

**Plant protection profiles
from
Asia-Pacific countries
(2007-2008)**
2nd edition



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ASIA AND PACIFIC PLANT PROTECTION COMMISSION

and

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

Bangkok, 2009

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For a copy of this publication, please write to:

Piao Yongfan

FAO Regional Office for Asia and the Pacific

Maliwan Mansion, 39 Phra Atit Road

Bangkok 10200

THAILAND

Tel: (+66) 2 697 4268

Fax: (+66) 2 697 4445

E-mail: yongfan.piao@fao.org

Foreword

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

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

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

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

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



He Changchui

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

Bangkok, July 2009

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List of acronyms

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

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

1. Plant protection information exchange among APPPC member countries

Background information

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

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

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

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

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

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

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

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

Ratification and membership of international agreements

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

* Japan is not a member of APPPC.

Brief status, development and progress

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

General information

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

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

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

Country	General Information (2007 – June 2009)
Cambodia	<p>The Plant Protection and Phytosanitary Inspection Office (PPPIO) as Cambodia's NPPO has recently been upgraded as the Plant Protection and SPS Department (PP-SPSD) of the General Directorate of Agriculture (GDA). NPPO was previously under the supervision of the former Department of Agronomy and Agricultural Land Improvement (DAALI).</p> <p>The Government of Cambodia has endorsed Sub-Degree No. 188 (14/11/2008) with the establishment of GDA which consists of nine departments. One of these is the Plant Protection, Sanitary and Phytosanitary Department (PP-SPSD) that has the following roles and responsibilities:</p> <ul style="list-style-type: none"> • To prepare the policy, plan, project, development programmes, the measure to <i>reduce</i> the crop production loose caused by pest, to <i>manage</i> chemical substances used to prevent, control, repellent, grow regulate (and all other pesticide actives) pest and all agent or biological substances used for the above mentioned purpose and for soil fertility improvement in order to increase productivity and plant production in the sound of sustainable of natural resources and biodiversity of the environment; • To prepare the plant product <i>quality standards</i>, the <i>assurance system of safety</i> and quality of plant product, policy plant project development programmes to <i>improve</i> the quality and safety of plant product in order to assure the quality and safety of plant product to consumer, market and encourage the export of plant product; • To prepare the <i>regulation</i> and to be the <i>regulatory service</i> in the management of <i>plant protection work</i>, <i>safety of food</i> originally from plant product and <i>phytosanitary inspection</i> according to the Government policy and SPS agreement of WTO; • To direct, manage and encourage the <i>research activities</i> of research institution under its manage and in cooperation with the agricultural extension department and local organizations to encourage the <i>extension</i> of plant protection, phytosanitary and production measures to improve the quality and safety of product to farmers, farmer organization, investor and private sector for increasing their benefits and family income to improve population's welfare and facilitate the exportation of agricultural product; • To be a <i>supporting service to the seed inspector</i> by playing a role of regulatory authority for inspecting all the seed transportation across the border;

Country	General Information (2007 – June 2009)
	<ul style="list-style-type: none"> • To persuade, facilitate and <i>encourage private sector to invest</i> the supporting service for plant protection, phytosanitary and improving quality of agricultural product; • To be a <i>technical advisor</i> and a service in <i>pest control</i> intervention, in <i>assessment of chemical</i> substances used to prevent, control, repellent, grow regulate (and all other pesticide actives) pest and all agent or biological substances used for the above mentioned purpose and for soil fertility improvement and in <i>assessment of quality</i> of agricultural product; • To liaison, cooperate and implement the convention, agreement related in national, regional and international level. • To implement other duties as given by Director Team of General Directorate. <p>This newly endorsed Sub-Degree just described the general mandate of these nine departments. Ministerial regulations are being drafted for each department and will be submitted to the Ministry of Agriculture, Forestry and Fisheries (MAFF) for approval.</p>

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

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

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

Country	General Information (2007 – June 2009)
Fiji Islands	<p>The agriculture sector holds a lot of promise but Fiji has yet to realize its full potential. The sector is further challenged with the loss of sugar preferential price that affects the sugar industry.</p> <p>The Cabinet on 18 January 2005 agreed on the reorganization of the Quarantine Department. A scoping study of the Department and audit of the Department's operations were carried out in the same year. The recommendations from the scoping study and the audit highlighted the need to reform the Department on areas of institutional strengthening to meet the SPS Agreement of the WTO.</p> <p>The Charter recommendations highlight the following areas for reform:</p> <ul style="list-style-type: none"> • The review of the Quarantine Legislations; • Training of officers; • Improve facilities and equipment; • Review and streamline current work practices; • Operating instructions; • Strengthen technical capacity; • Communication; • Awareness; and • New organization structure for the statutory authority to be known as the Biosecurity Authority of the Fiji Islands (BAFI). <p>The reform exercise has been progressing slowly. However, the review of the legislation has been completed, awareness programmes for the public are ongoing, communication has improved in the last two years and a standard operational procedure manual has been finalized.</p> <p>Currently in the pipeline, is the review of the organization structure and to be followed with the establishment of the Statutory Authority. The Authority will administer the Biosecurity Promulgation 2008 and fast-track the completion of the reform.</p> <p>This reform will bring the plant and animal biosecurity under one administration and develop its facilities and equipment to facilitate its operations. The Authority will have its laboratory and technical expertise to conduct risk and pest assessment whilst the Ministry Research Laboratory to focus on the Ministry's laboratory needs and will assist BAFI on needs that are beyond the capacity of BAFI's laboratory.</p> <p>The Government of the day is placing high priority on national security, putting biosecurity in the fore-front of its development plan. Fiji's biosecurity systems and services will continue to be developed, and we expect to fully administer the Biosecurity Promulgation 2008 when the Biosecurity Authority of the Fiji Islands is fully established in the year 2012.</p>
India	<p>The Headquarters of the Directorate of Plant Protection Quarantine and Storage is located at Faridabad, Haryana. This office is headed by the Plant Protection Adviser to the Government of India and is responsible for the implementation of plant protection policies and programmes of the Department of Agriculture and Cooperation, the Ministry of Agriculture, the Government of India.</p> <p>The major activities are exclusion of exotic pests, surveillance and monitoring and control of desert locust, ensuring availability of quality pesticides and biopesticides, promotion</p>

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

Country	General Information (2007 – June 2009)
	<p>Lao PDR with its much smaller population and abundant but largely untapped natural resources, which include water and land, is in a prime position to serve what must become growth markets for rice, vegetables and other farm produce. Currently, the major food crop and agriculture product of Lao PDR is rice. It is cultivated during the wet season, either rain fed in upland areas of under wet conditions on inundated river plains. Rice is often grown as a subsistence crop. The problem continues to be nation wide food security made worse by the frequency of droughts and floods. Despite the importance, agricultural productivity in Lao PDR is at a rather low level mainly due to traditional farming system susceptible to adverse affect of pests and diseases associated with the introduction of high yielding varieties and exotic crops.</p> <p>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.</p> <p>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.</p> <p>Exports of agricultural products from Lao PDR have not yet faced a major ban or suspension for SPS non compliance, but there are specific concerns for the future. At present most agricultural exports are destined to market segments in neighbouring countries where food safety and quality requirements are still moderate or low. There is no formal record, but it is estimated that greater than half of agricultural exports are through informal border trade. However, public and market requirements for quality and safety in neighbouring countries are also increasing.</p> <p>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).</p>
Malaysia	<p>Since the last session of the APPPC 2007, Malaysia is now getting to the final stage in the drafting of the plant quarantine legislation to replace the Plant Quarantine Act 1976, and alongside with it the Plant Protection Regulations is also being drafted to replace the existing Plant Quarantine Regulations 1981.</p>
Myanmar	<p>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.</p> <p>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.</p> <p>The Plant Protection Division of Myanmar Agriculture Service is playing the role of the National Plant Protection Organization (NPPO) and actively participates in the</p>

Country	General Information (2007 – June 2009)
	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
Nepal	<p>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.</p> <p>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.</p> <p>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:</p> <ol style="list-style-type: none"> 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. <p>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.</p>

Country	General Information (2007 – June 2009)
	<p>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/APPCC 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 (<i>Department of Food Technology and Quality Control under MoAC</i>), international treaties and conventions such as Rotterdam Convention, Stockholm Convention (<i>Pesticide Registration and Management Office</i>) as well as a competent authority (CA) and a focal point for Basel Convention (<i>Ministry of population and Environment</i>).</p> <p>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.</p>
New Zealand	<p>Since the last Session of the Asia and Pacific Plant Protection Commission, New Zealand has continued to develop and refine its Biosecurity system.</p> <p>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.</p>
Pakistan	<p>During the period 2007-2008, Pakistan has made steady progress in all areas of plant protection.</p> <p>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.</p>
Republic of Korea	<p>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.</p> <p>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.</p> <p>However, major implementation organizations regarding plant protection such as National Plant Quarantine Service, Rural Development Administration, are unchanged.</p>
Sri Lanka	<p>Some key organizational changes took place during 2007-2008. Some senior officers were transferred to other work places while some retired or were promoted.</p> <p>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</p>

Country	General Information (2007 – June 2009)
	<p>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.</p> <p>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.</p>
Thailand	<p>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.</p> <p>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, <i>Ferrisia vergata</i>.</p> <p>DOA has recently conducted a detection survey of mango seed weevil, <i>Sternochetus mangiferae</i>. The purpose is to confirm that Thailand is free from this weevil and to expand the export market for Thai mango.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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).</p>
Viet Nam	<p>Outstanding Issues</p> <p>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</p>

Country	General Information (2007 – June 2009)
	<p>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”.</p> <p>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.</p>

Plant quarantine

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

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

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

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

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

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

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

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

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

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

Country	Plant Quarantine (2007 – June 2009)
Lao PDR	<p>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.</p> <p>Protecting the Lao People’s Democratic Republic’s Plant Health Status and Facilitating Safe Trade in Plants and Plant Products, the NPPO of Lao PDR is dealing its mandates with the Prime Minister Decree on Plant Quarantine promulgated on 1993 and so far to be in compliance with the WTO SPS Agreement the National Assembly has approved new Plant Protection and Quarantine Law on December 2008. This new law determines the mandate of the NPPO to become a highly effective, efficient and professional with the capacities and competencies to protect the nation’s plant health status and biodiversity and promote market access for plants and plant products in compliance with international agreements and standards.</p> <p>As the role and responsibilities of the NPPO has been made more explicit under the WTO SPS regime and stipulated in the New Revised Text of the IPPC (1997), there is an increasing demand for government organizations to be more efficient, transparent and accountable for their activities or actions both globally with the trading partners and nationally with their stakeholders. Identified strategic areas for further development towards 2010 and 2020 including increasing rice production and production of other crops including maize, coffee, cassava, soybean, green bean, peanut, sugarcane, sugar palm fruit, sesame, vegetable and tropical fruit require to pay critical attention to all economic sectors reforms; to develop human resources in various areas, and to support modern industry development.</p> <p>At present, potentially more than 9 land border posts are going to play a major role in connecting Lao PDR to the neighbouring countries. Lao PDR is also likely to become a major land route for the movement of agricultural products in the GMS countries. Hence, for instance, in the strategic planning process, careful assessment need to be undertaken on the anticipated or projected increase in activities at the various entry/exit points. There entry/exit points are likely to need improved facilities for phytosanitary inspections, testing, certification, etc. Capacity building and infrastructure investment must be prioritized accordingly to correct need.</p>
Malaysia	<p>As for plant quarantine organization, a agency known as Malaysia Quarantine Inspection Service (MAQIS) has been introduced in the organization. This agency is responsible for the inspection services for all agriculture products includes plants, animal and fish at the entry check points in Peninsular Malaysia since August 2008. In addition to that, there is a policy among ASEAN countries, whereby the international entry points are operating under CIQS system as one stop centre to facilitate trade and tourism. There is an appointment of new Director General in Department of Agriculture (DOA) Peninsular Malaysia (2008), Sabah (2007) due to retirement.</p>

Country	Plant Quarantine (2007 – June 2009)
	<p>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.</p> <p>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.</p> <p>In order to facilitate trade and market access of agriculture produces/products, Malaysia had also carried out the following phytosanitary measures:</p> <ul style="list-style-type: none"> • 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 (<i>Sternochetus mangiferae</i>) and guava fruit fly (<i>Bactrocera correcta</i>) • 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. <p>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.</p>
Myanmar	<p>The Plant Protection Division, Myanma Agriculture Service of the Ministry of Agriculture and Irrigation is legally responsible for issuing phytosanitary certificates and import certificates, according to the Plant Pest Quarantine Law.</p> <p>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.</p>

Country	Plant Quarantine (2007 – June 2009)
	<p>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.</p>
New Zealand	<p>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 1st of July 2007, and is now known as MAF Biosecurity New Zealand (MAF BNZ).</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>New Zealand continues to develop and review import health standards based on pest risk assessment in accordance with the International Standards for Phytosanitary Measures. Since the 25th session of the APPPC, import health standards have been developed for a range of plants and plant products.</p> <p>New Zealand continues to be active in the development, implementation and promotion of international and regional standards.</p>
Pakistan	<p>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.</p> <p>Pakistan Plant Quarantine Act and Rules are being revised. The Central Plant Quarantine Laboratory and three regional labs are being completed. Equipment is being installed and recruitment of personnel is under process. A total of 08 PRA of different crops are completed for 52 insects, 72 pathogens and 8 plants but they are being made in conformity of ISPM-4.</p> <p>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.</p> <p>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.</p>

Country	Plant Quarantine (2007 – June 2009)
Philippines	<p>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.</p> <p>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 <i>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</i>. 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.</p> <p>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 <i>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</i>. PQS also formulated <i>Guidelines for the Implementation of the Australian Fumigation Accreditation Scheme (AFAS)</i> in the Philippines which signifies the readiness of the PQS to implement high standard fumigation. <i>Rules and Regulations for the Importation, Exportation and Domestic Movement of Irradiated Plants and Plant Products and the Use of Irradiation as Phytosanitary Treatment</i> was also issued which provides another regulatory option for the Philippines with regards to phytosanitary treatment of fruits and vegetables for export. Recently, the PQS also set-up a total of 260 fruit fly traps all over the country. Ten sites per region were determined as strategic locations for setting of traps. Data gathered in the survey will show the population and changes of population of fruit fly within the coverage area. The survey is a continuing activity of PQS in which the information gathered will be readily available once needed by the countries importing mangoes and other fruits from the Philippines. Furthermore, additional areas were surveyed and identified by the Philippines as area free from Mango Pulp Weevil (<i>Sternochetus frigidus</i>) and Mango Seed Weevil (<i>Sternochetus mangiferae</i>). 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.</p>

Country	Plant Quarantine (2007 – June 2009)
	<p>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.</p>
Republic of Korea	<p>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.</p> <p>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.</p>
Sri Lanka	<p>There were some important changes in the organization during the period under review, Dr D.H. Muthukudaarachchi was appointed as the Director of the Seed Certification and Plant Protection Centre and thus became the official contact point person for IPPC. The most senior officers working in plant quarantine stations were transferred out of their work places giving way to new officers. There was a policy decision to replace two most senior officers in every three years by other competent officials. The officer holding the Deputy Director post of the National Plant Quarantine Service (NPQS) retired from public service in 2007 and the following year, I was appointed as the Deputy Director.</p> <p>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.</p> <p>Quarantine pest intercepted during the import of planting material included <i>Phoma foveata</i>, <i>Clavieacter michiganensis spp.</i>, <i>scpedonicus</i>, and <i>Geotrichum candidum</i>, on sweet potato <i>Ralastonia solanacearum</i> 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.</p> <p>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.</p>
Thailand	<p>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).</p>

Country	Plant Quarantine (2007 – June 2009)
	<p>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.</p> <p>In 2007-2008, the Department of Agriculture (DOA) gave five of Notifications of the Ministry of Agriculture and Cooperatives and eight of its own Notifications to strengthen the quarantine practices for both export plants and plant products and import prohibited articles.</p>
Viet Nam	<p>Pest record/identification</p> <p>During the period from 2007-2008, 104 cases of quarantine pest interception were reported, including:</p> <ul style="list-style-type: none"> • Bacterial wilt of maize (<i>Pantoea stewartii</i> (Smith) Mergaert et al) intercepted on maize imported into Viet Nam from Thailand. • Potato tuber moth (<i>Phthorimaea operculella</i> (Zeller 1873)) intercepted on potato imported from China. • Khapra beetle (<i>Trogoderma granarium</i> Everts) intercepted on coconut oil-cake of Indonesia, wheat bran of Srilanka. <p>New regulations/decisions:</p> <ul style="list-style-type: none"> • Decree No. 02/2007/ND-CP of the government on plant quarantine dated 05 January 2007. • Decision No. 34/2007/QD-BNN of 23 April 2007 publishing the list of regulated articles subject to pest risk analysis before importing into Viet Nam. • Decision No. 48/2007/QD-BNN of 29 May 2007, Regulation on Procedure for the issuance of the phytosanitary import permit for articles subject to pest risk analysis before importing into Viet Nam. • Decision No. 89/QD-BNN of 29 October 2007 of Minister of Agriculture and Rural Development promulgating regulations on state management on fumigation practice for regulated articles. • New Law on Plant Protection is being drafted and will be submitted to the National Assembly by the end of 2010 for endorsement. <p>Projects/programme cooperation:</p> <ul style="list-style-type: none"> • Improvement of Plant Quarantine treatment against Fruit Fly on fresh fruits (JICA), finished 2008. • Dragon fruit has been approved and entered into U.S. market since October 2008. • 2 irradiation treatment facilities established in ABC Company and Son Son Company. • 1 vapor heat treatment facility is being built. • Viet Nam Methyl bromide phase out plan: ongoing with World Bank funding. • NZAID phytosanitary capacity building in the Mekong region: going to terminate, (NPD development still ongoing).

Country	Plant Quarantine (2007 – June 2009)
	<p>Achievements:</p> <ul style="list-style-type: none"> • BPH and Grassy stunt viruses were successfully control in past two years by using IPM community approach for BPH control/management with assistance from FAO/TCP Project. • Coconut beetle was also under controlled by introduction of new parasites from Samoa under FAO/TCP Project. • Many quarantine pests found in two years (104 times). • Successful technical market access to U.S., Japan. • Established equipment of vapor heat treatment and irradiation for fresh fruits exported. • National capacity building in phytosanitary was put in high priority in agriculture sector.

Outbreak management

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

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

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

Country	Outbreak Management (surveillance, pest outbreaks and invasive species) (2007 – June 2009)
Lao PDR	<p>Lao PDR has not established a national programme for pest outbreaks and invasive species management. Moreover, beside the forecast signal of possibly pest outbreak, the warning system is still weak, to the extent of being almost non-existent. Consequently, farmers are faced with invasive species that become established and create impacts on their cash crop such as coffee and coconut.</p> <p>The Department of Agriculture (DOA) has recently established network of plant protection with their role to monitor and develop database on pest status of economic crop which is further reported to NPPO to indentify proper control measure. Those mandates of plant protection unit have been clearly defined in the Agreement of DOA on function and role of the Provincial Agricultural Sector.</p> <p>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.</p> <p>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.</p>
Malaysia	<p>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.</p> <p>A pest of concern to the country especially in rice fields is golden apple snail (<i>Pomacea canaliculata</i>). 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.</p> <p>Efforts are stepped up to control and eradicate the exotic aquatic weeds, namely, <i>Cyperus papyrus</i> and <i>C. japonica</i> and terrestrial weed, <i>Pennisetum setaceum</i>, 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.</p> <p><i>Brontispa</i> sp. is a serious insect pest attacking the leaves of coconut palms. A biological agent, <i>Asedodes hispanarium</i> which is a hymenopteran parasite, will be introduced into the country in an effort to combat the menacing <i>Brontispa</i> pest.</p>
Myanmar	<p>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.</p> <p>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.</p> <p>There was no insect pest outbreak in agricultural areas. There was no invasive species management in Myanmar.</p>

Country	Outbreak Management (surveillance, pest outbreaks and invasive species) (2007 – June 2009)
Republic of Korea	<p>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.</p> <p>Two species of insect, a katydid <i>Paratlanticus ussuriensis</i> and a cicada <i>Lycorma delicatula</i>, broke out both in 2007 and 2008. And an invasive disease, TYLCV, out-broke in a limited area and it is under official control.</p> <p>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.</p> <p>In 2007 a rice pest, smaller brown planthopper <i>Laodelphax striatellus</i>, 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.</p>
Sri Lanka	<p>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 – <i>Paracoccus marginatus</i> and confirmed by the senior Biosystematics of the Plant Pest Diagnostic Center, USA. This species was observed in the host plant more than sixty and it caused significant losses to the papaya plants and ornamental plants in home garden.</p> <p>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 <i>Acerophagus papayae</i> was imported from Puerto Rico APHIS and released into several infested locations. At present damage is under control.</p>
Thailand	<p>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, <i>Ferrisia vergata</i>. The new pest was collected for taxonomic identification.</p> <p>The Department of Agriculture (DOA) conducts the detection survey of mango seed weevil, <i>Sternochetus mangiferae</i> 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.</p>
Viet Nam	<p>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.</p>

Pest management

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

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

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

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

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

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

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

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

Country	Pest Management (2007 – June 2009)
	<p>crop protection policy. It also makes decision on crop information exchange between Myanmar and other ASEAN countries and international association.</p> <p>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.</p> <p>The Farmer's Field School has been established since 2000. However, during the beginning stage, emphasis was placed only on the rice farmers.</p>
New Zealand	<p>Integrated pest management continues to be an integral component of orchard management programmes in New Zealand.</p>
Republic of Korea	<p>Rural Development Administration (RDA) conducted the demonstration projects for rice and citrus to distribute IPM practice. Demonstration farms operated in 2008 consisted of 284 sites for rice and 16 sites for citrus and contributed to reduce the chemical spray times by 4 from 12 times to 8 times in average for citrus, and for rice the chemical application reduced to 2 times from 3 times as well.</p> <p>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.</p> <p>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.</p>
Sri Lanka	<p>During the period under review the most significant change in the Pest Management in Sri Lanka, is the appointment of National committee to revise the Plant Protection Act No. 35 of 1999, to make the necessary changes to meet the present day requirements and submission of new set of regulations under the Act.</p> <p>The country has embarked on several Pest Management Programmes for control of specific pests. Shortage in resource like funds, trained staff, machinery, and equipments always hindered the progress of the programme. Despite the problems encountered the centre has achieved most of the targets.</p> <p>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.</p> <p>Due to multidisciplinary nature of the programme it required the involvement of several stakeholder Departments, like the Department of Agriculture, Department of Health and Mahaweli Authority of Sri Lanka (MASL). This itself was a unique experience, integrating Agriculture with Health for the purpose of providing a better service and upgrading the livelihoods of rural communities.</p>

Country	Pest Management (2007 – June 2009)
	<p>In order to sustain the programme IPVM clubs were formed in village where FFS training were conducted so that farmers themselves could continue the activities they learnt at the FFS while disseminating that knowledge to other farmers.</p> <p>Another development in the past two years is the preparation of regulations under Plant Protection Act No. 35, 1999, to control of Coconut Leaf Rot Disease and Weligama Coconut Wilt Disease in southern region of Sri Lanka.</p> <p>Water hyacinth and <i>Salvinia molesta</i>, have been identified as principal invasive weeds that require adoption of biological control methods. Rearing facilities of biocontrol agent <i>Cytobagous salviniae</i> has been improved and four regional rearing units were also established during the last two years for biological control programme of salvinia.</p> <p>In addition, biocontrol agent of water hyacinth, <i>Neochatina bruchi</i> was imported from Thailand and introduced into water bodies after completing the necessary host specific test.</p>
Thailand	<p>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.</p> <p>However, the budget constraint had an impact on IPM activities. The Department of Agricultural Extension (DOAE) had to decrease the number of training programmes and farmer field schools (FFS). As regards the main IPM Programme, DOAE still encouraged the farmers' education and knowledge development, with focus on the change of attitude of farmers using highly toxic pesticides. The education helped them understand the principles and the framework of Good Agricultural Practices (GAP).</p> <p>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.</p> <p>Since the end of 2007, DOAE has set the project entitled "Using Integrated Pest Management for Decreasing Risk of Plant Pest Infestation" as the main activity of the Community Plant Pest Management Centre. The objects of the project are to develop farmers into "Pests Management Professionals in IPM", to reduce damage to farmers crops, to encourage less investment, and to enhance community participation in the project.</p> <p>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.</p> <p>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</p>

Country	Pest Management (2007 – June 2009)
	<p>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.</p> <p>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.</p>
Viet Nam	<p>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.</p>

Pesticide management

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

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

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

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

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

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

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

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

Country	Pesticide Management (2007 – June 2009)
Lao PDR	<p>Pesticide management has been nationally recognized since the declaration of Pesticide Regulation No. 0886/MAF, dated on 10/030/2000, aiming at management and prohibition of non-quality pesticides and harmfulness to human, plants, animals and environment in Lao PDR. In addition, the regulation also aims at giving definition, principles, measures and approaches for management and inspection of pesticides used in Lao PDR.</p> <p>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.</p> <p>To comply with the WTO SPS Agreement, new Decree on pesticide management is being in the process of public consultation with the national authorities concerned. The first draft preparation was assisted by FAO Experts during 2008. Lao PDR has not yet signed the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and their Disposal.</p> <p>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.</p>
Malaysia	<p>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.</p> <p>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.</p> <p>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.</p>
Myanmar	<p>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.</p>
New Zealand	<p>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.</p>

Country	Pesticide Management (2007 – June 2009)
Republic of Korea	<p>Agro-chemical production increased 11.3 percent from 22 847 ton to 25 428 ton in 2007. Among the 1 287 chemicals enlisted in Republic of Korea as pesticide, above 98 percent is low or moderate toxic. Hazardous chemicals including high toxic pesticides are specifically regulated through many measures including a restriction standard on handling those materials.</p> <p>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.</p> <p>Rural Development Administration (RDA) deposited the instrument of ratification to the Rotterdam Convention on the Prior Informed Consent (PIC) Procedures for Certain Hazardous Chemicals and Pesticides on International Trade in August 2003, and improved related regulations or systems. As such, Republic of Korea has been fulfilling its duties as a contracting party.</p> <p>Also, RDA signed the Stockholm Convention on the production, usage and discharge prohibition of persistent organic pollutants (POPs) in 2001, and ratified in January 2007.</p>
Sri Lanka	<p>The mandate of the Office of the Registrar of Pesticides is to execute statutory provisions of the Control of Pesticides Act No. 33 of 1980. The pesticides registration is the key provision in the course of life cycle management of pesticides in the country from importation through marketing of crops treated with pesticides. During the period 182 registration applications and 319 re-registrations have been completed conforming to the international guidelines and test protocols ensuring acceptability on safety, efficacy and environmental grounds.</p> <p>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.</p> <p>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.</p>
Thailand	<p>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).</p>
Viet Nam	<p>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.</p>

2. Country Plant Protection Profiles

2.1 AUSTRALIA

I. GENERAL INFORMATION

Last Updated: December 2008

Overall Executive Summary

Review of Australia's Quarantine and Biosecurity Arrangements

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

National Plant Health Status

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

PaDIL

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

Australian IPPC activities

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

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

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

Biosecurity Australia

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

Border quarantine inspections

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

Australian Fumigation Accreditation Scheme (AFAS)

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

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

Regional capacity building

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

Pesticide regulation

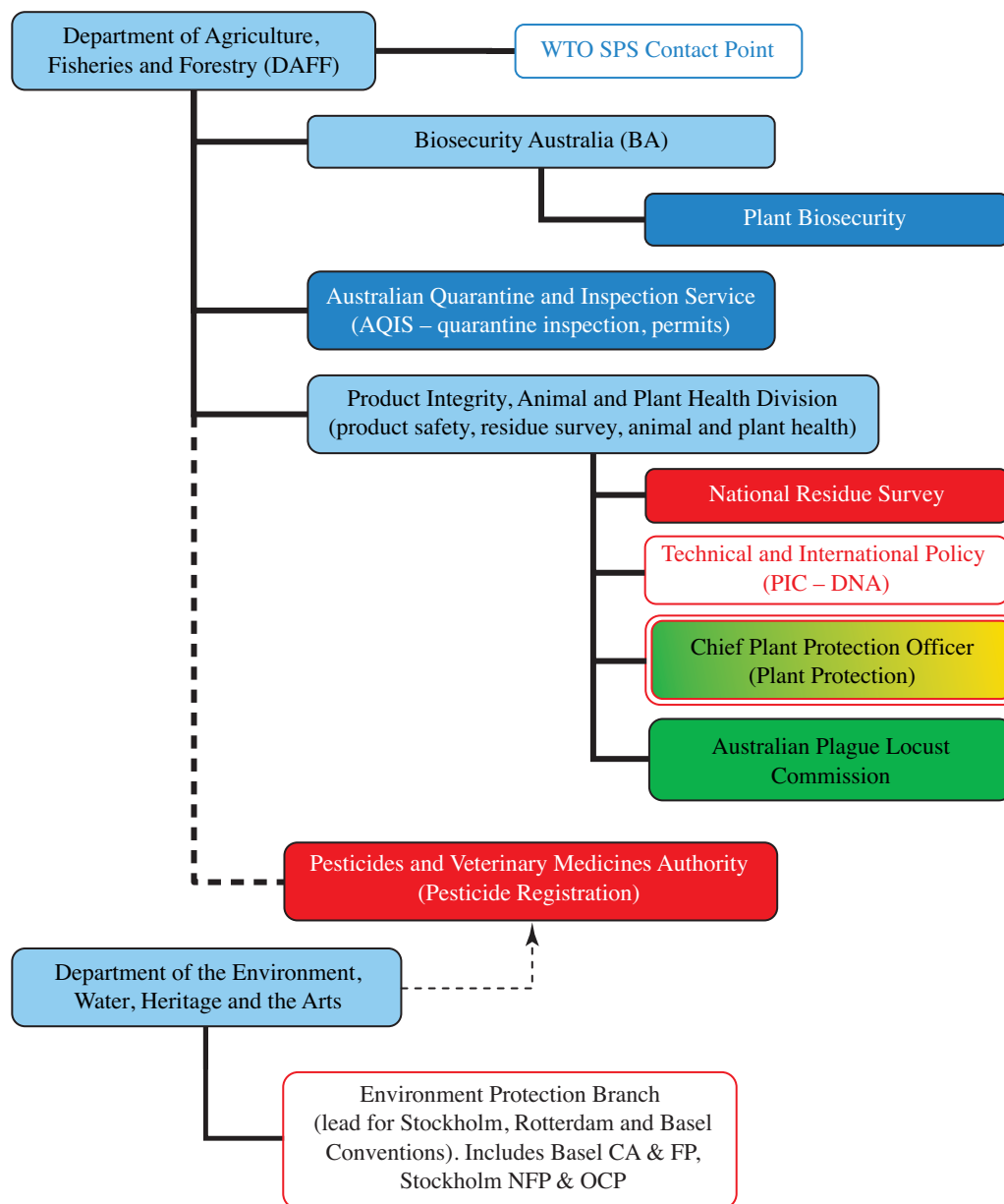
The National Registration Scheme for Agricultural and Veterinary Chemicals (National Registration Scheme) was established under Commonwealth and state legislation to provide an Australian scheme to regulate pesticides and veterinary medicines. The Australian Pesticides and Veterinary Medicines Authority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

Australia is a party to the Rotterdam and Stockholm Conventions.

References

- Links to all relevant documents and websites can be found on the IPP.
- The Australian Government Department of Agriculture, Fisheries and Forestry website provides information general information on the activities of the department, including quarantine and risk assessment www.daff.gov.au
- The Department's Annual Report is available at <http://www.daff.gov.au/about/annualreport/2007-2008>
- Specific information has been posted on the IPP at <https://www.ippc.int/servlet/CDSServlet?status=ND1ucHBvYXUuMj11biYzMz0qJjM3PWtvcw~~>
- The Australian Pesticides and Veterinary Medicines Authority (APVMA) is the national independent regulator. Information on the APVMA is at <http://www.apvma.gov.au/index.asp>
- **2008: Review of Australia's Quarantine and Biosecurity Arrangements**
Review of Australia's Quarantine and Biosecurity Arrangements – Report and Australian Government Preliminary Response is available at <http://www.daff.gov.au/about/publications/quarantine-biosecurity-report-and-preliminary-response>

Organization Chart



Color Code:

Phytosanitation	Outbreak Management	Pest Management	Pesticides	NPPO
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Important Contact Addresses

Last updated: December 2008

Ministry/Department of Agriculture

Australian Government Department of Agriculture, Fisheries and Forestry (DAFF)

Dr Conall O'Connell, Secretary

GPO Box 858

Canberra ACT 2601

Switchboard: +61 2 6272 3933

Website: <http://www.daff.gov.au>

Plant Protection

Office of the Chief Plant Protection Officer

Lois Ransom, Chief Plant Protection Officer

Product Integrity, Animal and Plant Health

Department of Agriculture, Fisheries and Forestry

GPO Box 858

Canberra ACT 2601

Tel: +61 2 6272 4888

Fax: +61 2 6272 5835

E-mail: ocppo@daff.gov.au

Website: www.daff.gov.au/planthealth

Plant Quarantine

Australian Quarantine and Inspection
Service (AQIS) (*inspections, permits*)

Mr Rob Delane, Executive Director

GPO Box 858

Canberra ACT 2601

Tel: +61 2 6272 5440

Plant Biosecurity

Mr Bill Magee, General Manager

Biosecurity Australia

GPO Box 858

Canberra, ACT 2601

Tel: (+61) 2 6272 3220

Fax: (+61) 2 6272 3307

E-mail: bill.magee@daff.gov.au

Pest Outbreaks and Invasive Species Management

Office of the Chief Plant Protection Officer

State/Territory Departments of Agriculture

Pesticide Registration

Australian Pesticides and Veterinary Medicines Authority

Dr Eva Bennet-Jenkins, Chief Executive Officer

Raj Bhula, Program Manager Pesticides

Amtech Park

18 Wormald Street

Symonston ACT 2609 Australia

Mailing Address:

P.O. Box E240

Kingston ACT 2604 Australia

Phone Switchboard +61 2 6210 4700

Fax: +61 2 6210 4874

E-mail: EnquiryLine@apvma.gov.au

Website: <http://www.apvma.gov.au/>

Official International Contact Points

Last updated: December 2008

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

Office of the Chief Plant Protection Officer

Ms Lois Ransom, Chief Plant Protection Officer

Australian Government Department of Agriculture, Fisheries and Forestry

GPO Box 858

Canberra ACT 2601

Tel: (+61) 2 6272 4888

Fax: (+61) 2 6272 5835

E-mail: IPPC.ContactPoint@daff.gov.au;

Website: www.daff.gov.au/plantippcDate received: 21 March 2006 *Official Correspondence*

Australian IPPC Secretariat

Ms Julia Rymer (Executive Officer)

Tel: +61 2 6272 4837

Fax: +61 2 6272 5835

E-mail: ocppo@daff.gov.au**WTO SPS Contact Point**

Australian Government Department of Agriculture, Fisheries and Forestry

GPO Box 858

Canberra ACT 2601

Tel: + (61) 2 6272 5242

Fax: + (61) 2 6272 3678

E-mail/Internet: sps.contact@daff.gov.auWebsite: <http://www.daffa.gov.au/market-access-trade/sps>**Rotterdam Convention (PIC) DNA Pesticides (P)**

Manager, Technical and International Policy

Product Integrity, Animal and Plant Health

Australian Government Department of Agriculture, Fisheries and Forestry

GPO Box 858

Canberra ACT 2601

Tel: +61 2 6272 3560

Fax: +61 2 6272 5697

E-mail: controlledchemicals@daff.gov.au**Stockholm Convention (POP) National Focal Point (P)**

Assistant Secretary, Environment Protection Branch

Australian Government Department of the Environment, Water, Heritage and the Arts

GPO Box 787

Canberra ACT 2601

Tel: (+61 2) 6274 1622

Fax: (+61 2) 6274 1164

E-mail: chemicals@environment.gov.au

Basel Convention Competent Authority (CA) and Focal Point

Hazardous Waste Section

Director

Australian Government Department of the Environment, Water, Heritage and the Arts

GPO Box 787

Canberra ACT 2601

Tel: (61 2) 6274 1411

Fax: (61 2) 6274 1164

E-mail: hwa@environment.gov.au

Selected Country Statistics

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

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

II. PLANT QUARANTINE

Last Updated: December 2008

List of Key Legislation/Regulations/Rules

(year, title and possibly short description)

1908 Quarantine Act

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

Web source for further information:

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

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

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

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

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

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

Key Situation Indicators depends on year and climatic conditions

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

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

Key Operation Indicators

Institutional Functions	Years: 2007-2008
Number of import permits issued	1.3 million/xxx
Number of import inspections carried out	[number]
Number of emergency phytosanitary treatments taken on imports	
Number notifications of non-compliance	
Number of conventional phytosanitary certificates issued <i>Do you have an electronic certification system?:</i> <i>Yes _____ No _____</i>	
Number of electronic phytosanitary certificates issued	

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

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

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

Progress and Constraints

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

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

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

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

Web source for further information:

http://www.planthealthaustralia.com.au/top_priorities/priorities.asp?ID=1

http://www.planthealthaustralia.com.au/top_priorities/priorities.asp?ID=2

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

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

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

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

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

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

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

Progress and Constraints

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

IV. PEST MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Pest Management

-

Web source for further information:--

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

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

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

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? <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>		
Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i>		
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	[number, %]
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]
Number of IPM-FFS conducted during the year	
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	
Crops in which IPM or other ecology friendly programmes are successfully implemented:	
Crops grown organic/pesticide-free:	

Progress and Constraints

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

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules*Agricultural and Veterinary Chemicals Code Act 1994 [No. 47 of 1994]**Agricultural and Veterinary Chemicals Act 1994 [No. 36 of 1994]**Agricultural and Veterinary Chemical Products (Collection of Levy) Act 1994 [No. 41 of 1994]**Agricultural and Veterinary Chemicals (Administration) Act 1992 [No. 262 of 1992]*See Comlaw website <http://www.comlaw.gov.au/>Web source: http://www.apvma.gov.au/about_us/legislat.shtmlList of registered products: http://www.apvma.gov.au/actives/standards_actives.shtml

Policies (regarding pesticide management)	Yes	No	Don't know
Do you have national pesticide reduction targets? <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 phrasing-out)	x		
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?			
Have you adopted Good Laboratory Practices (GLP)?	x		
<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?	x		
Do you require data on product equivalence for generic registration?	x		
Do you conduct country-specific risk assessments for...			
occupational risks?	x		
consumer risks?	x		
environmental risks?	x		
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labeling?	not yet		
Do you accept evaluation results from other countries?	Yes with qualifications		
Do you accept field studies conducted in other countries?	x		
Do you require environmental fate studies?	x		
<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.apvma.gov.au			

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

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

Key Situation Indicators – values \$Australian

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

^a for most recent year for which data are available

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

Post Registration Monitoring

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

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

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

Key Operation Indicators

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

* active ingredient

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

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

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

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

Progress and Constraints

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

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

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

2.2 BANGLADESH

I. GENERAL INFORMATION

Last updated: December 2008

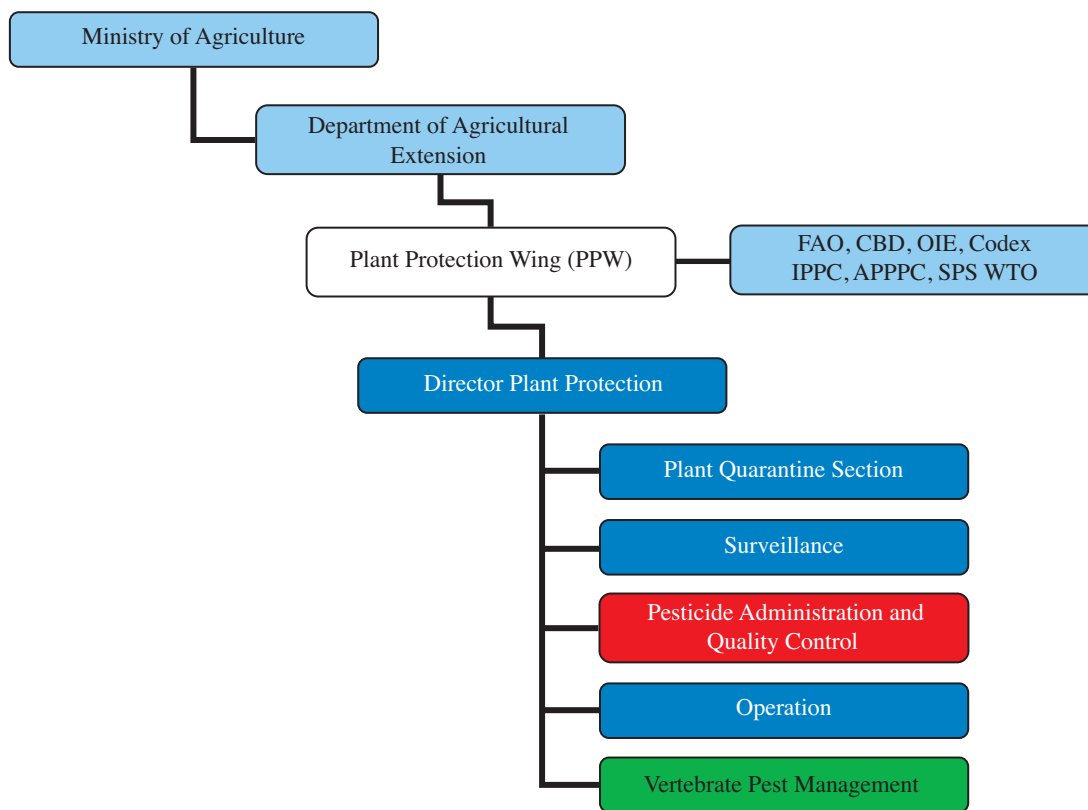
Overall Executive Summary

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

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

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

Plant Protection Organization Chart



Color Code:



Important Contact Addresses

Responsible Ministry/Ministries

–

Responsible Department

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

Director

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

Address of nominations

–

Operational Offices:

Plant Protection

–

Plant Quarantine

–

Surveillance, Pest Outbreaks and Invasive Species Management

Director

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

Pesticide Registration

Director

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

Official International Contact Points

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

Director

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

WTO SPS Contact Point

Senior Assistant Chief/Assistant Chief

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

Rotterdam Convention (PIC) DNA Pesticides (P)

—

Stockholm Convention (POP) National Focal Point (P)

Director General

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

Basel Convention Competent Authority (CA) and Focal Point

Ministry of Environment and Forest
Secretary to the Government of Bangladesh

Selected Country Statistics

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

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

II. PLANT QUARANTINE

Last updated: December 2008

Executive Summary

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

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

List of key Legislation/Regulations/Rules

1914 Destructive Insects & Pests Act

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

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

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

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

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

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

Key Situation Indicators

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

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

Key Operation Indicators

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

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

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

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

Progress and Constraints

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

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

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

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

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

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

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

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

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

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

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

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

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

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

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

Progress and Constraints

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

IV. PEST MANAGEMENT

Last updated: December 2008

Executive Summary

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

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

List of Key Legislation/Regulations/Rules for Pest Management

1971 The Pesticide Ordinance

1995 The Pesticide Rules

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

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

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

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

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? <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>		
Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i>		
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	[number, %]
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	222 550
Number of IPM-FFS conducted during the year	6 243
Number of farmers trained in GAP standards during the year	
Area under IPM/low pesticide management [ha]	
Area under organic/pesticide-free management [ha]	15
Crops in which IPM or other ecology friendly programmes are successfully implemented: IPM packages developed	
Crops grown organic/pesticide-free: –	

Progress and Constraints

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

V. PESTICIDE MANAGEMENT

Last updated: December 2008

Executive Summary

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

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

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

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

List of Key Legislation/Regulations/Rules:

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

1985 The Pesticide Rules

Ministry of Environment and Forest

1995 Bangladesh Environmental Conservation Act

1997 Bangladesh Environmental Conservation Rules

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

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction target? If yes, what is the target: –	x	
Have you ratified the Rotterdam (PIC) Convention?		
Have you ratified the Stockholm (POP) Convention?	x	
Have you ratified the Basel Convention? (hazardous wastes)	x	
Have you ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the code of conduct to FAO according to Art 12 of the Code?		
Have you adopted Good Laboratory Practices (GLP)?	x	
<i>Pesticide Registration</i>		
Do you require pesticides to conform to relevant FAO or WHO specification?	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?		
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: Other policies: Pesticide Ordinance 1971 is being amended, Integrated Pest Management and Integrated Crop Management Policies The Pesticides (Amended) Rules-2007 is under process.	x	
Web source for further information: http://www.dae.gov.bd		

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

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

* Only include the laboratories belonging to MOA

Key Situation Indicators

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

Registration Monitoring

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

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

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

Key Operation Indicators

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

* active ingredient

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

Pesticide Banned in Recent Years	
Year	Name of active ingredient

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

Progress and Constraints

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

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

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

2.3 CAMBODIA

I. GENERAL INFORMATION

Overall Executive Summary

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

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

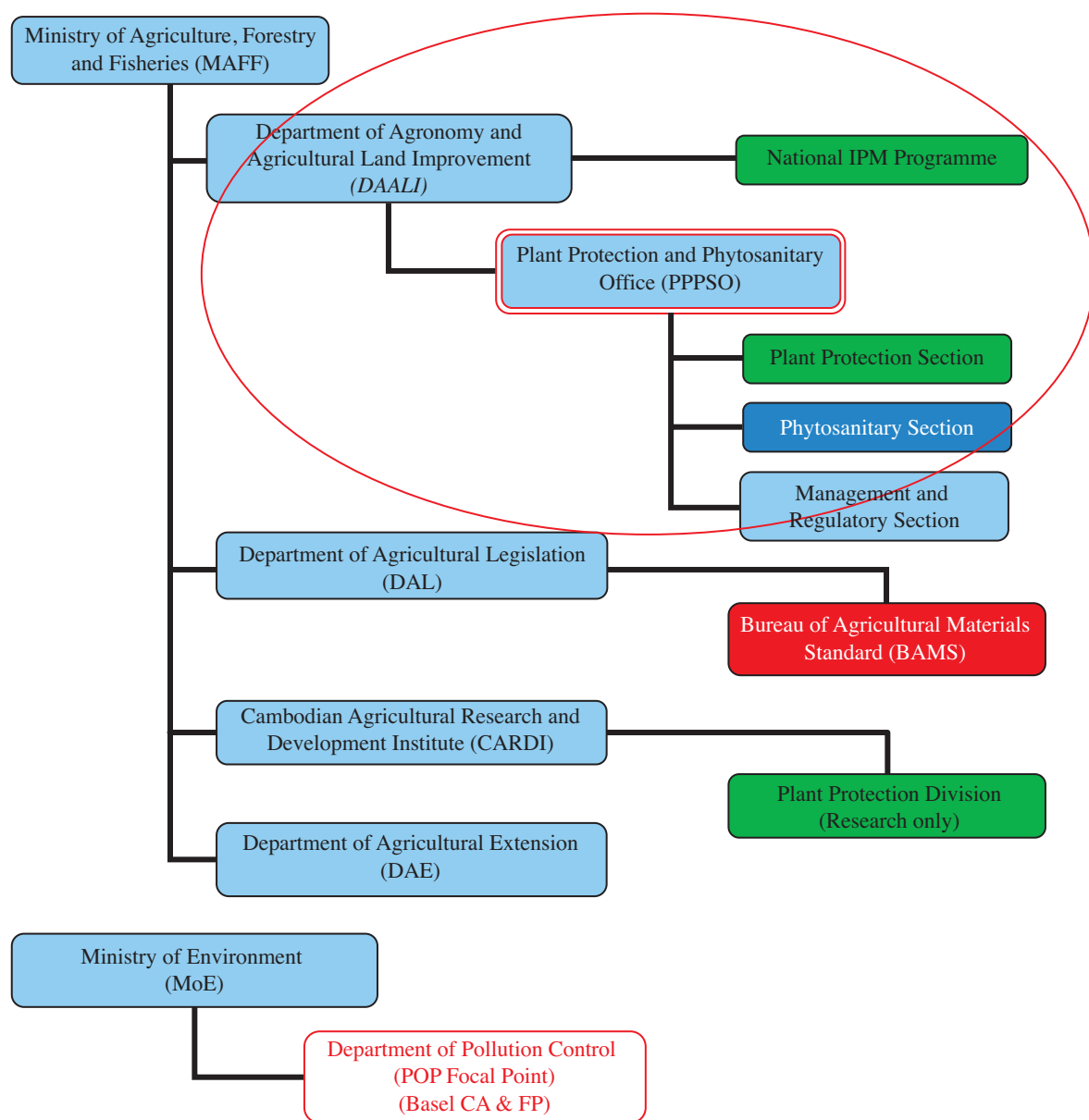
- To prepare the policy, plan, project, development programmes, the measure to *reduce* the crop production loss caused by pest, to *manage* chemical substances used to prevent, control, repellent, grow regulate (and all other pesticide actives) pest and all agent or biological substances used for the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

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

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

Plant Protection Organization Chart

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



Color Code:

Phytosanitation	Outbreak Management	Pest Management	Pesticides	NPPO
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Important Contact Addresses

Responsible Ministry/Ministries

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

Responsible Department

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

Dr Hean Vanhan, Deputy Director General in charge on plant protection, SPS and International Cooperation

Tel: (855) 12818216 / (855) 16818216
 Fax: (855) 23216655
 E-mail: heanvanhan@gmail.com

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

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

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

Address for nominations

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

Operational Offices:

Plant Protection

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

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

Plant Quarantine

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

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

Surveillance, Pest Outbreaks and Invasive Species Management

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

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

Pesticide Registration (Pesticide Regulatory Agency)

Department of Agricultural Legislation (DAL)

Mr Uk Siphon, Director

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

Bureau of Agricultural Materials Standards (BAMS) of DAL

Mr Chea Chan Veasna, Chief Office

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

Pesticide Management (Technical Adviser to MAFF for Pesticide evaluation)

1. Plant Protection, Sanitary and Phytosanitary Department (PP-SPSD)
 - *Dr Preap Visarto, Acting Director of PP-SPSD/GDA*
Tel: (855) 11622916
 - *Dy Sam An, Deputy Director of PP-SPSD/GDA*
Tel: (855) 12336934
 - *Mr Heng Chhunhy, Deputy Director of PP-SPSD/GDA*
Tel: (855) 12954963
#56B, Road 365, Teuk Laok III, Tuolkok, Phnom Penh, Cambodia
2. National Agricultural Lab of GDA
 - *Mrs Um Vannary, Director of NAL/GDA*
Tel: (855) 12960351
 - *Mr Loan Socheata, Senior of Pesticide Lab of NAL/GDA*
Tel: (855) 12871856
#56B, Road 365, Teuk Laok III, Tuolkok, Phnom Penh, Cambodia

Other Useful Contact Addresses

Department of Agricultural Extension

Department of Agricultural Extension (DAE)

Mr Mak Soeun, Director

Ministry of Agriculture, Forestry and Fisheries (MAFF)

No. 200, Preah Norodom Blvd., Sangkat Tonle Basak, Khan Chamkarmon,
Phnom Penh, Cambodia

Tel: (855) 12826617

Official International Contact Points

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

General Directorate of Agriculture (GDA/MAFF)

Dr Hean Vanhan, Deputy Director General in charge on plant protection, SPS and International Cooperation (Official NPPO)

Tel: (855) 12818216 / (855) 16818216

Fax: (855) 23216655

E-mail: heanvanhan@gmail.com

Dr Preap Visarto, Acting Director of PP-SPSD (Optional NPPO)

Tel: (855) 11622916

Language(s): English

Contact point received: 16/12/2003 Source: NPPO correspondence

WTO SPS Enquiry Point

Cambodia Import Export Inspection and Fraud Repression Department (CAMCONTROL),
Ministry of Commerce.

#50Eo, Street 144

Phnom Penh, Cambodia

Tel/Fax: (855) 23426166

E-mail: camcontrol@camnet.com.kh

ASEAN SPS Enquiry Point for MAFF

General Directorate of Agriculture (GDA/MAFF)

Dr Hean Vanhan, Deputy Director General in charge on plant protection, SPS and International Cooperation (Official NPPO)

Tel: (855) 12818216 / (855) 16818216

Fax: (855) 23216655

E-mail: heanvanhan@gmail.com

Rotterdam Convention (PIC) DNA Pesticides (P)

Bureau of Agricultural Materials Standards (BAMS) of DAL

Mr Chea Chan Veasna, Chief Office

Tel: (855) 12841867

No. 200, Preah Norodom Blvd., Sangkat Tonle Basak, Khan Chamkarmon,
Phnom Penh, Cambodia

Stockholm Convention (POP) National Focal Point (P)***Political Focal Point***

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

Technical Focal Points

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

Basel Convention Competent Authority (CA) and Focal Point

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

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

Selected Country Statistics

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

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

II. PLANT QUARANTINE

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

List of Key Legislation/Regulations/Rules

- 2003 Prakas (Ministerial Regulation) No. 522 on the creation and role of the office and organization under DAALI (Dated 30 September 2003): *DAALI responsible in Plant Quarantine Activity.*
- 2003 Sub-Decree (Government Regulation) No. 15 on the Phytosanitary Inspection (Dated 13 March 2003): *which appointed PPPSO of DAALI as Cambodian Plant Quarantine Authority (PQA).*
- 2001 Sub-Decree No. 69 on the management of border check points (09/07/01): *Plant and animal quarantine staff are not included in the team of border check point inspectors.*
- 2004 Sub-Decree No. 6 on the management of international airport of the Kingdom of Cambodia (30/03/04): *Plant and animal quarantine staff are included in the team of border check point inspectors.*
- (prep.) Sub-Decree on the management of the entry exit border check point at the sea and river port of the Kingdom of Cambodia: *Plant and animal quarantine staff may/will be included in the team of border check point inspectors.*
- (prep.) Sub-Decree on the management of the entry-exit check point at the land border of the Kingdom of Cambodia: *Plant and animal quarantine staff may/will be included in the team of border check point inspectors.*

Web source for further information: –

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

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

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

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

Key Situation Indicators

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

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

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

Key Operation Indicators

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

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

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

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

Progress and Constraints

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

- National Phytosanitary Database have been set up (NZAID)
- Capacity building for staffs on pest surveillance, pest list (entomology and plant pathology) (AusAID: SPS capacity building for ASEAN; NZAID II)
- 2004 Sub-Decree No. 6 on the management of international airport of the Kingdom of Cambodia (30/03/04): *Plant and animal quarantine are included in the member of border-check point inspectors.*

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

- No Plant Quarantine Check point at all river-port, seaport and entry-exit point of the land border.
- Awareness on the advantages of Phytosanitary Inspection is still low amount related inspection agencies, exporters, shipping agencies, and policy-makers.
- Plant Quarantine infrastructure is still remain a big gap below the ISPM, that is the main constrain in compliance with the importing country requirement.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade		x						
ISPM 02 Guidelines for pest risk analysis					x			
ISPM 03 Code of conduct for the import and release of exotic biological control agents					x			
ISPM 04 Requirements for the establishment of pest free areas				x				
ISPM 05 Glossary of phytosanitary terms		x						
ISPM 06 Guidelines for surveillance					x			
ISPM 07 Export certification system						x		
ISPM 08 Determination of pest status in an area					x			
ISPM 09 Guidelines for pest eradication programmes					x			
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites				x				
ISPM 11 Pest risk analysis for quarantine pests					x			
ISPM 12 Guidelines for phytosanitary certificates						x		
ISPM 13 Guidelines for the notification of noncompliance and emergency action				x				
ISPM 14 The use of integrated measures in a systems approach for pest risk management					x			
ISPM 15 Guidelines for regulating wood packaging material in international trade				x				
ISPM 16 Regulated non-quarantine pests: concept and application				x				
ISPM 17 Pest reporting					x			
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure				x				
ISPM 19 Guidelines on lists of regulated pests					x			
ISPM 20 Guidelines for a phytosanitary import regulatory system				x				
ISPM 21 Pest risk analysis for regulated non-quarantine pests				x				
ISPM 22 Requirements for the establishment of areas of low pest prevalence				x				
ISPM 23 Guidelines for inspection					x			
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures				x				
ISPM 25 Consignments in transit				x				
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)				x				
ISPM 27 Diagnostic protocols for regulated pests				x				
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								
Comments/Constraints <ul style="list-style-type: none"> • No enough capacity to implement; • No infrastructure • No supporting 								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

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

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

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

Web source for further information: –

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

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

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

Key Situation and Operation Indicators (Outbreaks and invasions in the past 2 years)

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

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

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

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
<ul style="list-style-type: none"> Four staffs of PPPSO have been trained by SPS of AusAID project on basic of pest surveillance (entomology and plant pathology); Have ability to raise the <i>Ascecodes hispinarum</i> as the parasite to coconut beetle (<i>Brontispa longissima</i>)
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
<ul style="list-style-type: none"> No Plant Quarantine Check point at all entry-exit point of the border, It is a big risk to new invade species; Plant Quarantine infrastructure is still remain a big gap below the ISPM , that is the main constrain in compliance with the importing country requirement.

IV. PEST MANAGEMENT

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

List of Key Legislation/Regulations/Rules for Pest Management

–

Web source for further information: –

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

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

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

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? <i>If yes, give Name and Address of IPM Programme:</i> National IPM Programme , #10, Monireth St., Tuol Svay Prey II, Phnom Penh, Cambodia	x	
Does the country have specific IPM extension programmes? <i>If yes, in which crops?: Rice, Vegetables</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)	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			
Name(s) of pest(s)			
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

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

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

Progress and Constraints

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

V. PESTICIDE MANAGEMENT

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

List of Key Legislation/Regulations/Rules

- 1998 Sub-Decree on Standards and Management of Agricultural Materials. The Prime Ministers signed this Sub-Decree on 28 October 1998 (Pesticide management in Cambodia was clearly mentioned in Chapter III “Pesticides” of the above Sub-Decree (Article 11-24).
- 1998 Sub-Decree (No. 69) on Standard and the Management of Agricultural Materials issued 28 October 1998 contains 14 articles mentioning the pesticide management procedures.
- 1999 Ministerial declaration (No. 038) on the creation of the Bureau of Agricultural Material Standard issued 21 January 1999.
- 2002 Ministerial guideline (No. 245) on the implementation of Sub-Decree No. 69 on the Standard and the Management of Agricultural Materials issued 21 October 2002.
- 2003 Ministerial declaration (No. 064) on Formats of Application Forms relating to Agricultural Materials issued 27 February 2003.
- 2003 Ministerial declaration (No. 522) on the Mandate of the Department of Agronomy and Agricultural Land Improvement issued 30 September 2003.
- 2003 Ministerial declaration (No. 598) on the Lists of Pesticide in Cambodia issued 15 December 2003.
- 2004 Ministerial declaration (No. 204) on Amendment of Declaration No. 064 issued 12 July 2004.
- 2004 Mutual declaration (No. 02/04) between MAFF and MoJ on Formats and Police of Justice for DAL/MAFF issued 26 October 2004

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? <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)		
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?	x	
Do you allow the “me-too” registration and sale of generic pesticides?		
Do you require data on product equivalence for generic registration?		
Do you conduct country-specific risk assessments for...		
occupational risks?		x
consumer risks?		x
environmental risks?		x

Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		X
Do you accept evaluation results from other countries?	X	
Do you accept field studies conducted in other countries?		X
Do you require environmental fate studies?		X
<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	MAFF/DAL + DGA
Registration	MAFF/DAL/BAMS
Licensing of shops	MAFF/DAL/BAMS
Licensing of field applicators	
Enforcement/inspections	MAFF/DAL/BAMS
Testing of pesticide efficacy	MAFF/DGA/PP-SPSD
Development of pesticide use recommendations	MAFF/DGA/PP-SPSD
Safe use training/extension	MAFF/DGA/PP-SPSD and MAFF/DAE
Food residue monitoring	MAFF/DGA/PP-SPSD
Environmental monitoring	MAFF/DGA/PP-SPSD
Health monitoring	
<i>Other Stakeholders:</i>	
Pesticide Industry Association	
Civil Society Organizations (NGO, etc.)	

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

Key Situation Indicators

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

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

Post Registration Monitoring

Testing, Quality Control and Effects in the Field	Yes	No
Do you have significant problems with low-quality pesticides in the market?	x	
Do you have significant problems with pesticide resistance? <i>Note: Unknown</i>		
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? <i>Note: Unknown</i>		
Do you have data on pesticides effects on wildlife and ecosystems? <i>Note: Unknown</i>		
Source for more information: –		

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

Key Operation Indicators

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

* active ingredient

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

Pesticides Banned in Recent Years	
Year	Name of active ingredient

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

Progress and Constraints

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

VI. ADDITIONAL ISSUES OF INTEREST

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

2.4 CHINA, PEOPLE'S REPUBLIC OF

I. GENERAL INFORMATION

Overall Executive Summary

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

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

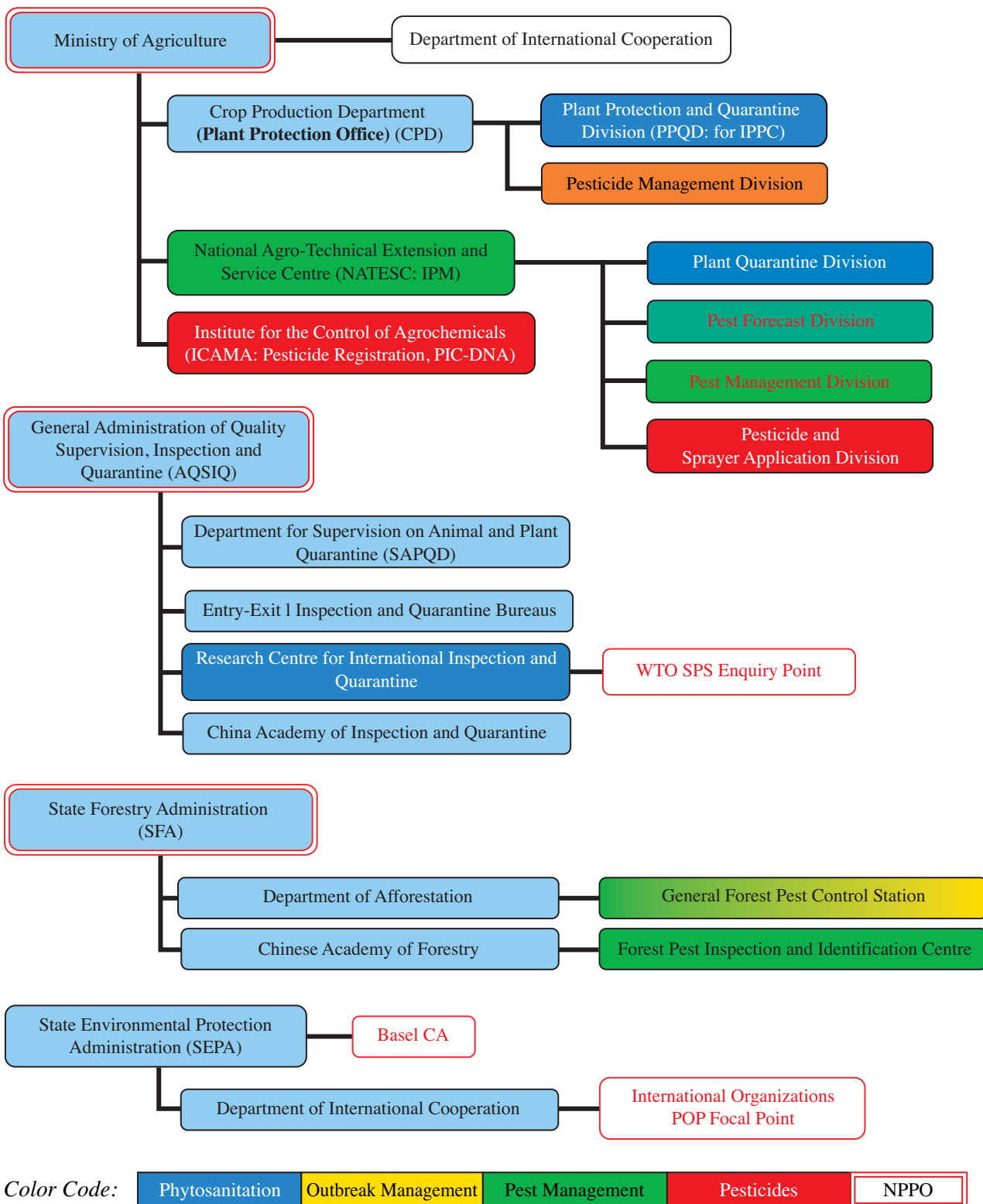
China's Crop Pests Management Information System was also established. Pest free areas (PFA) for codling moth in 9 provinces, such as Gansu, Shaanxi and Shandong and PFA for fruit fly in Chongqing were set up. The pest information about locust, migratory rice pests, rice borer, rice blast, wheat stripe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

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

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

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

Plant Protection Organization Chart



Important Contact Addresses

Responsible Ministry

Ministry of Agriculture (MOA)

Mr Dun Niu, Deputy Minister

No. 11 Nongzhanguan Nanli, Beijing, P.R. China 100026

Tel: 86-10-6419 2328

Fax: 86-10-6500 3621

Website: www.agri.gov.cn

Responsible Department

Crop Production Department, MOA

Mr Pugu Zhou, Deputy General Director

No. 11 Nongzhanguan Nanli, Beijing, P.R. China 100026

Tel: 86-10-6419 2864

Fax: 86-10-6419 3376

E-mail: ppq@agri.gov.cn

Website: www.agri.gov.cn

Address for nominations

International Cooperation Department

Ms Xiangjun Yao, Deputy General Director

Ministry of Agriculture

No. 11 Nongzhanguan Nanli, Beijing, P.R. China 100026

Tel: 86-10-6419 2400

Fax: 86-10-6500 4635

E-mail: yaoxj@agri.gov.cn

Website: www.agri.gov.cn

Operational Offices:

Plant Protection and Plant Quarantine

Plant Protection & Quarantine Division

Ms Xiaoling Wu, Division Director (IPPC Contact Point)

Crop Production Department, MOA

No. 11 Nongzhanguan Nanli, Beijing, P.R. China 100026

Tel: 86-10-6419 3350

Fax: 86-10-6419 3376

E-mail: ppq@agri.gov.cn

Websites: www.agri.gov.cn

www.ppq.gov.cn

Forestry Plant Quarantine

Pests Management Division

Ms Xiaohua Wang, Division Director

Forestation Department, State Forestry Administration (SFA)

Tel: 86-10-8423 8512

Fax: 86-10-8423 8067

E-mail: wangxiaohua@forestry.gov.cn

Website: www.forestry.gov.cn

Import/Export Plant Quarantine

Department for Supervision on Animal and Plant Quarantine

Mr Lu Houlin, Deputy Director-General

General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)

No. 9 Madiandonglu, Haidian District, Beijing, P.R. China 100088

Tel: 86-10-8226 1912

Fax: 86-10-8226 0155

E-mail: luhoulin@aqsiq.gov.cn

Website: www.aqsiq.gov.cn

Plant Quarantine Division

Mr Yiyu Wang, Division Director

Department for Supervision on Animal and Plant Quarantine

General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)

No. 9 Madiandonglu, Haidian District, Beijing, P.R. China 100088

Tel: 86-10-8226 1909

Fax: 86-20-8226 0157

E-mail: wangyiyu@aqsiq.gov.cn

Website: www.aqsiq.gov.cn

Surveillance, Pest Outbreaks and Invasive Species Management

Mr Jingyuan Xia, General Director

National Agro-technical Extension and Service Center (NATESC)

Ministry of Agriculture

No. 20 Maizidian Street, Chaoyang District, Beijing, P.R. China 100026

Tel: 86-10-5919 4505

Fax: 86-10-5919 4517

E-mail: xiajyuan@agri.gov.cn

Website: www.natesc.gov.cn

Mr Tianrun Zhong, Deputy General Director

National Agro-technical Extension and Service Center (NATESC)

Ministry of Agriculture

No. 20 Maizidian Street, Chaoyang District, Beijing, P.R. China 100026

Tel: 86-10-5919 4548

Fax: 86-10-5919 4517

E-mail: zhongtianrun@agri.gov.cn

Website: www.natesc.gov.cn

Mr Enlin Zhu, Division Director

Pest Control Division

National Agro-technical Extension and Service Center (NATESC)

Ministry of Agriculture

No. 20 Maizidian Street, Chaoyang District, Beijing, P.R. China 100026

Tel: 86-10-5919 4543

Fax: 86-10-5919 4542

E-mail: zhzhuenlin@agri.gov.cn

Website: www.natesc.gov.cn

Mr Fuxiang Wang, Division Director

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

Pesticide Registration

Institute for the Control of Agrochemicals (ICAMA)

Mr Yanqiu Zhang, Director

Ministry of Agriculture
No. 22 Maizidian Street, Chaoyang District, Beijing, P.R. China 100026
Tel: 86-10-5919 4055
Fax: 86-10-6502 5929
E-mail: wangyh@agri.gov.cn
Website: www.chinapesticide.gov.cn

Official International Contact Points

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

Plant Protection and Quarantine Division

Ms Xiaoling Wu, Division Director

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

WTO SPS Contact Point

Research Centre for International Inspection and Quarantine Standards and Technical Regulations of the People's Republic of China

WTO SPS Enquiry Point
General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ)
No. 9 Madiandonglu, Haidian District, Beijing, P.R. China 100088
Tel: 86-10-8226 2432
Fax: 86-10-8226 2449
E-mail: sps@aqsiq.gov.cn

Rotterdam Convention (PIC) DNA Pesticides (P)

Institute for the Control of Agrochemicals (ICAMA)

Ms Yong-zhen Yang, Deputy Director-General (until December 2006)

Ministry of Agriculture

No 22 Maizidian Street, Chaoyang, Beijing, P.R. China 100026

Tel: 86-10-6419 4071

Fax: 86-10-6502 5929

E-mail: yangyongzhen@agri.gov.cn

Stockholm Convention (POP) National Focal Point (P)

Division of International Organizations

Mr Yue Ruisheng, Deputy Director General

Department of International Cooperation

State Environment Protection Administration

No.115 Xizhimennei Nanxiaojie

Beijing, P.R. China 100035

Tel.: 86-10-6655 6492

Fax: 86-10-6655 6494

E-mail: yuers@zhb.gov.cn

Basel Convention Competent Authority (CA)

State Environmental Protection Administration

115 Xizhimennei Nanxiaojie

Beijing, P.R. China 100035

Tel: 86-10-6655 6256 / 6257

Fax: 86-10-6655 6252

E-mails: zhong.bin@sepa.gov.cn or wangqian@sepa.gov.cn

Selected Country Statistics

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

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

II. PLANT QUARANTINE

Executive Summary

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

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

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

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

List of Key Legislation/Regulations/Rules

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

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

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

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

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

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

Key Situation Indicators

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

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

Key Operation Indicators

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

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

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

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

Progress and Constraints

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

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

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Executive Summary

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

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

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

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

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Web source for further information: –

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

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

Reporting to bilateral or international organizations	MOA/DCP/PPQD, AQSIQ/SAPQD/PQD
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Infrastructure	Years: 2007-2008
Number of designated staff for surveillance of field pests of national importance	15 351
Number of designated staff for surveillance of migratory and periodically occurring pests	15 351
Number of designated staff for surveillance of invasive species	8 692
Number of designated staff for control of field pests of national importance	29 512
Number of designated staff for control of migratory and periodically occurring pests	29 512
Number of designated staff for eradication of invasive species	8 692

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

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

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

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

Progress and Constraints

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

IV. PEST MANAGEMENT

Executive Summary

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

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

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

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

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

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

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

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

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

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

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Web source for further information: –

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

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

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

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? <i>If yes, give Name and Address of IPM Programme: NATESC, MOA</i>	x	
Does the country have specific IPM extension programmes? <i>If yes, in which crops?: Vegetables and Fruits</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?: Apple</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	295.9 M ha
Size of biopesticides market	38.69 M ha
Size of biological control agents market	1.25 M ha

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

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

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

Progress and Constraints

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

V. PESTICIDE MANAGEMENT

Executive Summary

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

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

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

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

List of Key Legislation/Regulations/Rules

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

Web source: www.chinapesticide.gov.cn

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? <i>If yes, what is the target:</i> <i>Note: Reduce the production of high toxic pesticides and persistence organic pollution pesticides</i>	Note	
Have you ratified the Rotterdam (PIC) Convention?	x	
Have you ratified the Stockholm (POP) Convention?	x	
Have your ratified the Basel Convention? (hazardous wastes)	x	
Have your ratified the Montreal Protocol? (MeBr phasing-out)	x	
Have you reported the observance of the Code of Conduct to FAO according to Art. 12 of the Code?		x
Have you adopted Good Laboratory Practices (GLP)?	x	
<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

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

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

*only include the laboratories belonging to MOA

Key Situation Indicators

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

Post Registration Monitoring

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

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

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

Key Operation Indicators

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

* active ingredient

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

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

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

Progress and Constraints

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

VI. ADDITIONAL ISSUES OF INTEREST

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

2.5 REPUBLIC OF THE FIJI ISLANDS

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

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

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

The Charter recommendations highlight the following areas for reform:

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

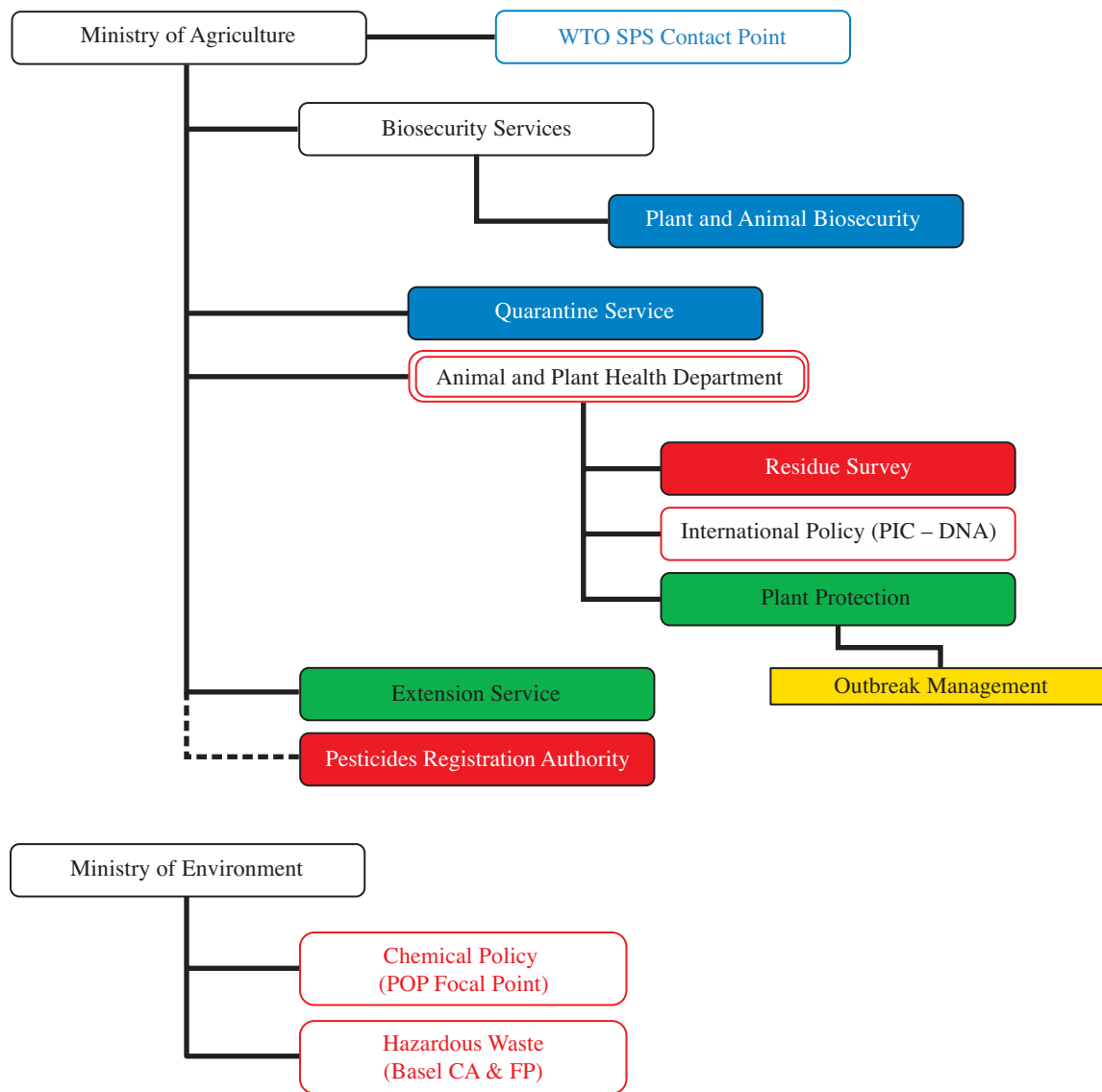
The reform exercise has been progressing slowly. However, the review of the legislation has been completed, awareness programmes for the public are ongoing, communication has improved in the last two years and a standard operational procedure manual has been finalized.

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

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

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

Plant Protection Organization Chart



Color Code: Phytosanitation Outbreak Management Pest Management Pesticides NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Ministry of Agriculture and Primary Industries

Hiagi Munivai FORAETE

Director Biosecurity Services

P.O. Box 18360

Suva, FIJI ISLANDS

Tel: (679) 331 2512

Fax: (679) 330 1657

E-mail: hforaete@govnet.gov.fj

Website: www.quarantine.gov.fj

Responsible Department

Biosecurity Services

Hiagi Munivai FORAETE

Director Biosecurity Services

Department of Biosecurity Services

P.O. Box 18360

Suva, FIJI ISLANDS

Tel: (679) 331 2512

Fax: (679) 330 1657

E-mail: hforaete@govnet.gov.fj

Website: www.quarantine.gov.fj

National Plant Protection Organization (if different from Focal Point)

Biosecurity Services

Hiagi Munivai FORAETE

Director Biosecurity

Biosecurity Services Division

Ministry of Agriculture and Primary Industries

P.O. Box 18360

Suva, FIJI ISLANDS

Tel: (679) 331 2512

Fax: (679) 330 1657

E-mail: hforaete@govnet.gov.fj

Website: www.quarantine.go

Operational Offices:

Plant Protection

Plant Protection Section

Mr Moti Lal Autar

Director of Research

Division of Research

Ministry of Agriculture and Primary Industries

Koronivia Research Station

FIJI ISLANDS

Tel: (679) 347 7044
Fax: (679) 340 0262
E-mail: moti.autar@govnet.gov.fj
Website: www.agriculture.org.fj

Plant Quarantine

Biosecurity Services

Mr Ilaitia Boa

Principal Biosecurity Officer
Biosecurity Services Division
Ministry of Agriculture and Primary Industries
P.O. Box 18360
Suva, FIJI ISLANDS
Tel: (679) 331 2512
Fax: (679) 330 1657
E-mail: ilaitia.boa@govnet.gov.fj
Website: www.quarantine.gov.fj

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

Biosecurity Services

Hiagi Munivai FORAETE,

Director Biosecurity

Biosecurity Services Division
Ministry of Agriculture and Primary Industries
P.O. Box 18360
Suva, FIJI ISLANDS
Tel: (679) 331 2512
Fax: (679) 330 1657
E-mail: hforaete@govnet.gov.fj
Website: www.quarantine.gov.fj

Pesticide Registration

Plant Protection Section

Mr Moti Lal Autar

Director Research
Research Division
Ministry of Agriculture and Primary Industries
Koronivia Research Station
FIJI ISLANDS
Tel: (679) 347 7044
Fax: (679) 340 0262
E-mail: moti.autar@govnet.gov.fj
Website: www.agriculture.org.fj

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

Biosecurity Services

Mr Hiagi Munivai FORAETE

Director Biosecurity

Ministry of Agriculture and Primary Industries

P.O. Box 18360

Suva, FIJI ISLANDS

Tel: (679) 331 2512

Fax: (679) 330 1657

E-mail: hforaete@govnet.gov.fjWebsite: www.quarantine.gov.fj**WTO SPS Contact Point**

Department of Agriculture

Dr Richard Beyer

Permanent Secretary

Ministry of Agriculture and Primary Industries

Private Mail Bag,

Raiwaqa, FIJI ISLANDS

Tel: (679) 331 2512

Fax: (679) 330 1657

E-mail: rbeyer@connect.fjWebsite: www.agriculture.org.fj**Rotterdam Convention (PIC) DNA Pesticides (P)**

Plant Protection Section

Mr Moti Lal Autar

Director Research

Research Division

Ministry of Agriculture and Primary Industries

Koronivia Research Station

FIJI ISLANDS

Tel: (679) 347 7044

Fax: (679) 340 0262

E-mail: moti.autar@govnet.gov.fjWebsite: www.agriculture.org.fj**Stockholm Convention (POP) National Focal Point (P)**

—

Basel Convention Competent Authority (CA) and Focal Point

—

Montreal Protocol Focal Point

—

Selected Country Statistics

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

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

II. PLANT QUARANTINE

Last updated: December 2008

List of Key Legislation/Regulations/Rules

(year, title and possibly short description)

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

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

The main features of the Biosecurity Promulgation:

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

The Promulgation is divided into 13 Parts:

Part 1 deals with preliminary matters.

Part 2 sets out the administrative framework for implementing the Promulgation.

Part 3 sets out the principles of border biosecurity control.

Part 4 sets out the rules for in-coming and out-going vessels and aircrafts.

Part 5 establishes a regime for the control of incoming goods once they have been landed from a vessel or an aircraft.

Part 6 sets out the control over articles intended for export.

Part 7 sets out the rules relating to plants, animals or other articles in biosecurity quarantine for observation or treatment.

Part 8 defines the general powers of biosecurity officers under the Promulgation.

Part 9 sets out the powers of the Authority and biosecurity officers to control pests and diseases within the Fiji Islands.

Part 10 provides powers to deal with biosecurity emergencies in the Fiji Islands which cannot be dealt with under Part 9.

Part 11 sets out some ancillary administrative provisions needed to allow the Promulgation to function effectively.

Part 12 is concerned with enforcement of the Promulgation and specifies offences and penalties.

Part 13 contains a number of miscellaneous provisions for implementing the Promulgation.

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

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

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

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

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

Key Situation Indicators

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

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

Key Operation Indicators

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

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

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

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

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
<ol style="list-style-type: none"> 1. Review of the Legislation; 2. Reform of the Quarantine and Inspection Services; 3. Capacity Building.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
<ol style="list-style-type: none"> 1. Delay in establishing the Biosecurity Authority of the Fiji Islands; 2. Insufficient funding to effectively provide biosecurity services; 3. Government policy to “freeze” creating new posts resulting in qualified technical experts returning to old posts.

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

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

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

(year, title and possibly short description)

Fiji Biosecurity Promulgation 2008

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

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

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

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

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

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

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

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

Progress and Constraints

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

IV. PEST MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Pest Management*(year, title and possibly short description)***Fiji Biosecurity Promulgation 2008**

Web source for further information: –

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

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

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

Key Situation and Operation Indicators

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

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

Progress and Constraints

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

V. PESTICIDE MANAGEMENT

Last updated: December 2008

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

Web source for further information: –

Policies (regarding pesticide management)	Yes*	No
Do you have national pesticide reduction targets? <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 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)?		
<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 labelling?		
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: –		

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

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

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

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

Key Situation Indicators

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

^a for most recent year for which data are available

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

Post Registration Monitoring

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

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

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

Key Operation Indicators

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

* active ingredient

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

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

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

Progress and Constraints

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

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

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

2.6 INDIA

I. GENERAL INFORMATION

Last updated: June 2009

Overall Executive Summary

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

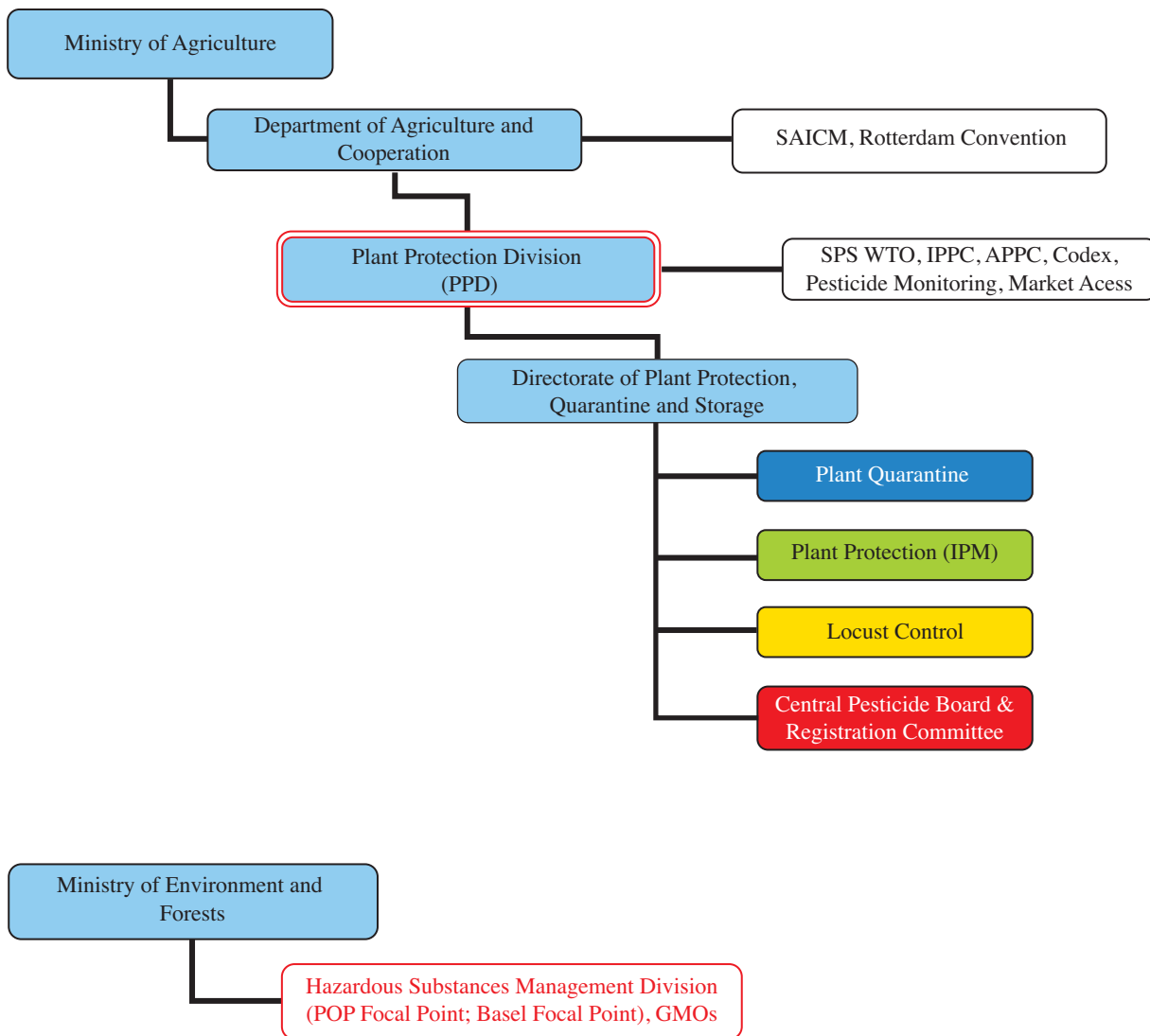
The major activities are exclusion of exotic pests, surveillance and monitoring and control of desert locust, ensuring availability of quality pesticides and biopesticides, promotion of integrated pest management approach in plant protection, development of the human resources in plant protection and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

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

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

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

Plant Protection Organization Chart



Color Code: Phytosanitation Outbreak Management Pest Management Pesticides NPPO

Important Contact Addresses

Responsible Ministry/Ministries

–

Responsible Department

–

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

Directorate of Plant Protection, Quarantine and Storage

Mr Pankaj Kumar, Joint Secretary (Plant Protection)

Dr P.S. Chandurkar, Plant Protection Adviser

Department of Agriculture & Cooperation, Ministry of Agriculture

Room No. 224, Krishi Bhawan, Rajendra Prasad Road

New Delhi 110001, India

Tel: (+91) 11-23070306 / (+91) 11-23070916

Fax: (+91) 11-23070306

E-mails: pankajkumar@nic.in, ppa@nic.in

Websites: <http://www.dacnet.ppin.nic.in>; <http://www.plantquarantineindia.org/>;
<http://www.cibrc.nic.in>, <http://agricoop.nic.in>.

Address for nominations

–

Operational Offices:

Plant Protection

Plant Quarantine

Surveillance, Pest Outbreaks and Invasive Species Management

Directorate of Plant Protection, Quarantine & Storage

Dr P.S. Chandurkar, Plant Protection Advisor

Department of Agriculture & Cooperation, Ministry of Agriculture

N.H-IV., Faridabad 121001 (Haryana), India

Tel: (+91) 129-2413985; 129-2418506

Fax: (+91) 129-2412125

E-mail: ppa@nic.in

Website: www.plantquarantineindia.org/ <http://www.cibrc.nic.in>

Pesticide Registration

Registration Committee, Directorate of Plant Protection, Quarantine and Storage

Dr S.K. Khurana, Secretary

Department of Agriculture & Cooperation, Ministry of Agriculture

N.H.IV, CGO Complex

Faridabad 121001 (Haryana), India

E-mail: cibsecy@hub.nic.in

Website: <http://www.cibrc.nic.in>

Official International Contact Points

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

Directorate of Plant Protection, Quarantine and Storage

Mr Pankaj Kumar, Joint Secretary (Plant Protection)

Dr P.S. Chandurkar, Plant Protection Advisor (Information officer for IPP)

Department of Agriculture & Cooperation, Ministry of Agriculture

Room No. 224, Krishi Bhawan, Dr Rajendra Prasad Road

New Delhi 110001, India

Tel: (+91) 129 2413985 / (+91) 11 23385026

Fax: (+91) 129 2412125 / (+91) 11 23384182

E-mail: pankajkumar@nic.in; ppa@nic.in

Website: <http://www.dacnet.pp.in>; <http://www.plantquarantineindia.org/>

WTO SPS Contact Point

Department of Agriculture & Cooperation

Mr Pankaj Kumar, Joint Secretary (Plant Protection)

Ministry of Agriculture

Krishi Bhavan

New Delhi 110001, India

Tel/Fax: (+91) 11 23070306 / 23070916

E-mail: pankajkumar@nic.in

Rotterdam Convention (PIC) DNA Pesticides (P)

Plant Protection Division

Director (Plant Protection)

Department of Agriculture and Cooperation, Ministry of Agriculture

Krishi Bhavan, Dr Rajendra Prasad Road

New Delhi 110001, India

Fax: (+91) 11 23070306 / 23070916

E-mail: pankajkumar@nic.in

Stockholm Convention (POP) National Focal Point (P)

Ministry of Environment & Forests

Mr Rajiv Gauba

Joint Secretary

Paryavaran Bhavan

CGO Complex, Lodhi Road

New Delhi 110003, India

Tel: (+91) 11 24360634

Fax: (+91) 11 24363577

E-mail: r.gauba@nic.in

Plant Protection Division

Director (Plant Protection)

Department of Agriculture and Cooperation,

Ministry of Agriculture,

Krishi Bhavan

Dr Rajendra Prasad Road

New Delhi 110001, India

Fax: (+91) 11 23070306

E-mail: pankajkumar@nic.in

Basel Convention Competent Authority (CA) and Focal Point

Ministry of Environment and Forests
 Secretary to the Government of India

CGO Complex, Lodi Road

New Delhi 110003, India

Tel: (+91) 11 24 36 07 21 or 24 36 18 96

Fax: (+91) 11 24 36 27 46

E-mail: meena.gupta@nic.in

Hazardous Substances Management Division
 Mr Rajiv Gauba, Joint Secretary

Ministry of Environment and Forests

Paryavaran Bhavan

CGO Complex, Lodi Road

New Delhi 110003, India

Tel: (+91) 11 24 36 06 34

Fax: (+91) 11 24 36 35 77

E-mail: r.gauba@nic.in

Selected Country Statistics

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

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

II. PLANT QUARANTINE

Last updated: June 2009

List of Key Legislation/Regulations/Rules

1914 Destructive Insects & Pests Act

2003 Plant Quarantine Order (effective: 1 January 2004) and amendments thereto (under consideration)

Web sources for further information:

<http://www.plantquarantineindia.org/law.htm>; <http://agricoop.nic.in>

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

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

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

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	MOA/DAC
– surveillance	MOA/DAC/PPQ&S/ICAR/State Agricultural Universities
– management	MOA/DAC assisted by PPQ&S
– certification	MOA/DAC/PPQ&S/ICAR
List of target pest species and crops ISPM 4	Number of sites in [year]
Fruit fly	
Brown rot on potato, ring rot on potato	Punjab State
Stone weevil and pulp weevil on mango	
List of target pest species and crops ISPM 10	Number of sites in [year]

Key Situation Indicators

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

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

Key Operation Indicators

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

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

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

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

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
<ul style="list-style-type: none"> • A new PRA based and continually updated PQ regulation put in effect, i.e. Plant Quarantine Order, 2003, effective since 1 July 2004. • SPS principles and transparency requirements being met through timely notifications of proposed phytosanitary measures. • National Phytosanitary certification system being modernized and strengthened. • Market access and phytosanitary requests from a number of member countries considered and issues resolved. • National Phytosanitary Standards, protocols and guidelines developed in a number of key phytosanitary activities. • Emphasis on capacity building; training and human resource development. • Continuous overhaul of the certification and accreditation system for treatment providers – both fumigators and ISPM 15 heat treatment providers. • Major expansion of facilities and laboratories under way – Number of new entry points and Plant Quarantine Stations opened across the country, more being opened. • Modern diagnostic facilities put in place. • Quarantine treatment facilities using VHT, Irradiation and other treatments developed and accreditation/certification systems developed for these facilities. • Massive survey and surveillance programmes undertaken for development and maintenance of pest free areas. • Pest free area notified for brown rot and ring rot on potato in Punjab, recognition of which is under consideration of EU.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
<ul style="list-style-type: none"> • Constraints are mainly in form of staff shortages in the wake of massive expansion of the Plant Quarantine facilities and operations across the country. Also, the need remains for upscaling training of officials and support staff in phytosanitary tasks.

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
	low	medium	high	none	partial	most	full	
ISPM 01 Principles of plant quarantine as related to international trade			x				x	
ISPM 02 Guidelines for pest risk analysis			x				x	
ISPM 03 Code of conduct for the import and release of exotic biological control agents			x			x		
ISPM 04 Requirements for the establishment of pest free areas			x		x			
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x			x		
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x			x		
ISPM 09 Guidelines for pest eradication programmes			x			x		
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x			x		
ISPM 11 Pest risk analysis for quarantine pests			x				x	
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x			x		
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application			x			x		
ISPM 17 Pest reporting			x			x		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure			x			x		
ISPM 19 Guidelines on lists of regulated pests			x			x		
ISPM 20 Guidelines for a phytosanitary import regulatory system			x			x		
ISPM 21 Pest risk analysis for regulated non-quarantine pests			x			x		
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x		x			
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures		x			x			
ISPM 25 Consignments in transit		x			x			
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x			x		
ISPM 27 Diagnostic protocols for regulated pests			x			x		
ISPM 28 Phytosanitary treatments for regulated pests								
ISPM 29 Recognition of pest free areas and areas of low pest prevalence								
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)								
ISPM 31 Methodologies for sampling of consignments								
Comments/Constraints 15 adopted National standards: http://www.plantquarantineindia.org/standards.htm 5 standards under preparation								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: June 2009

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

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

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

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

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

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

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

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

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

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

Progress and Constraints

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

IV. PEST MANAGEMENT

Last updated: June 2009

List of Key Legislation/Regulations/Rules for Pest Management

Insecticides Act, 1968, Insecticides Rules, 1971

Web source for further information: –

Policies (regarding pest management)	Yes	No
Do you have policies encouraging organic or low-pesticide use production	x	
Is IPM specifically mentioned in laws or policy documents?	x	
Do you have official Good Agricultural Practice (GAP) or any other relevant food safety (ecofood, etc.) standards for pest management?	x	
Is pest management extension separate from general extension?		x
Other policies: (subsidies, production inputs, etc.)		
<ul style="list-style-type: none"> • Increase in financial support for IPM • Phasing out subsidies on chemical pesticides • Emphasis on biocontrol agents, biopesticides and pheromones • Phasing out, banning or restricting hazardous chemical pesticides 		
Web source for further information: www.dacnet.pp.in		

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

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

Key Situation and Operation Indicators

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

Does the country have specific GAP extension programmes? <i>If yes, in which crops?: Grapes, Mangoes</i>	x	
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	43 000 MT
Size of biopesticides market	9 000 MT
Size of biological control agents market	

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

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

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

Progress and Constraints

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

V. PESTICIDE MANAGEMENT

Last updated: June 2009

List of Key Legislation/Regulations/Rules

Ministry of Agriculture Department of Agriculture & Cooperation

1968 Insecticides Act

1971 Insecticides Rules.

Ministry of Environment & Forest

1986 Environment Protection Act.

Ministry of Health & Family Welfare

2006 Food Safety & Standards Act (residue monitoring, MRLs)

Ministry of Labour

1948 Factories Act.

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? <i>If yes, what is the target: _____</i>		
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	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: Other policies: Insecticides Act, 1968 being amended.		
Web source for further information: http://agricoop.nic.in		

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

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

Key Situation Indicators

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

Post Registration Monitoring

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

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

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

Key Operation Indicators

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

* active ingredient; **provisional registration

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

Pesticides Banned in Recent Years	
Year	Name of active ingredient

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

Progress and Constraints

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

VI. ADDITIONAL ISSUES OF CONCERN

Last updated: June 2009

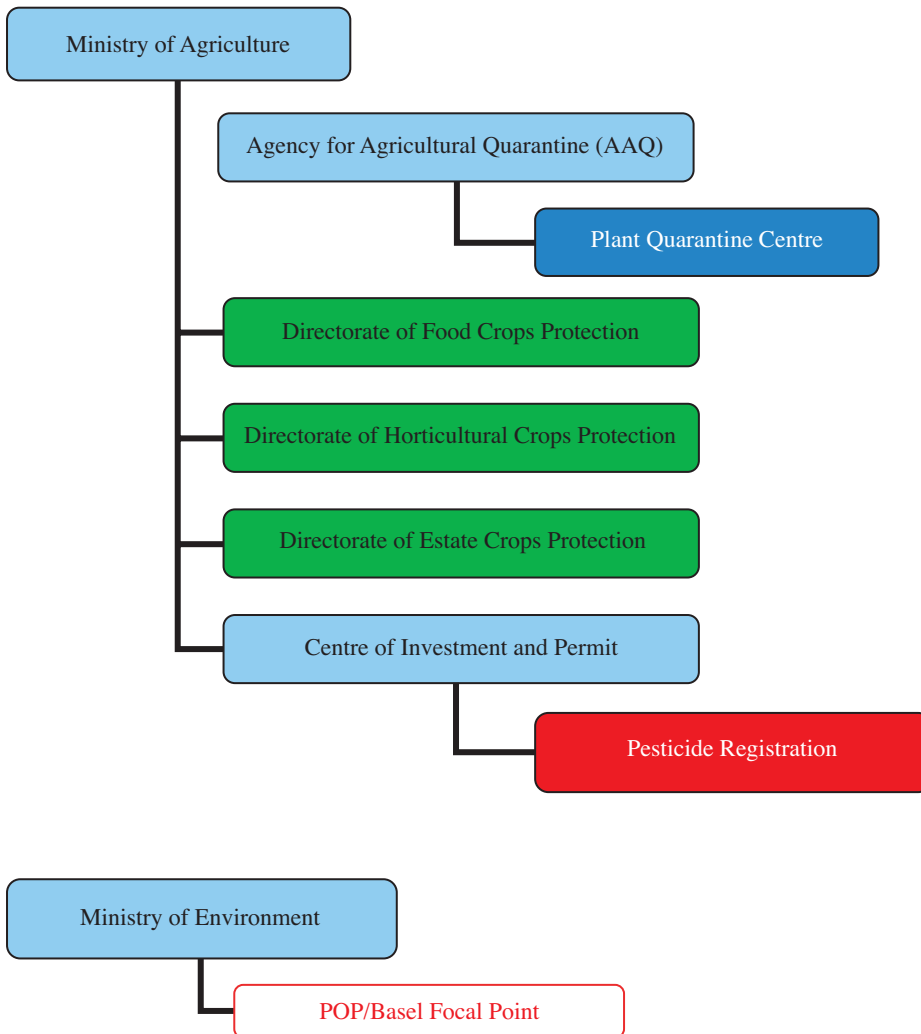
Genetically Modified Crops	
Name of GMO Crop	Area under Cultivation [ha]

2.7 INDONESIA

I. GENERAL INFORMATION

Last updated: December 2008

Plant Protection Organization Chart



Color Code:

Phytosanitation	Outbreak Management	Pest Management	Pesticides	NPPO
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Important Contact Addresses

Responsible Ministry/Ministries

Centre for Plant Quarantine

Mr Suwanda, Director (NPPO focal point)

Agency for Agricultural Quarantine (AAQ)

Ministry of Agriculture

Jl. Harsono RM No. 3 E Building (5th floor)

Pasar Minggu, Jakarta Selatan 12550, Indonesia

Tel: (+62) 21 7816482 / 7805641 ext. 1508

Fax: (+62) 21 7816481 / 7816482 / 7816483

E-mail: pusatkt@indo.net.id; suwanda@deptan.go.id

Websites: <http://www.karantina.deptan.go.id/>

<http://www.deptan.go.id/karantina/english/plant.htm>

Responsible Department

–

Address for nominations

–

Operational Offices:

Plant Protection

Directorate of Food Crop Protection

Ms Ati Wasiati, Director

Jl. AUP Pasar Minggu, P.O. Box. 7236/Jks Pasar Minggu

Jakarta 12520, Indonesia

Tel: (+62) 21 7806213

Fax: (+62) 21 7805652

E-mails: atiwasiati@deptan.go.id; ditlin-ftp@deptan.go.id

Directorate of Estate Crops Protection

Dr Herdradjat Natawijaya, Director

Building C, Ministry of Agriculture, Jl. Harsono RM No. 3

Ragunan, Pasar Minggu

Jakarta 12550, Indonesia

Tel: (+62) 21 7815684

Fax: (+62) 21 7815684

Directorate of Horticulture Crop Protection

Mr Sukirno, Director

Jl. AUP Pasar Minggu, P.O. Box. 7228/Jks PsM 12072

Jakarta 12520, Indonesia

Tel: (+62) 21 7819117

Fax: (+62) 21 78845628

E-mail: ditlinhor@deptan.go.id

Plant Quarantine

Centre for Plant Quarantine

Mr Suwanda, Director (NPPO focal point)

Agency for Agricultural Quarantine (AAQ)

Ministry of Agriculture

Jl. Harsono RM No. 3 E Building (5th floor)

Pasar Minggu

Jakarta Selatan 12550, Indonesia

Tel: (+62) 21 7816482 / 7805641 ext. 1508

Fax: (+62) 21 7816481 / 7816482 / 7816483

E-mails: pusatkt@indo.net.id; suwanda@deptan.go.id

Websites: <http://www.karantina.deptan.go.id/>

<http://www.deptan.go.id/karantina/english/plant.htm>

Surveillance, Pest Outbreaks and Invasive Species Management

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Pesticide Registration

Centre for Investment and Permit

Mr Mohammad Dani, Director

Ministry of Agriculture

3th Floor, Archive Building, Ministry of Agriculture, Jl. Harsono RM No. 3

Ragunan, Pasar Minggu

Jakarta 12550, Indonesia

Tel: (+62) 21 7815380 ext. 6314, 7812162

Fax: (+62) 21 7818205

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

Centre for Plant Quarantine

Mr Suwanda, Director (NPPO focal point)

Agency for Agricultural Quarantine (AAQ)

Ministry of Agriculture

Jl. Harsono RM No. 3 E Building (5th floor)

Pasar Minggu

Jakarta Selatan 12550, Indonesia

Tel: (+62) 21 7816482 / 7805641 ext. 1508

Fax: (+62) 21 7816481 / 7816482 / 7816483

E-mails: pusatkt@indo.net.id; suwanda@deptan.go.id

Website: <http://karantina.deptan.go.id/>

Language(s): English

Contact point received: 29/01/2004 Source: Official Correspondence

WTO SPS Contact Point

Agency for Agricultural Quarantine (Badan Karantina Pertanian)
 Ministry of Agriculture
 Ged. E. Lt. V. Jl. Harsono RM No. 3, Ragunan-Pasar Minggu
 Jakarta Selatan 12550, Indonesia
 Tel: (+62) 21 781 6480
 Fax: (+62) 21 781 6481 / 781 6483
 E-mail: caqsps@indo.net.id
 Website: <http://karantina.deptan.go.id/>

Rotterdam Convention (PIC) DNA Pesticides

Pesticide Committee

Mr Hasanuddin Ibrahim, Chairman

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

Stockholm Convention (POP) National Focal Point (S)

Ministry of Environment

Mr Moh Gempur Adnan, Deputy for Environmental Pollution

5th Floor, Building A
 Jl. D.I. Panjaitan, Kebon Nanas
 Jakarta 13410, Indonesia
 Tel: (+62) 21 858 0110 / 0067
 Fax: (+62) 21 852 0763 / 851 8135
 E-mail: haruki@indo.net.id

Basel Convention Competent Authority (CA) and Focal Point

Ministry of Environment

Mr Imam Hendargo Abu Ismoyo, Deputy Minister for Hazardous and Toxic Wastes Management

Jl. D.I. Panjaitan, Kebon Nanas
 Jakarta 13410, Indonesia
 Tel: (+62) 21 85 90 56 37
 Fax: (+62) 21 85 90 56 37 or 85 90 49 32
 E-mail: db3@menlh.go.id

Selected Country Statistics

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

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

II. PLANT QUARANTINE

Last updated: December 2008

List of Key Legislation/Regulations/Rules

- 1961 Exportation from the Territory of the Republic of Indonesia of Plant Propagating Materials on Regulation of the Minister of Agriculture No. 6/PMP/1961.
- 1984 Importation into the Territory of the Republic of Indonesia of Plants Used as Packing on DOMOA No. 796/Kpts/TP.830/10/1984.
- 1984 Importation into the Territory of the Republic of Indonesia of Plant Growing Media on DOMOA No. 797/Kpts/TP.830/10/1984.
- 1985 Plant Quarantine Requirements for the Importation of Plant Propagating Materials of Coconut, Oil Palm, Cocoa, Rubber, Coffee, Tea, Sugarcane, and Tobacco on DOMOA No. 559/Kpts/KB.630/8/1985.
- 1985 Domestic Plant Quarantine on DOMOA No. 809/Kpts/LB.710/12/1985.
- 1989 Prevention on the Introduction into the Territory of the Republic of Indonesia of South American Leaf Blight of Hevea on DOMOA No. 861/Kpts/LB.720/12/1989.
- 1989 Eradication for Khapra Beetle (*Trogoderma granarium* Everts) on DOMOA No. 799/Kpts/LB.710/10/1989.
- 1990 Plant Quarantine Requirements and Actions in relation to the Importation into the Territory of the Republic of Indonesia of Plants and Plant Propagating Materials on DOMOA No. 38/Kpts/HK.310/1/1990.
- 1992 Law No. 16 of 1992 concerning Animal, Fish, and Plant Quarantine.
- 1995 Importation into the Territory of the Republic of Indonesia of Biological Agents on DOMOA No. 411/Kpts/TP.120/6/1995.
- 1995 Formation of Biological Agent Commission on DOMOA No. 412/Kpts/KP.150/6/1995.
- 2001 Actions and conditions of quarantine plant for the entry of plant and seedling into the territory of the Republic of Indonesia, lastly amended by the decree of the Ministry of Agriculture Number: 211/Kpts/HK.310/2001 on DOMOA No. 469/Kpts/HK.310/8/200.
- 2002 Government Regulation of the Republic Indonesia No. 14 of 2002, concerning Plant Quarantine.
- 2006 Decree of the Minister of Agriculture No. 38 of 2006 concerning Plant Quarantine Pests Group I Category A1 and A2, and Group II Category A1 and A2; their hosts, carriers and countries of distribution.
- 2006 Minister of Agriculture Regulation No. 37 of 2006 concerning Importation of Fresh fruits and vegetables.
- 2006 Concerning requirements and guideline for Quarantine Installation Establishment for Private on MOAR No. 05/Permentan/HK.060/3/2006.
- 2006 Concerning requirements and guidelines for the Implementation of Plant Quarantine action by third party on MOAR No. 271/Kpts/HK.310/4/2006.
- 2006 Concerning the Implementation of Plant Quarantine action conducted import and exit points on MOAR No. 18/Permentan/OT.160/5/2006.
- 2006 Concerning addition requirements on MOAR No. 52/Permentan/OT.140/10/2006.
- 2008 Concerning Plant Quarantine Requirements and Measures Governing the Importation of Fresh Plant Products in the form of Fresh Bulb Vegetables into the territory of the Republic of Indonesia.

Web source for further information:

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

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

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

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

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

Key Situation Indicators

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

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

Key Operation Indicators

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

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

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

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

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
In 2008, IAQA has successfully issued 1 new Minister of Agriculture Decrees concerning Plant Quarantine Requirements and Measures Governing the Importation of Fresh Plant Products in the form of Fresh Bulb Vegetables into the territory of the Republic of Indonesia.
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)
<ul style="list-style-type: none"> • Reorganize the structure of IAQA by integrating plant quarantine dan animal quarantine into one operational service level • Increasing diagnostic capacity of quarantine pests in the main service point by providing some equipments and materials • Two trainings on new recruitment of plant quarantine inspector • One training on Pest Risk Analysis • Two trainings on Phosphine Fumigation

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

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

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

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

Web source for further information: –

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

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

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

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

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

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

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

Progress and Constraints

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

IV. PEST MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for Pest Management

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

Web source for further information: –

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

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

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

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? <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> Estates Crops	x	

Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i>		
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	Cacao	Tea	
Name(s) of pest(s)	Cacao Pod Borer	Helopeltis	
Estimated crop loss			
Affected area			
Number of pesticide applications or amount of pesticide used			
Government action taken			

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

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

Progress and Constraints

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

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

- 1973 Pesticide Regulation No. 7
 1996 Joint Decree of the Minister of Health and Minister of Agriculture No. 881/MENKES/SKB/8/1996 on Pesticides Maximum Residues No. 711/Kpts/TP.270/8/1996.
 2001 Ministry of Agriculture Decree No. 434.1/Kpts/TP.270/7/2001: Pesticide Registration.
 2002 Ministry of Agriculture Decree No. 517/Kpts/TP.290/9/2002 Supervision of storage, use and the distribution of pesticides.

Web source for further information: –

Policies (regarding pesticide management)	Yes	No
Do you have national pesticide reduction targets? <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?		
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?		
Do you conduct country-specific risk assessments for...		
occupational risks?		
consumer risks?		
environmental risks?		
Have you adopted the Global Harmonized System (GHS) for pesticides hazards evaluation and labelling?		
Do you accept evaluation results from other countries?		
Do you accept field studies conducted in other countries?		
Do you require environmental fate studies?		
<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?		

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

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

Key Situation Indicators

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

Post Registration Monitoring

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

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

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

Key Operation Indicators

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

* active ingredient

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

Pesticides Banned in Recent Years	
Year	Name of active ingredient

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

Progress and Constraints

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

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

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

2.8 JAPAN

(non-membership of APPPC)

I. GENERAL INFORMATION

Last Updated: December 2008

Overall Executive Summary

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

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

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

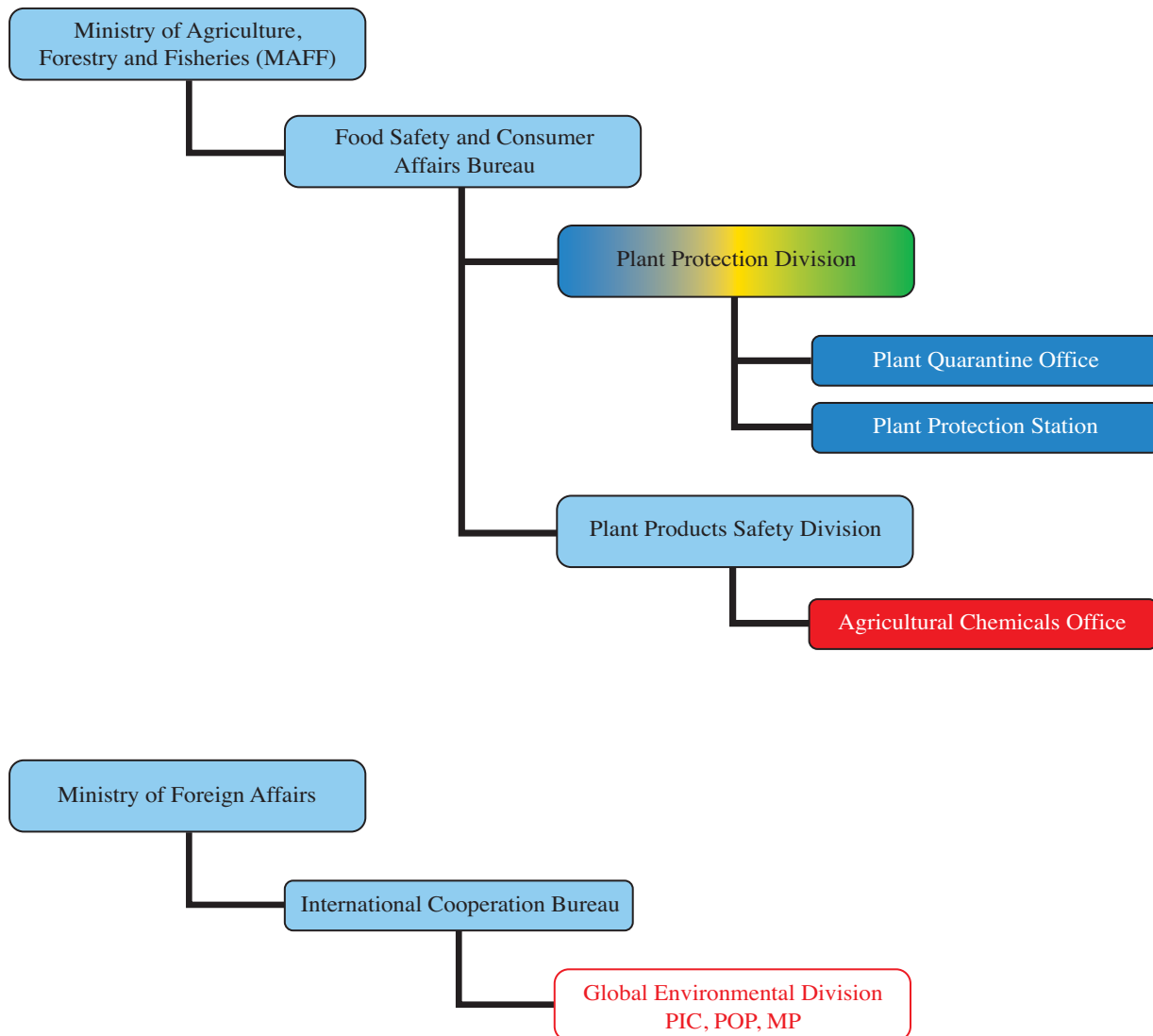
MAFF provided the specific guidelines for the crop of rice, cabbage, citrus, soybean, tomato, strawberry, pear, apple, tea, chrysanthemum and sugarcane to facilitate implementation of IPM for individual farmers.

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

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

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

Plant Protection Organization Chart



Color Code: Phytosanitation Outbreak Management Pest Management Pesticides NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Ministry of Agriculture, Forestry and Fisheries

Mr Shigeru ISHIBA, Minister

Ministry of Agriculture, Forestry and Fisheries

1-2-1 Kasumigaseki, Chiyoda-ku

Tokyo 100-8950

Operational Offices:

Plant Protection

Plant Protection Division

Mr Tomoyoshi FUKUMORITA, Director

Food Safety and Consumer Affairs Bureau

Ministry of Agriculture, Forestry and Fisheries

1-2-1 Kasumigaseki, Chiyoda-ku

Tokyo 100-8950

Plant Quarantine

Plant Quarantine Office

Mr Motoi SAKAMURA, Director

Plant Protection Division

Food Safety and Consumer Affairs Bureau

Ministry of Agriculture, Forestry and Fisheries

1-2-1 Kasumigaseki, Chiyoda-ku

Tokyo 100-8950

Tel: (81 3) 3502-8111 / 3502-5978 (direct)

Fax: (81 3) 3502-3386

E-mail: motoi_sakamura@nm.maff.go.jp

Website: <http://www.pps.go.jp/english/index.html>

Surveillance, Pest Outbreaks

Plant Protection Division

Mr Tomoyoshi FUKUMORITA, Director

Food Safety and Consumer Affairs Bureau

Ministry of Agriculture, Forestry and Fisheries

1-2-1 Kasumigaseki, Chiyoda-ku

Tokyo 100-8950

Invasive Species Management

Wildlife Division

Mr Kazuaki Hoshino, Director

Nature Conservation Bureau

Ministry of Environment

1-2-2 Kasumigaseki, Chiyoda-ku

Tokyo 100-8950

Tel: (81 3) 3581 3351

Pesticide Registration

Agricultural Chemicals Office

Mr Nobuo SUZUKI, Director

Plant Products Safety Division
Food Safety and Consumer Affairs Bureau
Ministry of Agriculture, Forestry and Fisheries
1-2-1 Kasumigaseki, Chiyoda-ku,
Tokyo, 100-8950

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

Plant Quarantine Office

Mr Motoi SAKAMURA, Director

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

WTO SPS Contact Point

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

Rotterdam Convention (PIC) Designated National Authority (DNA)

Global Environmental Division

Mr Masayoshi Mizuno, Director

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

Stockholm Convention (POP) National Focal Point (P)

Global Environmental Division

*Mr Masaya Sagawa, Deputy Director*Ministry of Foreign Affairs
2-2-1 Kasumigaseki, Chiyoda-ku

Tokyo

Japan

Tel: (81 3) 5501-8245

Fax: (81 3) 5501-8244

E-mail: masaya.sagawa@mofa.go.jp

Basel Convention Competent Authority (CA) and Focal PointDirector, Office of Waste Disposal
ManagementWaste Management and Recycling
Department

Ministry of the Environment

1-2-2 Kasumigaseki, Chiyoda-ku

Tokyo 100-8975

Tel: (81 3) 5501-3157

Fax: (81 3) 3593-8264

E-mail: env-basel@env.go.jp

Global Environment Division

International Cooperation Department

Ministry of Foreign Affairs

2-2-1 Kasumigaseki, Chiyoda-ku

Tokyo 100-8919

Tel: (81 3) 5501-8245

Fax: (81 3) 5501-8244

E-mail: yutaka.ishii@mofa.go.jp or
fuyumi.naito@mofa.go.jp**Montreal Protocol Focal Point**

Global Environmental Division

Ms Masami Fujimoto

Ministry of Foreign Affairs

2-2-1 Kasumigaseki, Chiyoda-ku

Tokyo

Japan

Tel: (81 3) 5501-8245

Fax: (81 3) 55 01-8244

Selected Country Statistics:

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

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

II. PLANT QUARANTINE

Last Updated: December 2008

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

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

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

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

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

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

Pest Free Areas According to ISPM 10	Responsible Organizational Unit (Ministry/Department/Unit)
Overall management	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
– surveillance	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
– management	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
– certification	Plant Protection Division, Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries
List of target pest species and crops ISPM 4	Number of sites in 2008
<i>Omphisa anastomosalis</i>	All area except South western Islands in south of latitude 30 degree north
<i>Euscepes postfasciatus</i>	All area except South western Islands in south of latitude 28 degree 40 minutes north and Ogasawara Islands
<i>Cylas formicarius Omphisa anastomosalis</i>	All area except South western Islands in south of latitude 30 degree north and Ogasawara Islands
Citrus greening disease <i>Euscepes postfasciatus</i>	All area except south western Islands in south of latitude 27 degree 10 minutes north
List of target pest species and crops ISPM 10	Number of sites in 2008
	[number]

Key Situation Indicators

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

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

Key Operation Indicators

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

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

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

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

Progress and Constraints

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

Implementation of ISPM	Relevance			Implementation				Planned/Actual Year of full implementation
	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 Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms		x				x		
ISPM 04 Requirements for the establishment of pest free areas			x				x	
ISPM 05 Glossary of phytosanitary terms			x				x	
ISPM 06 Guidelines for surveillance			x				x	
ISPM 07 Export certification system			x				x	
ISPM 08 Determination of pest status in an area			x				x	
ISPM 09 Guidelines for pest eradication programmes			x				x	
ISPM 10 Requirements for the establishment of pest free places of production and pest free production sites			x				x	
ISPM 11 Pest risk analysis for quarantine pests		x				x		
ISPM 12 Guidelines for phytosanitary certificates			x				x	
ISPM 13 Guidelines for the notification of noncompliance and emergency action			x				x	
ISPM 14 The use of integrated measures in a systems approach for pest risk management			x				x	
ISPM 15 Guidelines for regulating wood packaging material in international trade			x				x	
ISPM 16 Regulated non-quarantine pests: concept and application		x				x		
ISPM 17 Pest reporting			x			x		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		x						
ISPM 19 Guidelines on lists of regulated pests		x				x		
ISPM 20 Guidelines for a phytosanitary import regulatory system			x			x		
ISPM 21 Pest risk analysis for regulated non-quarantine pests		x				x		
ISPM 22 Requirements for the establishment of areas of low pest prevalence			x				x	
ISPM 23 Guidelines for inspection			x				x	
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures			x				x	
ISPM 25 Consignments in transit			x			x		
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			x				x	
ISPM 27 Diagnostic protocols for regulated pests			x				x	
ISPM 28 Phytosanitary treatments for regulated pests			x				x	
ISPM 29 Recognition of pest free areas and areas of low pest prevalence			x				x	
ISPM 30 Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			x				x	
ISPM 31 Methodologies for sampling of consignments			x				x	
Comments/Constraints								

III. SURVEILLANCE, PEST OUTBREAKS AND INVASIVE SPECIES MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules for surveillance, pest reporting and emergency actions*(year, title and possibly short description)*

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

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

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

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

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

Key Situation and Operation Indicators

(Outbreaks and invasions in the past 2 years)

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

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

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

Progress and Constraints

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

IV. PEST MANAGEMENT

Last updated: December 2008

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

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

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

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

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

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

Key Situation and Operation Indicators

Pest Management	Yes	No
Does the country have a National IPM Programme? <i>If yes, give Name and Address of IPM Programme:</i> Guidelines for implementation of IPM	x	
Does the country have specific IPM extension programmes? <i>If yes, in which crops?:</i> Eight major crops e.g. Apple and indoor grown tomato	x	
Does the country have specific IPM research programmes? <i>If yes, in which crops?:</i> Soybean, potato, tomato, strawberry, cabbage, pear, citrus, apple and tea	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)	Year: 2007
Size of chemical pest control market	[number, %]
Size of biopesticides market	
Size of biological control agents market	

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

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

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

Progress and Constraints

Main Progress in Recent Years (legislation, policies, infrastructure, investments, training, etc.)
Progress of the IPM <ul style="list-style-type: none">● IPM investigative commission (2004-)● Publication of the guidelines on IPM practice (2005-)● Providing the specific guidelines for rice, cabbage and citrus (2005-)● Providing the specific guidelines for soybean, tomato, strawberry, pear, apple, tea, chrysanthemum and sugarcane (2008-)● Granted project
Main Constraints (personnel, infrastructure, administrative, operational, training, etc.)

V. PESTICIDE MANAGEMENT

Last updated: December 2008

List of Key Legislation/Regulations/Rules

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

Web sources:

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

Policies (regarding pesticide management)	Yes*	No
Do you have national pesticide reduction targets? <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
Other policies:		
Web source for further information: See the above web sources.		

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

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

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

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

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

Key Situation Indicators

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

Other purposes		
TOTAL	61 164	

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

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

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

Post Registration Monitoring

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

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

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

Key Operation Indicators

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

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

* active ingredient

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

Pesticides Banned in Recent Years	
Year	Name of active ingredient

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

Progress and Constraints

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

VI. ADDITIONAL ISSUES OF INTEREST

Last updated: December 2008

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

2.9 KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF

I. GENERAL INFORMATION

Last updated: December 2008

Overall Executive Summary

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

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

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

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

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

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

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

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

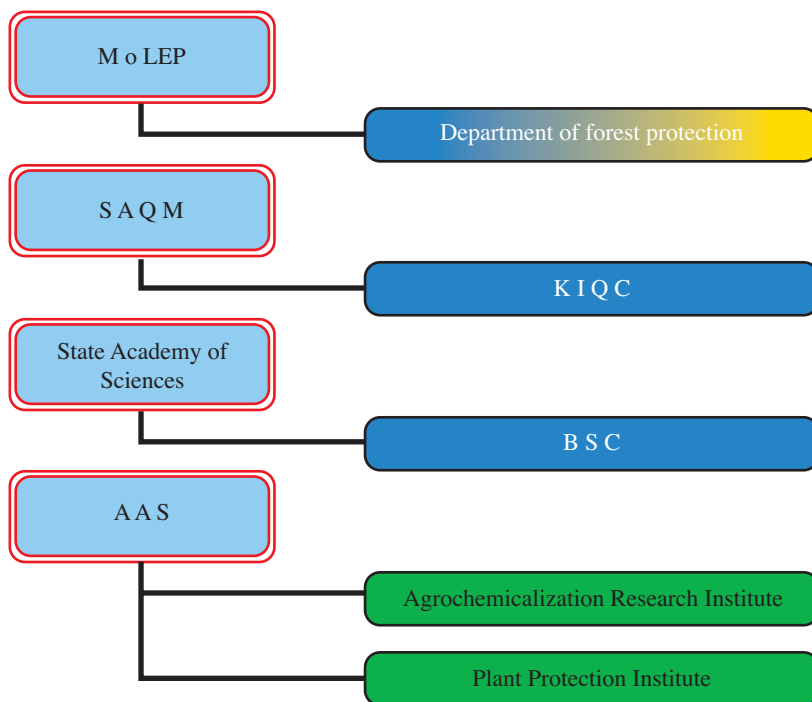
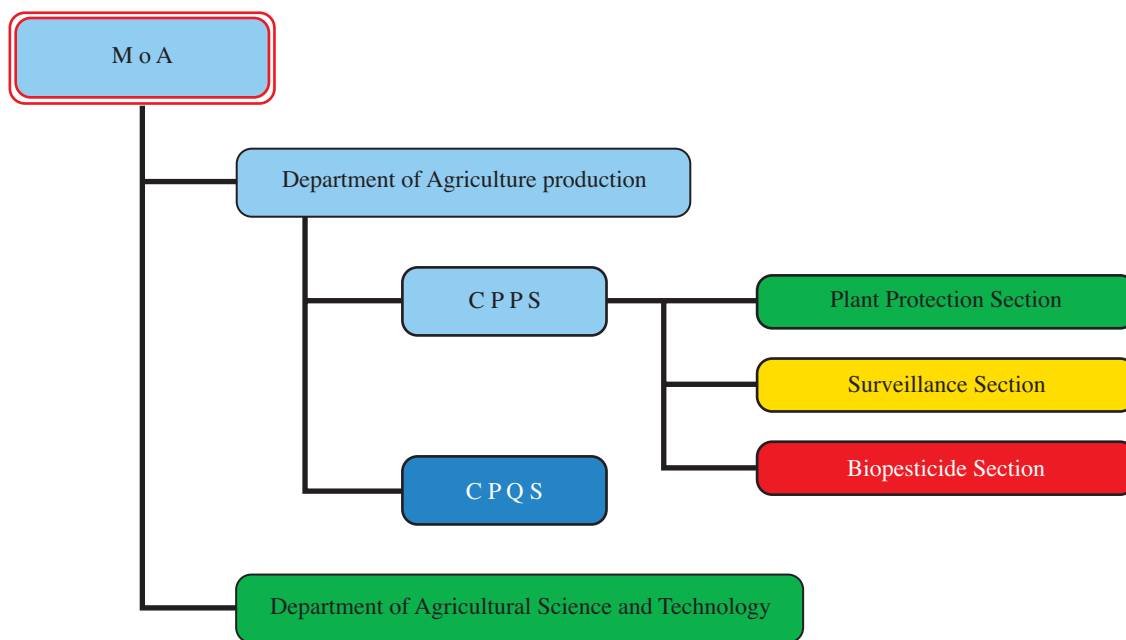
During the period from 2009-2010, DPRK plans to increase the investment in pest management, such as pest control in the fields, production of biopesticides as well as phytosanitary measures and regulations.

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

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

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

Plant Protection Organization Chart



Color Code: Phytosanitation Outbreak Management Pest Management Pesticides NPPO

Important Contact Addresses

Responsible Ministry/Ministries

Ministry of Agriculture

Mr Kim Kyong Il, Officer

Jungsong-dong, Central District

Pyongyang City, Korea, DPRK

Operational Offices:

Plant Protection

Central Plant Protection Centre

Mr Kim Chun San, Director

Ministry of Agriculture

Janghun Dong No. 1, Mangyongdae District

Pyongyang City, Korea, DPRK

Fax: (+850) 2 381 4427; 850 2 381 4081

Pesticide Registration

Agrochemicalization Research Institute

Mr Kim Chi Yong, Director

Academy of Agricultural Sciences

Chonggye-dong, Ryongsong District

Pyongyang City, Korea, DPRK

Tel: (+850) 2 18111(381 8557)

Fax: (+850) 2 381 2100

E-mail: ilsop@co.chesin.com

Official International Contact Points

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

National Committee for FAO

Mr Pak Chun Il, Coordinator

P.O. Box 44

Jungsong-dong, Central District

Pyongyang City, Korea, DPRK

Tel: (+850) 2 (Through operator)

Fax: (+850) 2 381 4460

E-mail: myonghyok.kim@fao.org

Language(s): English

Contact point received: – Source: NPPO Directory

Central Plant Protection Station (country report)

Mr Kim Chun San, Director

Ministry of Agriculture

Janghun Dong No. 1 Mangyongdae District

Pyongyang City, Korea, DPRK

Fax: (+850) 2 381 4427; 850 2 381 4081

Source: Country Report

WTO SPS Contact Point

–

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

National Committee for FAO

Mr Pak Chun Il, Coordinator

P.O. Box 44

Jungsong-dong, Central District

Pyongyang City, Korea, DPRK

Tel: (+850) 2 (Through operator)

Fax: (+850) 2 381 4460

E-mail: myonghyok.kim@fao.org

Stockholm Convention (POP) National Focal Point

National Coordinating Committee for Environment

Mr Kim Yong U, Coordinator

P.O. Box 44

Jungsong-dong, Central District

Pyongyang City, Korea, DPRK

Tel: (+850) 2 (Through operator)

Fax: (+850) 2 381 4460

Basel Convention Competent Authority (CA)

National Coordinating Committee for Environment

Mr Kim Yong U, Coordinator

P.O. Box 44

Jungsong-dong, Central District

Pyongyang City, Korea, DPRK

Tel: (+850) 2 (Through operator)

Fax: (+850) 2 381 4460

Montreal Protocol Focal Point

National Coordinating Committee for Environment

Mr Kim Yong U, Coordinator

P.O. Box 44

Jungsong-dong, Central District

Pyongyang City, Korea, DPRK

Tel: (+850) 2 (Through operator)

Fax: (+850) 2 381 4460

Selected Country Statistics:

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

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

II. PLANT QUARANTINE

Last updated: December 2008

Executive summary

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

CPQS

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

SAQM

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

BSC

- inspected the genetically modified organisms of plants

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

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

List of Key Legislation/Regulations/Rules

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

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

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

Web source for further information: –

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

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

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

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

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

Key Situation Indicators

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

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

Key Operation Indicators

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

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

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

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

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

Updated the Legislations of the Border Animal and Plant Quarantine.
Conducted training courses for phytosanitary staff.

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

Staff training on the PRA and surveillance.