language(s): English

WTO SPS Contact Point*Ms Sally Griffin*

SPS Coordinator

MAF Biosecurity New Zealand

Pastoral House

P.O. Box 2526

Wellington

Tel: +64 4 894 0431

Fax: +64 4 894 0731

E-mail: sps@maf.govt.nzWebsite: 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)

P.O. Box 2835

Wellington

Tel: +64 4 894 2500

Fax: +64 4 894 2501

E-mail: debbie.morris@nzfsa.govt.nzWebsite: <http://www.nzfsa.govt.nz/>

Rotterdam Convention (PIC) DNA Industrial Chemicals and Pesticides (CP)**Plant Residues***Mr David Lunn*

Senior Programme Manager (Residues – Plants)
New Zealand Food Safety Authority (NZFSA)
P.O. Box 2835
Wellington
Tel: +64 4 463 2654
Fax: +64 4 463 2675
E-mail: dave.lunn@nzfsa.govt.nz

Working with Central Government*Mr Todd Kriebel*

General Manager
Ministry for the Environment
P.O. Box 10362
Wellington
Tel: +64 4 439 7400
Fax: +64 4 439 7700
E-mail: todd.kriebel@mfe.govt.nz

Stockholm Convention (POP) National Focal Point*Mr Howard Ellis*

Senior Policy Analyst
Ministry for the Environment
P.O. Box 10 362
Wellington
Tel: +64 4 917 74 37
Fax: +64 4 917 75 28
E-mail: howard.ellis@mfe.govt.nz

Basel Convention Competent Authority (CA) and Focal Point

Environmental Issues, Effective Markets Branch
Ministry of Economic Development
P.O. Box 1473
Wellington
Tel: +64 4 474 28 76
Fax: +64 4 470 25 33
E-mail: robyn.washbourne@med.govt.nz

Basel Convention Focal Point
Ministry for the Environment
P.O. Box 10362
Wellington
Tele: +64 4 917 74 00
Fax: +64 4 917 75 23
E-mail: basel@mfe.govt.nz

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
<i>Import:</i>	
Import permits	MAF BNZ Border Standards Directorate
Import inspections	MAF BNZ Passenger and Cargo Directorates
Emergency action	MAF BNZ
<i>Export:</i>	
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 (<i>Globodera rostochiensis</i> and <i>Globodera pallida</i>)	250
Oriental fruit moth (<i>Graphiolita molesta</i>)	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
	low	medium	high	none	partial	most	full	
International Measures								
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: <ul style="list-style-type: none"> • 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)
<i>Field/Storage Pest Outbreaks</i>	
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	
<i>Migratory Pest Outbreaks</i>	
Response strategy/plans	N/A
Surveillance	
Control	
<i>New Exotic Pest Eradication</i>	
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	<i>Ophiostoma ulmi</i> (Dutch Elm Disease)	<i>Uraba lugens</i> (Gum Leaf Skeletoniser)	<i>Coptotermes acinaciformis</i> (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	<i>Solenopsis invicta</i> (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	<i>Salvinia molesta</i> Salvinia	<i>Eichhornia crassipes</i> Water hyacinth	<i>Sorghum halepense</i> 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 <i>Salvinia</i> , Water hyacinth, 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	<i>Moraea flaccida</i> (syn. <i>Homeria collina</i>) Cape tulip	<i>Ehrharta villosa</i> pyp grass	<i>Phragmites australis</i> 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 previous 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	<i>Hydrilla verticillata</i> hydrilla	<i>Ceratophyllum</i> <i>demersum</i> hornwort	<i>Bryonia cretica</i> subsp <i>dioica</i> 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	<i>Tricoglossus haematodus</i> rainbow lorikeet	<i>Zizania latifolia</i> 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 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 *Phytophthora 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) Dairy 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? <i>If yes, give Name and Address of IPM Programme:</i>		x
Does the country have specific IPM extension programmes? <i>If yes, in which crops?</i>	x	
Does the country have specific IPM research programmes? <i>If yes, in which crops?</i>	x	
Does the country have specific GAP extension programmes? <i>If yes, in which crops?</i>	x	
Does the country have specific GAP research programmes? <i>If yes, in which crops?</i>	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)	1 st	2 nd	3 rd
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? <i>If yes, what is the target: _____</i>		x
Have you ratified the Rotterdam (PIC) Convention?	x	
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?	x	
Have you adopted Good Laboratory Practices (GLP)?	x	
<i>Pesticide Registration</i>		
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	
<i>Incentives/Disincentives</i>		
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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • New Zealand Food Safety Authority and Environmental Risk Management Authority (ERMA New Zealand)
Licensing of shops	
Licensing of field applicators	<ul style="list-style-type: none"> • ERMA New Zealand
Enforcement/inspections	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • NZFSA • ERMA New Zealand
Safe use training/extension	<ul style="list-style-type: none"> • ERMA New Zealand (in association with ITOs)
Food residue monitoring	<ul style="list-style-type: none"> • New Zealand Food Safety Authority
Environmental monitoring	<ul style="list-style-type: none"> • Regional Councils
Health monitoring	<ul style="list-style-type: none"> • Ministry of Health, District Health Boards
<i>Other Stakeholders:</i>	
Pesticide Industry Association	<ul style="list-style-type: none"> • AGCARM • ARPPA
Civil Society Organizations (NGO, etc.)	Includes: <ul style="list-style-type: none"> • 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 programmes		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.)
<ul style="list-style-type: none"> 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.

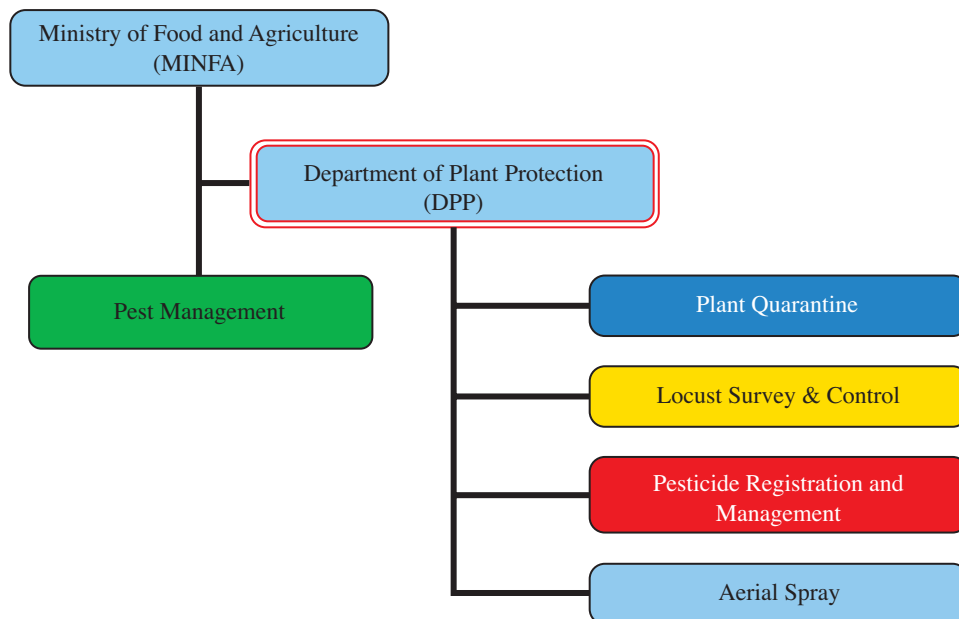
Pakistan Plant Quarantine Act and Rules are being revised. The Central Plant Quarantine Laboratory and three regional labs are being completed. Equipment is being installed and recruitment of personnel is under process. A total of 8 PRA of different crops are completed for 52 insects, 72 pathogens and 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
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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: dgl@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)

Ministry of Food and Agriculture

Jinnah Avenue, Malir Halt

Karachi 751000

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

Toghlaque House

Karachi, Pakistan

Tel: (+92 21) 9211468

Fax: (+92 21) 9211469

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

Mr Zafar Ali, Deputy Director (Q)

Ministry of Food and Agriculture

Jinnah Avenue, Malir Halt

Karachi

Tel: (+92 21) 9248072 / 9248612-15

Fax: (+92 21) 9248673

E-mails: quarantine@plantprotection.gov.pk & zafarali_khan@hotmail.com

Website: <http://www.plantprotection.gov.pk>

WTO SPS Contact Point

Department of Plant Protection

Dr Tasneem Ahmad, Adviser and Director General

Ministry of Food and Agriculture

Jinnah Avenue, Malir Halt

Karachi 751000

Tel: + (92 21) 924 8612 / 924 8607

Fax: + (92 21) 924 8673

E-mail/Internet: dg1@plantprotection.gov.pk

Rotterdam Convention (PIC) DNA Pesticides (P)

Department of Plant Protection

Dr Tasneem Ahmad, Adviser and Director General

Ministry of Food and Agriculture

Jinnah Avenue, Malir Halt

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) <i>Revision and updating of Pakistan Plant Quarantine Act and Rules according IPPC/SPS</i>		
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
<i>Import:</i>	
Import permits	DPP/PLANT QUARANTINE
Import inspections	DPP/PLANT QUARANTINE
Emergency action	DPP/PLANT QUARANTINE
<i>Export:</i>	
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]	
<i>Fruitfly (Mango, citrus, guava, melon etc.)</i>	–	
<i>Boll worm (Cotton)</i>	(Mealy Bug)	–
<i>Powdery Mildew (Mango, citrus, melon etc.)</i>	–	
<i>Weeds (Rice, wheat and cotton)</i>	(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) [year – year]
None			
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). <i>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</i>	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
	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)
<i>Field Pest Outbreaks</i>	(e.g. BPH, boll worm, etc.)
Response strategy/plans	Provincial Agriculture Departments
Surveillance	Provincial Agriculture Departments
Control	Provincial Agriculture Departments
<i>Migratory Pest Outbreaks</i>	(e.g. locusts, birds, armyworm)
Response strategy/plans	DPP
Surveillance	DPP/Locust Control
Control	DPP/Locust Control
<i>New Exotic Pest Eradication</i>	(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 personal 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? <i>If yes, give Name and Address of IPM Programme:</i> Dr. Iftikhar Ahmad, Dep. Dir., NARC, Park Road, Islamabad.	x	
Does the country have specific IPM extension programmes? <i>If yes, in which crops?:</i> Cotton, Wheat, Rice, Mango, Apple, Citrus, Tomato, Okra, Onion, Peaches.	x	
Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i> Cotton, Wheat, Rice, Mango, Apple, Citrus, Tomato, Okra, Onion.	x	
Does the country have specific GAP extension programmes? <i>If yes, in which crops?:</i>		
Does the country have specific GAP research programmes? <i>If yes, in which crops?:</i>		

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)	1 st	2 nd	3 rd
Affected crop	Cotton	Rice	Sugarcane
Name(s) of pest(s)	<i>Helicoverpa armigera</i> <i>Earias insulana</i> <i>Earias vittella</i> <i>Pectinophora gossypiella</i>	<i>Scirpophaga incertulas</i> <i>Scirpophaga nivella</i>	<i>Scirpophaga</i> spp. <i>Pyrilla</i> 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? <i>If yes, what is the target: encouragement of biopesticide and banning of extremely hazardous pesticides</i>	x	
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have you 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	
<i>Pesticide Registration</i>		
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	
<i>Incentives/Disincentives</i>		
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
<i>Other Stakeholders:</i>	
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. molluscicide, 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.)
<p>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.</p> <p>A new pesticide lab is established in Balochistan province for quality check of agriculture pesticides.</p>
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
<p>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.</p> <p>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.</p>

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.

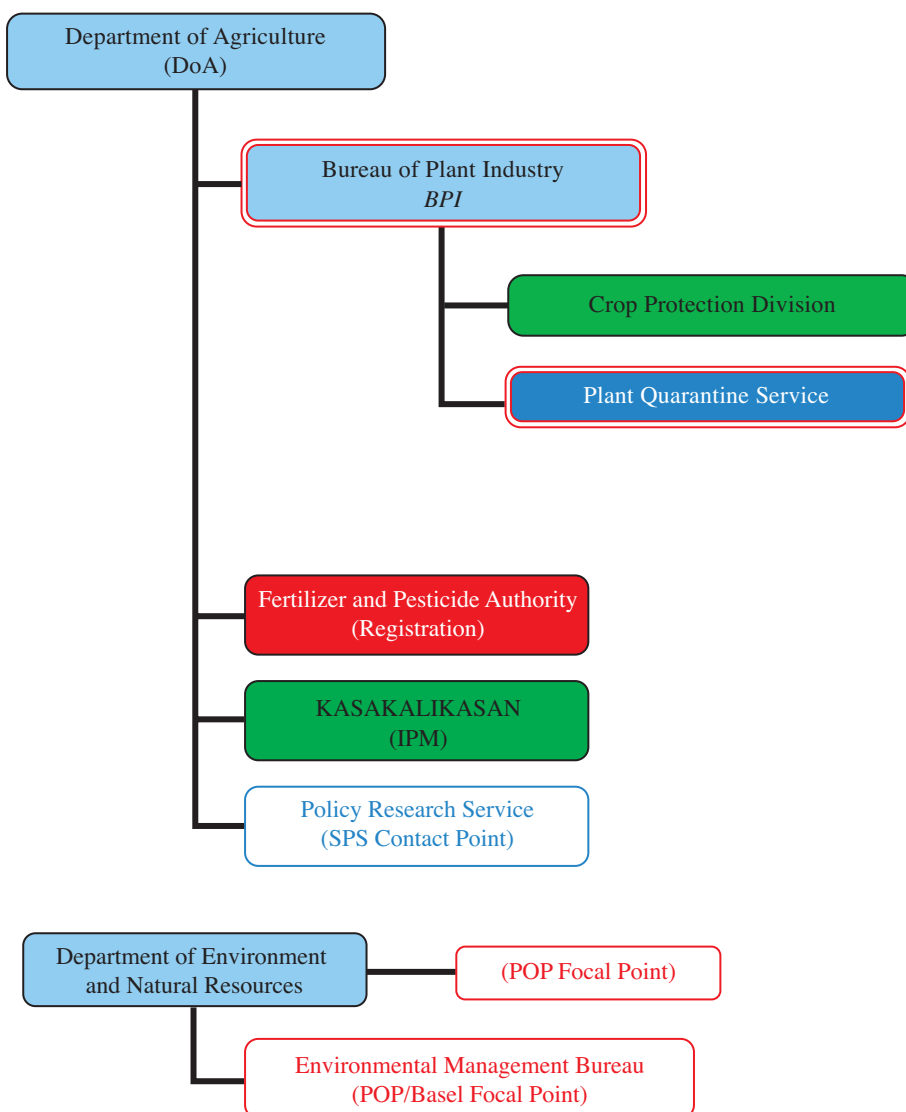
All these changes and developments reflect the Philippine Plant Quarantine’s initiative of having an improved system in place, highly trained technical personnel, better buildings and laboratory facilities and good rules and regulatory policies to achieve its three-point programme focus and proficiently perform the PQS mandate.

Note:

The country’s work plan is attached to this plant protection profile.

Organization Chart

Not updated



Color Code:

Phytosanitation	Outbreak Management	Pest Management	Pesticides	NPPO
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Important Contact Addresses

Ministry/Department of Agriculture

Department of Agriculture

Atty. Arthur C. Yap, Secretary

Office of the Secretary

Elliptical Road, Diliman

Quezon City, Philippines

Tel/Fax: (+632) 926-6426 / 929-8183

Website: www.da.gov.ph

Operational Offices:

BUREAU OF PLANT INDUSTRY

Mr Joel S. Rudinas, Director

692 San Andres St.

Malate, Manila, Philippines

Tel: (+632) 5257857 / 5257909 / 5219291

Fax: (+632) 5217650

E-mail: buplant@yahoo.com

Website: www.da.bpi.gov.ph

Plant Quarantine

Plant Quarantine Service

Mr Larry R. Lacson, Chief

Bureau of Plant Industry

692 San Andres St.

Malate, Manila, Philippines

Tel: (+632) 5243749 / 4040409

Fax: (+632) 5242812 / 4040409

E-mail: lacsonlr@yahoo.com

Surveillance, Pest Outbreaks and Invasive Species Management

Crop Protection Division

Ms Wilma R. Cuaterno, Chief

692 San Andres St.

Malate, Manila, Philippines

Tel: (+632) 524-73-53 / 523-38-53

Fax: (+632) 523-24-26

E-mail: wilmanemesio@yahoo.com

Website: www.da.bpi.gov.ph

Pesticide Residue Analysis

Laboratory Services Division/National Pesticide Analytical Laboratory

Ms Susana SG Gonzalo, Officer-In-Charge

692 San Andres St.

Malate, Manila, Philippines

Tel: 5240708

Fax: 5237154

E-mail: lsdbpi@yahoo.com

Website: www.da.bpi.gov.ph

Pesticide Registration

Fertilizer and Pesticide Authority

Dr Norlito Gicana, Executive Director

FPA Building, BAI Compound

Visayas Avenue

Diliman, Quezon City 1101, Philippines

Tel: (+632) 9208173

Fax: (+632) 9208173

E-mail: fpa_77@yahoo.com

Website: <http://fpa.da.com.ph>**Official International Contact Points****National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)**

Bureau of Plant Industry

Mr Joel S. Rudinas, Director

692 San Andres St.

Malate, Manila, Philippines

Tel: (+632) 524 2812 / 523 9132 / 525 7909

Fax: (+632) 521 7650 / 5242812

E-mail: buplant@yahoo.comWebsite: www.da.bpi.gov.ph

Language(s): English

Contact point received: 2005; Source: country report

Plant Quarantine Service

Mr Larry R. Lacson

Tel: (+632) 5243749 / 4040409

Fax: (+632) 524 2812

E-mail: lacsonlr@yahoo.com**WTO SPS Contact Point**

Policy Research Service

Office of the Director

Department of Agriculture

Elliptical Road, Diliman

Quezon City, Philippines

Tel: (+632) 926 7439 / 928 8741 local 2317, 2319 Fax: (+632) 928 0590

E-mail: epad.polreser@lycos.comWebsite: The Sanitary and Phytosanitary Standards Information System (SPSIS)
spsis.da.gov.ph**Rotterdam Convention (PIC) DNA Pesticides**

Department of Agriculture Compound

Ms Aida Ordas, Chief, Pesticide Regulatory Services Division

Fertilizer and Pesticide Authority (FPA)

Visayas Avenue

Quezon City 1116, Philippines

Tel: (+632) 4849720

Fax: (+632) 9208173

Stockholm Convention (POP) National Focal Point (P)

Department of Environment and Natural
Resources

Mr Jose L. Atienza Jr., Secretary

DENR Bldg., Visayas Avenue

Diliman, Quezon City 1116

Philippines

Tel: (+632) 926 2688 / 925 2329

Fax: (+632) 920 4301

Environmental Management Bureau

Mr Julian D. Amador, Director

Department of Environment and

Natural Resources

DENR Compound, Visayas Avenue

Diliman, Quezon City 1116

Philippines

Tel: (+632) 928 3782 / 9202246

Fax: (+632) 927 1518

E-mail: rq71@yahoo.com

Basel Convention Competent Authority (CA) and Focal Point

Environmental Management Bureau

Department of Environment and Natural Resources

Visayas Avenue

Diliman, Quezon City 1116

Philippines

Tel: (+632) 928 11 85 or 920 22 63

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
<i>Import:</i>	
Import permits/inspections	DA/BPI-PQS
Emergency action	DA/BPI-PQS
<i>Export:</i>	
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 <i>Do you have an electronic certification system?: Yes _____ No X</i>	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.)
<ul style="list-style-type: none"> • 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 <p>2007</p> <ol style="list-style-type: none"> 1. Developing Personal Excellence 2. 6th General Plant Quarantine Training <p>2008</p> <ol style="list-style-type: none"> 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 <ul style="list-style-type: none"> • 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.)
<ul style="list-style-type: none"> • 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
	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)
<i>Field Pest Outbreaks</i>	(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
<i>Migratory Pest Outbreaks</i>	(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
<i>New Exotic Pest Eradication</i>	(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? <i>If yes, give Name and Address of IPM Programme:</i> KASAKALIKASAN, Department of Agriculture, Elliptical Rd. Diliman, Quezon City, Philippines	x		
Does the country have special IPM extension programmes? <i>If yes, in which crops?:</i> Rice, corn, vegetables, abaca, coconut, banana, citrus, cotton, IPM for individual pest	x		

Does the country have special IPM research programmes? <i>If yes, in which crops?:</i> Rice, corn, vegetables, cotton, banana, abaca, coconut	x		
Does the country have specific GAP extension programmes? <i>If yes, in which crops?:</i>			
Does the country have specific GAP research programmes? <i>If yes, in which crops?:</i>			

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)	1 st	2 nd	3 rd
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? <i>If yes, what is the target: _____</i>			
Have you ratified the Rotterdam (PIC) Convention?			
Have you ratified the Stockholm (POP) Convention?			
Have you 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)?			
<i>Pesticide Registration</i>			
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?			
<i>Incentives/Disincentives</i>			
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
<i>Other Stakeholders:</i>	
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. Commodity 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

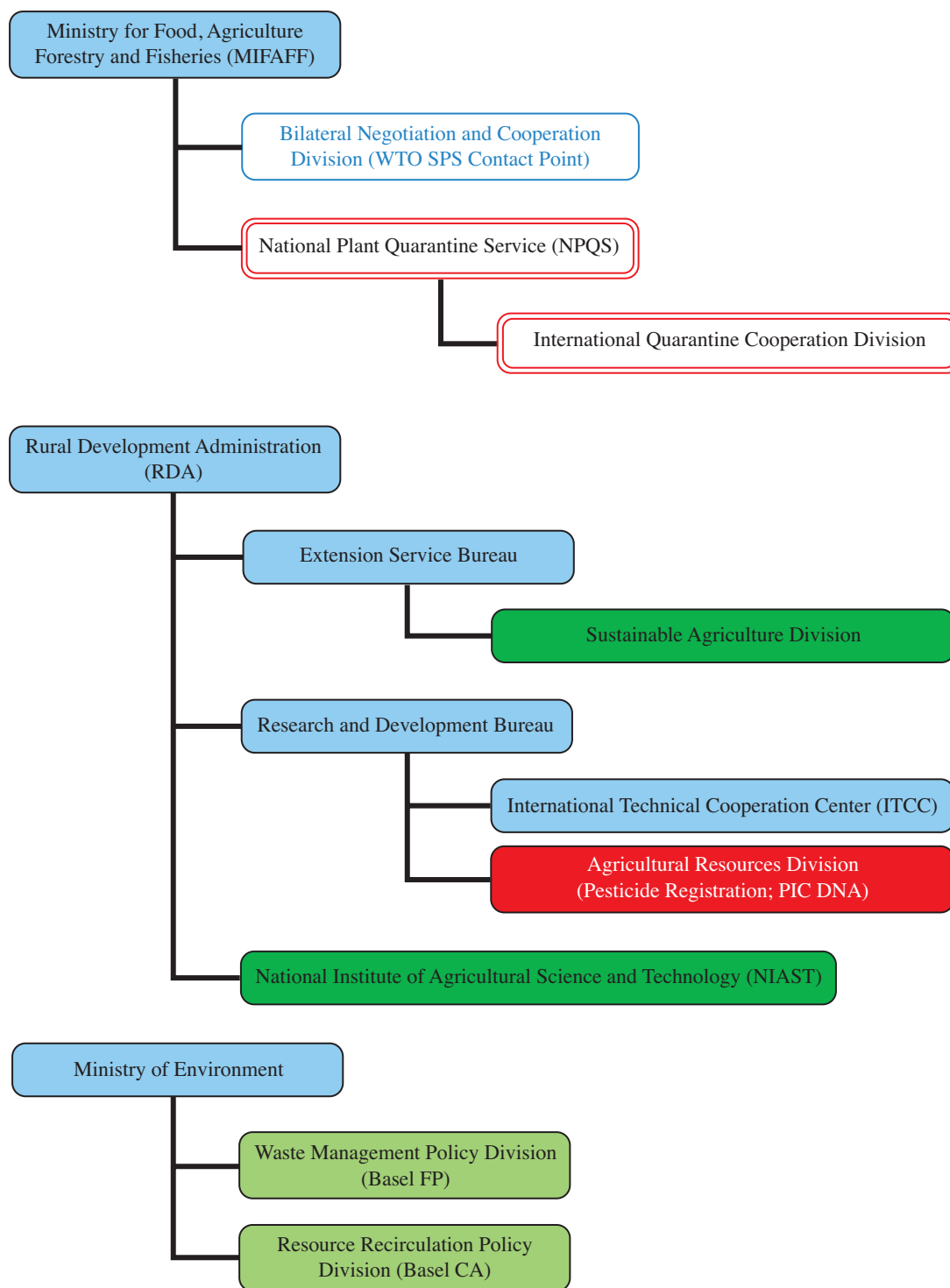
Overall Executive Summary

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

Mr In 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
<i>Import:</i>	
Import permits	MIFAFF/NPQS
Import inspections	MIFAFF/NPQS
Emergency action	MIFAFF/NPQS
<i>Export:</i>	
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	<i>Dysmicoccus neobrevipes</i>	998
	<i>Aspidiotus excisus</i>	297
	<i>Dysmicoccus brevipes</i>	12
Pineapple fruit	<i>Dysmicoccus brevipes</i>	783
	<i>Dysmicoccus neobrevipes</i>	3
	<i>Dolichotetranychus floridanus</i>	2
Lauan lumber	<i>Brachypeplus sp</i>	51
	<i>Silvanus bidentatus</i>	42
	<i>Xyleborus cognatus</i>	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.)
<ul style="list-style-type: none"> • 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
	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)
<i>Field/Storage Pest Outbreaks</i>	(e.g. BPH, boll worm, etc.)
Response strategy/plans	RDA NAQS
Surveillance	RDA NAQS
Control	RDA NAQS
<i>Migratory Pest Outbreaks</i>	(e.g. locusts, birds, armyworm)
Response strategy/plans	RDA
Surveillance	RDA
Control	RDA
<i>New Exotic Pest Eradication</i>	(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	<i>Laodelphax striatellus</i>	<i>Paratlanticus ussuriensis</i>	<i>Lycorma delicatula</i>
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 <i>per annum</i>
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? <i>If yes, give Name and Address of IPM Programme: MAF, Extension Service Bureau of RDA</i>	x	
Does the country have specific IPM extension programmes? <i>If yes, in which crops?: Rice, citrus, and other crops</i>	x	
Does the country have specific IPM research programmes? <i>If yes, in which crops?: Pepper, tomato, strawberry, apple</i>	x	
Does the country have specific GAP extension programmes? <i>If yes, in which crops?: Training programme for 96 agri. Crops and 4 forest products</i>	x	
Does the country have specific GAP research programmes? <i>If yes, in which crops?: Horticultural crops</i>	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)	1 st	2 nd	3 rd
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? <i>If yes, what is the target: _____</i>	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	
<i>Pesticide Registration</i>		
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	

<i>Incentives/Disincentives</i>		
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
<i>Other Stakeholders:</i>	
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.)**

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

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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.

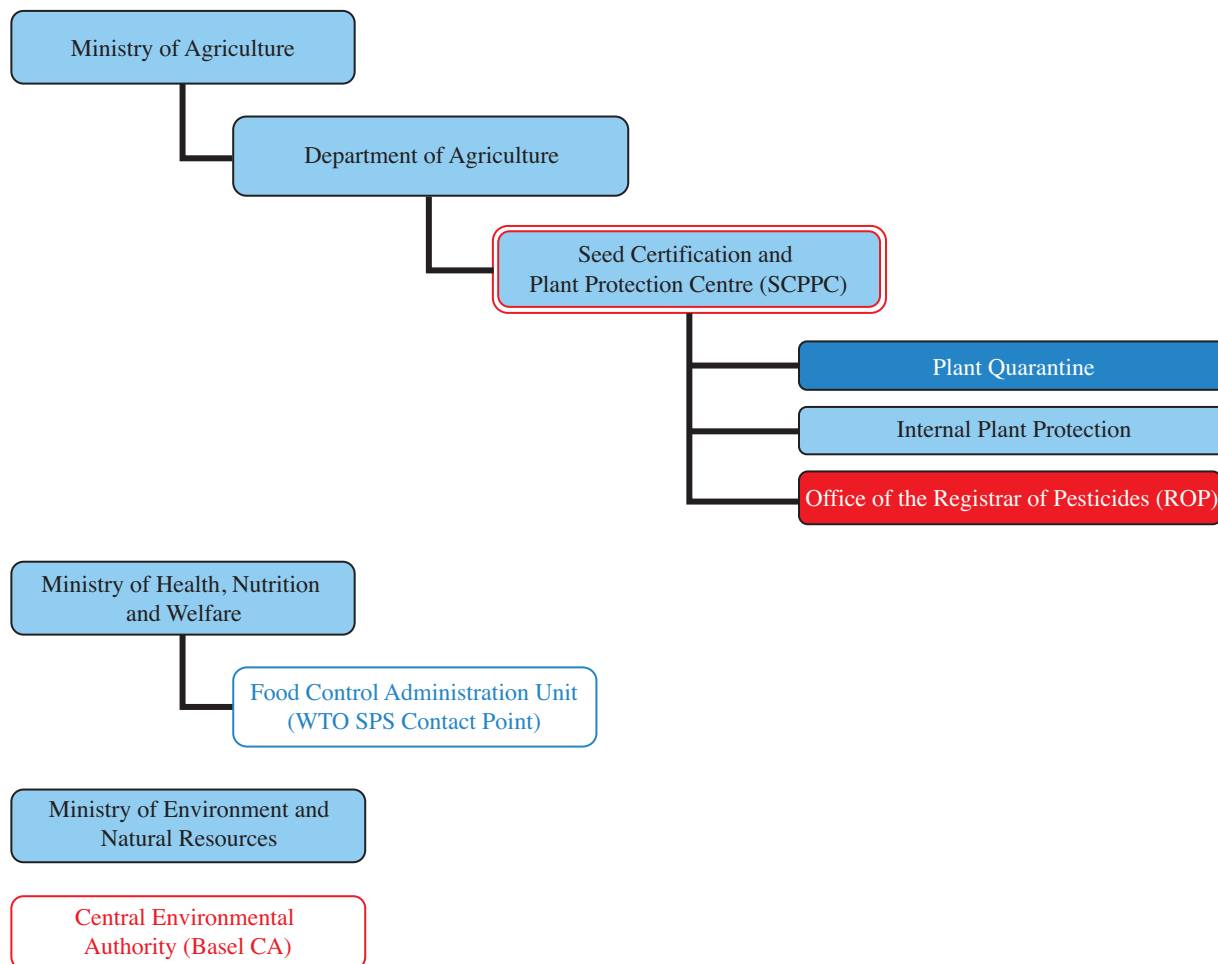
The Integrated Pest Management (IPM) strategy on rice cultivation is now extended to vegetables and other crops, using Farmer Field School (FFS) training approach.

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
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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@slt.net.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@slt.net.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

No. 104 Denzil Kobbekaduwa Mawatha

Battaramulla, Sri Lanka

Tel: (+94) 11 287 72 90 or 288 74 53

Fax: (+94) 11 287 72 92 or 286 11 96

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
<i>Import:</i>	
Import permits /inspections	MOA/DOA/SCPPC MOA/DOA/SCPPC/NPQS/Entry points
Emergency action	MOA, DOA, SCPPC, Entry points (Seaport, Airport)
<i>Export:</i>	
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
<i>Synchytrium endobioticum</i> (in ornamental plants)	Not available
<i>Rhadopholus similes</i> (in foliage plants)	Not available
<i>Globoderapallida pallida</i> , <i>Globodera rostochiensis</i>	Not available
<i>Bemisia tabasi</i> , <i>Thrips palmi</i> , <i>Liriomyza sativai</i>	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	63 634
<i>Number of electronic certificates issued: Yes _____ No ✓</i>	0
<i>Number of conventional certificates issued: Yes ✓ No _____</i>	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
	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)
<i>Field Pest Outbreaks</i>	(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)
<i>Migratory Pest Outbreaks</i>	(e.g. locusts, birds, armyworm)
Response strategy/plans	MOA, DOA, SCPPC, PPS, MOE, CEA
Surveillance	MOE
Control	MOA, DOA, SCPPC, PPS, DD (District)
<i>New Exotic Pest Eradication</i>	(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	<i>Paracoccus marginatus</i> (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 hose
 • Spray a mixture of 2 tsp of washing powder, 1 tsp of kerosene oil in 1 litre 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 Cocconut Wilt Disease in southern region of Sri Lanka.

Water hyacinth and *Salvinia 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 *salvinia*.

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? <i>If yes, give Name and Address of IPM Programme:</i> PPS	x		
Does the country have special IPM extension programmes? <i>If yes, in which crops?: Rice, vegetables</i>	x		
Does the country have special IPM research programmes? <i>If yes, in which crops?: Leafy vegetables</i>	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)	1 st	2 nd	3 rd
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.)
<p>Training in IPM has been increased</p> <p>Number of crops adopting IPM has been increased.</p> <p>Integrated Pest and Vector Management (IPVM) Programme has been implemented.</p>
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
<p>Lack of trained staff and technical knowledge.</p>

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? <i>If yes, what is the target: _____</i>		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	
<i>Pesticide Registration</i>			
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		
<i>Incentives/Disincentives</i>			
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
<i>Other Stakeholders:</i>	
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.)
<ul style="list-style-type: none"> • 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.)
<ul style="list-style-type: none"> • 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.

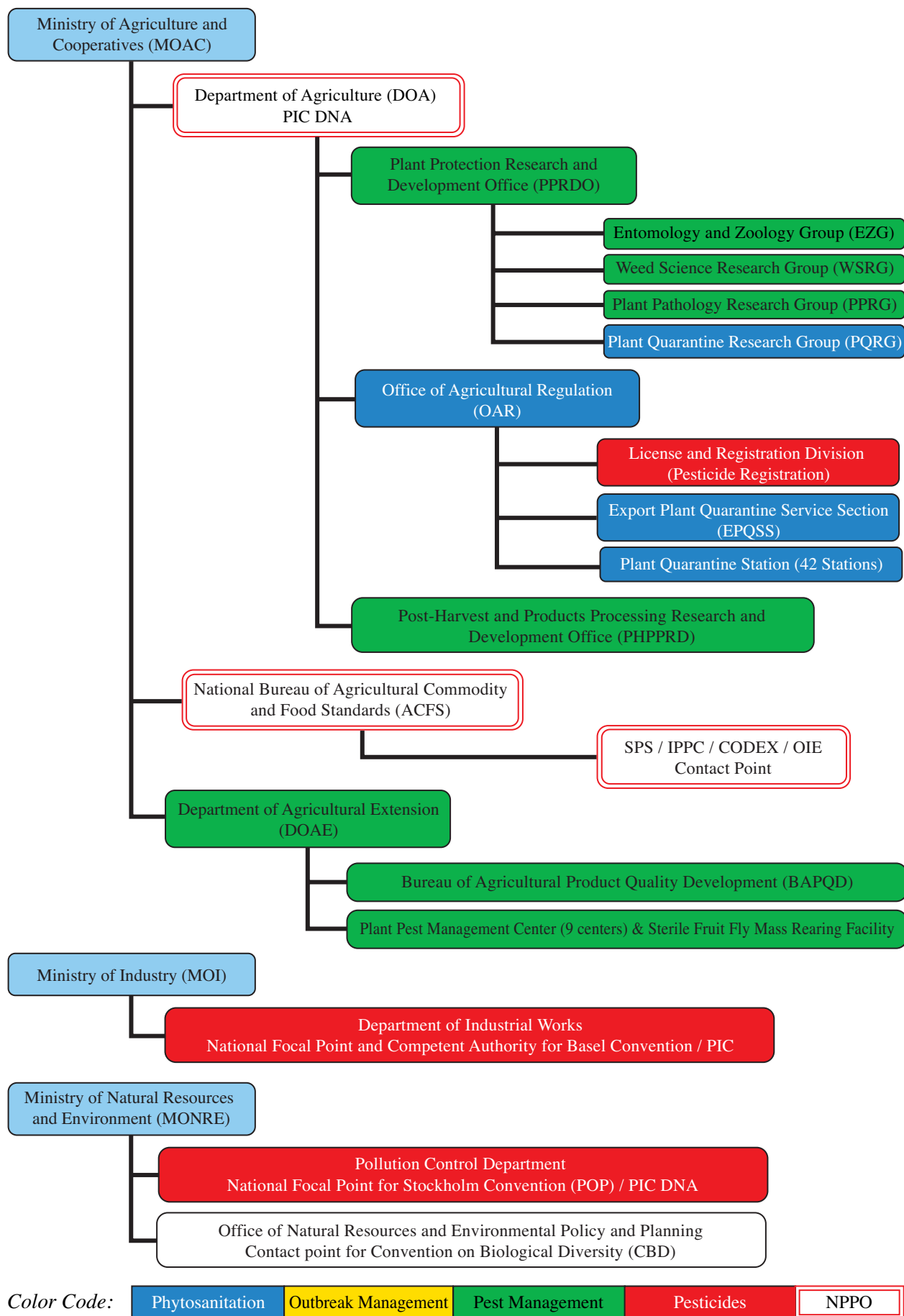
During 2007-2008, the Department of Agricultural Extension (DOAE) has not changed the national policy on IPM Programme. However, a number of IPM training programmes and farmer field schools had to be curtailed, due to the budget constraint. Farmers' education placed emphasis on changing the attitude 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.thWebsite: 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
<i>Import:</i>	
Import permits	MOAC/DOA/OAR
Import inspections	MOAC/DOA/OAR/PQ Stations MOAC/DOA/PPRDO/PQRG
Emergency action	MOAC/DOA/OAR/PPRDO/PQ Stations
<i>Export:</i>	
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	
<i>Xanthomonas axonopodis</i> pv. <i>citri</i> , 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
	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, *Sternonchetus 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)
<i>Field/Storage Pest Outbreaks</i>	(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
<i>Migratory Pest Outbreaks</i>	(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
<i>New Exotic Pest Eradication</i>	(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, <i>Sternochetus mangiferae</i> (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 <i>policy documents</i> ?	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? <i>If yes, give Name and Address of IPM Programme:</i>		
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	x	
IPM Programme 3: Establishment of Community Plant Pest Management Center Address: MOAC/DOAE/BAPQD		

Does the country have specific IPM extension programmes? <i>If yes, in which crops?:</i> baby corn, orchid, rice, sugarcane, mango, okra, mangosteen, asparagus, chilli and pomelo	x	
Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i> pomelo, tangerine, longan, ginger.	x	
Does the country have specific GAP extension programmes? <i>If yes, in which crops?:</i> 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? <i>If yes, in which crops?:</i> (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)	1 st	2 nd	3 rd
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? <i>If yes, what is the target: 25% in 2009</i>	x	
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have you ratified the Basel Convention? (hazardous wastes)	x	
Have you ratified the Montreal Protocol? (CH ₃ Br 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	
<i>Pesticide Registration</i>		
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	
<i>Incentives/Disincentives</i>		
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

<i>Other Stakeholders:</i>	
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).

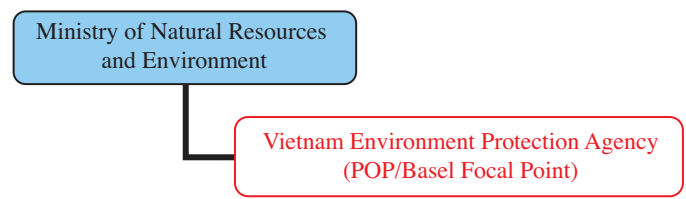
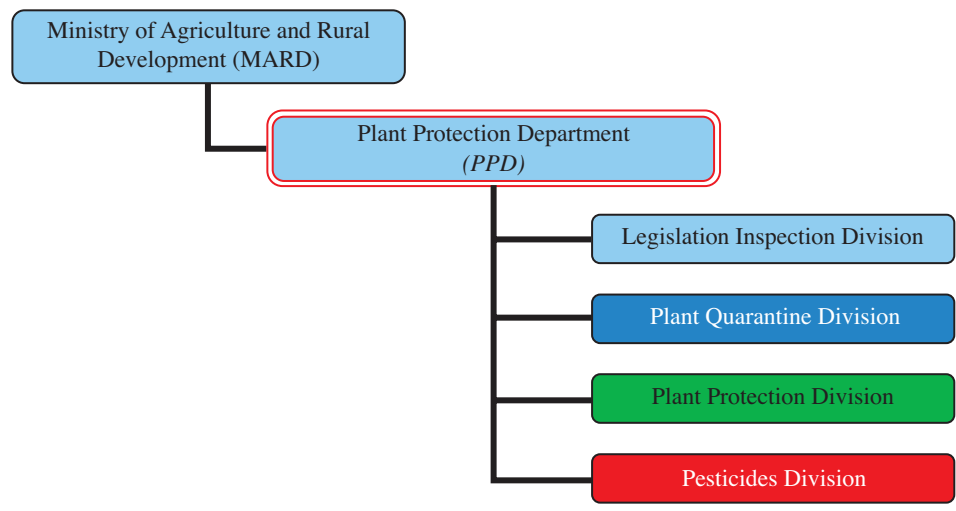
Achievements:

- 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
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Important Contact Addresses

Responsible Ministry

Ministry of Agriculture and Rural Development (MARD)

Mr Le Van Minh, Director General

International Cooperation Department

2 Ngoc Ha Street – Ba Dinh

Hanoi, Viet Nam

Tel: (+84) 4 8437520 / 7582005

Fax: (+84) 4 7330752

E-mail: icd.mard@fpt.vn

Website: <http://210.245.60.189/en/>

National Plant Protection Organization

Plant Protection Department

Mr Dam Quoc Tru, Deputy Director General

Ministry of Agriculture and Rural Development

149, Ho Dac Di Street

Dong Da District

Hanoi, Viet Nam

Tel: (+84) 4 8518198

Fax: (+84) 4 8574719 / 5330043

E-mail: trudq@fpt.vn

Website: <http://www.ppd.gov.vn>

Address for nominations

Plant Protection Department

Mr Dam Quoc Tru, Deputy Director General

Ministry of Agriculture and Rural Development

149, Ho Dac Di Street

Dong Da District

Hanoi, Viet Nam

Tel: (+84) 4 8518198

Fax: (+84) 4 8574719 / 5330043

E-mail: trudq@fpt.vn

Website: <http://www.ppd.gov.vn>

Operational Offices:

Plant Protection

Plant Protection Department (PPD)

Mr Khuong Quang Viet, Head of Plant Protection Division

149, Ho Dac Di Street, Dong Da District

Hanoi, Viet Nam

Tel: (+84) 4 8518197

Fax: (+84) 4 5330043

E-mail: bvtv@fpt.vn

Website: <http://www.ppd.gov.vn>

Plant Quarantine

Plant Protection Department

Dr Hoang Trung, Head of Plant Quarantine Division

Ministry of Agriculture and Rural Development (MARD)

149, Ho Dac Di Street, Dong Da District

Hanoi, Viet Nam

Tel: (+84) 4 5331033 / 8518192

Fax: (+84) 4 5330043

E-mail: pqd@fpt.vn

Website: <http://www.ppd.gov.vn>

Surveillance, Pest Outbreaks and Invasive Species Management

Plant Protection Department

Mr Khuong Quang Viet, Head of Plant Protection Division

Ministry of Agriculture and Rural Development (MARD)

149, Ho Dac Di Street, Dong Da District

Hanoi, Viet Nam

Tel: (+84) 4 8518198

Fax: (+84) 4 8574719 / 5330043

E-mail: trudq@fpt.vn

Website: <http://www.ppd.gov.vn>

Pesticide Registration

Plant Protection Department

Mr Dao Trong Anh, Head of Pesticide Division

Ministry of Agriculture and Rural Development (MARD)

149, Ho Dac Di Street, Dong Da District

Hanoi, Viet Nam

Tel: (+84) 4 5331562 / 8518194, Fax: (+84) 4 5330043

E-mail: p.qlt@fpt.vn

Website: <http://www.ppd.gov.vn>

Official International Contact Points**National Plant Protection Organization (NPPO) Contact Point (for IPPC/APPPC)**

Plant Protection Department

Mr Dam Quoc Tru, Deputy Director General

Ministry of Agriculture and Rural Development (MARD)

149, Ho Dac Di Street

Dong Da District, Hanoi, Viet Nam

Tel: (+84) 4 8518198

Fax: (+84) 4 8574719 / 5330043

E-mail: trudq@fpt.vn

Website: <http://www.ppd.gov.vn>

WTO SPS Contact Point

International Cooperation Department

Mrs Hoang Thi Dung, Deputy Director General

Ministry of Agriculture and Rural Development (MARD)

2 Ngoc Ha Street – Ba Dinh, Hanoi, Viet Nam

Tel: (+84) 4 8437450 / 8226318

Fax: (+84) 4 7330752

E-mail: icd.mard@fpt.vn

Website: <http://210.245.60.189/en/>

Rotterdam Convention (PIC) DNA Pesticides (P)

Plant Protection Department

Mr Bui Si Doanh, Deputy Director General

Ministry of Agriculture and Rural Development (MARD)

149, Ho Dac Di Street

Dong Da District

Hanoi, Viet Nam

Tel: (+84) 4 8518198

Fax: (+84) 4 8574719 / 5330043

E-mail: trudq@fpt.vn

Website: <http://www.ppd.gov.vn>

Stockholm Convention (POP) National Focal Point (P)

Viet Nam Environment Protection Agency

Dr Tran Hong Ha, Director General

Ministry of Natural Resources and Environment

67 Nguyen Du

Hanoi, Viet Nam

Tel: (+84) 4 942 3899

Fax: (+84) 4 822 3189

E-mail: pops.vn@nea.gov.vn

Basel Convention Competent Authority (CA) and Focal Point

Viet Nam Environmental Protection Agency (VEPA)

Dr Tran Hong Ha, Director General

Ministry of Natural Resources and Environment (MONRE)

67 Nguyen Du Street, Hanoi, Viet Nam

Tel: (+84) 4 822 4420

Fax: (+84) 4 822 3189

E-mails: baselvn@nea.gov.vn or nmcuong@nea.gov.vn

Montreal Protocol Focal Point

Viet Nam National Ozone Unit

Mr Luong Duc Khoa

Project Coordinator

Tel: (+84) 4 9743195

Fax: (+84) 4 9743200

E-mail: ozoneoffice@fpt.vn

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