

Country Report – Indonesia

General Information

In order to implement the provisions on phytosanitary measures according to the International Plant Protection Convention, Indonesia formed a National Plant Protection Organization (NPPO) which consists of several institutions under the Ministry of Agriculture, i.e. the Indonesian Agricultural Quarantine Agency (IAQA), the Directorate General of Food Crops, the Directorate General of Horticulture and the Directorate General of Estate Crops. IAQA is appointed as the focal point of the NPPO by the Minister of Agriculture (MoA's) Decree number 264 of 2006. As focal point of the NPPO, IAQA is responsible for coordinating with other institutions to conduct plant protection activities such as: issuance of phytosanitary certificates, surveillance, inspection, disinfection, risk analysis, protection of endangered areas, etc.

Phytosanitary Matters (Plant Quarantine)

Update on Indonesian regulations on plant quarantine

In 2013-2015, Indonesia stipulated MoA's Regulation Number 73 of 2013 regarding *Requirements and Guidelines for Quarantine Installation Establishment for Private*, MoA's Regulation Number 44 of 2014 regarding *The Entry and Exit Point of Pathway of Quarantine Animal Disease and Pathway of Quarantine Pest*, MoA's Regulation Number 38 of 2014 regarding *Implementation of Plant Quarantine Measures Outside the Entry and Exit Point*, and MoA's Regulation Number 04 of 2015 regarding *Food Safety Control for Importation and Exportation of Fresh Food of Plant Origin (FFPO)*.

Related to food safety regulation, MoA's Regulation Number 04 of 2015 will be fully implemented and supersedes MoA's Regulation Number 88 of 2011 on 17 February 2016. Starting from the date of enactment (17 February 2016), the exporting countries that have not been granted for recognition of its food safety control system or registration of its food safety testing laboratory will not be permitted to export their FFPO to Indonesia. Therefore, in order to avoid any disturbance on food trade, IAQA encourages the APPPC Member countries to promptly submit their application for recognition of its food safety control system or registration of food safety testing laboratory.

Intercepted pests in quarantine inspection

While Indonesia is a major export destination for various agricultural commodities, it also has a megabiodiversity which has to be protected and preserved against harmful pests. Therefore Indonesia has been strengthening its quarantine inspection at entry points to prevent the introduction of pests that potentially threaten biodiversity of Indonesia.

During 2014, a number of quarantine pests were intercepted through quarantine inspections on imported consignments, such as *Burkholderia glumae*, *Pantoea stewartii*, *Pseudomonas syringae* pv. *syringae*, *Pseudomonas viridiflava*, *Clavibacter michiganensis* subsp. *michiganensis*, *Helminthosporium solani*, *Erwinia chrysanthemi*, *Tilletia laevis*, *Tilletia indica*, *Aphelenchoides fragariae*, *Ditylenchus destructor*, *Ditylenchus dipsaci*, *Globodera rostochiensis*, *Pratylenchus vulnus*, *Sphacelotheca reiliana*, *Urocystis agropyri*, *Stenocarpella macrospora*, *Peronospora manshurica*, *Trogoderma granarium* and Raspberry ringspot nepovirus (RpRSV).

Pest Risk Analysis, Quarantine measures for Export and Import

Determination of phytosanitary measures for importation of agricultural commodities is based on Pest Risk Analysis (PRA). Until now, IAQA has produced 174 documents of PRA.

In 2014, inspection for import products has reached 96.978 times and emergency phytosanitary treatments on import products were 1.370 times. The current policy taken by IAQA for import is more emphasis on pre-clearance program as one of options for risk management.

Regarding export, IAQA has issued 122.255 documents of phytosanitary certificates during 2014. IAQA still received 20 notifications of non-compliance from trading partners which always promptly followed by corrective actions to avoid non-compliance in the future. IAQA has developed phytosanitary certification system based on management risk at production site, at processing unit until to the end of product prior export.

Pest management

Pest surveillance

Indonesia conducts regular pest surveillances to monitor new establishment of pests. Every two years, the status of pests is evaluated among the NPPO members. Pest surveillance is regularly conducted to monitor and evaluate the status of pests under-collaboration with the NPPO members. Eradication of pest outbreaks was also conducted under collaboration with the NPPO members and local governments.

Pest surveillances on food, horticultural and estate crops are conducted by pest observers and technical staff of the Pest and Disease Observation Laboratory and the Food Crop Protection Centre, the National Pest Forecasting Centre, and the Directorate of Food Crop Protection. The implementation of surveillance follows the Decree of the Director of Food Crop Protection Number 52 of 2012 on *Guidelines for Observation and Reporting of Food Crop Pests and Disease* and the Decree of the Director of Food Crop Protection Number 12a of 2012 on *Operating Standard of Pest and Disease Laboratory*.

Pesticide management

Regulation on pesticide registration

The distribution and use of pesticides must be registered according to the provisions of the ministerial decree on requirements and procedures of pesticide registration. In 2011, Indonesia reviewed the regulations and stipulated a new MoA Decree Number 24 of 2011 regarding *Requirement and Procedure of Pesticide Registration*. The Indonesian Government has strong concerns to reduce the use of non-ecofriendly pesticides in sustainable agricultural practices.

The use of pesticide in Indonesia shall be registered through the Center for Plant Variety Protection and License, the Ministry of Agriculture. There are 3 types of pesticide license, including trial license, temporary license and permanent license. Technical requirements for the status of pesticide use license include the evaluation such as quality assurance, safe for human and environment and effective control for specific pest. Licensed pesticides in Indonesia consist of 3541 pesticides from different trademarks.

Biological agents are used in agricultural practices to achieve food safety standards. Various biological agents and bio pesticides have been developed by the Farmer Unit of Biological Agents Services (PPAH). Biological agents that have been developed in PPAH are *Trichoderma* sp., *Metarhizium* spp., *Beauveria* spp., *Pseudomonas fluorescens*, *Paeni bacillus polymixus* (previous *Corynebacterium* spp.),

Gliocladium spp., red bacteria, *Nomuraea* spp, parasitoid *Trichogramma* sp., *Spodoptera litura*, Nuclear Polyhydrosis Virus (SINPV). Botanical pesticides that have been developed by PPAH are produced from leaves and seed of neem (mimba), lemongrass, brotowali, pepaitan, garlic, jeringau, galangal, and soursop. Organic fertilizers which have been developed include Trichokompos, liquid and solid organic fertilizer, and bokashi.

Update on Indonesian regulations on pesticide

Minister of Agriculture stipulated a new regulation, MoA's Regulation Number 39/Permentan/SR.330/7/2015 concerning *Registration of Pesticide*, in order to increase the effectiveness of the registration and legal certainty in the provision of issuing registration's number and pesticides licenses. The regulation also regulates the type of active ingredients and additive ingredients of pesticides which defined as banned pesticides.

Progress on the ratification of the Rotterdam Convention

Indonesia has ratified the Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade by the Law Number 10 of 2013.

ISPM Implementation

Plant quarantine regulations in Indonesia are very dynamic matters and supported by technical procedures that comply with ISPM. ISPM had been fully, mostly, partialy, and none implemented were 17%, 42%, 19%, and 22% respectively.

Other matters

Status of the 1999 Amendment of the Plant Protection Agreement for Asia and Pacific (APPPC)

Regarding the 1999 Amendment of the Plant Protection Agreement for Asia and the Pacific (deleting measures to exclude 'SALB' of *Hevea* from the region), Indonesia needs further discussions with other natural rubber producing countries before submit the acceptance of the amendment.

Section I: Plant protection

Annex I – 1

Executive Summary

The National Plant Protection Organization (NPPO) of Indonesia consist of Directorate Crop Protection of Horticulture, Directorate Crop Protection of Estate Crop, Directorate Crop Protection of Food Crops, and Indonesian Agricultural Quarantine Agency (IAQA). One of the mission of Ministry of Agriculture (MoA) is to achive self sufficiency of rice, maize and soybean production since 2014. NPPO implemented Integrated Pest Management (IPM) to encourage plant protection activities in order to increase food crops yield and productivity.

IPM activites geared to monitoring, pest forecasting, pest surveillence, and pest control activities due to the outbreak. Pest surveillence regularly conducted to monitor and evaluate the potential status of pests under collaboration of NPPO members referred to ISPM 31. The occurrence of pests in rice field during 2014 was approximately 950 hectares consist of stem borer, rat, Tungro virus, bacterial leaf blight and leaf blast. Directorate Crop Protection of Food Crop also implemented STOP SPOT policy witch are an early action program to control increasing of sourizes of pest or disease prevent spread of pest and damaged plant based on pre-emptive and responsive strategies. This strategy conducted by optimizing the empowerment of farmers through the IPM FFS (Farmers Field School) and Climate FFS to encourage implementation of Good Agricultural Practices (GAP).

Directorate of Crop Protection prepare a pest list for main export commodities based on the surveillence data carried out by the local government. On the other hand, they also involved in the preparation and implementation of risk mitigation on field level of pests which is being a concern of trading partner countries.

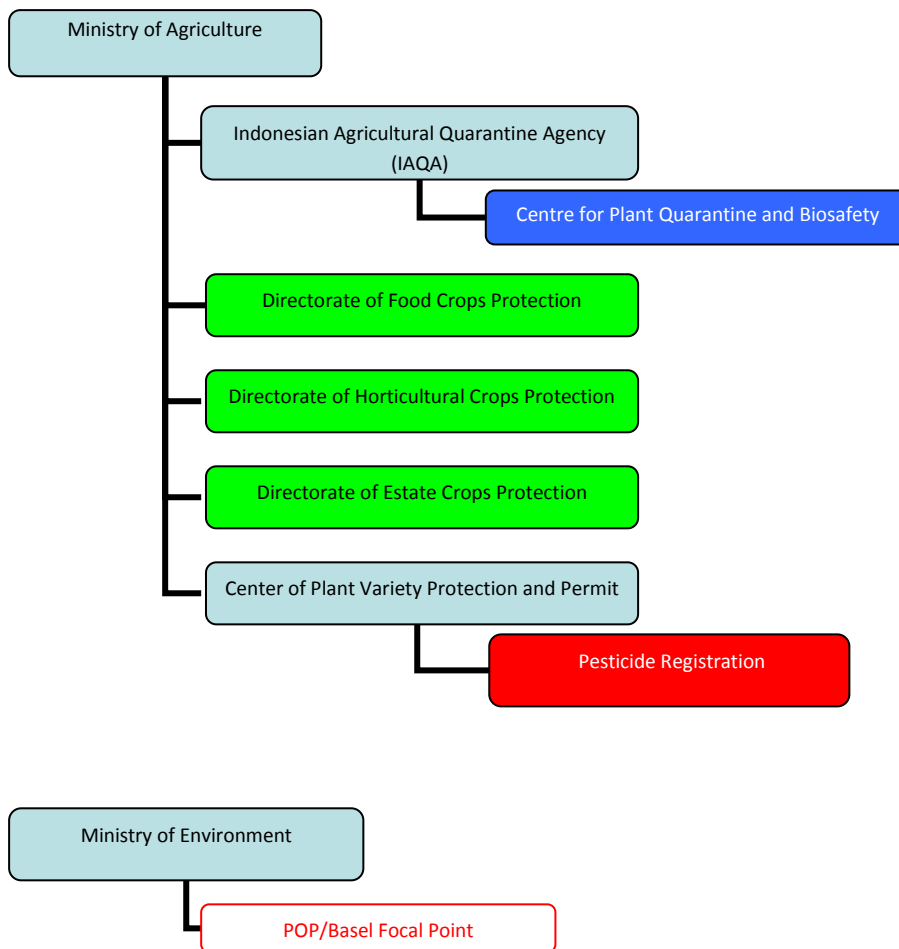
Annex I – 2

List of key legislation/regulations/rules

- 1992 Law No. 12 of 1992 concerning Crop Cultivation System
- 1999 Law No. 22 of 1999 concerning Autonomy
- 2000 Law No. 25 of 2000 concerning Conduct of Autonomy
- 2000 Law No. 29 of 2000 concerning Plant Variety Protection
- 2004 Law No. 18 of 2004 concerning Estate Crops
- 2010 Law No. 13 of 2010 concerning Horticulture: friendly environment pest management
- 2014 Law No. 39 of 2014 concerning Plantation
- 2011 The Decree of President of the Republic of Indonesia No. 5 of 2011 concerning The Achievement of National Rice Production in Relation with Extreme Climate Condition
- 1995 Government Regulation of the Republic of Indonesia No.6 of 1995 concerning Plant Protection
- 1995 Government Regulation of the Republic of Indonesia No.44 of 1995 concerning Seed Propagation Material
- 1999 Government Regulation of the Republic of Indonesia No.25 of 1999 concerning Decentralization
- 2006 Government Regulation of the Republic of Indonesia No.39 of 2006 concerning Production, Certification and Distribution of recommended seed
- 2010 Government Regulation of the Republic of Indonesia No.18 of 2010 concerning Agriculture Practices
- 1997 The Decree of the Ministry of Agriculture No. 887 of 1997 concerning Guideline of Pest Control
- 2004 The Decree of the Ministry of Agriculture No. 46 of 2004 concerning Plant Protection Commission
- 2012 The Decree of the Ministry of Agriculture No. 12a/PP.510/C.5/03/09/2012 concerning Standard Operating of Pest and Disease Observation Laboratory
- 2012 The Decree of the Ministry of Agriculture No. 13 of 2012 concerning Horticulture
- 2012 The Decree of the Director of Food Crop Protection No. 52/HK.310/C/8/2012 concerning Guidelines for Observation and Reporting of Food Crops Pests and Diseases

Annex I - 3

Plant protection organisation chart



Color Code:

Phytosanitation	Outbreak	Pest Management	Pesticides	NPP0
-----------------	----------	-----------------	------------	------

Annex I – 4

Infrastructure	Years: 2014
Number of laboratories for estate crops	3
Number of laboratories for horticulture	2
Number of laboratories for food crops	3
Number of crops protection laboratories at the local government	33

Pest-free areas according to ISPM 10	Responsible organizational unit (ministry/department/unit)
Overall management	Directorate of Plant Protections of related DG/IAQA
- surveillance	Directorate of Plant Protections of related DGs/ IAQA
- management	Directorate of Plant Protections of related DGs
- certification	Centre for Plant Quarantine and Biosafety
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	-

Annex I – 5

Key situation indicators

International trade		Years: 2014
Main import plant commodities	Main countries/areas of origin	Quantity (kg)
Wheat	Turki, Australia, India, Moldova, Sri Lanka, China, Netherland, Netherland Antiles, Singapur, Perancis, Polandia, Jerman, Belgia, Jepang, Filipina, Malaysia, Denmark, Ukraina, Vietnam, Korea Selatan, Latvia, Thailand, USA, dan Saudi Arabia	6.632.571.540,14
Soybean	USA, Kanada, Argentina, Uruguay, India, China, Malaysia, etiopia, Ukraina, Brazil, Uni emirat arab, Australia, Denmark, singapura, Belgia, Jepang, Hongkong, dan UK	3.545.100.400,36
Corn	Brazil, India, Argentina, USA, Paraguay, Uruguay, Thailand, Malaysia, Singapura, China, Korea Selatan, Taiwan, Jepang, dan Polandia	2.288.655.300,69
Main Export Plant Commodities	Main destination countries	
RBD palm stearin	South Afrika, Vietnam, Cina	6.604.833.572
Vegetable oil	Nigeria, China, Thailand, Gabon	2.235.207.533,91
Palm kernel oil	Filipina, China, Ghana	808.088.625,96

Cooperation projects			
Title (Purpose/target)	Donor	Amount	Years (start-end)
Join Surveillance	ACIAR	A\$ 124 000	2004-2008
Fruitfly Management Control	ACIAR		2004-2009
Post Harvest Technology on desinfection of fruitfly using Vapour Heat Treatment	JICA		2009-2013
Technical Assistance IAS	FAO		2010-2011
Area Wide Management of pest fruit fly on Mango	ACIAR		2010-2015
Integrated Pest Management for banana wilt	ACIAR		2010-2014
Microscope Diagnostic System	ACIAR		2011
Title of government follow-up programmes		Amount	Years (start-end)

Annex I – 6

No information

Annex I – 7

No information

Important contact addresses

Responsible ministry/ministries:

Ministry of Agriculture, Indonesia Centre for Plant Quarantine and Biosafety as Focal Point of NPPO Indonesia

Dr. Antarjo Dikin, Director

Indonesian Agricultural Quarantine Agency (IAQA)
Ministry of Agriculture
Jl. Harsono RM No. 3 Ragunan, E Building (5th floor)
Pasar Minggu, Jakarta Selatan, 12550, Indonesia
Tel: (+62) 21 7816482
Fax: (+62) 21 7816482
Email: kt.benih@gmail.com; antarjo.dikin@yahoo.com
Websites: www.karantina.deptan.go.id
www.deptan.go.id/karantina/english/plant.htm

Responsible department:

Plant Protection

1. Directorate of Food Crop Protection

Dr. Dwi Iswari, Director

Jl. AUP Pasar Minggu, PO. Box. 7236/Jks
Pasar Minggu, Jakarta, 12520, Indonesia
Tel: (+62) 21 7806213
Fax: (+62) 21 7805652
Email : ditlin-ptp@deptan.go.id

2. Directorate of Estate Crops Protection

Mr. Dudi Gunadi, Director

Ministry of Agriculture
Jl. Harsono RM No. 3 Ragunan, C Building
Pasar Minggu, Jakarta Selatan, 12550, Indonesia
Tel: (+62) 21 7815684
Fax: (+62) 21 7815684
E-mail : ipopt_tanhun@yahoo.com

3. Directorate of Horticulture Crop Protection

Mr. Soesilo, Director

Jl. AUP Pasar Minggu, PO. Box. 7228/Jks
Pasar Minggu, Jakarta, 12520, Indonesia
Tel: (+62) 21 7819117
Fax: (+62) 21 78845628
Email : ditlinhor@deptan.go.id

Plant Quarantine

Centre for Plant Quarantine and Biosafety as Focal Point of NPPO Indonesia

Dr. Antarjo Dikin, Director

Indonesian Agricultural Quarantine Agency (IAQA)
Ministry of Agriculture
Jl. Harsono RM No. 3 Ragunan, E Building (5th floor)
Pasar Minggu, Jakarta Selatan, 12550, Indonesia
Tel: (+62) 21 7816482
Fax: (+62) 21 7816482
Email: kt.benih@gmail.com; antarjo.dikin@yahoo.com
Websites: www.karantina.deptan.go.id
www.deptan.go.id/karantina/english/plant.htm

Surveillance, pest outbreaks and invasive species management

-

Pesticide Registration

Directorate of Fertilizer and Pesticides

Dr. Muhrizal Sarwani, Director

Ministry of Agriculture
Jl. Harsono RM No. 3 Ragunan, D Building (9th floor)
Pasar Minggu, Jakarta Selatan, 12550, Indonesia
Tel: (+62) 21 7890043
Fax: (+62) 21 7890043

Official international contact points

National Plant Protection Organization (NPPO) contact point (for IPPC/APPPC)

Dr. Antarjo Dikin, Director

Centre for Plant Quarantine and Biosafety as Focal Point of NPPO Indonesia
Indonesian Agricultural Quarantine Agency (IAQA)
Ministry of Agriculture
Jl. Harsono RM No. 3 Ragunan, E Building (5th floor)
Pasar Minggu, Jakarta Selatan, 12550, Indonesia
Tel: (+62) 21 7816482
Fax: (+62) 21 7816482
Email: kt.benih@gmail.com; antarjo.dikin@yahoo.com
Websites: www.karantina.deptan.go.id
www.deptan.go.id/karantina/english/plant.htm
Language(s): English

WTO – SPS contact point:

Dr. Sophia Setyawati, Head of Division Manager of Quarantine Cooperation

Center for Compliance, Information and Quarantine Cooperation
Indonesian Agricultural Quarantine Agency (IAQA)
Ministry of Agriculture
Jl. Harsono RM No. 3 Ragunan, E Building (3th floor)
Pasar Minggu, Jakarta Selatan, 12550, Indonesia
Tel: (+62) 21 781 6480
Fax: (+62) 21 781 6481/781 6483
Email: caqsps@indo.net.id
Website: http://karantina.deptan.go.id/

Rotterdam Convention (PIC) DNA Pesticides
Pesticide Committee

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

Email: haruki@indo.net.id

Basel Convention Competent Authority (CA) and focal point office

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

Email: db3@menlh.go.id

Selected country statistics:

Last updated: December 2014

Agricultural Population: 93.0 million (year 2008)		Agricultural Land: 48.9 million ha	
GDP: US\$ 807 000 million	Agric. GDP: 17.3 %	GNI per capita: US\$ 11 135	Undernourishment: 11.7 %
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;

Additional issues of interest

Section II: Plant quarantine

Annex II – 1

II. Plant quarantine

Last updated: December 2014

Executive summary

Indonesian Agricultural Quarantine Agency (IAQA) under Ministry of Agriculture (MoA), has been appointed as focal point of the National Plant Protection Organization (NPPO) under the Decree of Minister Agriculture Number 264 of 2006. The IAQA has three main sub-bodies namely Center for Plant Quarantine and Biosafety, Center for Animal Quarantine and Biosafety, and Center for Compliance, Information and Quarantine Cooperation.

During the last three years (2011 – 2014), a number of regulations regarding plant quarantine for import, export and domestic have been stipulated. The implementation of all regulations is supported by about 3000 quarantine officers which is spread across 51 Agricultural Quarantine Services in all over Indonesia. For strengthening the implementation of main tasks of IAQA, specifically in detection and identification of quarantine pests, IAQA is supported by National Standard Testing Laboratory of Agricultural Quarantine. Moreover, IAQA also has an Applied Research Institute of Agricultural Quarantine for developing techniques and methods for quarantine treatments.

While Indonesia is a major export destination for various agricultural commodities, it also has a megabiodiversity which has to be protected and preserved against harmful pests. Determination of phytosanitary measures for importation of agricultural commodities is based on Pest Risk Analysis (PRA). Until now, IAQA has produced 174 documents of PRA.

Indonesia has been strengthening its quarantine inspection at entry points to prevent the introduction of pests that potentially threaten biodiversity of Indonesia. In 2014, inspection for import products has reached 96.978 times and emergency phytosanitary treatments on import products were 1.370 times. The current policy taken by IAQA for import is more emphasis on pre-clearance program as one of options for risk management. However, a number of quarantine pests were intercepted through quarantine inspections on imported consignments, such as *Burkholderia glumae*, *Pantoea stewartii*, *Pseudomonas syringae* pv. *syringae*, *Pseudomonas viridiflava*, *Clavibacter michiganensis* subsp. *michiganensis*, *Helminthosporium solani*, *Erwinia chrysanthemi*, *Tilletia laevis*, *Tilletia indica*, *Aphelenchoides fragariae*, *Ditylenchus destructor*, *Ditylenchus dipsaci*, *Globodera rostochiensis*, *Pratylenchus vulnus*, *Sphacelotheca reiliana*, *Urocystis agropyri*, *Stenocarpella macrospora*, *Peronospora manshurica*, *Trogoderma granarium* and Raspberry ringspot nepovirus (RpRSV).

Regarding export, IAQA has issued 122.255 documents of phytosanitary certificates during 2014. IAQA still received 20 notifications of non-compliance from trading partners which always promptly followed by corrective actions to avoid non-compliance in the future. IAQA has developed phytosanitary certification system based on management risk at production site, at processing unit until to the end of product prior export.

Pest surveillance is regularly conducted by IAQA to monitor new establishment of pests as well as to evaluate the status of quarantine pests in collaboration with other NPPO members. Every two years, the status of pests is evaluated among the NPPO members. Eradication of pest outbreaks was also conducted in collaboration with other NPPO members and local governments.

Plant quarantine regulations are very dynamic matters supported by technical procedures that comply with ISPM. ISPM had been fully, mostly, partially, and none implemented by IAQA were 17%, 42%, 19%, and 22% respectively.

Regarding new regulations, in 2013-2015, Indonesia stipulated MoA's Regulation Number 73 of 2013 regarding *Requirements and Guidelines for Quarantine Installation Establishment for Private*, MoA's Regulation Number 44 of 2014 regarding *The Entry and Exit Point of Pathway of Quarantine Animal Disease and Pathway of Quarantine Pest*, MoA's Regulation Number 38 of 2014 regarding *Implementation of Plant Quarantine Measures Outside the Entry and Exit Point*, and MoA's Regulation Number 04 of 2015 regarding *Food Safety Control for Importation and Exportation of Fresh Food of Plant Origin (FFPO)*.

Related to food safety regulation, MoA's Regulation Number 04 of 2015 will be fully implemented and supersedes MoA's Regulation Number 88 of 2011 on 17 February 2016. Starting from the date of enactment (17 February 2016), the exporting countries that have not been granted for recognition of its food safety control system or registration of its food safety testing laboratory will not be permitted to export their FFPO to Indonesia. Therefore, in order to avoid any disturbance on food trade, IAQA encourages the APPPC Member countries to promptly submit their application for recognition of its food safety control system or registration of food safety testing laboratory.

Annex II - 2

List of key legislation/regulations/rules

- 1984 Decree of the Minister of Agriculture No. 796/Kpts/TP.830/10/1984 concerning Importation of Plants Used as Packing into the Territory of the Republic of Indonesia.
- 1984 Decree of the Minister of Agriculture No. 797/Kpts/TP.830/10/1984 concerning Importation of Plant Growing Media into the Territory of the Republic of Indonesia.
- 1985 Decree of the Minister of Agriculture No. 559/Kpts/KB.630/8/1985 concerning Plant Quarantine Requirements for the Importation of Plant Propagating Materials of Coconut, Oil Palm, Cocoa, Rubber, Coffee, Tea, Sugarcane, and Tobacco.
- 1989 Decree of the Minister of Agriculture No. 799/Kpts/LB.710/10/1989 concerning Eradication for Khapra Beetle (*Trogoderma granarium* Everts).
- 1989 Decree of the Minister of Agriculture No. 861/Kpts/LB.720/12/1989 concerning Prevention on the Introduction into the Territory of the Republic of Indonesia of South American Leaf Blight of Hevea.
- 1992 Law No. 16 of 1992 concerning Animal, Fish, and Plant Quarantine.
- 1995 Decree of the Minister of Agriculture No. 411/Kpts/TP.120/6/1995 concerning Importation of Biological Agents into the Territory of the Republic of Indonesia .
- 1995 Decree of the Minister of Agriculture No. 412/Kpts/KP.150/6/1995 concerning Formation of Biological Agent Commission.
- 2002 Government Regulation of the Republic Indonesia No. 14 of 2002 concerning Plant Quarantine.
- 2006 Regulation of the Minister of Agriculture No. 271/Kpts/HK.310/4/2006 concerning requirements and guidelines for the Implementation of Plant Quarantine action by Third Party.
- 2009 Regulation of the Minister of Agriculture No. 09/Permentan/OT.140/2009 concerning Requirement and Procedure of Plant Quarantine Measures for the Importation of Plant Quarantine Pest Carrier into the Territory of the Republic of Indonesia.
- 2009 Regulation of the Minister of Agriculture No. 12/Permentan/OT.140/2/2009 concerning Requirement and Procedure of Plant Quarantine Measures for the Importation of Wood Packaging Material into the Territory of the Republic of Indonesia.
- 2011 Regulation of the Minister of Agriculture No. 88/Permentan/PP.340/12/2011 concerning Food Safety Control over the Import and Export of Fresh Food of Plant Origin.
- 2011 Regulation of the Minister of Agriculture No. 93/Permentan/OT.140/12/2011 concerning List of Quarantine Pest.
- 2011 Decree of the Minister of Agriculture No.94/Permentan/OT.140/12/2011 concerning Entry Exit Point of Quarantine Pest.
- 2012 Regulation of the Minister of Agriculture No. 42/Permentan/OT.140/6/2012 concerning Plant Quarantine Measures for Importation of Fresh Fruits and Fresh Fruits Vegetables into the Territory of the Republic of Indonesia.
- 2012 Regulation of the Minister of Agriculture No. 43/Permentan/OT.140/6/2012 concerning Plant Quarantine Measures for the Importation of Fresh Bulb Vegetables into the Territory of the Republic of Indonesia.
- 2013 Regulation of the Minister of Agriculture No. 73/Permentan/HK.060/2/2013 concerning Requirements and Guideline for Quarantine Installation Establishment for Private.
- 2014 Regulation of the Minister of Agriculture No. 44/Permentan/OT.140/3/2014 Concerning Revised of The Decree of Ministry of Agriculture No.94/Permentan/OT.140/12/2011 Concerning Entry Exit Point of Quarantine Pest.
- 2014 Regulation of the Minister of Agriculture No. 38/Permentan/OT.140/3/2014 Concerning Implementation of Plant Quarantine Measures Outside the Entry and Exit Point.
- 2015 Regulation of Minister of Agriculture No. 04/Permentan/PP.340/2/2015 regarding Food Safety Control for Importation and Exportation of Fesh Food Plant Origin (FFPO).

Web sources for further information:

www.deptan.go.id and www.karantina.deptan.go.id

Annex II – 3

Policies regarding plant quarantine	Yes	No	Don't know
Does phytosanitary legislation cover domestic quarantine?	x		
Does phytosanitary legislation cover import quarantine?	x		
Does phytosanitary legislation cover export quarantine?	x		
Does phytosanitary legislation cover living modified organisms?	x		
Is plant quarantine a separate organization from animal quarantine?		x	
Other policy initiatives (under review/progress) Importation of plant propagation materials as high ALOP, the quarantine measures may conduct in the exporting country need strong control by NPPO of Indonesia such as pest free area/sites and pre-shipment inspection			
Web source for further information: www.karantina.deptan.go.id/			

Organization of plant quarantine functions	Responsible organizational unit (ministry/department/unit)
Pest Risk Analysis	Center for Plant Quarantine and Biosafety
National standards development	MOA/IAQA/ Centre for Plant Quarantine and Biosafety
International notifications	MOA/Agency for Agricultural Quarantine and Biosafety
<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 and Biosafety
Emergency action	Centre for Plant Quarantine and Biosafety, Directorate of Horticulture Crop Protection, Directorate of Food Crop Protection, Directorate of Estate Crop Protection and Local Government
<i>Export:</i>	
Phytosanitary certificates	MOA/IAQA/ Centre for Plant Quarantine and Biosafety
Treatment of commodities	Center for Plant Quarantine and Biosafety, Plant Protection

Annex II – 4

Infrastructure	Years: 2014
Number of plant quarantine officers authorized to inspect/certify	1.038
Total qualified personnel for plant pest risk analysis	>50
Number of quarantine offices	52
entry points (sea/air/land/mail = total)	704
post-entry plant quarantine containment facilities	50
other offices	0
Number of quarantine service diagnosis laboratories	52
In-country recognized pest diagnostics capabilities (incl. universities, etc.)	
Number of laboratories for insect/mite (arthropod) samples	51
Number of laboratories for bacteria samples	20
Number of laboratories for virus samples	20
Number of laboratories for fungus samples	51
Number of laboratories for mycoplasma samples	6
Number of laboratories for nematode samples	51
Number of laboratories for plant/weed samples	51
Number of laboratories for other pests (snail, slug, rodents, etc.)	51

Pest-free areas according to ISPM 10	Responsible organizational unit (ministry/department/unit)
Overall management	Directorate of Plant Protections of related DG/IAQA
- surveillance	Directorate of Plant Protections of related DGs/ IAQA
- management	Directorate of Plant Protections of related DGs
- certification	Centre for Plant Quarantine and Biosafety
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	-

Annex II – 5

Key situation indicators

International trade		Years: 2014
Main import plant commodities	Main countries/areas of origin	Quantity (kg)
Wheat	Turki, Australia, India, Moldova, Sri Lanka, China, Netherland, Netherland Antiles, Singapur, Perancis, Polandia, Jerman, Belgia, Jepang, Filipina, Malaysia, Denmark, Ukraina, Vietnam, Korea Selatan, Latvia, Thailand, USA, dan Saudi Arabia	6.632.571.540,14
Soybean	USA, Kanada, Argentina, Uruguay, India, China, Malaysia, etiofia, Ukraina, Brazil, Uni emirat arab, Australia, Denmark, Singapura, Belgia, Jepang, Hongkong, dan UK	3.545.100.400,36
Corn	Brazil, India, Argentina, USA, Paraguay, Uruguay, Thailand, Malaysia, Singapura, China, Korea Selatan, Taiwan, Jepang, dan Polandia	2.288.655.300,69
Main Export Plant Commodities	Main destination countries	
RBD palm stearin	South Afrika, Vietnam, Cina	6.604.833.572
Vegetable oil	Nigeria, China, Thailand, Gabon	2.235.207.533,91
Palm kernel oil	Filipina, China, Ghana	808.088.625,96

Cooperation projects			
Title (Purpose/target)	Donor	Amount	Years (start-end)
Join Surveillance	ACIAR	A\$ 124 000	2004-2008
Management Fruitfly	ACIAR		2010
Vapour Heat Treatment	JICA		2009-2012
Technical Assistance IAS	FAO		2010-2011
Microscope Diagnostic System	ACIAR		2011
Title of government follow-up programmes		Amount	Years (start-end)

Annex II – 6

Key operation indicators

Institutional functions	Years: 2014
Number of import permits issued	486
Number of import inspections carried out	96.978
Number of emergency phytosanitary treatments taken on imports	1.370
Number notifications of non-compliance	20
Number of conventional phytosanitary certificates issued	122.255
Number of electronic phytosanitary certificates issued	0

Number of quarantine pests intercepted		Years: 2014
Top three commodity	Top three pest/commodity	# of interceptions
Corn seed	<i>Pseudomonas syringae</i> pv <i>syringae</i>	
Wheat	<i>Tilletia laevis</i>	
Dendrobium Seedling	<i>Erwinia chrysanthemi</i>	

List of regulated pests	Year of last update	Insects	Pathogens	Weeds
Number of quarantine pests	2011	299	403	41
Number of regulated non-quarantine pests	-	-	-	-
Number of regulated import articles	2010	6		
Website for the above information: www.karantina.deptan.go.id				

Pest risk analysis (PRA)	Insects	Pathogens	Plants
Number of PRA completed and documented (according to ISPM)			174
Web source for further information: www.karantina.deptan.go.id			

Annex II – 7

Progress and constraints

Main progress in recent years (legislation, policies, infrastructure, investments, training, etc.)

In 2013-2014 IAQA has successfully issued 4 new Decrees of the Minister of Agriculture concerning on plant quarantine. Another activity was Training in PQ which produced about 360 PQ inspectors. While PQ infrastructures funded by Government was designed to fulfill the needs of PQ stations throughout the country.

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

- The main constraint is the recruitment of PQ officers as the Government allowed the recruitment for only limited amount of personnel per year
- 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 inspectors

Annex II – 8

Implementation of ISPMs	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	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				
ISPM 05 Glossary of phytosanitary terms			X			X		
ISPM 06 Guidelines for surveillance			X			X		
ISPM 07 Phytosanitary 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 Phytosanitary certificates			X				X	2006
ISPM 13 Guidelines for the notification of non-compliance and emergency action			X			X		
ISPM 14 The use of integrated measures in a systems approach for pest risk management		X			X			
ISPM 15 Guidelines for regulating wood packaging material in international trade			X			X		
ISPM 16 Regulated non-quarantine pests: concept and application		X		X				
ISPM 17 Pest reporting			X			X		
ISPM 18 Guidelines for the use of irradiation as a phytosanitary measure		X			X			
ISPM 19 Guidelines on lists of regulated pests			X			X		
ISPM 20 Guidelines for a phytosanitary import regulatory system			X				X	
ISPM 21 Pest risk analysis for regulated non-quarantine pests		X		X				
ISPM 22 Requirements for the establishment of areas of low pest prevalence			X	X				
ISPM 23 Guidelines for inspection			X			X		
ISPM 24 Guidelines for the determination and recognition of equivalence of phytosanitary measures		X			X			
ISPM 25 Consignments in transit		X				X		
ISPM 26 Establishment of pest free areas for fruit flies (Tephritidae)			X	X				

ISPM 27	Diagnostic protocols for regulated pests			X			X		
ISPM 28	Phytosanitary treatments for regulated pests			X			X		
ISPM 29	Recognition of pest free areas and areas of low pest prevalence			X		X			
ISPM 30	Establishment of areas of low pest prevalence for fruit flies (Tephritidae)			X	X				
ISPM 31	Methodologies for sampling of consignments			X			X		
ISPM 32	Categorization of commodities according to their pest risk			X				X	2015
ISPM 33	Pest free potato (<i>Solanum</i> spp.) micropropagative material and minitubers for international trade			X	X				
ISPM 34	Design and operation of post-entry quarantine stations for plants			X			X		
ISPM 35	Systems approach for pest risk management of fruit flies (Tephritidae)			X		X			
ISPM 36	Integrated measures for plants for planting			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.									

Section III: Pest surveillance and pest outbreaks

Annex III – 1

III. Surveillance, pest outbreaks and invasive species management

Last updated: December 2014

Executive summary

Pest surveillance regularly conducted to monitor and evaluate the status of pests under-collaboration with the NPPO members. Eradication of pest outbreaks was also conducted under collaboration with the NPPO members and local governments.

Pest surveillance on food crops conducted by pest observer and technical staff in Pest and Disease Observation Laboratory and Food Crop Protection Centre, National Pest Forecasting Centre, and Directorate of Food Crop Protection. Implementation of surveillances referred to Decree of The Director of Food Crop Protection No.52 of 2012 on Guidelines for Observation and Reporting of Food Crop Pests and Diseases and Decree of The Director of Food Crop Protection No.12a of 2012 on Operating Standard of Pest and Disease Laboratory. Surveillances on food crops have not referred ISPM 6 yet.

There were several constraints in order to achieve crop production target namely climate change particularly drought session and pests infestation. Major pests attacked rice crop were: rice stem borer, brown plant-hopper, rat, leaf blast, bacterial leaf blight, and tungro.

The major pest attacked estate crops such as palm, rubber, cocoa and coffee caused decline. The production target of oil palm and sugar cane were not fully increased during the last 2 years (2013-2014). It was caused by surveillance program and management of pest had not been carried out intensively, limited of human resources and the impact of climate change.

Annex III – 2

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

- 1992 Law No. 12 of 1992 concerning Crop Cultivation System
- 2000 Law No. 29 of 2000 concerning Plant Variety Protection
- 2004 Law No. 18 of 2004 concerning Estate Crops
- 2010 Law No. 13 of 2010 concerning Horticulture: friendly environment pest management
- 1995 Government Regulation of the Republic of Indonesia No.6 of 1995 concerning Plant Protection
- 2002 Government Regulation No. 14 of 2002 Concerning Plant Quarantine
- 1997 The Decree of the Ministry of Agriculture No. 887 of 1997 concerning Guideline of Pest Control
- 2012 The Decree of the Director of Food Crop Protection No. 52/HK.310/C/8/2012 concerning Guidelines for Observation and Reporting of Food Crops Pests and Diseases

Web source for further information: www.deptan.go.id

Annex III – 3

Policies regarding invasive/migratory species management	Yes	No	Don't know
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: ditlin-ptp@deptan.go.id			

Organization of functions related to surveillance pest outbreaks and invasive species management	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. <i>Locusta migratoria</i>)
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/IAQA
Control/eradication	Related Directorate of Plant Protection/ IAQA
Reporting to bilateral or international organizations	NPPO/Centre for Plant Quarantine and Biosafety

Annex III – 4

Infrastructure	Years: 2014
Number of designated staff for surveillance of field pests of national importance	>5.000
Number of designated staff for surveillance of migratory and periodically occurring pests	>3.000
Number of designated staff for surveillance of invasive species	< 500
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	< 500
Number of observer pest and disease	961 person

Annex III – 5

Key situation indicators

Pest outbreaks actions	Outbreaks 1	Outbreaks 2	Outbreaks 3
Name of species	<i>Aceria guereronis</i>	<i>Phytophthora palmivora</i>	<i>Bactocera</i> sp.
Year of outbreaks	2012	2015	2015
Area affected [ha]	-	309.50	1.429,30
Estimated damage \$	-		-
Area treated by government [ha]	752	309.50	200
Expenditures by government [\$]	\$ 47.769	\$ 50.496	\$ 19.828
Control method	Observation, monitoring and surveillance	Observation,	Observation, monitoring and surveillance
More information	-	-	-

New exotic species found established in the country	Insects	Pathogens	Weeds
Total number for 2013 [most recent]	-	-	-
Total number for 2012 [year before]	-	1	-
Total number on record:	-	1	-

Annex III – 6

Key operation indicators

Pest outbreak actions	Outbreak 1	Outbreak 2	Outbreak 3
Name of species	<i>Stem borer</i>	<i>BLB</i>	<i>BPH</i>
Year of outbreak	2012	2013	2013/2014
Area affected [ha]	148.964	78.644	64.408/39.069
Estimated damage \$	Not estimated	Not estimated	Not estimated
Area treated by government [ha]	164.245	82.636	171.119/88.606
Expenditures by government [\$]	Not estimated	Not estimated	Not estimated
Control method	Biological and chemical control	Biological and chemical control	Biological and chemical control
More information	DG of Food Crop/Directorate of Food Crop Protection	DG of Food Crop/Directorate of Food Crop Protection	DG of Food Crop/Directorate of Food Crop Protection

Annex III – 7

Progress and constraints

Main progress in recent years (legislation, policies, infrastructure, investments, training, etc.)

Policies : To stop the increasing of the sources of pest or disease as soon as possible based on pre-emptive and responsive strategy

Infrastruktur/Equipment :

- Development of biological control laboratories
- Renovation of Crop Protection Brigade buildings
- Provision of Crop Protection Brigade Cars (equipped by control equipment) for controlling pest and disease attacks effectively

Coordination : The current progress in controlling pest outbreak is the cooperation between central government (NPPO) and local government authority

Training : Training for farmer observer, Training of Trainer for Field Leaders, Training for Technical Field Officer of Crop Protection Brigade, Training of Pest Observation, Forecasting and Controlling.

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

- Lack of Pest Observer
- Lack of Pest and Disease Observation Laboratory Facilities

Annex III – 8

No information

Section IV: Pest management

Annex IV – 1

IV. Pest management

Last updated: December 2014

Executive summary

Since 1989, Indonesia has been implementing and developing Integrated Pest Management (IPM) training for workers and farmers in groups through the IPM National Program (*Pronas PHT*). This IPM training is later called IPM Farmer Field School (IPM-FFS). Integrated Pest Management FFS is one method to empowering and encouraging farmers to implement IPM and make the self-reliance farmers on decision-making in their farm. IPM programs are essentially based on agro-ecosystem management and four principles mentioned above.

To achieve farmer's empowerment target, IPM-FFS shall be implemented using previously defined standards, principles, fundamentals, procedures, and methods. Fundamentals of IPM-FFS are: (i) The fields as primary learning tools; (ii) Learning through experiences; (iii) Assessment of agro-ecosystem; (iv) Practical and efficient methods and materials; (v) Adaptable curriculum based on the skills needed. IPM-FFS is a participatory educational method for farmers using andragogy approach. Andragogy is the most appropriate method that allows farmers to learn from experience. Facilitators are needed to guide the learning process. IPM FFS/"SLPHT" goals are to increase knowledge, skills and expertise of farmers /farmer groups in analyzing the data and agro-ecosystem information, as well as to disseminate and institutionalize the implementation of IPM.

This IPM National Program was held until the year 2000. In the period of 2000-2006, the implementations of IPM FFS through state funds are limited. However, since 2007 the program was re-built through state funds (APBN) and proclaimed as the year of IPM revitalization. By the end of 2013 the number of IPM FFS units were carried out in provinces amounted to 7,545 units. In 2014, IPM FFS program will be implemented in 885 units of rice, 3 units of maize and 52 units of soybean in 33 provinces.

Farmers who had followed IPM-FFS hold a very important role in achieving sustainability of IPM implementation. Their empowerment can establish variety of components that support the successful of IPM application, including pest and disease observer farmers, Farmer Leader, Pest Control Team / RPH and the Farmer Unit of Biological Agents Services (PPAH).

Farmer Unit of Biological Agents Services (PPAH) consists of several farmers of IPM FFS alumnae that develop biological agents, botanical pesticides, or organic fertilizer in order to control the pests. In general, Farmer Unit of Biological Agents Services aims to socializing and encouraging the implementation of IPM.

Some of biological agents and bio pesticides have been developed by the Farmer Unit of Biological Agents Services (PPAH). Biological agents that have developed in PPAH are among other: *Trichoderma* sp, *Metarhizium* spp, *Beauveria* spp, *Pseudomonas fluorescens*, now *Paeni bacillus polymixus* (previous *Corynebacterium* spp), *Gliocladium* spp, red bacteria, *Nomuraea* spp, parasitoid *Trichogramma* sp, *Spodoptera litura* Nuclear Polyhidrosis virus (SINPV) . Botanical pesticides that are developed among others: leaves and seeds of neem (mimba), lemongrass, bitter, brotowali, pepaitan, garlic, jeringau, galangal, soursop, Sugar-apple. Organic fertilizers developed such as organic fertilizer Trichokompos, liquid and solid organic fertilizer, and bokashi.

The role of institutional and network of IPM farmers are expected to be stronger. Support from pest and disease observer officers, community leaders, relevant stake holder, and community service units is expected to encourage establishment of IPM District ("Kecamatan PHT"). IPM District is a

region/area that the farmers have implemented the principles of IPM to reach sustainability and self-sufficiency in farming.

Annex IV – 2

List of key legislation/regulations/rules for pest management

- 1992 Law No. 12 of 1992 concerning Crop Cultivation System
- 1992 Law No. 16 of 1992 concerning Animal, Fish and Plant Quarantine
- 2000 Law No. 25 of 2000 concerning Conduct of Autonomy
- 2000 Law No. 29 of 2000 concerning Plant Variety Protection
- 2004 Law No. 18 of 2004 concerning Estate Crops
- 2010 Law No. 13 of 2010 concerning Horticulture Crops: friendly environment pest management
- 2014 Law No. 39 of 2014 concerning Plantation
- 1995 Government Regulation of the Republic of Indonesia No.6 of 1995 concerning Plant Protection
- 1999 Government Regulation of the Republic of Indonesia No.25 of 1999 concerning Decentralization
- 2002 Government Regulation of the Republic of Indonesia No.14 of 2002 concerning Plant Quarantine
- 2011 The Decree of President of Republic of Indonesia No. 5 of 2011 concerning The Achivement of National Production in Relation with Extreme Climate Condition
- 1997 The Decree of the Ministry of Agriculture No. 887 of 1997 concerning Guideline of Pest Control
- 2004 The Decree of the Ministry of Agriculture No. 46 of 2004 concerning Plant Protection Commission
- 2012 The Decree of the Ministry of Agriculture No. 12a/PP.510/C.5/03/09/2012 concerning Standard Operating of Pest and Disease Observation Laboratory
- 2012 The Decree of the Ministry of Agriculture No. 13 of 2012 cocerning Horticulture
- 2012 The Decree of the Director of Food Crop Protection No. 52/HK.310/C/8/2012 concerning Guidelines for Observation and Reporting of Food Crops Pests and Diseases
- 2012 Guidelines on Rice Pest Surveillance 2011

Annex IV – 3

Policies regarding pest management	Yes	No	Notes
Do you have policies encouraging organic or low-pesticide use production	√		<ul style="list-style-type: none"> - Procedure standard on GAP including IPM implementation, development and implementation of bio-agents - Government regulation No.6/1995 - Agric.Ministerial Decree No.887/Kpts/OT/9/1997
Is IPM specifically mentioned in law or policy documents ?	√		Law No. 12 of 1992 concerning Crop Cultivation System
Do you have official Good Agricultural Practices (GAP) or any other relevant food safety (ecofood, etc) standards for pest management ?	√		<ul style="list-style-type: none"> • GAP guidance and IPM Farmer's Field School (FFS) guidance • Agric.Ministerial Decree No.887/Kpts/OT/9/1997 • Director General Food Crop Degree No.53/HK.310/C/8/2012
Is pest management extension separate from general extension ?	√	√	<ul style="list-style-type: none"> • Yes, technology based implementation by Crop Protection Officers • No, general extension by extension workers • Pest Management Integrated with GAP • Stated in Minister of Agriculture Regulation No. 45/Permentan/OT.140/8/2011. Although pest management extension in general extension should be strengthened
Other policies (subsidies, production inputs, etc): Fertilizer, seed, organic fertilizer subsidies			
Web source for further information : www.deptan.go.id			

Organization of pest management function	Responsible organizational unit (ministry/department/unit)
Policy development	MOA/Directorate of Plant Protection/IAQA
Pest management research	MOA/Agricultural Agency of Research Development (AARD)
Control recommendations	MOA/Directorate of Plant Protection/Province/District
Pest management extension	MOA/Agricultural Agency of Human Resource Development (AAHRD)/Province/District
IPM training	MOA/Directorate of Plant Protection/Province/District
GAP training	MOA/Directorate of Plant Protection/Directorate General of Horticulture/Province/District

Annex IV – 4

Infrastructure	Years: 2014
Number of technical officers for pest management (food crops and horticulture crop)	4.238 persons field technical staff (Pest Observers) and 1,288 persons Temporary Officers
Number of central, regional, provincial or state officers	32 unit Provincial Crop Protection Centre, 87 unit Field Laboratory of Plant Protection and 229 Person, 705 state officers from Directorate of Food Crops Protection
Number of district and village level field officers	4.238 Pest Observers and 1.288 Temporary Officers
Number of field/extension agents for pest management advice	961, 989, and 1.270 field agents respectively for Directorate of Horticulture, Directorate of Estate Crops, and Directorate of Food Crops
Number of field/extension agents trained in IPM-FFS facilitation	858, 914, and 1.270 field agents respectively for Directorate of Horticulture, Directorate of Estate Crops, and Directorate of Food Crops
Number of government biocontrol production/distribution facilities	<ul style="list-style-type: none"> • 500 Farmer’s Group on Biocontrol Agents and 87 Field Laboratory of Biocontrol Agents for Directorate of Horticulture • 4 unit for Directorate of Estate Crops • 1,009 Units of Farmer Unit of Biological Agents Services for Directorate of Food Crops
Number of government biopesticide production/distribution facilities	4 Unit
Number of general extension staff involved in pest management	More than 15,000 person of Field Extension Worker (FEW)
Number of designated plant protection technical officers for extension	<ul style="list-style-type: none"> • At least 3,081 persons of Pest Observers for Directorate of Horticulture • 2.390 for Directorate of Food Crop

Annex IV – 5

Key situation indicators

Pest management	Yes	No	Notes
Does the country have a National IPM programme ? <i>If yes, give Name and Address of IPM Programme</i> Directorate of Food Crop Protection, Directorate of Estate Protection, Directorate of Horticulture Crop Protection	√	-	The Increasing of Crop Production, Productivity, and Quality Program to Achieve Self-Sufficiency and Sustainable Self-Sufficiency DG of Food Crop
Does the country have specific IPM extension programme <i>If yes, in which crops ?</i> In food crops, horticulture crops, and estate crops	√	-	Rice, maize and soybean
Does the country have specific IPM research programme <i>If yes, in which crops ?</i> Agricultural Agency of Research Development (AARD) on food crops, horticulture crops, and estate crops	√	-	Food crops (mainly on rice)
Does the country have specific GAP extension programme <i>If yes, in which crops ?</i> Fruit crops, vegetable and Bio-medicine crops, ornamental crops.		√	
Does the country have specific GAP research programme <i>If yes, in which crops ?</i>		√	

Market shares (estimated value, volume or area under control)	Years: 2014
Size of chemical pest control market	>352.610 ha
Size of biopesticides market	Not reported
Size of biological control agents market	Not reported

Major crops requiring most pesticide applications..... food crop protection	1st	2 nd	3 rd
Affected crop	<ul style="list-style-type: none"> Rice Rubber 	Chilli	Shallot
Names(s) of pest(s)	<ul style="list-style-type: none"> BPH, Stem borer <i>Rigidoporus lignosus</i> 	Antracnose	<ul style="list-style-type: none"> <i>Spodoptera exigua</i> <i>Alternaria porii</i>
Estimated crop loss	<ul style="list-style-type: none"> Not estimated <i>Rigidoporus lignosus</i> 48.896.611 kg 	30% -70% 20%-70%	20 -35 % 20 -60%
Affected area	BPH: 2013: 64,408 2014: 39,069 Stem borer 2013:142,725 2014:51,017 <i>Rigidoporus lignosus</i> : 73.198.52 ha		

Number of pesticide application or amount of pesticide used	BPH: 157,499(year 2013) 69,955(year 2014) Stem borer: 158,216 (year 2013) 33,982 (year 2014) <i>Rigidoporus lignosus</i> : 5	1 lt/ha	
Government action taken	<ul style="list-style-type: none"> • Not reported 		

Annex IV – 6

Key operation indicators

Cooperation projects			
Purpose/target	Donor	Amount	Year (start – end)
- Fruit fly management control	ACIAR		2004 - 2009
- Post harvest technology on desinfestation of fruit fly, VHT used	IJ-EPA		2009 - 2013
Purpose/target of government follow-up programmes		Amount	Year (start – end)
- Wede Area of fruit fly management control	ACIAR		2010 - 2014
- Integrated of Pest Management : banana wilt	ACIAR		2010 - 2014

Pest management extension	Years: 2013
Number of farmers trained in IPM during the year (on horticulture and estate crop)	20,000 and 4850 farmers
Number of IPM-FFS conducted during the year (on horticulture and estate crop)	790 IPM FFS and 194 farmer groups in 24 Province
Number of farmers trained in GAP standard 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 :	
Mango, salacca, banana, cabbage, chilli	
Crops grown organic/pesticide-free :	
Banana, mangosteen, salacca, durian, avocado, ginger	

Annex IV – 7

Progress and constraints

Main progress in recent Years (legislation, policies, infrastructure, investments, training, etc.)

At present, Indonesia has been conducting a number of activities related to fulfillment of SPS/WTO requirements, namely: surveillance for pests of fruit crops (mango, salacca, mangosteen, papaya, lansium, dragon fruit, pineapple, avocado, durian, orchids, raphis, bell peper, ginger.

Pest management measures

- a. Empowering farmers and field observers to develop pest surveillance system intensively.
- b. Provide pest control assistance funded by the government (APBN)
 - 2013, pest management assistance program on coconut, rubber, cocoa, coffee and sugarcane crops in the area of 11.610 ha.
 - 2014, pest management assistance program on coconut, rubber, cocoa, coffee, and sugarcane crop in the area of 14.040 Ha.
- c. Preparing the demonstration plot and demonstration farming to improve farmers skills in pest management program
- d. Empowering and developing Integrated Pest Management (IPM) training for workers and farmers in IPM Farmer Field School (IPM-FFS)
 - As many as 202 farmer groups from 24 provinces and 95 districts have followed the IPM-FFS in 2013
 - As many as 194 farmer groups from 24 provinces and 89 districts have followed the IPM-FFS in 2014
- e. Developing Biological Control Agents (APH) at the field level
- f. Implementation of Minimum Service Standards
- g. Build an Automatic Weather System (AWS) in some provinces such as East Java, Central Java, West Java, Yogyakarta and 4 Technical Unit (BBPPTP Medan, Surabaya, Ambon and BPTP Pontianak) in order to support Early Warning System (EWS)
- h. Anticipate the impact of climate change through mitigation and adaptation.

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

Human resources capabilities of personnel in identifying pests up to species.

Annex IV – 8

No information

Section V: Pesticide management

Annex V – 1

V. Pesticide management

Last updated: December 2014

Executive summary

The use of pesticide in Indonesia shall be registered through the Center for Plant Variety Protection and Permit, the Ministry of Agriculture. There are 3 kinds of permit of pesticide use, including trial permit, temporary permit and permanent permit. Technical requirements for the permit status of pesticide use include the evaluation such as quality assurance, safe for human and environment and effective control for specific pest. Permitted pesticides in Indonesia consist of 3541 pesticides from different trademarks.

Ministry of Agriculture stipulated a new regulation namely MoA's Regulation Number 39/Permentan/SR.330/7/2015 concerning *Registration of Pesticide* in order to increase the effectiveness of the registration and legal certainty in the provision of registration and licences number of pesticides. The regulation also regulates actives ingredients and addictives of pesticides defined as banned pesticides. Through the registration, the amount of formulations for each active ingredient is become limited.

Annex V – 2

List of key legislation/regulations/rules

- 1992 Law No. 12 of 1992 concerning Crop Cultivation System
- 1997 Law No. 23 of 1997 concerning Environment Management
- 1999 Law No. 8 of 1999 concerning Consumer Protection
- 1973 Government Regulation of the Republic of Indonesia No.7 of 1973 concerning Monitoring of Distribution, Storage, and Use of Pesticides
- 1995 Government Regulation of the Republic of Indonesia No.6 of 1995 concerning Plant Protection
- 2015 The Regulation of the Ministry of Agriculture No. 39 of 2015 concerning Pesticide Registration
- 2014 The Regulation of the Ministry of Agriculture No. 107 of 2014 concerning Oversight of Pesticides Enforcement
- 2001 The Decree of the Ministry of Agriculture No. 434.1/Kpts/TP.270/7/2001 of 2001 concerning Pesticide Regulation
- 2002 The Decree of the Ministry of Agriculture No. 517/Kpts/TP.290/9/2002 of 2002 concerning Supervision of storage, use and the distribution of pesticides.
- 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.

Government efforts In Pesticides Management

Standard of Harmonization

1. Prohibited active substances criteria follow standards issued by international institution such as FAO/WHO, US-EPA, etc
2. Pure active substances following FAO regulation
3. Experiment method of quality, efficient, toxicity, and residue follow standards issued by international institution
4. Labelling follow FAO and WHO standards

Web source for further information: www.deptan.go.id

Annex V – 3

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

Organization of pesticide management function	Responsible organizational unit (ministry/department/unit)
Legislation	Ministry of Agriculture, Pesticides Committee
Registration	Ministry of Agriculture, Pesticides Committee
Licensing of shops	-
Licensing of field applicators	Local Institutions based on area
Enforcement/inspections	Department of Inspection in Centre and Local
Testing of pesticide efficacy	Universities, Research Centre, Professional Organization
Development of pesticide use recommendations	Ministry of Agriculture
Safe use training/extension	Company, Government in Centre and Local
Food residue monitoring	Directorate of Plant Protection
Environmental monitoring	Ministry of Environment
Health monitoring	Ministry of Health, Drug and Food Testing
<i>Other Stakeholders:</i>	
Pesticide Industry Association	Crop life Indonesia, Himpunan Masyarakat Pestisida Nasional (HMPN), Masyarakat Produsen Pestisida Rumah Tangga (MP2RT), Bio agro Input Indonesia

Civil Society Organizations (NGO, etc.)	Yayasan Lembaga Konsumen Indonesia (YLKI)
--	---

Ministry of Agriculture Regulation No. 107 Of 2014 on Oversight of Pesticides Enforcement

- Supervisor of pesticide is supervisor of fertilizer and pesticide
- Supervisor of pesticide comes from institution with handling function :
 1. Agriculture
 2. Industry
 3. Trade
 4. Health
 5. Drugs and Food Supervisor
 6. Environment and Forestry
 7. Worker
 8. Ocean and Fishery

Central Supervisor Assignment

Monitoring pesticide including: Quality of active substances and formula

Annex V – 4

Infrastructure	Year: 2013
Number of registration officers	21
Number of enforcement officers	33
Number of department quality control laboratories	-
Number of quality control laboratory personnel	-
Number of department residue analysis laboratories	-
Number of residue laboratory personnel	-

Annex V – 5

Key situation indicators

Pesticide trade: 2010 *	Tons**	US\$ '000 Value**
Imports		
Manufacture		
Export		
Domestic Use/Sales		
Pesticide use profile: 2010	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		

Note : *or 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?		√	
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	Don't know
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	Don't know
Do you have system to collect and safely dispose of used containers and small quantities of left-over pesticides?	x	√	
Do you have an inventory of outdated and obsolete pesticides in the country? (eg. banned and no longer traded, but still in storage)	√		
Do you have illegal trade in pesticides? if yes: what is the estimated amount: _____	√		
Source for more information: -			

Annex V – 6

Key operation indicators

Registration/regulation/monitoring*	Years: 2014	
	a.i.**	Trade names
Number of registered pesticide products	3225	
Number of registered bio-pesticides (Avamectrin, Bt, Neem, etc.)	82	
Number of active ingredient that is prohibited for all pesticides purposes	70	
Number of prohibited for household purposes	1	
Number of prohibited for fishery purposes	1	
Number of prohibited for rice field	31	
Number of restricted-use pesticides/formulations	9	
Number of banned pesticides	30	
Number of additive ingredient restricted for crop management	3	
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	-	

*See attachment

**active ingredient

Pesticides restricted in recent years	
Year	Name of active ingredient or hazardous formulation
2009	6
2011	8

Pesticides banned in recent years	
Year	Name of active ingredient
2009	39
2011	42

Cooperation projects			
Purpose/target	Donor	Amount	Years (start-end)
Purpose/target of government follow-up programs		Amount	Years (start-end)

Annex V – 7

Progress and constraints

Main progress in recent years (legislation, policies, infrastructure, investments, training, etc.)

1. Revision of Legislation in Pesticide Registration
2. Draft of Government Regulation of The Republic Indonesia concerning Pesticide Management

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

Annex V – 8

No information