**REPORT OF THE TWENTY-EIGHTH SESSION OF**

**THE ASIA AND PACIFIC PLANT PROTECTION COMMISSION**

**23-27 September, 2013**

**Jeju Island**

**Republic of Korea**

12.1 Introduction of the outputs of the APPPC working group meeting on planning for the next biennium

12.2 Group discussions and reports on the work plan by the Chairpersons of the Standing Committees on Plant Quarantine, IPM and Pesticide Management

*12.2.1 Standing Committee on Plant Quarantine*

*12.2.2 Standing Committee on IPM*

*12.2.3 Standing Committee on Pesticides*

12.3 Proposal for the work plan by the Secretariat of the APPPC and discussion on the approval of the APPPC work plan (2014-2015)

12.4 Financial report of 2012-2013, and consideration and adoption of the proposed budget for 2014-2015 as well as assessment of country mandatory contributions

13. Date and venue of the 29th Session of the APPPC
14. Any other business
15. Adoption of the report
16. Closing of the Session

# 1. Opening of the session and organizational matters

## 1.1 Attendance

The twenty-eighth session of the Asia and Pacific Plant Protection Commission (APPPC) was held in Cheju Island (Jeju), Republic of Korea, from 23 to 27 September 2013. Sixty-four delegates from 22 contracting Governments, namely, Australia, Bangladesh, Cambodia, China, Fiji, India, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, Nepal, New Zealand, Pakistan, Papua New Guinea, the Philippines, the Republic of Korea, Sri Lanka, Solomon Islands, Thailand, Timor-Leste, Tonga and Viet Nam attended the meeting. Representatives from the IPPC and the Rotterdam Convention Secretariat participated in the Session. Four delegates from Japan and Singapore attended as observers. There were also observers from CABI and the regional IPM Programme. The list of participants is attached as Annex I.

## 1.2 Introductory remarks by the Chairperson of the Local Organizing Committee

On behalf of the Organizing Committee, Mr Chulgoo Kang welcomed all participants to the meeting. He especially welcomed the Vice Minister and thanked him for coming to open the meeting. He wished everybody fruitful discussions, and hoped they would enjoy the beautiful autumn season in Jeju

## 1.3 Opening remarks by the Chairperson of the 27th session of APPPC

The opening remarks by the outgoing Chairperson of the 27th session of the APPPC, Mr Clario Barron, were delivered by Ms Merle Palacpac. On behalf of the Government of the Philippines, she expressed her gratitude to the Government of the Republic of Korea and the FAO for their contributions and efforts in hosting the 28th Session of APPPC. She also congratulated APPPC for its leadership role with drafting new regional and international phytosanitary standards. As the global landscape is becoming more dynamic, there are opportunities for the region to show the whole world the Asia-Pacific model of cooperation and its taking on ownership of regional plant protection issues.

## 1.4 Welcome address by FAO

The welcome address by Mr Hiroyuki Konuma, Assistant Director General and FAO Regional Representative for Asia and Pacific, was delivered by Mr Villi A. Fuavao, Deputy Regional Representative. He thanked the Government of the Republic of Korea for hosting the meeting and congratulated the Organizing Committee for a job well done.

In his address, he emphasized the importance of phytosanitary measures and integrated pest management in the sustainable intensification of food production and for reducing hunger in the world. The close collaboration of APPPC and IPPC is an important cornerstone for improving the international standards. While the region as a whole has done well in developing sound plant protection programmes, some countries still need to further strengthen their organizational structures and functions. In many countries, pesticide management has been improved in line with the International Code of Conduct and other relevant treaties. However, there are still challenges and issues concerning the proper management of hazardous chemicals in the region.

He concluded his speech by urging the delegates to bring to the attention of their respective governments the importance of pursuing the deposition of the instrument of acceptance of the amendments to the APPPC Agreement.

## 1.5 Inaugural address by Mr In-Hong Yeo, Vice Minister, Ministry of Agriculture, Forestry and Rural Affairs (MAFRA), Republic of Korea

Mr In-Hong Yeo welcomed the delegates, officials and observers in the Republic of Korea. He also expressed his appreciation to the APPPC Secretariat and the Animal and Plant Quarantine Agency staff for their efforts in preparing this meeting. The large number of member country participants may show an increasing interest and expectation on APPPC activities. He pointed out that the Republic of Korea

has evolved from a war-torn, least developed country to a developed one with a functional democracy and economy within 50 years. It is willing to share its experience with other countries in various areas. In agriculture, the Republic of Korea has achieved self-sufficiency with rice and many horticultural crops, and has been most successful in restoring forests. At the same time, it is a major importing country of agricultural products. Therefore with this import of agricultural products, plant protection become most important to protect its agricultural production and the natural environment.

Enhanced communication and cooperation among the countries in the region is required more than ever before. APPPC plays a key role in this and the Republic of Korea will continue to support and participate in APPPC activities. He urged other member countries also to contribute and participate with finance and expertise to make APPPC function successfully.

Finally, he wished the session in-depth discussions and exchanges of ideas on plant protection issues, and he hoped that everyone will have a chance to enjoy Korean culture during this visit.

### 1.6 Election of the Chairperson and Vice-Chairpersons of the 28th Session, the Drafting Committee and the adoption of the provisional agenda and timetable

1.6.1 Election of the Chairperson and Vice-Chairpersons of the 28th Session

The Republic of Korea was elected Chairperson of the 28th session of the APPPC. The elected Vice-Chairpersons were the Philippines, Indonesia and New Zealand
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1.6.2 Election of the Drafting Committee

New Zealand was elected Chairperson of the Drafting Committee. The other country members were: China, Republic of Korea, India, Indonesia and Malaysia.

1.6.3 Adoption of the provisional agenda and timetable

The draft agenda and timetable were adopted without modifications.

## 2. Secretariat report on actions taken on the implementation of the work plan adopted by the Twenty-seventh Session of the Asia and Pacific Plant Protection Commission

Mr Piao Yongfan, Executive Secretary of the APPPC, reported on the activities of the Secretariat and working groups since the 27th Session of the Commission.

### 2.1 Status of the Plant Protection Agreement for Asia and the Pacific

Timor-Leste has endorsed the Agreement by accepting all amendments (1983 and 1999) and became a member of APPPC on 20 April 2012. Bhutan, Japan and Singapore have expressed their intentions to become members and both the Secretariat and FAO's Legal Service have provided these countries with some essential advice. Presently, twenty-five countries are contracting parties to the Plant Protection Agreement for Asia and the Pacific. These countries are Australia, Bangladesh, Cambodia, China, Democratic People's Republic of Korea, Fiji, France, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga and Viet Nam.

Since the entry into force of APPPC's 1983 amendment on financial mandatory contribution on 4 September 2009, 18 countries have become financial mandatory contributors. These are Australia, Bangladesh, Cambodia, China, DPRK, Fiji, India, Indonesia, Lao PDR, Malaysia, New Zealand, Pakistan, Philippines,

Republic of Korea, Sri Lanka, Thailand, Timor-Leste and Viet Nam.

With regard to the adoption of the 2nd set of the amendments in 1999, Australia deposited an instrument of endorsement on 12 August 2011, Timor-Leste on 20 April 2012 and the Republic of Korea on 10 September 2013. In order to assist member countries to prepare their acceptance initiatives, the Secretariat provided some countries upon request with Australia's document as a sample. It contains some background information and essential paragraphs that are proposed as a proactive reference. Detailed background information on amendments and status of acceptances will be available from the webpage of the FAO Legal Office:
http://www.fao.org/fileadmin/user_upload/legal/docs/2_006s-e.pdf

## 2.2 Implementation of the work plan adopted by the 27th Session of APPPC

A number of follow-up activities have been undertaken in relation to the implementation of the work plan (2012-2013) adopted by the 27th Session of APPPC.

### 2.2.1 Implementation of ISPMs

#### *2.2.1.1 Working group on ISPMs*

The 26th Session proposed that a working group be established to investigate how the Commission members can assist in the implementation of standards. The working group would select one or more ISPMs and, if deemed appropriate, examine the development of training materials. The working group was led by the Republic of Korea and consisted of Australia, India, Philippines and New Zealand. It worked continually on the ISPM 15, which was included in the work plan adopted by the 27th Session of APPPC. They investigated how Commission members can assist in its implementation. The lead country collected and analyzed preliminary feedback responding to questionnaires. The related details are given under Agenda No.7.3. The regional workshop on Systems Approach has been planned to be organized in November 2013 with financial support from Australia. The implementation work on pest surveillance is reported in section 2.2.1.3 below.

#### *2.2.1.2 Nomination of APPPC delegates to participate in the global workshop on grain*

The 27th Session decided to provide APPPC financial support for two representatives from the region to participate in the global workshop on grain movement which was held in December 2011 in Canada. The main objective of this meeting was to consider the development of international standards for the movement of grains. Two participants from Pakistan and the Philippines were funded to participate. The delegate from the Philippines participated in the workshop and presented the status of movement of grains in the region; the delegate from Pakistan was not able to attend due to visa arrangement issues. Other countries from the region attended the workshop using their own funds.

#### *2.2.1.3 Regional workshop on ISPM 6 and global symposium on pest surveillance*

In collaboration with the IPPC Secretariat, APPPC organized a regional workshop on the review of surveillance in the context of ISPM 6 from 31 January to 3 February 2012 in Chiang Rai, Thailand. The objectives of the workshop were to analyze main implementation constraints of pest surveillance-ISPM6, to discuss recommendations to improve ISPM 6 and to identify best practices for surveillance. Three survey forms that were submitted by 17 participating countries were analyzed, and an analytical summary was presented to the participants. The meeting identified benefits of using ISPM6, constraints and difficulties in its implementations and made a number of recommendations for improvements. During the workshop, a draft tentative programme of an international symposium on pest surveillance, including the main topics of a training programme related to surveillance, was drafted.

A number of recommendations for improving ISPM 6 were made to the IPPC Secretariat. which included administrative, operational and technical aspects. There were overall suggestions for improvements such as considering guidance on obtaining country commitments to a surveillance programme, ways to improve coordination of surveillance efforts within countries, guidance on the management of surveillance programmes and the quality (particularly statistical) of such programmes, and of means of improving diagnostic support.

This was followed by a global symposium on pest surveillance, which was held in collaboration with the IPPC Secretariat, in the Republic of Korea from 29 October to 2 November 2012. About 50 experts from 28 countries in 7 regions in addition to delegates from FAO participated in the meeting. The symposium came up

with a series of manual frameworks as base materials for the development of manual guides for implementing ISPM 6. These frameworks contained chapter headings and an outline of additional materials to be included as appropriate. This would also contribute to IRSS implementation programmes. Details are reflected in Agenda item 7.1.

*2.2.1.4 Regional consultation on draft ISPMs*

The 12th and 13th Regional (Asia) APPPC Workshops on the review of draft ISPMs were convened with the financial support from the Republic of Korea in Busan and Gyeong Ju, Korea, on 19-23 September 2011 and 3-7 September 2012, respectively. Substantive editing and amendments were proposed for the drafts. During the 2011 workshop, in addition to the review of draft ISPMs, a short training session was provided on how to use the IPPC Online Coment System (OCS) to submit country comments by incorporating regional comments; three countries demonstrated their experiences of using the OCS as practical examples. At the same time, a questionnaire on the implementation of ISPM 15, which was designed by the APPPC working group, was distributed to the participants for feedback. Furthermore, a potential regional workshop on diagnostics related to ISPM 6 was discussed. After the 2012 workshop, the regional comments that were prepared by the workshop, were immediately distributed to all NPPO focal points of participating countries as well as to all participants. They were accompanied by operational instructions on how to share/incorporate regional comments with country comments on draft ISPMs. In addition to reviewing draft ISPMs, there were also discussions about the Implementation Review and Support System (IRSS), provision of technical resources, reporting obligations, information exchange through IPP/APPPC website, capacity development, etc. In addition, outputs of the regional workshop on ISPM6 were presented together with the analytical results on the survey-feedbacks collected from 17 countries. The 14th regional workshop on the review of draft ISPMs will be held from 28 October to 1 November 2013 in Seoul, Republic of Korea.

2.2.2 Pre-CPM meetings of APPPC members

The APPPC pre-CPM 7 and pre-CPM 8 meetings were organized in Rome on 18 March 2012 and on 7 April 2013, respectively. The pre-CPM meetings provided APPPC members with an opportunity to discuss the CPM agenda, including the election of the Chair of the CPM and more specifically the draft ISPMs which were presented for adoption. These meetings provided a better understanding of specific concerns of participants and their positions on various matters. The meetings did not require any financial input from the APPPC.

## 2.3 Development of RSPMs

Three draft specifications for RSPMs were prepared with the contributions and assistance from Australia and New Zealand. Three draft RSPMs were prepaed in line with the specifications for the review and approval of by the APPPC Standards Committee. The APPPC Standards Committee meeting on the review of draft regional standards for phytosanitary measures was convened in Bangkok, Thailand from 30 July to 3 August 2012. After extensive review and discussions, the meeting approved two draft standards "*Approval of Irradiation Facilities*" and "*Approval of Fumigation Facilities*" for circulation to member countries for their comments. The revised draft Standards were for submission to the next session of the APPPC. The draft RSPMs were sent to member countries on 12 October 2012 for consultations. With regard to another draft RSPM on "*Minimizing pest movement by machinery moved in international trade*", the meeting members proposed a number of suggestions for further consideration in the development of the draft. It was agreed that the technical working group (New Zealand with technical input from Australia) could develop this standard as a technical document in the first instance, along the lines as outlined in Annex 5 of the Standards Committee report, to be considered at the next APPPC meeting. However, this has been dropped with the development of an ISPM on this subject by IPPC.

Finally, the paper on "Importation Requirements for *Hevea* Plant Material" has been included in the new publication of RSPM 7 as an Appendix after consultations with the FAO's Legal Department and as advised by the 27th Session. As further suggested by the Session, the paper "*Contingency plan for South American leaf blight* (*Microcyclus ulei*)" was uploaded to the APPPC website as an APPPC Technical Guideline.

## 2.4 Information management programme

In order to enhance information exchange among member countries through the APPPC website, regular quarterly monitoring of country updates has been set up with the help of an assistant for information management. A summary of the updated status of each country was sent to the members for their reference and

as a reminder to accelerate follow-up actions for updating the countries' web pages in the APPPC/IPP website where the section on phytosanitary measures is automatically cross linked. Various reports and news on APPPC workshops, meetings and training sessions have been uploaded in a timely manner. In addition, a series of extensive test and adjustments have been made in 2013 after the FAO webpage was changed in June 2013. Five publications have been produced during 2012-2013 and distributed to all member countries as well as uploaded to the APPPC and RAP websites. Details can be found in Agenda item 6.

## 2.5 Capacity development

Prevention and reduction of risks of transboundary threats to food production, health and the environment is one of the focus areas of FAO, as it is a key requirement for achieving the goals set out in the FAO Strategic Framework. It is to be achieved by promoting, developing and re-enforcing policy and regulatory frameworks for food, agriculture, fisheries and forestry. It encompasses all policy and regulatory frameworks to manage risks associated with food and agriculture, including relevant environmental risks.

### 2.5.1 Enhancement of capacity in dealing with South American leaf blight

In order to develop a training programme and reference materials for the protection against South American leaf blight (SALB), a workshop was organized in Malacca, Malaysia in November 2011. It was attended by participants from seven rubber growing countries in the region and a representative from the Brazil NPPO. Compiled reference materials were reviewed, selected and produced as leaflets, pamphlets, booklets, posters and a bibliography. Furthermore, training modules were developed and topics for a training course in Brazil were proposed. As a follow-up activity, a regional training of trainers workshop on the protection against SALB in the region was held in Penang, Malaysia in July 2012; it used the reference materials produced in 2011. It was expected to enhance participants' knowledge on SALB and to promote their training capacity to carry out public awareness and training programmes in their countries. In addition, it was hoped that the reference materials would be reviewed and updated from time to time based on feedback. At the end of the workshop, each participating country prepared a tentative follow-up action plan. Also, the collaboration with the Brazil NPPO on a training workshop on diagnostics in Brazil was discussed. Several participants from rubber growing countries were identified and - with the kind assistance of Brazil NPPO and the International Rubber Research and Development Board (IRRDB) – will be sent to Brazil for training. Malaysia, a lead country of the working group on SALB, played an active role in facilitating the training. Details will be given in Agenda item 7.2.

### 2.5.2 Promotion of the capacity in spread prevention and control of apple snail (*Pomacea* spp) in rice

The apple snail (*Pomacea spp*.) has become a serious pest of rice in Asia and the Pacific region in the past few years. Extensive technical assistance to improve the capacity in effective management of this pest is needed. With the assistance of the Malaysia NPPO, a regional workshop on spread prevention and control of apple snail in rice was convened in Malaysia from 3 to 7 December 2012. The workshop programme discussed the biology and ecology of the pest *Pomacea spp.* and control strategies. Participants shared their experiences, gained expertise in the field and learned from experts. The workshop presented various methods to control *Pomacea spp*. such as physical control, cultural control, biological molluscicides, habitat modification, and chemical control.

The workshop developed an action plan (including research, capacity building, communication and information exchange) and management strategies to mitigate infestations. The workshop also drafted national awareness programmes, control measures and collated reference materials related to *Pomacea spp*. in rice growing areas for participating countries. It was expected that activities suggested in the awareness programme will be given priority and implemented immediately in each country. Furthermore, participants were expected to become core trainers and experts on apple snails in their own countries.

### 2.5.3 Training workshop on biological control

In collaboration with the Government of Thailand, a regional training workshop on biological control (BC) was held in Bangkok, Thailand from 25 February to 2 March 2013. It not only provided the participants with updated information and Thailand's practical experience in BC, but also gave an opportunity to review concepts and principles of BC. Participants shared experiences from their countries and discussed opportunities and challenges for the production and sustainable application of BC agents in the context of IPM strategies. Meanwhile participants explored best options to improve the access and application of BC by IPM

farmers, which included techniques on mass rearing in the laboratory, releases under field conditions, follow-up field monitoring and evaluation of their effectiveness. The development of the training capacity among IPM facilitators in identifying specific BC agents (parasitism, predators and microbial) for specific pest managements programmes was also discussed. It was expected that a regional network of information exchange and collaboration for the promotion of biological control would be established by the participants who would provide updates on developments, issues and challenges to the APPPC website.

2.5.4 Capacity building for spread prevention and management of cassava pink mealybug in the Greater Mekong Subregion

Extensive technical support was provided through a regional technical cooperation project (TCP/RAS/3311) to GMS countries for developing capacity to manage the cassava pink mealybug which was introduced from outside the region. The project achieved better basic knowledge of the biology and ecology of the pest and its natural enemies; improvement of mass production methodology of biocontrol agents; in-country training of extension staff on mass production of the introduced wasp *A. lopezi*; field surveillance and the establishment of a GIS database; enhancement of capacities for conducting Farmer Field Schools (FFS) for the effective management of the mealybug; and the putting into practice of precautionary measures such as raising public awareness and intensifying quarantine efforts.

In addition, FAO TCP (Technical Cooperation Programme) technical assistance was provided for specific pest issues such as coconut wilt disease management in Sri Lanka, kiwi fruit disease management in China, walnut pest control in DPR Korea, and citrus disease management in Nepal.

## 2.6 Cooperation with counterparts

During the past two years the Commission cooperated closely with counterparts to obtain their assistance and financial support. The global symposium on pest surveillance is a notable example: APPPC and the IPPC Secretariat collaboratively organized the symposium and a number of experts from Australia, Canada, New Zealand and USA kindly facilitated the discussions on various specified subjects. They also contributed outlines of a framework of manuals to be produced by IRSS. Furthermore, IAEA experts provided valuable inputs to the development of draft RSPMs. The APPPC working group on ISPM 15 is collaborating with the NAPPO for a potential joint workshop on ISPM 15. Several experts from Thailand kindly provided extensive assistance to GMS countries for the introduction and establishment of an effective natural enemy wasp to control the cassava mealybug; they provided training sessions on mass rearing, field release and monitoring. The Republic of Korea conducted a training workshop for ASEAN member countries on plant health and market access. A number of countries also provided voluntary contributions of funds and in-kind support. Australia provided US$85 000 for the development of RSPMs and the implementation of ISPMs. Recently Australia provided Australia$100 000 as an additional fund for supporting a potential regional workshop on pest diagnostics. Since 2006, the Republic of Korea has continuously provided financial support for regional workshops to review draft ISPMs; this has enabled the Commission to continue the regional consultation on draft ISPMs and to contribute to the development of new ISPMs with substantial comments. The Republic of Korea, Malaysia and Thailand kindly hosted a number of regional workshops and training sessions, and provided logistic arrangements, secretarial services and inputs from local experts and NPPO staff; the topics of these meetings were: training on SALB, apple snail management, plant health and biological control. Furthermore, the Republic of Korea provided extra funds (US$1.7 million) for supporting the FAO/APPPC capacity development program to start in July 2013 a new regional project on capacity enhancement in pest surveillance and identification in Cambodia, Laos, Myanmar, Nepal, Thailand and Viet Nam. This project can be viewed as one of the follow-up actions after the regional workshop on ISPM 6 and the 2012 global symposium on pest surveillance. The regional project on pesticide risk reduction through IPM, which is funded by the Swedish government (GCP/RAS/229/SWE), will be extended for another 5 years as the 2nd phase. The STDF project “Beyond compliance: on an integrated systems approach for pest risk management” (STDF/PG/329) was implemented and ended successfully in July 2013. Various case study countries (Malaysia, Philippines, Thailand and Viet Nam) had identified production chains and intervention points for jackfruit, banana, orchid and dragon fruit; these are essential to implement the innovative Control Point - Bayesian Network (CP-BN) modelling approach to develop the Systems Approach for case studies.

## 2.7 APPPC planning for 2014-2015

An APPPC planning workshop was held in Bangkok, Thailand, from 13 to 15 May 2013 to review the status of implementation of the work plan adopted by the 27th Session and to prepare recommendations for the 2014-

2015 biennium work programme. The planning workshop was attended by the Chair and Vice Chair of the 27th Session, the Chairs of the three standing committees, and the APPPC Standard Committee members. The recommendations prepared by the meeting were presented to the 28th Session for further discussion and adoption. The detailed outputs of the meeting will be given under Agenda No.12.1.

## 2.8 Pesticide risk reduction and IPM in support sustainable crop production intensification and food safety approach

The reduction of pesticide risks is one of FAO's main working areas. This includes the reduction of highly toxic pesticides and the promotion of IPM for the enhancement of food safety and sustainable crop production intensification through the implementation of the Code of Conduct on the Distribution and Use of Pesticides and other relevant international treaties. The improvement of regulatory pesticide management is one of the key concerns of the Code of Conduct. A number of approaches have been made to achieve pesticide risk reduction and IPM.

### 2.8.1 Promotion of the implementation of the FAO Code of Conduct on the Use and Distribution of Pesticides

Five regional guidelines covering registration data requirements, risk assessment, labelling, bioefficacy and biopesticide registration have been developed through FAO's technical assistance programme with extensive inputs and collaboration among ASEAN countries. A checklist with indicators for follow-up actions as well as country work plans were prepared. Achievements were examined after one year by the regional workshop on enhancement of regional collaboration in regulatory management of pesticides, which was convened in Chiang Mai, Thailand from 26 to 30 November 2012; delegates from 16 countries participated in the workshop. It was noted that all countries had made progress in implementing their action plans. Besides reviewing the progress made in regulatory harmonization in the member countries, the workshop also shared the outcomes of each country's self assessment exercises and compiled the results in a system that allowed the seven former TCP countries to assess their level of regulatory harmonization in five areas.

The meeting consolidated the data requirements for different types of registrations and produced an easy-to-use summary table of the requirements. The participants developed a priority list of registration data requirements which can be used by the individual countries as a checklist for their own requirements and to measure their progress toward harmonization. While post-registration activities needed strengthening in most countries, this was largely determined by the available resources. A priority list was developed to help countries with fewer resources to set-up activities that are within their means. The targets and indicators for regulatory harmonization as well as short/mid/long term goals were updated and prioritized. Each country prepared a work plan for follow-up actions to achieve greater regulatory harmonization.

The regional cooperation network provided opportunities to share expertise and resources among countries to learn and help each other in the process of amending concerned regulations and legislations. The continual active collaboration among former TCP project countries (ASEAN) would add value to the regional harmonization approaches.

### 2.8.2 Promotion of IPM and ecological approach

For over a decade, the FAO Regional IPM Programme, working with government and non-governmental organizations, has carried out farmer education and participatory research activities to promote and support Integrated Pest Management (IPM) in vegetables by Asian smallholder farmers. IPM is an ecological approach to crop production and protection that combines different management strategies and practices to grow healthy crops and minimize the use of pesticides. In collaboration with the APPPC Standing Committee on IPM, the FAO Asia Regional Integrated Pest Management/Pesticide Risk Reduction Programme (Project GCP/RAS/229/SWE) supports governments and NGOs in building capacity for a coordinated approach to applied research, extension and farmer education activities. The objective is to promote and support the development and application of IPM in smallholder crop production throughout the Asia region. The programme provides advice, organises training of trainers and arranges for the exchange of expertise. The programme funds field activities and provides advice to national governments for better policies in the field of farmer education, crop protection, good agricultural practices and rural development. At the same time, the pesticide risk reduction programme provides guidance for the development of regulatory frameworks for the control of pesticides. The programme works primarily at international and government levels. It has provided assistance to Lao PDR, Viet Nam and Cambodia for their efforts to improve pesticide legislation. At the same

time, it assisted with building capacity for the enforcement of pesticide legislation, notably in the areas of licensing and inspection of pesticide retailers. Capacity building activities in Cambodia, Laos and Viet Nam focused on innovative and effective area-wide application of IPM for population management of the oriental fruit fly (*Bactrocera dorsalis*), the guava fruit Fly (*Bactrocera correcta*) and the melon fruit fly (*Bactrocera cucurbitae*). To date, a large number of farmers benefitted from FFS training and mastered the application skills of innovative and effective fruit fly IPM in their farms and orchards. The programme recently expanded into Myanmar by providing technical support for an innovative fruit fly IPM capacity building initiative among export-oriented mango growers in Southern Shan State. In addition, with technical assistance from FAO, the 2nd phase of the IPM Programme in Nepal has also made significant achievements. More details will be reported in Agenda item 8.

In conclusion, the collaboration and cooperation among member countries were significantly enhanced during 2012-2013 through a number of well planned activities in line with the work plan adopted by the 27th Session of APPPC and by applying the APPPC self-financing mechanism. Extensive financial, technical and in-kind support and assistance from more member countries are indispensible for such cooperation in the region. The Executive Secretary expressed his appreciation to those countries that provided great support and invaluable assistance in form of financial, technical and in-kind assistance as well as facilities to APPPC activities during the past two years.

### 2.9 Discussion on the report by the Executive Secretary

The Secretary of IPPC congratulated APPPC for its achievements and the positive changes over the past 20 years. With regard to a question about the actual situation with financial contributions, the Executive Secretary pointed out that many countries use their own funds to support regional cooperation and only one country has not yet provided the agreed funds to the Secretariat. This is a strong sign of the recognition and ownership of the APPPC by its members.

The report of the Executive Secretary was endorsed by the Session.

## 3. Country reports of significant changes and developments since 2011 by member delegates and reports of relevant organizations and institutions by observers

### 3.1 Australia

The Hon. Barnaby Joyce MP was appointed Minister of Agriculture in September 2013. The Australian Government also appointed a new head of the Department of Agriculture, Dr Paul Grimes.

In the Department in 2012, Dr Vanessa Findlay was appointed as the new Australian Chief Plant Protection Officer. The Biosecurity Plant Division was reorganised and this is reflected in the new description of the NPPO.

The name *Australian Quarantine and Inspection Service* (AQIS) is no longer used.

A major legislative process is currently underway to replace the *Quarantine Act 1908* with the new Biosecurity Act. The new Act will have new administrative, civil and criminal powers; however, it will also recognise good behaviour by reducing the burden on importers.

A risk-based approach to quarantine has been introduced, resulting in concentrating on imports of highest risk and reducing inspection of lower risk imports.

A new post entry quarantine facility is being built in southern Australia, near Melbourne airport. All existing other facilities will be closed when it becomes operational, expected to be 2018.

Surveillance activities in Australia are described and information provided on some native and invasive weed species. Pest management is outlined, explaining the management and funding of eradication programs, as well as the agreed technical response plan. Where eradication programs are not considered feasible, transitioning to management programs are implemented and examples are provided for some of these programs.

The reform of pesticide and veterinary chemicals continues as does the harmonisation of chemical control use legislation across the Australian states and territories. Updates on pesticide reviews are provided, with links to more information. The Australian Pesticides and Veterinary Medicines Authority has recently registered the new active ingredient ethanedinitrile in the product Sterigas 1000 Fumigant, which may be a possible alternative for methyl bromide.

### 3.2 Bangladesh

Bangladesh is an agrarian country with a climate that favours the rapid development of various pests and diseases on crops. One of the main constraints to crop production is the pests. Estimated crop losses by pest and diseases are 10-15 percent annually.

The plant protection activities of the country at national level are under the Director of Plant Protection Wing of the Department of Agricultural Extension under the Ministry of Agriculture. Bangladesh has to import a huge quantity of food, seeds and other plants and plant products. Annually more than 8 million metric tons of plants and plant products are imported through the Plant Quarantine Stations of Plant Protection Wing. On an average one million metric tonnes of agricultural commodities are inspected by the plant quarantine officers per annum for the purpose of export and they need to issue a large number of phytosanitary certificates. To conform to the phytosanitary import regulations for citrus and some vegetables for the EU, a programme titled "Exportable citrus and vegetable production" was launched. Some places in the north-west region were selected as low pest prevalence areas for mango production.

The existing plant quarantine legislation known as "Destructive Insects and Pests Rules, 1966" (Plant Quarantine) was framed as per provisions delineated under Sub-section (I) of Section-3, Section-5 of the Destructive Insect and Pests Act, 1914 (II of 1914). The "Plant Quarantine Act, 2011" has been approved by the Parliament in April 2011. Making rules under the Act is yet to complete. It is expected that by the end of this year the existing "Destructive Insects and Pests Rules, 1966 (Plant Quarantine)" will be repealed by the newly passed "Plant Quarantine Act, 2011". There is a provision for the establishment of a separate authority titled "Plant Quarantine Authority" in the Act. Recently, ten Plant Quarantine Centre Laboratories were developed and the number of border check posts was increased from 18 to 30. In the last two years, the NPPO organised 25 training programmes for quarantine officials to strengthen their capacity. The 'Quarantine Act-2011' was formulated according to the IPPC Convention and the Agreement on the Sanitary and Phytosanitary Measures (SPS). To implement the International Standards for Sanitary and Phytosanitary Measures (ISPMs), a project titled "Strengthening phytosanitary capacity in Bangladesh" was initiated.

Pest surveillance and forecasting system of the country have been upgraded recently. The infestations of brown plant hopper (BPH) and stem borer were high 2009-2010. Besides, outbreaks of bacterial leaf blight and blast in rice during the 2008-2009 and 2009-2010 crop seasons created some threats on the total rice production in the country.

Different pest control approaches are being practiced to manage the pest incidence in the country. Among these, the Integrated Pest Management (IPM) approach is given more emphasis for the management of pests in the country. In view of the importance of IPM in Bangladesh, a national IPM policy has been developed. Research institutions have developed several new IPM technologies. The research institutions are now putting emphasis on IPM, particularly on biocontrol and non-chemicals (bio-pesticides) for pest management.

Private sector enterprises have become involved in mass rearing and marketing of parasitoids and predators. Pesticide-free vegetables and some fruits are available on a limited scale, but marketing channels need to be developed. The Government has initiated the implementation of Good Agricultural Practices (GAP) particularly for exportable vegetables and fruits. Safe food production through the IPM approach created great enthusiasm among the producers and consumers under the guidance of the different Government agencies.

The "Pesticide (Amendment) Act, 2009" and the "Pesticide Rules 1985", amended up to 2010, are in force. A total of 250 generic pesticides have been registered for use in agriculture and 30 for use in public health. The total number of trade names of agricultural and public health pesticides is 3 200. Among those are two biopesticides, and ten biopesticides are in the process of being registered. Pesticide use in Bangladesh is gradually reducing due to low pest infestations and increased IPM activities. There is a Pesticide Technical Advisory Committee led by the Executive Chairman of the Bangladesh Agricultural Research Council

(BARC), Ministry of Agriculture. Based on its recommendation, the Government has banned nine pesticide compounds in the WHO class 1a and 1b for agricultural purposes.

### 3.3 Cambodia

Cambodia is an agricultural country where the majority of people live in rural areas (80 %). In 2012, the agricultural sector had a 28 % share of the GDP; it is in third place after the service and industry sectors. The agriculture subsectors consists of crop production (55 %), forestry (6 %), fisheries (2 5%) and livestock (14%). The Plant Quarantine Office under PP-SPSD/GDA was given a key role in inspecting and certifying plant products intended for export. With the accession of Cambodia to the WTO, the Government has realized the critical role of phytosanitary measures as an integral part of the SPS agreement.

The Farmer Field School (FFS) approaches play a main role in the National IPM Programme; this programme has been supported by development partners such as AusAID, NZAID, and FAO. The IPM-FFS programme also supports the work and budget plans of local commune councils whose work plans are funded through decentralized donor-supported programs. A FFS-IPM Trainer network was established and formed by FFS alumni to provide services to local IPM projects and promote IPM products through food safety projects. IPM alumni farmers have organized themselves in chemical-free and organic production associations. These associations assist in facilitating linkages for more effective marketing of IPM produce and better market access. The IPM programme also introduces and promotes biological control through parasitoids, pathogens and predators in order to provide farmers with alternatives to chemical pesticides.

Within MAFF, there are three technical departments involved with pesticide management with clear responsibilities. Registering, licensing and inspecting pesticides is the duty of the Department of Agriculture Legislation (DAL) which acts as a regulatory authority, while field technical advising and laboratory testing are under the responsibilities of the Plant Protection Sanitary and Phytosanitary Department and the National Agricultural Laboratory, respectively.

With regard to the relevant pesticide convention such as the Stockholm and Basel Conventions, the Ministry of Environment is the focal point, while the MAFF/DAL is the focal point for the Rotterdam Convention to which Cambodia had acceded in May 2013.

The pesticide management in Cambodia faces many challenges which urgently need to be resolved. They have been identified as the insufficient enforcement of rules and regulations; uncontrolled importation; widespread availability of undesirable pesticides; misuse and overuse; limited data on health and environmental effects and lack of scientific evidence of high pesticide residues in food. However, MAFF is currently making strong efforts in pesticide management. The Royal Government has issued an order to all relevant units to strengthen pesticide management and enforce quality control for pesticide labels to be written in Khmer language.

For food safety issues, Cambodia is a part of the World Trade Organization (WTO) and needs to comply with the food safety standards, good manufacturing practices and the Codex. Cambodia also joined global and regional food safety networks as a member of ASEAN and WTO, such as the network for pesticides regulatory database; focal point of the ASEAN Plant Health Cooperation Network; ASEAN food safety network; harmonization of Codex standards; phytosanitary; maximum residue limits of pesticides; livestock and fisheries. For the smooth implementation of food safety regulations, Cambodia has established by sub-decree a committee which consists of eight members from different ministries; the Department of Export Inspection and Fraud Repression of the Ministry of Commerce was appointed as focal point, while the MAFF is responsible for establishing and testing the maximum residue limits for pesticides. Good Agriculture Practices (GAP) are also included in the food safety programme. A fresh fruit and vegetable GAP was developed based on existing ASEAN GAP guidelines. The GAP for fruit and vegetables is under the responsibility of the Department of Plant Protection Sanitary and Phytosanitary. However, there are other GAP guidelines, such as for fisheries and livestock, which need to be developed and implemented.

### 3.4 China

During the period 2011-2012, seven national and six industry standards were formulated. In addition, three new pests were added to the list of quarantine pests for entry based on pest risk analysis. In 2011, there were

500 106 pest interception cases in import cargoes; among them were 242 quarantine pests and 3 730 non-quarantine pests. In 2012, there were 400 497 pest interception cases in import cargoes and 217 quarantine pests and 3 437 non-quarantine pests were found.

In 2011 and 2012, great effort was undertaken to control *Cydia pomonella* (L.) for establishing and maintaining Pest Free Areas (PFA). Some strict methods also were conducted on *Phenacoccus solenopsis* Tinsley to protect the main cotton areas. A highlight of the quarantine pest control was the successful eradication of *Solenopsis invicta* Buren at Zhangjiajie in Hunan province in 2011, where the fire ant invaded in 2007.

Outbreaks of some pests on major crops occurred in responses to significant changes in cropping systems, climate conditions, and crop varieties during the period of 2011-2012; among them, *Athetis lepigone*, wheat scab (*Gibberrella zeae*), armyworm (*Mythimna separate* [Walker]), rice brown plant hopper (*Nilaparavata lugans*), and rice leaf folder (*Cnaphalocrocis medinalis*) were the most severe and destructive ones. Regional actions were coordinated by the National Agro-technical Extension and Service Center (NATESC) of the Ministry of Agriculture for controlling migratory pests - locusts, meadow moth, armyworm, rice brown hopper, rice leaf roller - and regionally epidemical diseases - wheat scab, wheat stripe rust, rice blast and rice sheath blight -, and newly emerged pests - *Athetis lepigone*, etc. The annual control area of major crop pests reached 530 million hectares in 2011 and 567 million hectares in 2012, respectively.

In 2011, a National Plan for Forest Pest Management (2011-2020) was promulgated and an integrated management strategy - mainly on biological measures - was adopted for strengthening the management of major forest pests. The number of county-level epidemic areas, occurrence areas and dead trees of pine wilt disease continued to decline. In 2012, a number of tasks were carried out, such as the revision of *Regulations on Forest Disease and Pest Control*, national forest pest analysis and pilot work for forest plant quarantine traceability, etc.

In order to protect people's health and environmental safety, pesticide management was strengthened in China during the period of 2011-2012. China revised and improved the approval system for pesticides registration. A number of rules and regulations were formulated. These included 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).

### 3.5 Fiji

The Plant Protection Section in the Research Division of the Ministry of Agriculture (MoA) is responsible for providing support and advisory services in plant pest diagnostics and their management in Fiji. The Principal Research Officer is the head of the Plant Protection Section and is also responsible for the registration of pesticides and policing their sales and usage through compliance with the Pesticide Act No. 41 of 1971. This act is currently under review. The Plant Protection Section comprises of the Plant Pathology, Entomology, Fruit Fly, Weed Science and Pesticide Registration Units.

Important pests of concern include: taro beetle (*Papuana uninodis*), coconut rhinoceros beetle (*Oryctes rhinoceros*), coconut stick insects (*Graeffea crouanii*), fruit flies (*Bactrocera passiflorae* and *B. xanthodes*), chilli anthracnose (*Colletotrichum* spp.), wedelia (*Sphagneticola trilobata*) and African tulip tree (*Spathodea campanulata*). These pests continue to be a problem despite attempts by the MoA and other stakeholders to control them. The MoA, in collaboration with the Biosecurity Authority of Fiji and/or The Secretariat of the Pacific Community (SPC), carries out monitoring and surveillance of economic pests, including surveys of pests and updating of the Pest List Database.

The Biosecurity Authority of Fiji (BAF) was established in 2008 and became a full-fledged authority in January 2011. The BAF is mandated to protect Fiji's agricultural sector from the introduction and spread of pests of plants and animals and facilitate the access to viable agro-export markets and ensure compliance of Fiji's agro-exports to overseas market requirements.

### 3.6 India

The Directorate of Plant Protection, Quarantine and Storage (DPPQS) under the Department of Agriculture and Cooperation, Ministry of Agriculture, is the National Plant Protection Organization with its headquarter located in Faridabad, Haryana and operational offices all over the country. The Directorate is led by the Plant Protection Adviser who is responsible for the implementation of plant protection policies and programmes of the Government of India. The Joint Secretary (Plant Protection) in the Ministry of Agriculture is the Official Contact Point IPPC and APPPC. The main sections of the Directorate are i) plant quarantine, ii) Integrated Pest Management iii) locusts control iv) Central Insecticides Board and Registration Committee v) Central Insecticides Laboratory

As the contracting party to IPPC and as the National Plant Protection Organization, the DPPQS is responsible for the implementation of the phytosanitary certification programme. More than 159 plant protection specialists from all over the country have been authorized by the NPPO to issue phytosanitary certificates in accordance with the requirements of importing countries as stated by the IPPC (list of phytosanitary certificate issuing authorities is available at http://www.plantquarantineindia.org/pdffiles/Appendix-1.pdf).

During 2012-2013, 286 445 phytosanitary certificates were issued and 40 518 import inspections carried out. More than 2 760 pest risk analyses have been carried out so far. A number of quarantine pests were intercepted in imported consignments and notifications were sent to the exporting countries.

The IPM programme follows a crop-based Farmer Field School approach. It is implemented through 31 Central Integrated Pest Management Centers. Seventy-seven IPM packages have been developed for major agricultural/horticultural crops, and efforts are being made to make these packages GAP compliant. Three hundred and fifty-two bio-control laboratories are in operation. Pesticides consumption trends have shown a significant decline in chemical pesticides and an increasing acceptance of biopesticides by the farming community. The Ministry of Agriculture is implementing a national programme for monitoring pesticide residues in food commodities.

India is a signatory to the FAO Code of Conduct. The legal foundation for pesticide regulations in India is provided by the *Insecticides Act, 1968*. So far, 241 pesticides have been registered. Details of registered and banned pesticides are available at http://www.cibrc.gov.in.

Major developments since 2011 were as follows:

- The PRA based *Plant Quarantine Order, 2003* is updated from time to time in accordance with the WTO-SPS Agreement. A uniform phytosanitary certification system with enhanced security features has been put into operation.
- One new National Standard for Phytosanitary Measures, and several Standard Operating Procedure protocols and guidelines have been developed on key phytosanitary activities.
- The National Institute of Plant Health Management in Hyderabad has organised long-term and short-term training courses ( contact http://www.niphm.gov.in. for details).
- An accreditation system for both fumigators and heat treatment providers was implemented in compliance with ISPM No. 15.
- Survey and surveillance programmes were undertaken for the establishment and maintenance of pest free areas for mango nut weevil/pulp weevil and brown rot/ring rot of potato.
- The plant quarantine services launched an online system.
- New legislation on pesticides management has been introduced in the Parliament.
- An online Pesticide Registration System was launched.
- In 2013, a new *Agricultural Bio-Security Bill* was sent to the Parliament for consideration. This proposed bill seeks to replace the *Destructive Insects and Pest Act, 1914* and would create an autonomous, integrated and modern Agricultural Bio-Security Authority.

## 3.7 Indonesia

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, namely the Indonesian Agricultural Quarantine Agency, the Directorate General of Food Crops, the Directorate General of Horticulture and the Directorate General of Estate Crops. The Indonesian Agricultural Quarantine Agency was appointed as the focal point of the Indonesian NPPO by the Minister of Agriculture's (MoA's) Decree Number 264 of 2006.

As focal point of the NPPO, the Indonesian Agricultural Quarantine Agency is responsible for coordinating with other institutions to conduct activities such as: issuance of phytosanitary certificates, surveillance, inspection, disinfection, risk analysis, protection of endangered areas, etc.

Plant quarantine

*Update on Indonesian regulations on plant quarantine*

In 2012, Indonesia stipulated MoA's Regulation Number 42 of 2012 regarding *Plant Quarantine Measures for the Importation of Fresh Fruits and Fruit Vegetables into Indonesia Territory* and MoA's Regulation Number 43 of 2012 regarding *Plant Quarantine Measures for the Importation of Fresh Bulb Vegetables into Indonesia Territory.*

Both regulations amended previous regulations, specifically MoA's Regulation Number 37 of 2006, 38 of 2011, and 15 of 2012 and MoA's Regulation Number 18 of 2008, 90 of 2011, and 16 of 2012.

The main change in both regulations was the change of entry points for the importation of fresh fruits, fruit vegetables and bulb vegetables to five designated ports in Indonesia, i.e. Belawan Seaport (Medan-North Sumatra), Soekarno-Hatta Airport (Jakarta), Tanjung Perak Seaport (Surabaya-East Java) and Soekarno-Hatta Seaport (Makassar-South Sulawesi), and the free trade zones Batam, Bintan and Karimun Islands. Fresh fruits, fruit vegetables and bulb vegetables may enter through other ports as long as the fresh fruits and vegetables were exported from countries that have been officially recognized by Indonesia for their food safety and/or pest free areas.

*Intercepted pests in quarantine inspection*

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

During 2011-2012, a number of quarantine pests were intercepted through quarantine inspections on imported consignments, such as *Helminthosporium solani*, *Erwinia carotovora* pv. *atroceptica*, *Pseudomonas syringae* pv. *syringae*, Strawberry Latent Ring Spot Nepovirus (SLRSV), *Pantoea stewartii*, *Pratylenchus vulnus*, *Panonichus citri*, *Burkholderia glumae*, *Tilletia laevis*, *T. indica*, *T. tritici*, and *Pseudomonas syringae* pv. *lachrimans.*

Pest management

*Pest outbreaks*

During 2011-2012, there was an outbreak of the coconut mite (*Aceria guerreronis*) in North Sulawesi. Official control of the coconut mite is going on to remove the establishment of pest. An outbreak of *Paraeoucosmetus pallicornis* occurred in rice fields in Sulawesi, and quarantine measures were taken to prevent its spread to other areas. Another pest that was established in North Sulawesi is weedy rice (*Oryza* sp.).

*Pest surveillance*

Indonesia conducts regular pest surveillances to monitor new establishments of pests. Every two years, the status of pests is evaluated among the NPPO members.

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 surveillances 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 Diseases* 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.

Biological agents are used in agricultural practices to achieve food safety standards. Biological control agents such as *Beauveria* sp., *Trichoderma* sp., *Metarhizium* sp. are locally produced by trained IPM Farmer Field School alumnies.

*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.

Other matters

*Ratification of the Nagoya Protocol*

Indonesia has ratified the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity by the Law Number 11 of 2013.

*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 depositing its acceptance of the amendment.

*International activities*

Indonesia conducted training courses and workshops on the detection and fumigation treatment using alternatives of methyl bromide in the Applied Research Institute of Agricultural Quarantine (ARIAQ). Indonesia invites APPPC members to join the national training program in quarantine matters at the ARIAQ.

### 3.8 Lao PDR

Agriculture is the mainstay of the economy of Lao PDR. The majority of farmers is engaged in rice production, and to some extent in cash crops and rubber trees. Frequent floods and droughts cause significant year-to-year fluctuations in agricultural yields. The adoption of modern agricultural inputs such as high yielding varieties, fertilizer and pesticides is low compared to other country in the region. For the time being, agriculture production in Lao PDR is recognized as organic by default.

In March 2006, the Government of Lao PDR had initiated a policy on clean agriculture which is directed to be secure, sustainable, clean, and free of toxic substance at low production costs. Currently, organic agriculture production is rapidly developing. Sixty-two stakeholders comprising of 54 producer groups and 8 entrepreneurs are farming organic agriculture. Within the country, 65 villages with 884 farmer households and an area of 1 527 hectares are participating in organic farming. The total of organic products is nearly 2 000 tonnes per year and includes rice, leafy and fruity vegetables, geographically indicated coffee, tea and cashew nuts. Updated statistical production data are significantly higher than recorded ones. Non-timber forest products, which are also organic by default, are an important part of income generation for rural peoples.

Lao PDR has joined the ASEAN community in 1997 and entered the WTO officially in early 2013. The Government of Lao PDR prepared and adopted a *Sanitary and Phytosanitary Action Plan* which recommended

that improved SPS are needed to gain and maintain market access and to protect crops against trade-related hazards better. SPS measures aim to protect against the introduction and spread of pests, diseases and harmful chemicals in conjunction with the movement of seeds, planting materials, agricultural and food products. To comply with SPS requirements in terms of sectoral legal frameworks, the Lao PDR Government has promulgated successively several laws, decrees, regulations and orders. Within the plant health sector, there were the Plant Protection Law in 2008; the Government Decree on implementing the Plant Protection Law in 2012; regulations on organic agriculture as the national organic standard in 2005; regulations on pesticide use and management, fourth update, in 2010; adoption of ASEAN GAP as national GAP in 2011; and the regulations on the use and management of fertilizer in 2000, of which a new revision is under preparation.

In 2012, five local factories which produce bio-fertilizer and reformulated chemical fertilizer, were registered with the Department of Agriculture under present regulations of the Ministry of Agriculture and Forestry of Lao PDR. Thirty-nine foreign investors and importers were granted registration certificates for fertilizers. Five companies in the phytosanitary treatment business are registered and 39 kinds of pesticides are also registered in Lao PDR.

The establishment of a plant protection network within the country and a plant protection strategic plan are under domestic consultations. Despite the lack of an operational budget and porous condition at numerous entry-exit check points along the 5 000 km border, only nine locations are staffed by plant quarantine inspectors with very limited training. Other entry-exit check points are beyond their capacity. While significant amounts of agricultural products move through these points, this uncontrolled import and export leads to risks associated with incoming and outgoing plant pests.

### 3.9 Malaysia

Since 2011, the Department of Agriculture has embarked on several legislative and policy initiatives, quarantine infrastructure development and capacity building initiatives in order to continually enhance its plant quarantine enforcement services, comply with international quarantine standards and international pesticides safety requirements.

Plant quarantine and crop protection initiatives in the last two years:

- New Plant Biosecurity Bill to replace the current Plant Quarantine Act (1976), forwarded to the Parliament for approval this year.
- Five new Plant Biosecurity regulations have been submitted to Ministry of Agriculture for approval.
- Formation of a permanent and formal PRA team with guidelines based on ISPM 11.
- Formation of a committee and subsequently four committee meetings conducted to discuss and develop a biosecurity plan for oil palm.
- On Invasive Alien Species (IAS), a workshop was organized in 2011 to identify research areas for IAS, seek funding for national activities; create a public awareness programme especially for tourism activities; and seek funding from UNDP to organize a workshop on a National Action Plan on IAS.
- Development of policy guidelines and standard operating procedures for the control and eradication of papaya dieback, red palm weevil, golden apple snail and weedy rice.
- The Malaysian Quarantine Inspection Services (MAQIS) Act (2011) and five regulations were gazetted as law in 2011 and 2013, respectively, and consequently the formation of a new agency for its enforcement. Thereafter all export permits for agriculture produce will be under MAQIS's jurisdiction.
- Malaysia has gazetted two dangerous pests namely apple snail (*Pomacea* spp.) and weedy rice (*Oryza sativa*) which are threatening the rice growing industry. By gazetting the pests, Malaysia will have the power to take legislative action to contain or eradicate these pests in the country. Similarly, we developed Standard Operating Procedures (SOPs) for the containment and eventual eradication of the apple snail and weedy rice and implemented them in selected rice growing area. These SOPs have lead to a better coordination and effective containment of these pests.

- Integrated Pest Management employing a new approach was developed for our rice granary areas. To date, more than 1000 hectares of rice involving 1500 farmers have adopted this approach.
- Our recent pest survey on the presence of exotic pests, namely mango seed weevil, khapra beetle and guava fruit fly (*Bactrocera correcta*) indicated that up to now Malaysia is free from these pests.

Improvement of manufacturing, sale, distribution and management standards of pesticides:

- First Schedule of Malaysia Pesticide Act (1974) was amended in July 2011 by adding 268 new active ingredients for regulation under this Act.
- The Pesticides Board has completed its review on the Pesticides (Advertisement) Regulations, 1996 to make it more business friendly. Expected for application in 2013.
- Pesticides (Pest Control Operator) Rules 2004 amended for implementation in 2013 for purpose of reducing application time for Pest Control Operator (PCO) from 45 days to 20 days.
- Pesticides (Licensing for Manufacturing) Rules 2011 gazetted in July 2011 for purpose of controlling the manufacture of pesticides, pesticides manufacturer and also the contract manufacturer of pesticides.
- Deregistration of tributyltin compounds and subsequently termination of its sale and manufacture by end 2011 in line with our national effort to phase out Highly Hazardous Pesticides (HHPs)

Effort to enhance plant quarantine enforcement, monitoring and diagnostic capabilities, and improve customer services:

- Construction and operation of two new Custom, Immigration, Quarantine & Security (CIQS) border entry points along the Sarawak/Indonesia land border (CIQS Lubok Antu and CIQs Biawak), one new sea CIQS entry/exit points in Kudat, Sabah and one at the Kuala Lumpur International Airport 2 (KLIA2).
- One new regional pesticide laboratory was established in Besut, Terengganu in order to increase our Pesticides Board pesticide residue analysis capacity by another 500 samples per year.
- One Plant Diagnostic Center in Sg. Burong, Selangor was established to provide training materials and references for farmers and extension officer.
- Development of online application and issuance of PC under the National Phytosanitary Certification Scheme (NPCS) was initiated in 2011 and will be completed by the end of 2013. The cost of the project is RM5 million.
- Implementation of E-permit for online application of import and export permit for agriculture produce has been extended to Sarawak in 2012.

Capacity building programs:

- Expert Working Group (EWG) meeting on sea containers (28 May - 2 June 2012), in Johor Bahru, Malaysia.
- Beyond Compliance: Integrated System Approach for Pest risk Management in Southeast Asia, a collaboration project funded by Standard Trade Development Funds involving CABI, Imperial College, Queensland University of Technology and DOAs of Malaysia, Thailand, Philippines and Vietnam. The two-years project commenced in 2011 and expected to be completed in June 2013.
- Workshop on training of trainers on protection against SALB of rubber in the Asia Pacific Region was conducted in July 2012 in Penang, Malaysia. Funded by FAO and participated by ten rubber growing countries (Vietnam, Malaysia, India, Sri Lanka, Thailand, Laos PDR, Myanmar, Cambodia, Indonesia, China).
- Workshop to develop training programme and reference materials for protection against SALB conducted in Malacca, Malaysia on December 2011. Funded by FAO and participated by ten rubber growing countries (Vietnam, Malaysia, India, Sri Lanka, Thailand, Laos PDR, Myanmar, Cambodia, Indonesia, China).

- Regional workshop on spread prevention and control of apple snail (*Pomacea* spp.) in rice was held in December 2012 in Kuala Lumpur, Malaysia. Funded by FAO and participated by seven rice growing countries (Vietnam, Malaysia, Brunei, Thailand, Laos PDR, Myanmar, Cambodia).
- Workshop on innovative approaches in the implementation of *APEC Food Security Action Plan in Developing Economies* was held in Kuala Lumpur, Malaysia on 18-21 June 2012. Funded by APEC and participated by Vietnam, Malaysia, Brunei, Thailand, Laos PDR, Myanmar, Cambodia, Indonesia, China, Japan, Chinese Taipei and USA.
- Regional workshop on information exchange through the IPP and the APPPC Website, 4-9 July 2011.
- Regional training on Integrated Pest Management (IPM) for Carambola, 29 April -12 May 2012

Pest outbreaks: In 2011–2012, pests outbreak of brown plant hopper, red palm weevil and banana bacteria wilt were reported from various areas of the country.

Market access: In 2011–2012, Malaysia was given market access for its products by Australia, China and the Republic of Korea.

### 3.10 Myanmar

Myanmar has a total land area of 676 552 sq km. From north to south it stretches 2 085 km, and from east to west about 930 km. Only 66-67 million hectares are utilized for farming. The main agricultural crops are rice, pulses, oil seed crops (groundnut, sesame and sunflowers), industrial crops (jute, cotton, rubber) and horticultural crops (fruits and vegetables). The Department of Agriculture, Ministry of Agriculture and Irrigation is the only government agency responsible for agricultural research and development, extension and plant protection. The Plant Protection Division (PPD) is one of the divisions of the Department of Agriculture.

As PPD is the National Plant Protection Organization (NPPO) in Myanmar, its major task is to undertake plant pest control measures, manage pesticides at state/regional level and district levels, and issue Phytosanitary Certificates.

The PPD is legally responsible for issuing Phytosanitary Certificates and Import Certificates according to the Plant Pest Quarantine Law. The marketing and management of pesticides are controlled according to the Pesticide Law. The Plant Quarantine Law is being reviewed in line with WTO/SPS and the Pesticides Law in line with FAO. Four inspection points were established at border crossings as Myanmar's trade increased.

Monitoring the occurrence of pests and diseases is being carried out for solving pest and disease related field problems. Pests and diseases are managed in an integrated manner as the policy for plant protection is based on IPM. Natural enemies are reared for biological control, such as *Eocanthecona furcellata* for the control of cotton bollworm (*Helicoverpa amigera*), *Compoletis chlorideae* for chickpea bollworm, and *Cotesia plutellae* for diamond back moth. The EuropeAid funded Rice and Maize Integrated Pest Management Project uses *Trichogramma* wasp to control rice stem borer and corn borer. A study on the biodiversity of pests and natural enemies in rice ecosystem was conducted, funded by IRRI. Surveying, collection, identification, yield loss assessment, and management are based on IPM. Trainings related to weeds and rodents were carried out, and post-harvest technologies were introduced. No pest outbreaks occurred in 2011-2012.

Pesticides are analyzed and evaluated for registration, commercial use and import. Residue levels as well as mycotoxin levels are monitored and certified for agricultural commodities both for domestic consumption and export. The PPD is also participating in the harmonization program of MRLs in the ASEAN region by conducting residue analyses for the proposed pesticides and commodities.

### 3.11 Nepal

Agriculture is the mainstay of the Nepalese economy, providing livelihood for 65 percent of the population and accounting for 38 percent of the GDP. Agriculture employs 76 percent of the workforce, while services employ 18 percent and manufacturing/craft-based industry 6 percent. Agricultural produce - mostly grown in

the Terai region bordering India - include tea, rice, corn, wheat, sugarcane, root crops, milk, and water buffalo meat. Industry mainly involves the processing of agricultural produce, including jute, sugarcane, tobacco, and grain.

The Department of Agriculture (DoA) bears overall responsibility for the growth and development of the agricultural sector which still plays a prime role in the Nepalese economy. The Department of Agriculture (DoA) has twelve directorates which provide technical services. One of the important directorates is the Plant Protection Directorate (PPD), which is the national focal point for plant protection services as well as the National Plant Protection Organization (NPPO). Under the PPD there are one National Plant Quarantine Program, one Pesticide Management Office, five Regional Plant Protection Laboratories, five Regional Plant Quarantine Offices and ten Plant Quarantine Check Posts which are located in the centre and at the border points to India and China. Under the Department of Agriculture, 75 District Agricultural Offices are providing services at the district level. In each district, one Plant Protection Officer is responsible for general crop protection services to farmers; for implementing the Plant Protection Act as pesticide inspector; and for linking plant quarantine functions (especially post-entry quarantine) to farmers.

The Government of Nepal has developed a policy for the judicious use of pesticides and safety regulations; however, these have not yet been materialized at the farmer's level due to the lack of studies on alternative pest management practices, such as the use of biological, botanical and safe chemicals as well as knowledge about indigenous farmers' practices. There are the basic components of IPM, and therefore, establishment and functioning of bio-agent rearing laboratory, studies of locally available botanical pesticides and residue study laboratories can exploit locally available natural resources of pest management.

In Nepal, there are approximately 72 pesticides importers. Some 8 222 resellers received training on the safe use of pesticides and storage management, and 8 551 were licensed. About 1 098 pesticide trade names and 108 common names have been registered for use under Pesticides Act and Rules. According to the latest estimate, Nepal imports annually about 345 tonnes (a.i.) of pesticides of which 33 percent are insecticides, 48 percent fungicides, 15 percent herbicides, 2.4 percent rodenticides, 0.04 percent bio-pesticides and 0.5 percent others. The value of gross sales account for US$4.41 million per year.

Nepal imports chemical pesticides mostly from India and China. Generally, the use of chemical pesticides is very low (142 g a.i./ha); however, it is much higher in areas with intensive commercial farming of vegetables, tea, and cotton. The use of pesticides is increasing by about 10-20 percent per year, and in market-oriented vegetables and fruit production, expenses for pesticides are a major cost factor. Studies have shown that more than 90 percent of the total pesticides are used in vegetable farming. Nepal has banned 15 types of hazardous chemical pesticides including POP, phosphamidon, organo-mercury fungicides and endosulfan. A study has shown that chemical pesticides are used by 25 percent of Terai (area along the Indian border) households, 9 percent of mid-hill households and 7 percent of mountain households. In certain mid-hill pockets close to urban markets, pesticide use is particularly high.

The Integrated Pest Management (IPM) approach was initiated in Nepal in 1997 within the Community IPM Support Program. During this stage, the program was financially supported by FAO and operated by FAO and the Plant Protection Division. Later on, this program has been executed by the Ministry of Agriculture and Co-operatives and managed by the Plant Protection Directorate (PPD). The Norwegian Government provided financial support for the first (2003-2007) and second phase (2008-2013). While the PPD has been coordinating its operation, FAO-Nepal has provided technical backstopping in some selected intensive IPM districts.

The National Integrated Pest Management Program in Nepal has been designed to support poverty reduction, ensure food security and protect the environment in a sustainable way. Its strategy is to implement and gradually up-scale participatory IPM by using the Farmers Field School approach to cover the seventy-five districts of Nepal with integrated agricultural development. Its primary focus is on the rural poor where IPM will increase economic benefits, develop farmer empowerment and establish better marketing of safer commodities. This would lead to a transparent mode of agricultural transactions that safeguards human health and the environment in line with the Government’s national commitments to global biodiversity, environmental protection and WTO related issues.

Nepal ratified IPPC on 8 May 2006, although the country has been a member of APPPC since 1965. It is a signatory to all major international conventions related to plant protection and environmental issues. The acceptance of the revised Plant Protection Agreement (1983 and 1999) has been forwarded by the Plant

Protection Directorate to the Government of Nepal which will deposit the letter of acceptance to APPPC as soon as possible. Nepal became a member of WTO in 2004 and has committed itself to give high priority to fulfill its obligations, particularly those related to the SPS Agreement.

The Plant Protection Act 1972 (revised 2007) and Rules 1974 (revised 2010) have been in effect since 1972 and 1974, respectively. They comply with the principles of harmonization and equivalence. Plant protection and quarantine laboratories are being equipped to meet the standards set by IPPC for accreditation. To comply with WTO requirements, actions are progressing in delineating endangered area, area of low pest prevalence and pest-free area. Quarantine pests are being identified. To establish a scientific basis for these zoning activities, pest surveillance and monitoring are being strengthened. Recently, Nepal has developed 24 National Standards for Phytosanitary Measures on the basis of ISPMs, and other Standard Operating Procedures, protocols and guidelines for a number of key phytosanitary activities. Survey and surveillance programmes are undertaken for the establishment and maintenance of pest free citrus orchards areas.

### 3.12 New Zealand

Since the last Session of the Asia and Pacific Plant Protection Organisation, New Zealand has continued to develop and refine its biosecurity system. During this time it has undergone two major restructures, first the merging of the Ministry of Agriculture and Forestry (MAF), the New Zealand Food Safety Authority (NZFSA) and Biosecurity New Zealand (MAFBNZ). They were amalgamated on 1 July 2010 and the new integrated structure came into effect on 1 February 2011. This was followed by a second restructure which merged the functions of the Ministry of Fisheries into the new organization. This took effect on 1 July 2012 when the Ministry of Agriculture and forestry (MAF) officially became Ministry for Primary Industries (MPI)

**Strategy**

MPI is a large and extensive government agency and is charged with the leadership of New Zealand's biosecurity system, the core of New Zealand's economy. The focus of MPI is on enhancing the integrity and performance of the value food chain, which covers animals, plants, food and related sectors, and their contribution to New Zealand's economy and well-being. With the new organization, a new strategy focus MPI on four key objectives:

- Maximise export earnings
- Protect from biological risk
- Improve sector productivity
- Increase sustainable resource use

**Legislation**

The Biosecurity Act has now been amended and is now enacted. It provides new powers across the sanitary and phytosanitary systems including for example:

- Instant fines and greater penalties on importers presenting false information.
- Ability to place conditions on imports after border clearance has been given, e.g. commodities imported for consumption cannot then be used for propagation.
- Use of electronic systems for border clearance.
- Enables industry to jointly fund incursion responses with government.

The amendments address areas in border verification, marine biosecurity, readiness and response, pest management, and compliance and enforcement.

**Other Strategic Improvements**

New Border Management Systems – A Joint Border Management System (JBMS) is under development. This

is a collaborative systems development between NZ Customs, NZ MPI and other frontline agencies. The first stage, a Trade Single Window (TSW) is now operational so importers provide information once to meet both customs and phytosanitary information requirements. Improvements are also being made to better share intelligence across agencies and to establish greater integration between rule making and border interventions.

New Zealand continues to develop and review import health standards based on pest risk assessment in accordance with the International Standards for Phytosanitary Measures (ISPMs). Since the last session of the APPPC, import health standards have been developed for a range of plants and plant products with 9 new import health standards developed and 28 additional import health standards reviewed and amended.

New Zealand continues to be active in the development, implementation and promotion of international and regional standards.

New Zealand operates an approvals framework for pesticides under the ACVM and HSNO Acts (see section IV). MPI (incorporating the former NZFSA) administers the ACVM Act, while ERMA NZ administers the HSNO Act and has developed a substance reassessment programme. Both organisations have implemented a compliance structure to support the approvals framework.

A new FarmsOnLine database is now fully functional. It is a database of all rural properties and includes ownership and management personnel and contact information, property boundaries and unique identifiers, and Information on agricultural production on each property. It is a shared resource that will give government agencies efficient access to up-to-date rural property information. It interfaces with a National Animal Identification and Traceability system. It provides functionality that will support quicker responses to adverse rural events and effective policy development for the agricultural, food and forestry sectors; improved surveillance for pests and diseases; quicker response to new incursions; and faster tracing back of non-compliances.

The Biosecurity Surveillance Strategy 2020 sets the future direction for the biosecurity surveillance system and is a starting point for changing the way surveillance is led, planned, conducted, and communicated. As the strategy is implemented collaboration between government agencies, regional government, industry, and other stakeholders has improved to ensure we have an accurate understanding of our pest status and can detect new incursions quickly.

Response Tracker is a database that has been designed to support the maintenance and tracking of MPI responses. It is used to report on individual responses or to provide data on response activities for a given period.

### 3.13 Pakistan

Agricultural productivity in Pakistan is prone to problems with pests and diseases that cause 20-50 percent economic losses. The Department of Plant Protection (DPP) with its well-versed wings viz. Locust Control, Aerial Pest Control, Pesticides Management and Registration, Plant Quarantine and Planning Wings performs regulatory, advisory, research and extension roles in the area of plant protection in Pakistan.

By keeping a constant vigil through locust outposts established in the interior of deserts, regular field service, monitoring by e-locust /geographical information system (GIS), ground operations and Pakistan-Iran and Pakistan-India boarder meetings under FAO programmes, the Department of Plant Protection safeguarded a 300 000 square kilometers area of Balochistan, Thar and Chohlistan deserts from catastrophic outbreaks of locusts during the last five years.

Through aerial spray operation programmes, the Department of Plant Protection kept under control the dubas bug (*Ommatitus lybicus*) in 13 000 acres of date palm growing areas of Balochistan during the last five years.

To avoid any shortage of pesticides, cope resistant pests, encourage local industry, save biodiversity and the

environment and ensure import, formulation, refilling-repacking and sale of quality and newly developed and safe pesticides at cheaper prices, the department took following steps:

In the 28 years from 1980 to January, 2008, only 154 types of pesticides were registered for import whereas, during the past five years, 82 new types of pesticides were registered for import to control potential and resistant pests like whitefly, jassid, thrips, armyworm, etc., fungal diseases and weeds of major crops, orchards, vegetables.

Likewise, from 1980 to January 2008, only 3 833 registrations for the import of 154 pesticides had been granted to only a few importers, mostly multinational companies that created their monopolies in the market for supply and price, so, the farmers had to pay exorbitant prices. In contrast, during last five years, 2 499 registrations for the import of 236 pesticides were granted in addition to the renewal of 3 833 already registered pesticides. This triggered a 40 to 50 percent decline in pesticide prices (e.g. emamectin benzoate, imidacloprid, pyriproxyfen, spinasid, glyphosate, sulphosulfuran, chlorfenpyr, etc.) and a 30 to 40 percent increase in yields of wheat, cotton, mango, citrus and vegetables. It also brought in Rs. 140 297 660 revenue from registrations.

For the first time in 2012, locally manufactured/formulated pesticides with locally conducted toxicity, residue, bio-efficacy, and post harvest interval studies were accorded registration. This was done to promote local manufacturing industries and local research institutions to develop new local products that are best suited to local conditions. It also emphasized on local toxicological, residual, post harvest interval, and bio-efficacy studies for making products more effective against pests and more environmentally friendly. This move saved 40 to 50 percent of foreign exchange being spent on the import of pesticides; before, the country was previously fully dependent on exporting countries.

The Department also functions as the National Plant Protection Organization (NPPO) under the provisions of the WTO-SPS negotiated International Plant Protection Convention (IPPC), a multilateral treaty signed by 177 countries under the auspices of the Food and Agriculture Organization (FAO) and the Pakistan Plant Quarantine Act, 1976 and Rules, 1967. The Department has the mandate to enhance the quarantine and phytosanitary capabilities of the country; to check pest and disease spread on crops; and to facilitate trade with plants and plant materials/agro-commodities under the WTO–SPS agreement through Plant Quarantine Outposts established on all sea ports, dry ports, international air terminals and international border crossings. Twenty-three phytosanitary protocols, MoUs and SOPs were signed with various countries on the application of plant quarantine and phytosanitary measures.

### 3.14 Papua New Guinea

The National Agriculture Quarantine and Inspection Authority (NAQIA) is the National Plant Protection Organisation (NPPO) in Papua New Guinea. NAQIA is a statutory authority established in 1997 by an Act of Parliament with the overall objective of protecting the country's plant and animal health.

Papua New Guinea was last represented at the 24$^{th}$ Session of APPC in 2006. Since then, NAQIA and particularly the pest status of plants have changed, and this report presents a brief account of those changes. The overall governance of NAQIA is basically the same. However, there were a few significant changes in the technical and advisory capacities for service delivery of the Plant Health Section. These include the introduction of a cadetship program in 2010. The Section now has three plant pathologists, two entomologists and two botanists as a result of the program. The Plant Health Services has been regionalised to improve the service delivery mechanism. The recruitment of regional plant protection officers and some support staff are at an advance stage.

The overall status of plant protection and quarantine has not changed very much over the last three years. Main issues and constraints affecting plant protection activities with NAQIA and other institutions include inadequate financial support by the Government, lack of trained plant protection scientists (plant pathologists, entomologists, and botanists), lack of laboratories with basic equipment, internal quarantine pest control, increased pest risks due to Papua New Guinea Liquefied Natural Gas (PNG LNG) project and poor employment conditions in Government funded organizations.

Some recently introduced pests include the coconut phytoplasma disease, banana phytoplasma disease, *Erythrina* gall wasp (*Quadrastichus erythrinae*), teak tree rust (*Olivea tectonae*), *Heliconia* rust and vegetable

leaf miner (*Liriomyza sativae*). Other pests like cocoa pod borer (*Conopomorpha cramerella*), little fire ant (*Wasmannia auropuntata*), siam weed (*Chromolaena odorata*), citrus huanglongbing disease and Asian rhinoceros beetle (*Oryctes rhinoceros*) have limited distribution and continue to spread despite attempts by NAQIA, Government agencies and the industries to prevent their spread.

Pests that have an imminent threat to biosecurity include banana blood disease, Tropical Race 4 of the Panama disease, coffee berry borer (*Hypothenemus hampei*), red imported fire ant (*Solenopsis invicta*), potato wart (*Synchytrium endobioticum*), sugarcane smut (*Ustilago scitaminea*), potato cyst nematodes (*Globodera* spp.) and khapra beetles (*Trogoderma* spp.*)*. Many of these pests are present in neighboring countries (Indonesia, Australia and New Zealand) and the risk of introducing some of these through the Indonesian province of West Papua is very high because of the limited control on the movement of people and goods across the PNG-Indonesia border and the increased movement of people and goods into PNG due to the PNG LNG project.

### 3.15 Philippines

The Department of Agriculture's (DA) Bureau of Plant Industry (BPI) is the Philippine National Plant Protection Organization. One of its primary functions is crop protection. This BPI function is being implemented by the Crop Protection Division (CPD) and the Plant Quarantine Service (PQS).

The Philippine plant quarantine is being enforced by the BPI-Plant Quarantine Service (BPI-PQS) by virtue of the Presidential Decree 1433, otherwise known as the Plant Quarantine Law of 1978**.** The BPI-PQS is the regulatory arm of the DA, which is mandated to safeguard the Philippine Agriculture from risks associated with the entry of exotic pest into the country; prevent the further spread of plant pests already existing in the country; and to enforce phytosanitary measures for the export of plants/plant products and other regulated articles to meet the importing country's requirements.

In line with the PQS' thrust to further strengthen its capacity for rendering services and carrying out its mandate, PQS conducted 13 technical trainings and participated in international and local trainings, meetings, workshop and conferences. Four new PQS buildings, a multi-purpose lounge and two diagnostic laboratories were established.

In order to conform to international quarantine standards; comply with the requirements of the importing countries; expand the Philippine market internationally; and prevent a further spread of regulated pests, the PQS formulated and modified 12 PQ rules and regulations.

The Province of Davao del Sur and Samal Island have been recognized by Australia as areas free from mango pulp weevil (MPW) and mango seed weevil (MSW), indicating additional sources of mango exports to Australia aside from Guimaras Island. The Philippines' request to the USDA for recognizing the whole Philippines except for Palawan as MPW free and the whole Philippines as MSW free is in the final stage of the rule making process.

The Philippines were able to access the US mainland market for banana. The BPI is continuously working to gain access to foreign markets for the export of commodities such as banana, mango, coconut, pineapple okra, etc.

The BPI Crop Protection Division is continuously addressing pest outbreaks of the rice grain bug, coconut scale insect, corn silk beetle and rodents. It is also actively promoting the use of Biological Control Based Management as part of Integrated Pest Management (IPM).

The Fertilizer and Pesticides Authority (FPA) of the DA is responsible for overseeing fertilizer and pesticide production in the Philippines and for regulating imports from other countries. To date, there are 28 banned and 18 restricted pesticides in the Philippines.

### 3.16 Republic of Korea

Organisation

The Ministry for Agriculture, Food and Rural Affairs (MAFRA) reorganized the *Animal, Plant and Fisheries*

*Quarantine and Inspection Agency* (QIA) into the *Animal and Plant Quarantine Agency* (QIA) on 23 March 2013 in order to focus on quarantine issues of animal and plant.

Plant protection regulations

The MAFRA partially revised the Plant Protection Act in January 2012, and the QIA revised the list of regulated pests in August 2012.

International cooperation programs on plant quarantine

The QIA held a mini-workshop on market access in 2013, utilizing the IPPC Market Access Manual (draft) in the ASEAN Plant Quarantine Expert Training Program. The QIA hosted and partially supported the 'IPPC Global Symposium on Pest Surveillance' which was organized by APPPC. QIA will host and support an IPPC regional workshop (formerly Draft ISPM Workshop) in Seoul in October this year.

Strengthening of the border inspection system and development of alternative fumigants of MB

- The QIA has conducted special annual quarantines on plants for foods before New Year's Day and Korea's Thanksgiving Day, on seeds and seedlings in the spring, and on tropical fruits in the summer.
- The QIA has participated in the development of alternative fumigants of MB, and started using ethyl-formate as a fumigant against banana mealybugs.

Lift a ban on foreign fresh fruits

The QIA has lifted a ban on fresh fruits from five countries since 2012.

Pesticide

The Rural Development Administration (RDA) cancelled the registration of paraquat in 2012 in order to prevent misuse. RDA will assess four pesticides that were temporarily banned in the EU, such as clothianidin, for being harmful to honeybees.

### 3.17 Solomon Islands

The Solomon Islands Agriculture Quarantine Service (SIAQS) is principally responsible for protecting the country from the entry and spread of pests and diseases of plants and animals that may have adverse effects upon the country's agricultural sector, economy, biodiversity, food security and the health of its population.

It also has an important role in facilitating trade in and out of the country to the benefit of the economy. To do this, the department maintains operations at ports, airports, freight and mail handling centers. The majority of the department's staffs are based in Honiara and it has only a limited staff presence in provincial areas. An important aspect of the department's work is the need to interact effectively with stakeholders in the private sector such as importers, exporters, vessel owners, shipping agents, industry groups and farmers.

Until now, the department has lacked a clear plan on its strategic direction and has approached its work mainly in response to immediate operational needs. Its ability to carry out its various roles has been limited by significant constraints in technical capacity and infrastructure.

Operational funding constraints remain one of the key issues limiting SIAQS's overall ability to deliver its required roles. Finding a means to fund delivery of all its biosecurity functions and still meet stakeholder demand regarding costs remain a challenge.

In order for SIAQS to progress forward as an effective biosecurity agency, it needs a clearer picture of what it wants to achieve, what resources it requires in order do so, and a better understanding of the specific steps it needs to take.

### 3.18 Sri Lanka

Some key organizational changes took place during 2012. The National Plant Quarantine Service (NPQS) in Katunayake took over all quarantine activities from the Seed Certification and Plant Protection Center

(SC&PPC) in Peradeniya in September 2012. The National Plant Quarantine Service (NPQS) in Katunayake serves as the National Plant Protection Organization (NPPO) for national inquiries concerning phytosanitary related activities in Sri Lanka. Since Sri Lanka is a signatory to the International Plant Protection Convention (IPPC), the NPQS is obliged to ensure the successful implementation of the conditions laid down by the International Plant Protection Convention (IPPC) as well as the Sanitary and Phytosanitary Agreement of the World Trade Organization (SPS/WTO).

The NPQS plays the regulatory role under the Plant Protection Act No.35 of 1999. Recently, regulations under the Plant Protection Act were updated, and the updated regulations are now in the final stages of legal drafting. Among these, the list of regulated pests will be also finalized.

Meanwhile, a Memorandum of Understanding was signed between the Sri Lanka Department of Agriculture and the Australian Department of Agriculture, Forest and Fisheries in order to implement the AQIS Standards for Methyl Bromide Fumigation. Under this, the first joint system review was conducted in Sri Lanka from 11 to 15 February 2013.

With these developments, the Plant Quarantine Station at the seaport in Colombo and the Plant Quarantine Station at the airport in Katunayake, which are the major border points for exports and imports, were taken under the direct supervision of the NPQS.

A number of quarantine pests were intercepted during the import of planting materials in year 2011 and 2012. Nearly 1000 consignments in 2011 and 900 consignments in 2012 were destroyed due to an unacceptable phytosanitary status.

The stem spot disease of dragon fruit which is caused by the fungus *Botryosphaeria dothidea* was detected in the western province. A nematode species that damaged the root system of guava was identified from the north central province. Both were successfully controlled. Measures taken by the Plant Protection Service of the Department of Agriculture to prevent further spreading of leaf rot caused by a complex of fungi and wilt disease caused by a phytoplasma which were affected coconut plantation in southern part of the country was also a success.

The rice IPM programme has been successfully implemented and now has been expanded to cover vegetables and other field crops in all districts through the Farmer Field School (FFS) training approach.

The Government has given high priority to pesticide control, and the mandate of the pesticide regulations is to execute statutory provisions of the Control of Pesticide Act No 33 of 1980, which was amended by the Control of Pesticides (Amendment) No 6 of 1994 and regulations made there under. It makes provisions to regulate the importation, formulation, packing, labeling, storage, transport, sales and use of pesticide. Legal provisions are also provided in the Act for licensing of traders, appointment of authorized officers, specifying functions and power to seize pesticides in outlet conducting activities contrary to regulations. Regulations to control commercial pest control service organizations are also implemented.

Currently, investigations are underway to verify the presence of arsenic in some agrochemicals. Based on the findings and the instructions of the Pesticides Technical Advisory Committee, four pesticides were recently banned.

### 3.19 Thailand

General information**:** Three agencies under the Ministry of Agriculture and Cooperatives (MOAC) are responsible for plant protection and pesticide management: 1) Department of Agriculture (DOA) serves as the country's NPPO; 2) Department of Agricultural Extension (DOAE) is the agency which provides advice, training of pest management and pesticide advisory to farmers; 3) National Bureau of Agricultural Commodity and Food Standards (ACFS) is the national contact point for WTO-SPS/TBT, Codex Alimentarius, OIE and IPPC.

Plant quarantine: Since 2009, the DOA has announced the Government Gazette on Notification of criteria, procedures and conditions for the importation of plants and plant products 32 issues. During 2011-2012, there were approved 13 fruits and vegetables which have been prohibited articles from 8 countries. The export

quarantine service has been implemented in line with the ISPMs. In 2012, the DOA has established an internal and external audit system for the export quarantine service at the port.

The following quarantine pests were intercepted: fuller's rose weevil: potato virus Y genetically modified in corn seeds; *Corcyra cephalonica* in rice seed imported for research.

Cooperation projects were 1) ASEAN Biocontrol for Sustainable Agrifood Systems (ASEAN Biocontrol) supported by the German International Cooperation (GIZ). 2) Plant biosecurity: technological research and training for improved pest diagnostics in Thailand and Australia, supported by the Australian Centre for International Agricultural Research (ACIAR). 3) Beyond Compliance funded by the Standards and Trade Development Facility (STDF).

Progress of implementation of ISPMs: The DOA has developed diagnostic protocols followed ISPM 27 for *Pantoea stewartii* subsp.*stewartii,* the cause of bacterial wilt of maize, and is developing diagnostic protocols for *Clavibacter michiganensis* subsp.*michiganensis* in tomato seed. The developed Guideline on Sampling of Consignments which followed ISPM 31 (Methodologies for sampling of consignments) has been used as the guideline for the inspection of pests by the quarantine export service.

Pest management: The DOAE has established Community Pest Management Centers (CPMCs) to transfer to farmers the knowledge and technical know-how required for self - pest management. There were still outbreaks of invasive species, i.e. pink cassava mealybug (*Phenococcus manihoti*) in cassava plantations and black headed caterpillar (*Opisina orenosella*) in coconut plantations. IPM programs using cultural practices, chemical and biological control have been recommended to farmers.

The DOA has conducted a surveillance of corn seeds from 142 sites in 20 corn production locations of the country to determine the establishment of the bacterial disease Stewart's wilt (*Pantoea stewartii* subsp. *stewartii*). The diagnostic results showed that all samples of corn seeds were negative for *P. stewartii* subsp. *stewartii* in both ELISA and PCR methods.

Pesticide management; The Hazardous Substances Act B.E. 2535 (1992) amended in 2008 is being enforced. There are still 96 items in the list of banned pesticides of Thailand. The activities in pesticide management were: 1) Implementation of international treaties and conventions; 2) Changes in the regulations for biopesticides, including biochemical and microbial pest control agents; 3) Registration application and data requirements; 4) Pesticide regulatory information exchange.

Information exchange: As the IPPC and APPPC contact point, the ACFS has posted information on the IPP and the APPPC websites. The National Committee on Phytosanitary Measures (NCPM) under the MOAC has elaborated comments on related issues under IPPC and developed a strategy to improve collaboration among the concerned organizations. In 2012, another committee which is composed of experts in plant protection developed a regulated pest database to meet IPPC obligations.

### 3.20 Timor-Leste

The National Plant Protection Organisation (NPPO) of Timor-Leste played an important role when the country became a member of the FAO in November of 2003. The Government of Timor-Leste (GoTL) has prepared a number of legislations and decree laws about quarantine and plant protection. The National Directorate of Quarantine and Biosecurity of Timor-Leste is the government body responsible for the implementation of those regulations and application of the SPS/WTO. More concretely, the Department of Plant Quarantine will apply those regulations and the SPS/WTO on the ground. It will control the sanitation of imported and exported materials such as plants, parts of plants as well as agriculture products through all means of transportation, by air, land and sea. The Department of Plant Quarantine prepared the list of materials that are not allowed to be imported, as well as the list of materials that are allowed for importation but with restricted conditions due to biosecurity reasons.

The legislations on plant quarantine and the lists of pests and diseases have been prepared and are still waiting for the approval by the GoTL. Moreover, the National Directorate of Agriculture and Horticulture, specially the Department of Plant Protection of Timor-Leste is the government body responsible for the management of pests and diseases, and the evaluation of activities for controlling pests and diseases in the field.

The annual joint survey between specialists of the DAFF-AQIS (entomologist, botanist, plant pathologist) from Australia and specialists from the National Directorate of Quarantine and Biosecurity (of Timor-Leste) contributes to increase the skills of the personnel of the Department of Plant Quarantine in updating the database of pests according to ISPM 19 and using the *Pest-tracker* kit for the *Surveillance Information Management System* (SIMS). This system is useful for data collection, data consistency, data integrity, mapping capabilities, surveillance reporting, data analysis, available technology, resource considerations and operational efficiencies.

The activities of the Department of Plant Quarantine are to control the sanitation of plants, part of plants and the agriculture products that are imported into or exported from Timor-Leste through all means of transportation by air, land or sea. In conducting their daily duties, the quarantine personnel always apply the following measures: inspection; detention; refusal for entry into the country; destruction; or release. Until now, the measures of isolation, observation and treatment have not yet been applied due to the lack of appropriate infrastructure and facilities.

The Department of Plant Quarantine conducts annual surveys of pests and diseases in plants in Timor-Leste. Its infrastructure, such as the laboratory, will be upgraded to facilitate the operation of quarantine services and improve the mechanism of control at the entry and exit points. Timor-Leste will start using the *Phytosanitary Certification* once it is approved by the GoTL. The quarantine regulations on pests and diseases, taxes and fees for quarantine services are still waiting for approval by the GoTL. Soon after the approval, the Department of Plant Quarantine will notify all IPPC members.

In early 2011, a pest outbreak occurred in two districts of Timor-Leste (Dili and Liquiça). The outbreak was caused by a mealybug (*Paracocos marginatus*) that destroyed most papaya trees in the two districts. These pests were controlled with applications of chemical insecticide Kanon and combined with biological control by using the parasitoid *Aecerophagus papayae*.

The control of pests and diseases in plants still relies on the application of chemical pesticides. The draft legislation about pesticides is still in discussion by the Government authorities. In addition, Timor-Leste also needs to ratify all treaties such as the Stockholm Convention (POP), Montreal Protocol (Ozone Depletion Materials), etc.

Timor-Leste still needs technical assistance from the DAFF/IPHP in Australia, the Indonesian Agricultural Quarantine Agency and from those APPPC members who are willing to provide temporary technical support (i.e. one year) to conduct evaluations and reviews, and prepare whatever is related to ISPMs/RSPMs, PRA and other matters that are related to the IPPC treaty. This is necessary to harmonise the mechanisms of controlling the importation and exportation of plants and the agricultural products among all APPPC and IPPC member countries.

### 3.21 Tonga

A new head of the Quarantine and Quality Management Division of Ministry of Agriculture, Food, Forestry and Fisheries (MAFFF) was appointed in April 2012, and a new CEO of the Ministry took office in June 2013.

A draft of a bio-security bill will be ready for submission by the end of September 2013.

Bilateral discussions were held with other Pacific island countries, New Zealand, and Australia; the New Zealand discussions took place in Wellington in June 2013.

The Pacific Horticultural and Agricultural Market Access Project was launched in Tonga in February 2011, and the second phase of the PHAMA project started in August 2013.

A series of diagnostic training sessions by the Ministry for Primary Industries, New Zealand, was completed in March 2013 and there is now qualified staff for the small diagnostic laboratory which holds the equipment used during the training, including a remote microscopy unit. With the launch of high-speed internet on 21 August 2013, information exchange limitations are overcome.

Tonga was represented at the Pacific Plant Protection Organization (PPPO) in May 2012, and it participated in a regional (PPPO) ISPM workshop in August 2012 and the Global Symposium on Plant Pest Surveillance in the Republic of Korea, 29 October-2 November 2013

The country is currently working towards adopting and implementing a new web-based biosecurity

information facility (BIF). To that effect, an introductory training was held in August 2012, and field testing took place from 29 July to2 August 2013.

### 3.22 Vietnam

General information

- Plant Protection Department (PPD) was established in 1961, under the Ministry of Agriculture and Rural Development (MARD)
- Acts as the National Plant Protection Organisation (NPPO) of Vietnam
- Headquarter is located at 149 Ho Dac Di Street, Dong Da District, Ha Noi Capital, Socialist Republic of Vietnam (SRV)
- The representative office of PPD is located at 28 Mac Dinh Chi Street, District No. 1, Ho Chi Minh City.
- Main functions: Responsible for plant protection, plant quarantine, food safety and environmental management, and pesticide management.

Directorial Board

- Director General – Associate Prof. Dr Nguyen Xuan Hong.
- CODEX Official Contact Point: Dr Bui Si Doanh - Deputy Director General (in charge of finance, inspection and pesticide control).
- IPPC, SPS Official Contact Point: Dr Hoang Trung - Deputy Director General (in charge of plant quarantine).
- ASEAN, APPPC, FAO Official Contact Person: Mr Ngo Tien Dung- Deputy Director General (in charge of pest management issues).

Organization

A new division (Food Safety and Environmental Management) was established on 10 March 2011 to implement the responsibilities in plant origin food safety and environment management related to PPD functions.

Updated applicable legal documents

- *In plant quarantine:*

  MARD's Circular No.39/2012/TT-BNNPTNT issued on 13 August 2012 on Publishing the List of Regulated Articles Subject to PRA before Importing into Vietnam.

  MARD's Circular No.40/2012/TT-BNNPTNT issued on 15 August 2012 on Publishing the List of Regulated Articles of the Socialist Republic of Vietnam.

- *In pesticide management:*

  MARD's Circular No.03/2013/TT-BNNPTNT issued on 11 January 2013 on Pesticide Management.

  MARD's Circular No.14/2013/TT-BNNPTNT issued on 25 February 2013 on Eligibility Certification for Pesticide Production and Trading.

Legal documents under development

The draft LAW ON PLANT PROTECTION AND QUARANTINE is being developed; it now has been submitted to the Viet Nam National Assembly for consideration and approval, expected in November 2013.

New pests occurred on crops

In the past two years, there were some new pests that emerged on crops, such as: pink cassava mealybug on cassava (*Phenaccocus manihot*); citrus moths on grapefruits *(Prays citri* Millier*e and Citripestis sagittiferella* Moore *);* phytoplasma on cassava (*cassava phyllody phytoplasma* or *cassava witches'-broom phytoplasma)*.

### 3.23 Country, regional and international organization reports

#### 3.23.1 Japan

Since the 26th Session of the APPPC, 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.

The Ministry of Agriculture, Forestry and Fisheries (MAFF) has the main responsibility 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 the implementation of import/export inspections and the supervision of disinfestation treatments. The PPS of Japan consists of five head offices, 16 sub stations, 47 branches, three detached offices and one plant inspector's office and 875 plant quarantine officers who are authorized by the NPPO to implement appropriate inspection/certification.

The MAFF is working closely with pest control stations operated 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 regulate the movement of plants from outbreak areas to non-outbreak areas.

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

The MAFF revised the Enforcement Ordinance of the Plant Protection Law (Ministerial Order) in March 2011 to stipulate the list of quarantine pests with a view to meeting the requirements of the IPPC. MAFF continues to update the list based on PRA.

Training courses on the disinfestation technique using thermal treatment on fruit flies have been organized since 1988 with trainees invited from countries affected by fruit flies. As a multilateral contribution, Japan financially supported from 2007 to 2011 through a trust fund a field project on phytosanitary capacity building, targeting ten countries. The project was implemented by the FAO. Since 2012, Japan has provided a trust fund to the IPPC Secretariat to support its activities on capacity developing for the purpose of comprehensive improvements of the phytosanitary capacity in developing countries, especially of Asian countries.

## 4. Update on the International Plant Protection Convention and the CPM Bureau

Mr Yukio Yokoi, Secretary of IPPC, reminded the participants that the IPPC celebrated its 60th anniversary in 2012. On that occasion (particularly in the Symposium held in CPM-7), the activities of the IPPC were reviewed and they were found to have increased both in terms of quality and quantity after the negotiations of the WTO/SPS agreement. This agreement recognized the potential capacity of the Convention, which is still growing. During the almost two decades after this change in its role, the IPPC has undergone various developments, including the establishment and strengthening of Secretariat services, standard setting systems, efforts in capacity development and information exchange as well as its own dispute settlement mechanisms. Some disputes in the plant health area were taken up in the WTO dispute settlement mechanisms, and the WTO/SPS Committee started functioning as the forum to exchange potential/actual trade concerns on a regular basis

Mr Yokoi provided a brief overview of the IPPC and its governance mechanisms, including its Commission, Bureau and Financial Committee. The strategic objectives of IPPC are food security and agriculture, trade development and protection of the environment. Recent achievements were the strengthening of area specific strategies and the framework for standards, development of tools and the mobilisation of resources. The challenges ahead (with the primary focus on the issues discussed in the CPM-8 and followed up since then) are the responses to the FAO reform, a new direction for standards and the national reporting obligations. The Secretary presented his perspective on further possible improvements of the Secretariat and future IPPC activities, as well as the interactions with outside stakeholders. In addition, updates of the ongoing FAO reform in relation to the IPPC's perspective were presented. . An advisory group on national reporting has been nominated, and the Secretariat is looking into ways to strengthen a more active communication between the IPPC, RPPOs and NPPOs. Compared to the other standard setting organisations, the OIE and the CODEX, the IPPC still has a small funding base. It is hoped that the APPPC may play a larger role in the IPPC community.

## 5. Developments with the amendments of the Plant Protection Agreement (1983 and 1999) for the Asia and Pacific region and development of APPPC

### 5.1 Update on the acceptance/ratification of the Agreement

The report on the development with the amendments of the Plant Protection Agreements for Asia and the Pacific and the development of APPPC was presented by the Executive Secretary.

There was no change in the membership status of APPPC until early 2012. Twenty-four countries were contracting parties to the Plant Protection Agreement for Asia and the Pacific at present. These countries were Australia, Bangladesh, Cambodia, China, DPRK, Fiji, France, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Solomon Islands, Sri Lanka, Thailand, Tonga and Viet Nam.

On 6 September 2011, the Executive Secretary of APPPC sent FAO legal circular state letter (20/V/2010) together with context of the Agreement and model letter to all contacts of APPPC for potential follow-up actions to accelerate the procedure of acceptance. Some additional follow up communications with individual countries took place in the past two years. In addition, the Secretariat provided relevant advice to Bhutan, Japan, Singapore and Timor-Leste for their consideration of becoming new APPPC members.

Timor-Leste has deposited with the FAO Director-General an instrument of acceptance of the Agreement including the amendments of 1983 and 1999, and became the 25$^{th}$ member nation of APPPC on 20 April 2012. Therefore there are now 25 countries are contracting parties to the Plant Protection Agreement for Asia and the Pacific at present.

With regard to the adoption of the 2nd set of the amendment in 1999, Australia, Timor-Leste and the Republic of Korea deposited an instrument of endorsement, and Nepal is expected to do so shortly. With the coming into force of the 1983 amendment on 4 September 2009, 18 countries are contracting parties of the amended Agreement which includes the financial obligation. Recently, the Republic of Korea deposited an instrument of the endorsement.

In order to assist member countries in preparing their acceptance initiatives, in May 2013 the Secretariat provided the countries with an example document from Australia which contains some background information and essential paragraphs that are proposed as a proactive reference. Detailed background information on the amendments and their status of acceptances is available from the webpage of the FAO Legal Office: http://www.fao.org/fileadmin/user_upload/legal/docs/2_006s-e.pdf.

### 5.2 Discussion on the approval of the new Regional Standards for Phytosanitary Measures (RSPMs)

The chairperson of the Standing Committee, Mr John Hedley, reported that the Committee convened from 30 July to 3 August 2012 in Bangkok, Thailand to review draft regional standards for phytosanitary measures (RSPMs). Participants from Australia, Bangladesh, China, Indonesia, Malaysia, New Zealand, Republic of Korea and Thailand attended the APPPC Standards Committee meeting. Also, Mr Yves Henon, Asia-Pacific Manager of the International Irradiation Association in Bangkok, Thailand and Mr Kwang Youll Lee of the Atomic Energy Research Institute of the Republic of Korea, attended as observers.

After an extensive review and discussions, the meeting approved two draft standards, namely "*Approval of Irradiation Facilities*" and "*Approval of Fumigation Facilities*" for circulation to the member countries for their comments The draft RSPMs were sent to member countries on 12 October 2012 for consultation.

With regard to another draft RSPM on "*Minimizing pest movement by machinery moved in international trade*", the meeting members proposed a number of suggestions for further consideration in developing the draft. It was agreed that the technical working group (New Zealand, with technical input from Australia) should first develop this standard as a technical document along the lines described in Annex 5 of the SC report, to be considered at the next APPPC meeting. However, in May 2013, during the working group meeting on the work plan for 2014-2015, it was concluded that the development of the draft RSPM on the

movement of machinery should not go ahead since the IPPC is developing a standard.

The two draft RSPMs were submitted to the 28th Session for consideration and adoption.

5.2.1 Adoption of the RSPMs on *Approval of Irradiation Facilities* and *Approval of Fumigation Facilities*

Both proposed RSPMs were adopted by the Session. Their full texts are given in Annex III (*Approval of Irradiation Facilities)* and Annex IV (*Approval of Fumigation Facilities).* There are now a total of ten APPPC RSPMs.

## 6. Progress report on information exchange within the region

### 6.1 Report on information exchange by the Secretariat

The report on information exchange was presented by the Executive Secretary. The full report is attached as Annex V.

Information exchange and reporting is an integral part of an effective IPPC/APPPPC implementation. The APPPC website now enables member countries in the region to exchange plant protection information. During the past biennium (2012-2013), there has been a gradual increase of information exchange activities among APPPC members through both the IPP and APPPC websites. The automatic crosslinking of the APPPC website with the IPP facilitates the uploading process and avoids the duplication of official information.

As of August 2013, 80 percent of the APPPC countries have posted general plant protection information on the APPPC website, and roughly half the countries had provided specific information on plant quarantine, pest surveillance, pest and pesticide management. About one-third of the information updates were made by the APPPC Secretariat which also monitors the information exchange activities on a regular basis and encourages the members to make use of this information exchange platform. The Secretariat also produced five publications during this period and distributed them to all member countries in addition to uploading them to the APPPC and RAP websites.

In 2013, the IPP was migrated to a new software, and consequently the Secretariat also upgraded the APPPC website.

To encourage a more active information exchange, the Philippines and Thailand organized national training meetings on the use of the website as well as the use of IPP for the promotion of the information exchange. To encourage a more active information exchange, particularly by those countries that have not yet actively participated, the Secretariat recommended (1) the establishment of a country-level mechanism of information collection, review and clearance before uploading to the APPPC website or/and IPP: (2) enhancement of coordination among various sections of plant protection in countries by setting set up a committee with representatives from different agencies. The committee may meet from time to time to decide on what information to be uploaded to the two websites, or it may decide beforehand what information should be regularly uploaded by the country editor(s) without having to seek prior consent from the committee.

### 6.2 Report of the working group on information management and exchange

Mr Ho Haw Leng from Malaysia reported on the activities of the working group which consisted of Australia, Fiji, India, Malaysia, Republic of Korea, Thailand and Vietnam. The working group had the task of developing a strategy and a plan for information management and exchange. A draft proposal was developed that listed four priority activities: (1) sharing information on capacity building activities (including name of experts, funding, etc.); (2) sharing information of success stories of best practices for the management or mitigation of quarantine pest incursions; (3) sharing expert information on specific issues such as SALB, mites, nematodes, PRA, etc. and (4) utilizing the interactive SALB Asia blogspot platform. Comments on the proposal were received and will be incorporated in an updated draft for further discussions. To finalize the document, the

Working group is considering holding another meeting. Other countries are welcome to join.

## 7. Progress report on plant quarantine in the Asia and Pacific region

### 7.1 Report by the Chairperson of the Standing Committee

The Chairperson of the Standing Committee, Mr John Hedley, reported on the following activities during the 2011-2013 biennium, which were funded by sponsors or APPPC funds from its operational funding mechanism.

The following meetings were held:

- 12th APPPC Asia Regional Workshop for the review of draft ISPMs, Busan, Republic of Korea, 19-23 September 2011
- 13th APPPC Asia Regional Workshop for the review of draft ISPMs, Gyeong Ju, Republic of Korea, 3-7 September 2012
- The Pre-CPM Meeting with APPPC members, 18 March 2012, FAO, Rome
- The Pre-CPM Meeting with APPPC members, 7 April 2013, FAO, Rome
- Workshop on the Review of Draft Regional Standards for Phytosanitary Measures, 30 July-3 August 2012, Bangkok, Thailand
- Workshop to develop a training programme and reference materials for the protection against the South American leaf blight (SALB) of rubber, 21–25 November 2011, Malacca, Malaysia
- Regional status of pest surveillance in the context of ISPM 6: International Standard for Phytosanitary Measures – Guidelines for Pest Surveillance. Analysis of the responses to the Implementation Review and Support System (IRSS) questionnaire from APPPC countries
- The Global Symposium on Plant Pest Surveillance, 29 October–2 November 2012, Anyang, Seoul, Republic of Korea
- The APPPC Working Group Meeting on the preparation of the work plan for 2014-2015, 13-15 May 2013, Bangkok, Thailand

Details of the meetings and workshops are given below:

***12th APPPC Asia Regional Workshop for the review of draft ISPMs, Busan, Republic of Korea, 19-23 September 2011***

The following drafts were examined and commented on by participants:

- Annex to ISPM 11:2004. Pest risk analysis for plants as quarantine pest and consequential changes in the core text of ISPM 11:2004
- Annex 1 of ISPM 15:2009. Approved treatments associated with wood packaging material
- Annex to ISPM 27:2006 *Trogoderma granarium*
- Annex to ISPM 28: 2007. Vapour heat treatment of *Cucumis melo* var. *reticulata* for *Bactrocera cucurbitae* (201-)
- Annex to ISPM 28: 2007. Heat treatment of wood packaging material using dielectric heat (201-)
- Revision of Supplement No. 1. Guidelines on the interpretation and application of the concept of official control for regulated pests (not widely distributed) of ISPM 5: Glossary of phytosanitary terms
- Amendments to ISPM 5; Glossary of phytosanitary terms

***13th APPPC Asia Regional Workshop for the review of draft ISPMs, Gyeong Ju, Republic of Korea, 3-7 September 2012***

The following drafts were examined and commented on by participants:

- Appendix to ISPM 12: Electronic certification
- Determination of host status of fruits and vegetables to fruit fly (Tephritidae) infestation (2006-031)

- Annex to ISPM 26: Establishment of fruit fly quarantine areas within a pest free area in the event of an outbreak (2009-007)

***The Pre-CPM Meeting with APPPC Members, 18 March 2012, FAO, Rome***
***The Pre-CPM Meeting with APPPC Members, 7 April 2013, FAO, Rome***

The countries attending these meetings (11 in 2012 and 9 in 2013) used the Pre-CPM Meetings to be updated on issues from Bureau members and to discuss certain matters of particular concern to the countries attending.

***Workshop on the Review of Draft Regional Standards for Phytosanitary Measures, 30 July-3 August 2012, Bangkok, Thailand***

See section 2.3.

***Workshop to develop a training programme and reference materials for the protection against the South American leaf blight (SALB) of rubber, 21 – 25 November 2011, Malacca, Malaysia***

The 26th Session of the APPPC in India agreed that Malaysia was to lead the working group on SALB and prepare a draft programme for the publication of reference materials on SALB. This involved collecting, editing and publishing reference materials as well as developing training programmes. Malaysia hosted a workshop to accomplish this, entitled 'Workshop to Develop Training Program and Reference Materials for Protection against South American leaf blight' in Malacca, Malaysia from 21–25 November 2011. In this workshop, several reference materials (leaflet, pamphlet, a booklet, PowerPoint presentations, banner/poster and bibliography) on SALB were developed for regional training on the prevention of the introduction of SALB into the region.

***Workshop on the training of trainers on the protection against the South American leaf blight (SALB) of rubber in the Asia-Pacific Region, 2–6 July 2012, Penang, Malaysia***

The 27th Session of the APPPC held in the Philippines recommended that the SALB working group carry out two follow-up activities in the year 2012 and 2013, i.e. a training workshop on SALB (using the reference materials produced in 2011) and a training workshop on diagnostics. Thus, a '*Workshop on Training of Trainers on Protection against South American leaf blight of Rubber in the Asia-Pacific Region*' was held in Penang, Malaysia from 2 to 6 July 2012. Lectures were presented on the economic importance of rubber and SALB; the biology of the rubber plant; its cultivation and propagation methods; the symptoms of SALB; the spores of *M. ulei*, physiological races, distribution, dispersal and epidemiology; Management of SALB of rubber; methods for isolation and culturing of *M. Ulei;* other important *Hevea* diseases; quarantine pests and diseases of *Hevea*; the historical development on quarantine of SALB; Pest Risk Analysis (PRA) of *M. ulei* with emphasis on entry pathways and import requirements; procedures for inspection, diagnostics and disinfection of planting materials; contingency plan: detection surveys and eradication procedures; and public relations: creation of public awareness.

***Regional status of pest surveillance in the context of ISPM 6: International Standard for Phytosanitary Measures – Guidelines for Pest Surveillance. Analysis of the responses to the Implementation Review and Support System (IRSS) questionnaire from APPPC countries***

***The Global Symposium on Plant Pest Surveillance, 29 October–2 November 2012, Anyang, Seoul, Republic of Korea***

See section 2.2.1.3 for reviews on both these meetings.

***The APPPC Working Group Meeting on the preparation of the work plan for 2014-2015, 13-15 May 2013, Bangkok, Thailand***

See sections 2.7 and 12.1.

## 7.2 Report by the working group on South American leaf blight (SALB)

The Chairperson of the group, En Yusof from Malaysia, presented the report. The 27th Session of the APPPC in the Philippines recommended that the SALB working group carry out follow-up activities in 2012 and 2013. Having been given the task of continuing to lead the working group on SALB, Malaysia organized a *Workshop to Develop Training Programme and Reference Materials for Protection against South American leaf blight* in Malacca, Malaysia from 21 to 25 November 2011. The overall objective of the workshop was to develop a draft frame programme for the publication of reference materials, a SOP/ Operational Guideline for the protection against SALB, and training modules. During this workshop, a 6-day training programme on the South American leaf blight (SALB) was proposed be conducted in Brazil for personnel from the rubber growing countries within the Asia and Pacific region. The training modules developed at the workshop were to be translated into local languages by the respective countries.

A follow-up *Workshop on Training of Trainers on Protection against South American leaf blight of Rubber in the Asia-Pacific Region* was held in Penang, Malaysia from 2-6 July 2012. This workshop was attended by 19 participants from Cambodia, China, India, Indonesia, Laos, Malaysia, Philippines, Sri Lanka, Thailand and Vietnam, while 8 persons from Malaysia attended as observers. Two experts on SALB and quarantine from FAO and Malaysia were invited as consultants and trainers. The overall objective of the workshop was to enhance capacity building on the protection against SALB in the APPPC region. Details of this workshop are given in Annex VI.

A six day diagnostic workshop on South American leaf blight (SALB) for personnel from the rubber growing countries within the Asia and Pacific region will be held in Brazil from 28 October to 2 November 2013. The training programme will be led by the NPPO Malaysia and co-organized by FAO and the NPPO Brazil. A letter of invitation was been sent to Cambodia, China, Indonesia, India, Lao PDR, Philippines, Singapore, Sri Lanka, Thailand, Viet Nam and Malaysia. Indonesia, Malaysia and Thailand confirmed sending one to three participants, while the Philippines and China were unable to participate. Malaysia coordinated with Brazil to finalize the program. After the Brazil visit, it is intended that the Brazil attendees run a workshop for APPPC rubber growing country officials.

During the discussions it was noted by one country representative that he felt the SALB pest risk analysis could be reviewed and the amendment to the APPPC agreement be examined. Another country representative expressed concerns on the possibility of seed- and airborne transmission of the SALB pathogen. A number of member country representatives supported these viewpoints. Other countries stated that the APPPC should address any reconsideration of the risk analysis and agreement with caution. It was suggested that members await the report of the Brazil visit and carefully consider any new information that may arise. Stringent precautions against SALB have already been designed but if new scientific evidence is found then additional measures should be considered.

## 7.3 Report of the working group on the implementation of ISPMs

Ms Kyu-Ock Yim, Republic of Korea, presented the report of the implementation working group which was established at the 26th APPPC session in New Delhi in 2009. ISPM 15 was selected as the first ISPM for study, and a questionnaire was circulated in 2011 to the official contact points of IPPC or APPPC. Only 17 countries (including Japan and Singapore) responded by early 2012. Hence, the results from the questionnaire may not reflect the complete situation. The full summary of the results from a questionnaire on the implementation of ISPM 15 is given in Annex VI.

The questionnaire responses showed that in general the ISPM 15 is implemented in most of APPPC member countries with a few exceptions. Some NPPOs were not aware of their correct status of registration of the IPPC symbol (sometimes also called the IPPC mark). Those NPPO without a registration wanted to learn more about the experience in other countries and consult with IPPC. A few countries incorrectly require both the IPPC symbol and a phytosanitary certificate for export.

In conclusion, it was proposed that up-to-date information about the registration be provided to the NPPO with easy explanations about the purpose of the registration and its possible impact. To that effect, the working group suggested that the IPPC Secretariat send a letter to the NPPOs regarding concerns about the IPPC symbol registration, including information about the benefits from registration and the world status. This

was already approved by CPM-8 after suggestions from Asian bureau member (see CPM-8 document in Appendix 1 of Annex V). A large-scale workshop by APPPC on the implementation may not necessary, but opportunities by IPPC or other organization may be used to improve the implementation in the APPPC region. A small-scale workshop with a few countries (for example: Laos, Myanmar, Cambodia, Timor, Samoa, etc.) was recommended in 2013, possibly in a country that has a sound system for WPM treatment and monitoring. Finally, concerns about the ISPM 15 content may be submitted to the Standards Committee of IPPC.

The registration of the IPPC symbol is very important part of the ISPM 15 certification procedure. Without proper registration, it could be fraudulently used and create confusion in international trade. The symbol is owned by FAO, but individual countries need to register it in their own territory. The FAO Legal Office can help in this process and could also register the symbol in a country (with reimbursement from the local NPPO). Since the present registrations will expire soon, it is important that all NPPO initiate the registration process as soon as possible or contact the FAO Legal Office.

## 8. Progress report on IPM in the region by the Chairperson of the APPPC Standing Committee on IPM

Mr Ngo Tien Dung from Viet Nam presented the report of the Standing Committee. The full progress report is given in Annex VII.

During the last APPPC-SC-IPM meeting (Manila, August 2011), member countries agreed on focus areas /concerns for the 2012-2013 biennium. These included: Strengthening of national early warning and surveillance and forecasting systems for brown plant hopper (BPH) in rice; formulation of policy and advocacy for promotion of IPM, Pesticide Risk Reduction and biological control - biological control agents, bio-pesticides and botanicals. The meeting also emphasized the need to address spread prevention and management of invasive agricultural crop pests and diseases, including *Bactrocera* fruit flies, golden apple snails (*Pomacea spp.)* and various phytoplasma diseases in cassava, sugarcane and coconut.

With 2011 APPPC approved seed funding (US$30,000) and with other FAO Regular Program and Trust Fund initiatives, APPPC member countries have invested their own resources and made good progressing in addressing above mentioned concerns and work areas, in-country and at regional level, during the last two years. The SC-IPM supported two regional workshops: (1) Regional Workshop on Spread Prevention and Control of Golden Apple Snail in Rice (Kuala Lumpur, Malaysia, 3-7 December 2012 and (2) Regional Training Workshop on Biological Control (Bangkok, Thailand, 25 February-2 March 2013). With FAO Regular Programme and Trust Funds, the following regional projects were implemented: TCP/RAS/3311: Spread Prevention and Management of Cassava Pink Mealybug in Greater Mekong Subregion, GCP/RAS/229/SWE: Pesticide Risk Reduction in Southeast Asia, GCP/RAS/268/AIT: Area-wide Management of *Bactrocera* Fruit Flies in Asia, GCP/RAS/253/ASB- Spread Prevention and Management of Invasive Crop Pests and Diseases in Greater Mekong Subregion. FAO launched in 2013 a Regional Rice Initiative with pilot activities on *sustainable* rice intensification in the countries of Indonesia, Lao PDR and Philippines. These –and other- regional efforts have contributed towards strengthening of national flagship programs (e.g. on food security and food safety, on sustainable crop intensification, and on facilitation of better market access for smallholder farmers) in APPPC member countries. These efforts have also strengthened regional and in-country information sharing and capacity building for spread prevention and management of invasive agricultural crop pest and diseases and have promoted IPM and reduction in risks related to distribution and use of pesticides in agriculture.

During the discussion of the report, Pakistan raised the question about the sustainability of IPM farmer groups and encouraged other countries to follow its example of establishing formal farmer organizations. Cambodia also highlighted its experience with community IPM work. In Nepal, the training of IPM facilitators has become part of the curricula of agricultural colleges and thus replaces the need to conduct Training of IPM Facilitator courses by the extension services.

## 9. Progress report on implementation of the provisions of the International Code of Conduct on the distribution and use of pesticides, and the Convention on the Prior Informed Consent (PIC) by AGPP/PIC Secretariat

Ms Yun Zhou of the PIC Secretariat in Rome presented the summary note on the development of the Rotterdam Convention and the International Code of Conduct on Pesticide Management

For the first time in the history of the Basel, Rotterdam and Stockholm conventions, the ordinary and extraordinary meetings of the conferences of the parties (COP) were held in Geneva back-to-back from 28 April to 10 May 2013. The meetings, attended by about 1,400 participants from 170 countries as well as 80 ministers, adopted 73 separate decisions aimed at strengthening protection against hazardous chemicals and waste. The objectives of holding these meetings in a coordinated manner were to strengthen cooperation and collaboration between the conventions, promote a more effective and coherent decision-making on policy and enhance efficiency in the provision of support to parties, with a view to enhancing the implementation of the three conventions at the national, regional and global levels. It was a milestone in the process of synergies among the three conventions. As a result, the secretariats of the three conventions have moved together in Geneva and they have established joint discussions on the work program and budget; half of the Rotterdam Convention secretariat is still located with FAO in Rome.

As one of the key outcomes of the COP, the Rotterdam Convention listed several pesticides and industrial chemicals. The listing of the new chemicals entered into force in August 2013.

Over the last two years, progress has been made in the ratification and implementation of the Rotterdam Convention. As of September 2013, there are 153 parties worldwide, 17 parties among the APPPC members. The full report on the progress of ratification and implementation is given in Annex VIII.

The agriculture sector should continue playing an important role in the synergies process of the conventions. Around 70 percent of the chemicals covered by the Basel, Rotterdam and Stockholm conventions are pesticides, and many are used in agriculture. It is in the best interest of all countries to ensure that the Basel, Rotterdam and Stockholm conventions can work together effectively and efficiently, to address various aspects of chemical life cycle management.

The new International Code of Conduct which is now called the Code of Conduct on Pesticide Management was approved by the FAO Conference in June 2013. The Code provides standards of conduct that serve as a point of reference for sound pesticide life cycle management practices, in particular for government authorities and the pesticide industry. The new Code of Conduct also contains a simplified and more inclusive definition of pesticides. Since 2007, highly hazardous pesticides (HHP) are a special focus area for FAO in implementing the Code of Conduct. Reducing the risks from pestcides is a common goal of the FAO Code of Conduct and the Rotterdam Convention.

## 10. Progress report on pesticide management in the Asia and Pacific region by the Chairperson of the APPPC Standing Committee on Pesticides Management

Mdm Nursiah Mohamad Tajol Aros from Malaysia presented the following activities that were carried out with regards to pesticides management between 2011 and 2013:

- FAO-TCP Project on pesticide regulatory harmonization, where the Final Meeting of the Pesticide Monitoring Committee was held in November 2011 in Kuala Lumpur;
- GIZ Project on Harmonization of Bio-pesticides Registration, which aims to develop harmonized ASEAN Guidelines for Registration and Application of Biological Control Agents;
- Regional workshop on pesticide regulatory management held in Chiang Mai in November 2012 to review and discuss the progress of the FAO-TCP and GIZ projects;
- Implementation of the Rotterdam Convention by Parties in the Asia-Pacific region, where Lao PDR and Malaysia have initiated efforts for National Action Plans; and
- Information exchange and data base where a dedicated pesticide database developed by Malaysia will be updated for utilization by ASEAN countries.

Countries in the Asia-Pacific actively participated in the different projects and programmes above, which included training workshops, project coordinator meetings and also drafting of guidelines and legislation on pesticide control. Other activities in line with pesticide control & management included the ongoing work of the ASEAN-Expert Working Group on Harmonization of Pesticide Maximum Residue Limits (MRLs) to propose new MRLs for adoption at the ASEAN Sectoral Working Group on Crops and also the Codex Committee on Pesticide Residues. An ASEAN Pesticide Residue Data Generation Project is being implemented to give technical officers in the ASEAN countries an opportunity to gain experience in carrying out field and laboratory work to determine MRLs for certain pesticide-tropical crop combinations.

The different countries in ASEAN continue to carry out pesticide management activities e.g. Thailand, Laos and Malaysia have amended or are in the process of amending their pesticide legislation. The countries have also made further progress in other pesticide management-related activities which include licensing and monitoring of pesticide sales, registering pesticides, combating illegal pesticides, recycling of pesticides containers, pesticide risk reduction and others.

The full report by the Standing Committee on Pesticides Management is given in Annex IX.

During the discussions, interest was expressed in a database on the situation of pesticides in each country. Questions regarding minimum data requirements for various types of pesticides were referred to the APPPC publications on *Guidelines for harmonizing pesticide regulatory management in Southeast Asia* and *Advancement of pesticide regulatory management in Asia*.

## 11. Consideration of recommendations of the 24th Technical Consultation among Regional Plant Protection Organizations (RPPOs)

The summary report of the 24th Technical Consultation among Regional Plant Protection Organizations (RPPOs) was presented by the Executive Secretary.

This consultation was hosted by the Pacific Plant Protection Organization (PPPO) in collaboration with Biosecurity Fiji (BAF). The meeting was held in, Fiji from 27 to 31 August 2012. Present at the Consultation were representatives of the IPPC Secretariat, the CPM Bureau and six RPPOs: Asia and Pacific Plant Protection Commission (APPPC), Comité de Sanidad Vegetal del Cono Sur (COSAVE), European and Mediterranean Plant Protection Organization (EPPO), North American Plant Protection Organization (NAPPO), Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA), and Pacific Plant Protection Organisation (PPPO).

The programme included a review the RPPO's activities and work plans for 2013-2015. Among others, discussions focused on climate change and the pest introduction potential, invasive species and pathway risk analysis. The concept of Systems Approach and its application was introduced. Furthermore, the development of standards for the International Movement of Seeds and diagnostic protocols for seed pests were discussed. Reporting obligations are a big challenge and an incentive system for NPPO to meet their obligations may have to be considered.

In addition, the main outputs of the 25th Technical Consultation among Regional Plant Protection Organizations, which was held in August 2013 in Uruguay, were highlighted too.

The full reports of the consultations are available from IPP. The summary report by the Executive Secretary is given in Annex X.

## 12. The APPPC programme of work for 2014-2015

### 12.1 Introduction of the outputs of the APPPC working group meeting on planning for the next biennium

The APPPC planning meeting was held in May 2013 to prepare recommendations on a work plan of the next biennium (2014-2015) for discussion at the 28th Session of APPPC.

The working group members considered the status of activities of the three work areas of Plant Quarantine, IPM and Pesticides. The work programme for the remainder of the 2012-2013 biennium was discussed in detail. This included: the work on ISPM 15 with NAPPO and on ISPM 14 with a meeting proposed for November 2013; the 14th Regional workshop on draft ISPMs in the Republic of Korea; further work on surveillance, in particular with surveillance information management; the submission of two draft RSPMs to the 28th Session of the APPPC; and training programmes on SALB diagnostics in Brazil.

Recommendations for the 2014-2015 biennium work programme were considered at length. The recommendations to be presented to the 28th Session of the APPPC included: further work on ISPM 15 and 14; the beginning of implementation work on ISPM 31 with a survey; work of ISPM 6 implementation concerning pest surveillance data management; regional workshops on draft ISPMs; and information exchange programme on pest status, phytosanitary treatments, PRA and capacity development projects; a work programme planning group meeting in 2015; the development of RSPMs on alternatives to methyl bromide fumigation and pest risk management for seed production for vegetable and flower seeds; an implementation survey on RSPMs; the continuation of SALB work; and pre-CPM consultations. Workshops on IPM and pesticides will be discussed at the 28th session of the APPPC.

The costs of the 2014-2015 work programme was estimated for the consideration of the 28th Session of the APPPC. It was proposed that members consider a raise of 5percent in the level of mandatory contributions in consideration of the inflation factor.

### 12.2 Group discussions and reports on the work plan by the Chairpersons of the Standing Committees on Plant Quarantine, IPM and Pesticide Management

The three standing committees met during the Session to discuss the work plans for 2014-2015. The results of the discussions were reported by the respective chairpersons

#### 12.2.1 Standing Committee on Plant Quarantine

Discussions on the proposals included the following points:

- Implementation of ISPM 15: There was a proposal for a joint workshop with NAPPO and ongoing discussions with China to host this meeting. The committee agreed to the proposal and expenditure.

- Survey on the use of ISPM 31 in sampling grain for pests: This includes a workshop. Indonesia will prepare a first draft of a survey to determine the methods used by the countries. This was agreed to.

- Surveillance data management workshop on ISPM 6: This involves a workshop on surveillance data collection and management, using tracking tools developed by Australia and inputting into a database. The plan will be lead by Australia supported by Timor-Leste. The committee agreed to this proposal.

- Regional workshops on the review of draft ISPMs: The Republic of Korea hopes to be able to fund these workshops. The committee agreed to this.

- Training workshops on pest surveillance: It was agreed that the APPPC should try to follow up on the Global Symposium with a workshop on the instruction in the use of manuals. It is hoped that the IRSS will have some manuals prepared and available for workshops. If not, the APPPC might try to develop some.

- Information exchange programme: This will be led by Malaysia with the support from Australia, Fiji, India, Indonesia, New Zealand, Philippines, Republic of Korea, Tonga, Thailand, and Vietnam. A number of areas would be covered – PRA, surveillance, SALB and other pests. Surveys could also cover two to three important commodities for the region and develop a format for reporting. Links will be developed with the IPPC Advisory Group. Costs will be mainly for website support and publications. This was agreed to.

- Planning group meeting: This was agreed to, but it was suggested that this meeting could consider the format and content of the biennial session. It was also suggested that this takes place earlier in the biennium to allow for a mid-term review of the progress of the work programme.

- Development of RSPMs: It was agreed that the proposal for an RSPM for alternatives to MB fumigation would be put aside for the time being. The proposal for the pest management of seed production is to be delayed. Thailand will contact the steward of the ISPM on the movement of seed and see how the work of the APPPC could complement the matters noted in section 7 of the specification for the ISPM by contributing to the technical aspects for annexes/appendices. A working group will be established in due course with Thailand (lead), Indonesia, Philippines, Australia, China, (Japan) as members.

- Survey on the implementation of RSPMs: This will allow the APPPC to determine if further work is needed to implement the RSPMs. This would be undertaken by the information exchange programme. This was agreed to.

- SALB working group: The plans were outlined by Malaysia. The training in Brazil will help identify any gaps and give baseline data on the status of pests, and allow the rubber growing parties to determine the next steps. This was agreed to by the committee.

- ISPM 14: The workshop in 2013 will determine what further work is necessary. A second workshop in 2014 will develop more specific training materials that meet the needs of APPPC members. This was agreed to.

As a new item, New Zealand proposed an ePhyto workshop that would ensure that members would have a common understanding of the use of ePhyto certification. This could be followed by a further workshop on the practical aspects of operating of an ePhyto system. The working group to be established has the following members: Australia, China, India, Indonesia, Malaysia, New Zealand, Republic of Korea and Thailand (Japan). The working group would be led by New Zealand.

The work plan was supported by the Session

### 12.2.2 Standing Committee on IPM

The total budget available for the IPM-SC for the next biennium is $60,000.

The IPM-SC agreed to include the following regional activities and workshops in their 2014-2015 work plan:

*12.2.2.1 Capacity building on IPM for Bactrocera fruit flies ($30,000)*

Thailand will be hosting the *International Symposium of Fruit Flies of Economic Importance* from 12-16 May 2014. Governments are requested to support the participation of interested IPM-SC member states to the symposium. A focused *Regional Workshop on IPM for Fruit Flies* will be organized back-to-back with the *International Symposium* using part of the allocation for the IPM-SC.

*12.2.2.2 Preparation of case studies on IPM as part of sustainable intensification of crop production on various commodities ($30,000)*

The IPM-SC will develop guidelines for the development of case studies with assistance from the FAO Asian Regional IPM/Pesticide Risk Reduction Programme. Selected countries will document success stories or best practices on IPM-based management of a pest of concern to the country (e.g., golden apple snails in Malaysia) in the spirit of FAO's Sustainable Crop Intensification policy "*Save and Grow*". The results will be presented in a regional workshop. Local staff will develop the materials for the case studies and the FAO Asian Regional IPM/Pesticide Risk Reduction Programme will be requested to support costs for an international consultant to assist with the further development of the case studies. The case studies will be circulated through the APPPC website and other FAO channels.

The work plan was supported by the Session.

### 12.2.3 Standing Committee on Pesticide Management

*12.2.3.1 Regional workshop on the Code of Conduct on Pesticide Management and the Rotterdam Convention*

The purpose of this proposal is to assist countries not only towards a better understanding of the current amended Code of Conduct but also to further strengthen their compliance with the Rotterdam Convention. The topics for the workshop include:

- Awareness-raising on the amended Code on Conduct ( e.g. new or revised definitions of terms used, amendments made to the Code, new reporting format, differences between the previous and new Code of Conduct, etc.)
- Comparison between the requirements for information exchange under the new Code of Conduct and the previous one (forms used)
- Follow-up action on the fulfilment of national obligation under the Rotterdam Convention on the submission of import responses for Annex III chemicals and notification of the Final Regulatory Actions by APPPC countries that are Parties to the Convention
- Follow-up action on the ratification of the Rotterdam, Stockholm and Basel Conventions
- Sharing of experiences with the implementation of the Rotterdam Convention in the Asia-Pacific region
- Guidance on reporting of pesticides poisoning incidences under the Rotterdam Convention
- Country experiences with the disposal of used pesticide containers
- Progress report on the implementation of the Harmonization Guidelines and the work plans under the FAO TCP.

Nepal will be the lead country for this activity and will host the workshop in late 2014 or early 2015.

*12.2.3.2 Facilitate the development of a National Action Plan (NAP) by countries*

Preparation of NAPs to enable countries to carry out their obligations under the Rotterdam Convention in a systematic manner. Cambodia and Lao PDR propose to develop their NAP, with assistance from FAO.

*12.2.3.3 Survey on Application of the Code of Conduct by countries*

The first workshop on the Code of Conduct on the Distribution and Use of Pesticides was held in 2005. It would be timely for countries to review progress made since then, particularly the extent to which the countries have applied the Code for the management of pesticides and also on what they expect from the new or amended Code. Assistance from FAO would be required to prepare an appropriate survey form, circulate it to countries and process the data collected, as well as to disseminate the results to all the countries.

*12.2.3.4 To work with the APPPC secretariat and/or WG on Information Exchange of APPPC to place information on pesticides management on the APPPC website*

Although there is a dedicated database developed in ASEAN on pesticide management, this database is underutilized due to many constraints faced by member states. It is thus proposed to use the APPPC website to place information on pesticides management by countries, that can be accessed by interested parties. Such information can include:

- Placing the amended Code of Conduct, with a brief explanation on the differences between the previous and new Code of Conduct on the APPPC website
- Link the APPPC website to the Rotterdam, Basel and Stockholm Conventions with a note on new listings in all the Conventions, including procedures and forms
- Update or add information on pesticides that have been banned and restricted (lists submitted by all countries at APPPC workshop in November 2012, in Chieng Mai, Thailand)
- All countries should provide linkages to their website of registered, banned and restricted pesticides list or provide hard copies of these documents to APPPC Secretariat for uploading to the APPPC website.

This activity will be led by Malaysia.

The work plan was supported by the Session.

## 12.3 Proposal for the work plan by the Secretariat of the APPPC and discussion on the approval of the APPPC work plan (2014-2015)

### 12.3.1 Specific activities (2014-2015)

*12.3.1.1 Implementation of ISPMs in the region*

ISPM15-the working group on ISPM15 will continue its work. A joint workshop with NAPPO on ISPM15 will be organized.

ISPM 31 – Survey on use of ISPM31 in a sampling grain for pests (including survey to determine methods used by countries). This exercise will be led by Indonesia.

ISPM 6 – Surveillance data collection and management workshop on ISPM6, this will be led by Australia and be funded by Australia..

ISPM 14 (systems approach) implementation - Production of resource materials and one workshop will develop more specific training materials

*12.3.1.2 Regional workshop on draft ISPMs*

The 15th and 16th regional consultations will continue in 2014 and 2015, respectively. It is hopted that these meetings will be funded by the Republic of Korea.

*12.3.1.3 Pre-CPM consultation for APPPC members*

A pre-CPM consultation will provide APPPC member with an opportunity to discuss CPM agenda items more specifically, including the draft ISPMs which will be presented for adoption by the CPM. This meeting facilitates a better understanding of the specific concerns of participants and allows the development of regional views on some issues. No extra fund is required as participants from member countries as they will already be attending the CPM's 9 and 10.

*12.3.1.4 Training workshops on pest surveillance by using manuals*

This would constitute follow up on the global symposium. The manuals would be prepared by IPPC, if not, the APPPC might develop some. This will be led by Australia and New Zealand.

*12.3.1.5 Information exchange programme*

This will be led by Malaysia with Australia, Fiji, India, Indonesia, New Zealand, Philippines, Republic of Korea, Tonga, Thailand, and Vietnam as members) The programme will cover PRA, surveillance, SALB and other pests collect information on pest status, phytosanitary treatments, PRA and capacity development projects for sharing with countries. It is also intended to conduct survey to cover two to three important commodities for the region and develop a format for reporting. Links will be developed to the IPPC Advisory Group. A survey on the implementation of RSPMs will be included.

This activity will include regular website maintenance, monitoring the status of country updates, staffing assistance, publications, etc.

*12.3.1.6 The planning group meeting for work plan (2016-2017)*

This would be held in early 2015 for review the implementation of the work plan adopted, developing a draft work plan proposal and discussing the format and content of biennial session .

*12.3.1.7 Workshop on e-phyto*

New Zealand will lead organizing a work shop on e-phyto to be held in 2014. A working group on e-phyto will be led by New Zealand with participation of Australia, China, India, Indonesia, Malaysia, Republic of Korea, and Thailand (Japan). The development of RSPMs is pending depending on subsequent work.

*12.3.1.8 SALB working group will continue*

There will be a follow-up to the diagnostic training visit in Brazil with in-country training programmes and manual development (with translation), including a diagnostic protocol for SALB. The group will monitor the

training in the countries and the development of country translations. Twice-yearly surveillance programmes will be developed. Data from the region will be collected and exchanged with a specific database being developed by the SALB working group (together with the information exchange working group). Funds may be required for the training.

*12.3.1.9 IPM Standing Committee*

A training workshop on fruit fly management in 2014 in Thailand will be led by Thailand; case studies on IPM will be collected in 2014 with APPPC funding support; a workshop on pesticide risk reduction, supported by the Regional Programme on Pesticide Risk Reduction, will be held in 2015; documentation of outputs from the case studies and the regional workshop will be uploaded to the APPPC website and other related media for sharing expertise, experience and information.

*12.3.1.10 Pesticides Standing Committee*

A workshop on awareness of the revised *Code of Conduct on Pesticide Management* as well as on the implementation of the Rotterdam Convention (notification, national action plan, etc.) will be held in 2015; the information exchange-database on banned/restricted pesticides (the list which was produced at the regional workshop in 2012) will be updated. A linkage to other treaties, especially procedures and forms, etc., will be provided for the enhancement of regional cooperation through the network. (Further details can be found in the relevant sections of the reports of the three Standing Committees)

### 12.3.2. Estimated budget for specific activities (2014-2015) in US $

12.3.2.1 Estimated costs for specific activities (2014-2015) supported by the mandatory contributions from contributing contracting countries

**Table 1. Proposed work plan and estimated costs for 2014-2015**

| No. | Activity Planned | Remarks | Estimated budget (US $) |
|---|---|---|---|
| 1 | Pre-CPM consultation for APPPC members: A pre-CPM consultation will provide APPPC member with an opportunity for discussion of CPM agenda items more specifically, including the draft ISPMs which will be presented for adoption by the CPM. This meeting facilitates a better understanding of the specific concerns of participants and allows the development of regional views on some issues. No fund is required. | Take the opportunity of participation of CPM by member countries in 2014 and 2015 respectively | No expenditures |
| 2 | Implementation: Joint work shop with NAPPO on ISPM 15 | Led by the working group (2014-2015) | 40,000 |
| 3 | ISPM 31 – Sampling<br>Grain for pests (including survey to determine methods used by countries). | Led by Indonesia<br>(2014-2015) | 20,000 |
| 4 | ISPM 6 – Surveillance data management workshop | Led by Australia (2014) | *91,000* (Australia fund to be provided) |
| 5 | Training workshops on pest surveillance (continual follow up the global symposium action)-the manuals would be prepared by IPPC, if not, the APPPC might develop some. | Led by Australia and New Zealand (2014-2015) | 40,000 |

| No. | Activity Planned | Remarks | Estimated budget (US $) |
|---|---|---|---|
| 6 | Regional workshop on review of draft ISPMs – continue | Hosted by the Republic of Korea (2014, 2015) | Voluntary contribution |
| 7 | Information exchange programme: Working group (led by Malaysia with Australia, Fiji, India, Indonesia, New Zealand, Philippines, Republic of Korea, Tonga, Thailand, and Vietnam as members) on information exchange will continue functioning. It includes PRA, surveillance, SALB and other pests. Survey on implementation of RSPMs will be included too. This would include regular website maintenance, monitoring status of country update, staffing assistance, publications, etc. | Led by Malaysia (2014-2015) | 90,000 |
| 8 | Planning group meeting to be held at early 2015 (review progress, prepare a draft work plan proposal for next biennium and to discuss contents of the 29th Session of APPPC. | (2015) | 25,000 |
| 9 | Workshop on e-phyto in 2014 (WG: Australia, China, India, Indonesia, Malaysia, New Zealand, Republic of Korea, and Thailand (Japan)) | Led by New Zealand | 25,000 |
| 10 | SALB working group:<br>- follow-up from the diagnostic training visit to Brazil with in-country training programmes and manual development (with translation)<br>-The group will monitor training in countries and development of country translations of relevant materials as follow-up actions after previous regional assistance.<br>-Twice-yearly surveillance programmes will be developed.<br>-Data from the region will be collected and exchanged with a specific database being developed by the SALB working group (with the information exchange working group). | Led by Malaysia | 30,000 |
| 11a | SC-IPM:Workshop on fruit fly management in 2014, Thailand (TF257); | Led by Thailand | 30 000 |
| 11b | SC-IPM: Case studies on IPM, joint workshop with regional PRR program, etc. | Led by selected National IPM programmes | 30,000 |
| 12 | SC-Pesticide management: Continuation of collaboration through regional network. A workshop on the revised code of conduct and implementation of PIC; Information exchange-database of banned/restricted pesticides, etc. (without funding). | Led by Malaysia and Nepal | 40,000 |
| 13 | ISPM 14 implementation: Production of resource materials and one workshop | Led by Australia (2014-2015) | 50,000 |
| 14 | 29th Session of APPPC | Indonesia | |
| | Subtotal of the costs: | | 420,000 |

| No. | Activity Planned | Remarks | Estimated budget (US $) |
|---|---|---|---|
| | Overhead charge (13% of total amount) | | 54,600 |
| | **Total costs** | | **474,600** |

Note: Total estimated cost of proposed programme for the next biennium (2014-2015) is US$ 474,600 including, overhead charges.

The session approved the work plan.

### 12.4 Financial report of 2012-2013, and consideration and adoption of the proposed budget for 2014-2015 as well as assessment of country mandatory contributions

#### 12.4.1 Financial report of the 2012-2013 biennium

Until 4 September 2013, fourteen out of seventeen contributing contracting members provided full mandatory contributions during 2012-2013. The remaining contribution arrears of US$ 19,164.62 to be paid by three countries (Indonesia-$8,281, Pakistan-$8,145.62 and Sri Lanka-$2,738). It is hoped that the contribution would be made by these countries soon without further delay. It was noted that there was no contribution from Sri Lanka since 2010 and from Pakistan since 2011 until 4 September 2013 (see below table 1 and 2).

Timor-Leste becomes the 18th contributing contracting member from the next biennium onward.

**Table 1. Status of contributions as of 31 December 2012 (expressed in USD)**

| Member Governments | Outstanding 31-12-2011 | Contribution due for 2012 | Received up to 31-12-2012 | Outstanding 31-12-2012 |
|---|---|---|---|---|
| **AUSTRALIA** | 0.00 | 37,290.00 | 37,290.00 | 0.00 |
| **BANGLADESH** | 0.00 | 17.00 | 17.00 | 0.00 |
| **CAMBODIA** | 0.00 | 17.00 | | 17.00 |
| **CHINA** | 0.00 | 37,290.00 | 37,290.00 | 0.00 |
| **FIJI** | -129.00 | 132.00 | 268.00 | (265.00) |
| **INDIA** | 0.00 | 20,828.00 | 20,828.00 | 0.00 |
| **INDONESIA** | -7452.00 | 7,452.00 | | 0.00 |
| **KOREA, DPR** | 0.00 | 231.00 | | 231.00 |
| **KOREA, RP** | 0.00 | 37,290.00 | 37,290.00 | 0.00 |
| **LAO, PDR** | 0.00 | 17.00 | 17.00 | 0.00 |
| **MALAYSIA** | 0.00 | 8,794.00 | | 8,794.00 |
| **NEW ZEALAND** | 0.00 | 11,849.00 | 11,849.00 | 0.00 |
| **PAKISTAN** | 2724.62 | 2,710.00 | | 5,434.62 |
| **PHILIPPINES** | (3,610.00) | 2,975.00 | 3,610.00 | (4,245.00) |
| **SRI LANKA** | 1482.00 | 628.00 | | 2,110.00 |
| **THAILAND** | 0.00 | 8,794.00 | 8,794.00 | 0.00 |
| **VIETNAM** | -1111.00 | 1,111.00 | | 0.00 |
| TOTALS | (8,095.38) | 177,425.00 | 157,253.00 | 12,076.62 |

**Table 2. Status of contributions as of 4 September 2013 (expressed in USD)**

| Member Governments | Outstanding 31-12-2012 | Contribution due for 2013 | Received up to 04-09-2013 | Outstanding 04-09-2013 |
|---|---|---|---|---|
| **AUSTRALIA** | 0.00 | 37,290.00 | 37,290.00 | 0.00 |
| **BANGLADESH** | 0.00 | 17.00 | 17.00 | 0.00 |
| **CAMBODIA** | 17.00 | 17.00 | 34.00 | 0.00 |
| **CHINA** | 0.00 | 37,290.00 | 37,290.00 | 0.00 |
| **DPR KOREA** | 231.00 | 232.00 | 463.00 | 0.00 |
| **FIJI** | (265.00) | 132.00 | | (133.00) |
| **INDIA** | 0.00 | 14,473.00 | 14,473.00 | 0.00 |
| **INDONESIA** | 0.00 | 8,281.00 | | 8,281.00 |
| **LAO, PDR** | 0.00 | 17.00 | 17.00 | 0.00 |
| **MALAYSIA** | 8,794.00 | 7,931.00 | 25,519.00 | (8,794.00) |
| **NEW ZEALAND** | 0.00 | 6,198.00 | 6,198.00 | 0.00 |
| **PAKISTAN** | 5,434.62 | 2,711.00 | | 8,145.62 |
| **PHILIPPINES** | (4,245.00) | 2,975.00 | | (1,270.00) |
| **REP. OF KOREA** | 0.00 | 37,290.00 | 37,290.00 | 0.00 |
| **SRI LANKA** | 2,110.00 | 628.00 | | 2,738.00 |
| **THAILAND** | 0.00 | 5,022.00 | 5,022.00 | 0.00 |
| **VIETNAM** | 0.00 | 1,071.00 | 1,071.00 | 0.00 |
| TOTALS | 12,076.62 | 161,575.00 | 164,684.00 | 8,967.62 |

The total amount of the contributions received from 1 January 2012 until 4 September 2013 was US $321,947. The real amount carried over from previous biennium was $145,089. Total available fund for 2012-2013 is US $467,036. The actual expenditure from the assessed contributions for activities planned for the 2012-2013 biennium is 314,931$, while some activities were funded by additional voluntary contributions which led to significant savings of the assessed contribution budget the balance is $152,105. The additional funding for activities is more than 180,000$ (see Tables 3 and 4). The voluntary funds were mainly provided by Australia, the Republic of Korea and the FAO. About $156,000 could be carried over to the next biennium (2014-2015), which will be the essential amount for covering the cost of main activities in the first year as usual by filling a gap of time period of receiving assessed contributions from countries in the first year.

**Table 3. Costs for specific activities in 2012-2013 supported by the Trust Fund from <u>mandatory contributions</u> together with other funding sources (US$)**

| No. | Activity | Budget (Estimated) | Expenditure | |
|---|---|---|---|---|
| | | | TF (MTF/RAS/257/MUL) | Other source |
| 1 | Implementation of ISPMs in the region**:** implementation programme prepared by the working group (training course, explanatory papers etc) in 2012/2013 for ISPM 15 and | $ 75,000 | | 50,000 (Australia funding: MTF/RAS/258/MUL) for the workshop on system approach for pest risk management |

| No. | Activity | Budget (Estimated) | Expenditure | |
|---|---|---|---|---|
| | | | TF (MTF/RAS/257/MUL) | Other source |
| | ISPM- Systems Approach | | | (Nov. 2013) |
| 2 | Regional workshops on review of draft ISPMs in 2012 and 2013 | | | >80,000+FAO (Republic of Korea funds+ FAO) |
| 3 | Training workshop on pest surveillance<br><br>- A symposium on pest surveillance in November 2012<br><br>- Regional workshop on ISPM 6<br>- training with the manual | $ 60,000 | 37,300<br><br>*-37,300*<br><br><br><br><br>Pending | <br><br><br>Together with additional funding from FAO and the Republic of Korea<br><br><br>42,000 (IPPC) |
| 4 | Development of information exchange programme | $ 90,000 | 73,000<br><br>-staffing: *51,000*<br>-publication: *22,000* | > 20,000 (additional) (FAO) |
| 5 | A planning working group meeting on APPPC work plan for 2014-2015 | $ 25,000 | 10,000 | |
| 6 | Development of RSPMs on movement by used machinery; RSPM on fumigation; RSPM on Irradiation | US $ 30,000 | | 35,000 (Australia funding: TF258) |
| 7 | More SALB workshops<br>- Training workshop (using the reference produced in 2011)<br>- Training workshop on diagnostics (Brazil) | $50,000<br><br>(40,000)<br><br><br>(10,000) | 55,300<br><br>*-45,300*<br><br><br>*-(10,000) (Nov. 2013)* | <br><br><br><br><br>Together with additional funding from countries, Brazil, Industry, etc. |
| 8 | IPM programme (workshops)<br><br>-Training workshop on Snail<br><br>-Training workshop on biocontrol | $ 30,000 *(+20,000* from 2011 plan) | 69,000<br><br>*-46,000*<br><br>*-23,000* | |
| 9 | Pesticide management programme (workshops) | $30,000 | 34,100 | |
| | Sub-total | 390,000 | 278,700 | >180,000 |
| 10 | Administration (13%) | *$ 50,700* | 36,231 | |
| | **Total** | ***$440,700*** | **314,931** | >180,000 |

**Table 4. Additional activities (2012-2013) supported by the funds from <u>voluntary contributions</u> or other sources (US $)**

| No. | Activity | Expenditure | Funding source |
|---|---|---|---|
| 1 | Regional workshops on draft ISPMs (one per year)<br>- 2012 workshop (Sept. 2012, Republic of Korea)<br>- 2013 workshop (Oct. 2013, Republic of Korea) | > 80,000<br>-40,000<br>-40,000 | Republic of Korea |
| 2 | Capacity building for spread prevention and the management of the cassava pink mealybug in the Greater Mekong Subregion | 491,000 | FAO regional project TCP/RAS/3311 |
| 3 | Promotion of IPM and Pesticide risk reduction | Continual implementation | FAO Regional PRR Project (GCP-RAS/229/SWE) |
| 4 | Capacity development in phytosanitary measures for ASEAN countries | >40,000 | Republic of Korea funds (hosted by the Republic of Korea) |
| 5 | Various country based projects for management of specific pest/pesticide issues<br>- Coconut wilt disease<br>- Citrus disease<br>- Walnut pest<br>- Pesticide management<br>- Fruit fly<br>- Kiwi disease<br>- BPH<br>- Etc. | Project funds | FAO |
| 6 | Systems approach for pest risk management | Project fund | STDF |

### 12.4.2. Proposed budget for covering estimated costs of specific activities supported by the mandatory contributions from contributing contracting countries for 2014-2015

Based on the work programme adopted under agenda 12.3, specific activities to be supported by the mandatory contributions during 2014-2015 and their estimated costs are listed in the Table 5. Total estimated costs (2014-2015) are US$ 474,600 (US$ 420,000+13% total costs), the available amount of funds would be US$508,055, which consists of US $355,950 (being the total assessed contribution from contributing contracting members) and US$ 152,105 (to be carried over from the 2012-2013 biennium). The estimates are based on the assumption that all 18 countries will make their mandatory contributions timely and that the estimated costs are the minimum. Devaluation of US dollar may lead to more expenditure than the estimated amount. In addition, some activities have been planned for early 2013. Therefore there is a need to consider some flexible amount of funds (beyond actual amount of the budget planned) for backstopping potential expenditures of such activities as well as emergency actions.

**Table 5. Estimated budget of specific activities supported by the mandatory contributions for 2014-2015**

| No. | Activity Planned | Remarks | Estimated budget (US $) |
|---|---|---|---|
| 1 | Pre-CPM consultation for APPPC members:<br>A pre-CPM consultation will provide APPPC member with an opportunity for discussion of CPM agenda items more specifically, including the draft ISPMs which will be presented for adoption by the CPM. This meeting facilitates a better understanding of the specific concerns of participants and allows the development of regional views on some issues. No fund is required. | Take the opportunity of participation of CPM by member countries in 2014 and 2015 respectively | No expenditures |
| 2 | Implementation: ISPM 15 work shop will make clear what registration is and why it is necessary. This could be extended to deal with export certification. It is suggested that the APPPC investigate additional potential treatments. | Led by the working group (2014-2015) | 40,000 |
| 3 | ISPM 31 – Sampling<br>Indonesia suggested that a survey be undertaken. Implementation for sampling for pests in grain | Led by Indonesia (2014-2015) | 20,000 |
| 4 | ISPM 6 – Surveillance data management workshop | Led by Australia (2014) | 90,570 (Australia fund: TF258) |
| 5 | Training workshops on pest surveillance (continual follow up the global symposium action)-wait for guidelines from IPPC & use these or Australian manuals for training, or develop manuals by APPPC) | Led by Australia (2014-2015) | 40,000 |
| 6 | Regional workshop on review of draft ISPMs – continue | Hosted by the Republic of Korea (2014, 2015) | Voluntary contribution |
| 7 | Information exchange programme:<br>Working group (Australia, Fiji, India, Indonesia, Malaysia, New Zealand, Philippines, Republic of Korea, Tonga, Thailand, and Vietnam) on information exchange will continue functioning. It includes PRA, surveillance, SALB and other pests. Survey on implementation of RSPMs will be included too. This would include regular website maintenance, monitoring status of country update, staffing assistance, publications, etc. | Led by Malaysia (2014-2015) | 90,000 |
| 8 | Planning group meeting to be held at early 2015 (review progress, prepare a draft work plan proposal for next biennium and to discuss contents of the 29th Session of APPPC. | (2015) | 25,000 |
| 9 | Workshop on e-Phyto | Led by New Zealand (2014) | 25,000 |
| 10 | SALB working group:<br>- follow-up from the diagnostic training visit to Brazil with in-country training programmes and manual development (with translation)<br>-The group will monitor training in countries and development of country translations of | Led by Malaysia | 30,000 |

| No. | Activity Planned | Remarks | Estimated budget (US $) |
|---|---|---|---|
| | relevant materials as follow-up actions after previous regional assistance.<br>-Twice-yearly surveillance programmes will be developed.<br>-Data from the region will be collected and exchanged with a specific database being developed by the SALB working group (with the information exchange working group). | | |
| 11 | SC-IPM<br>Workshop on fruit fly management in 2014, Thailand (TF257);<br>Case studies on IPM, joint workshop with regional PRR programme, etc. | Led by Thailand<br>(2014) | 60,000 |
| 13 | SC-Pesticide management:<br>Continuation of collaboration through regional network. A workshop on the revised code of conduct and implementation of PIC;<br>Information exchange-database of banned/restricted pesticides, etc. (without funding). | Led by Malaysia and Nepal | 40,000 |
| 14 | ISPM 14 implementation:<br>Production of resource materials and one workshop | Led by Australia<br>(2014-2015) | 50,000 |
| 15 | 29th Session of APPPC | Indonesia | |
| | Subtotal of the costs: | | 420,000 |
| | Overhead charge (13% of total amount) | | 54,600 |
| | **Total costs** | | **474,600** |

Note: Total estimated budget of proposed programme for the next biennium (2014-2015) is 474,600$ US including overhead charges.

The proposed budget of 474,600$ US for 2014-2015 was approved by the Session.

### 12.4.3. Proposed mandatory contributions for 2014-2015 by contributing contracting members

The level of contributions was discussed at the APPPC Working Group Meeting on the Preparation of the Work Plan for 2014-2015, which was in held in Bangkok, Thailand, from 13-15 May 2013. The Working Group noted that a zero increase of total amount of the budget based on the current biennium level would not cover inflation. As a result, a 5% increase of the total amount in comparison of current biennium budget (2012-2013) was proposed and agreed.

The calculation of the scale of each country for the next biennium (2014-2015 (Table 6) is based on the "Assessment of Member States' contributions of the United Nations regular budget for the year 2013 (Reference - ST/ADM/SER.B/866 dated 24 December 2012). On 25 December 2012, acting by consensus, the General Assembly at its 67th session retained the existing formula for assessing Member States' financial contributions to the UN regular budget during 2013-2015 period. It also maintained that 0.01 percent ceiling for assessing the rate of least developed countries (LDCs) and the 22 percent maximum assessment rate for all other countries.

**Table 6. Proposed mandatory contributions for 2014-2015 by contributing contracting governments**

| APPPC member countries endorsing mandatory contributions | UN scale of assessments for 2013 | Adjusted % contributions based on UN's 22% maximum assessment rate and LDC ceiling criteria (0.01%) | Proposed contributions (US $) | | |
|---|---|---|---|---|---|
| | | | Two years (2014-2015) | 2014 | 2015 |
| Australia | 2.074 | 22.000 | 78,309.00 | 39,154.50 | 39,154.50 |
| China | 5.148 | 22.000 | 78,309.00 | 39,154.50 | 39,154.50 |
| Republic of Korea | 1.994 | 22.000 | 78,309.00 | 39,154.50 | 39,154.50 |
| DPR Korea | 0.006 | 0.097 | 345.37 | 172.69 | 172.69 |
| Fiji | 0.003 | 0.049 | 172.69 | 86.34 | 86.34 |
| India | 0.666 | 10.770 | 38,336.43 | 19,168.21 | 19,168.21 |
| Indonesia | 0.346 | 5.595 | 19,916.52 | 9,958.26 | 9,958.26 |
| Malaysia | 0.281 | 4.544 | 16,174.98 | 8,087.49 | 8,087.49 |
| New Zealand | 0.253 | 4.091 | 14,563.24 | 7,281.62 | 7,281.62 |
| Pakistan | 0.085 | 1.375 | 4,892.79 | 2,446.39 | 2,446.39 |
| Philippines | 0.154 | 2.490 | 8,864.58 | 4,432.29 | 4,432.29 |
| Sri Lanka | 0.025 | 0.404 | 1,439.06 | 719.53 | 719.53 |
| Thailand | 0.239 | 3.865 | 13,757.37 | 6,878.68 | 6,878.68 |
| Viet Nam | 0.042 | 0.679 | 2,417.61 | 1,208.81 | 1,208.81 |
| Bangladesh | 0.010 | 0.010 | 35.60 | 17.80 | 17.80 |
| Cambodia | 0.004 | 0.010 | 35.60 | 17.80 | 17.80 |
| Lao PDR | 0.002 | 0.010 | 35.60 | 17.80 | 17.80 |
| Timor-Leste | 0.002 | 0.010 | 35.60 | 17.80 | 17.80 |
| **Total** | **11.334** | **100.000** | **355,950.00** | **177,975.00** | **177,975.00** |

**Notes:**

1) The calculation of the scale is based on "Assessment of Member States' contributions of the United Nations regular budget for the year 2013" (Reference - ST/ADM/SER.B/866 dated 24 December 2012). The total rate form the basis for calculating the % contributions of APPPC's endorsing countries adds up to a full 100 percent.

2) The On 25 December 2012, acting by consensus, the General Assembly at its 67th session retained the existing formula for assessing Member States' financial contributions to the UN regular budget during 2013-2015 period. It also maintained that 0.01 percent ceiling for assessing the rate of least developed countries (LDCs) and the 22 percent maximum assessment rate for all other countries. These are set out in Items 5(g) and 5(h) respectively on Page 2 of the UN General Assembly's resolution 64/248 (5 February 2010).

3) It is proposed that the % share of contributions by each of the four least developed countries (LDCs) including Bangladesh, Cambodia, Lao PDR and Timor-Leste does not exceed 0.010 percent, and the % of contributions by each of the three countries including Australia, China and the Republic of Korea does not exceed 22 percent. (About Least Development Countries: http://www.unohrlls.org/en/ldc/25/)

4) Total amount of mandatory contributions for the next biennium (2014-2015) is increased by 5% than current biennium (2012-2013) in consideration of inflation factor.

**T**he mandatory contribution amount **of 355,950$ US** for 2014-2015 with the proposed contribution scale **for** 2014-2015 were approved by the Session.

## 13. Date and venue of the 29th Session of APPPC

The Indoneisain delegate, Mrs. Banun Harpini (Director General of Indonesian, Agricultural Quarantine Agency, Ministry of Agriculture, Indonesia) briefly introduced the potential venue for hosting the 29th Session of APPPC.

The Session agreed that the Twenty-ninth Session would be held in Indonesia in October 2015. The city of Makassar, South Sulawesi, has been tentatively selected to host the Session, and the exact dates of the meeting will be announced.

## 14. Any other business

### 14.1 Next chair of CPM

New Zealand brought to the attention of the Session that the CPM chair will move to Asia in April 2014. This would be an opportunity to inform the world of the progress and experiences in APPPC and make this period of chairpersonship significant for IPPC.

The Republic of Korea nominated Ms Kyu-Ock Yim for chairpersonship for the next CPM; this nomination was strongly supported by all countracting members present at the session.

Ms Yim accepted the nomination and asked for support and ideas to show APPPC's progress and leadership. Mr Piao noted the CPM discussions on the rotation of the position of CPM chair. The meeting agreed that Asia should try to have such a leadership role with possibly holding a global event. New Zealand suggested that ePhyto or implementation could be areas for emphasis during the period.

### 14.2 Capacity Development Committee (CDC)

Mr. Ho, Malaysia reminded the session about the activities of the Capacity Development Committee of the IPPC which consists of members come from seven regions of the world. He encouraged the APPPC countries to support the functions of the CDC and to use the Phytosanitary Resource page for uploading and retrieving information such as training materials, consultants, databases and tools.

## 15. Adoption of the report

The report was adopted.

## 16. Closing of the Session

The Chairperson thanked all the delegates and the organizing committee for making the meeting a success and closed the Session.

LIST OF ANNEXES

Annex I

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Annex II

# THE PLANT PROTECTION AGREEMENT FOR THE ASIA AND PACIFIC REGION AND ITS AMENDMENTS OF 1983 AND 1999

**Background**

On 26 November 1955, during its 23rd Session, the FAO Council approved the Plant Protection Agreement for the Asia and Pacific Region (formerly Plant Protection Agreement for the South-East Asia and Pacific Region) for submission to Governments for acceptance.

The Agreement was concluded on 27 February 1956, came into force on **2 July 1956** and was registered with the Secretariat of the United Nations on 20 July 1956 under No. 1963.

The FAO Council approved amendments for the Agreement in 1967, 1979, 1983 and 1999. Some of these amendments have entered into force for all Contracting Governments while others only with respect to the Contracting Governments that have actually accepted those amendments, as described below.

At present[2], there are two versions of the Agreement if force for two different sets of Contracting governments:

1. The Agreement as approved in 1955 and amended in 1967, 1979 and in 1983 (to include the People's Republic of China in the definition of the Region) which is binding for seven Contracting Governments; and

2. The Agreement as approved in 1955 and amended in 1967, 1979 and in 1983 (to include the People's Republic of China in the definition of the Region and to introduce mandatory contributions) which is binding for nineteen Contracting governments.

In total, there are 25 Parties to the Agreement.

Moreover, there are three sets of amendments open for acceptance by the Contracting Governments as detailed below.

**Parties to the Agreement**

The following Contracting Governments provided their definitive signature or deposited the pertinent instrument of ratification or adherence to the Agreement on the date indicated:

| Contracting Government | Signature | Definitive Signature | Ratification | Adherence |
|---|---|---|---|---|
| Australia | | 27 Feb 1956 | | |
| Bangladesh | | | | 4 Dec 1974 |
| Cambodia | | | | 27 Jan 1969 |
| China | | | | 6 Jun 1990 |
| Democratic People's Republic of Korea | | | | 16 Jan 1996 |
| Fiji | | | | 16 Dec 1970 |
| France | | | | 20 Aug 1957 |
| India | | 2 Jul 1956 | | |
| Indonesia | 28 Jun 1956 | | 21 Dec 1967 | |
| Lao People's Democratic Republic | 25 May 1956 | | 17 Mar 1960 | |

| | | | | |
|---|---|---|---|---|
| Malaysia | | | | 20 Nov 1957 |
| Myanmar | | | | 4 Nov 1959 |
| Nepal | | | | 12 Aug 1965 |
| New Zealand[3] | | | | 17 Dec 1975 |
| Pakistan [4] | | | | 8 Jan 1958 |
| Papua New Guinea | | | | 1 Jun 1976 |
| Philippines | | | | 11 Jun 1962 |
| Republic of Korea | | | | 4 Nov 1981 |
| Samoa | | | | 23 Dec 1971 |
| Solomon Islands | | | | 20 Jun 1979 |
| Sri Lanka | | 27 Feb 1956 | | |
| Thailand | | | | 26 Nov 1956 |
| Timor-Leste | | | | 20 Nov 2012 |
| Tonga | | | | 5 Nov 1981 |
| Viet Nam | | 2 Jul 1956 | | |

**Amendments to the Agreement**

At its 49th Session (November 1967), the FAO Council approved an amendment to the Agreement in order to extend the geographical scope of the Region. This amendment came into force with respect to all Contracting Governments on **16 August 1969**.

At its 75th Session (June 1979), the FAO Council approved the deletion of the words "South East" in the title of the Agreement and the change of the name of the Commission to read "Asia and Pacific Plant Protection Commission" (hereafter “the Commission”). These amendments came into force with respect to all Contracting Governments on **16 February 1983**.

At its 84th Session (November 1983), the FAO Council approved two sets of amendments to the Agreement related to the following issues:

1. The definition of the Region in Article I (a) in order to include the People's Republic of China in the definition of the Region; and
2. The introduction of mandatory contributions in order to finance certain activities of the Commission.

The amendment to Article I (a) of the Agreement to include the People's Republic of China in the definition of the Region came into force with respect to all Contracting Governments on **23 May 1990**.

The second set of amendments introducing mandatory contributions entails new obligations for the Contracting Governments. Therefore, as provided in paragraph 4 of Article IX, these amendments came into force on the thirtieth day after acceptance by two-thirds of the Contracting Governments, i.e. on **4 September 2009**, but only with respect to the Contracting Governments that have actually accepted these amendments (see table below). These amendments remain open for acceptance by the remaining Contracting Governments.

At its 117th Session (November 1999), the FAO Council approved another two sets of amendments to the Agreement as follows:

1. Amendments designed to bring the Agreement into line with the new revised text of the International Plant Protection Convention (IPPC) and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and with modern requirements for plant protection, as well as amendments designed to strengthen the Commission; and
2. Amendments providing for the deletion from the Agreement of measures to exclude the “South American Leaf Blight of Hevea” from the Region.

Both sets of amendments have been transmitted for acceptance to the Contracting Parties but have not yet entered into force. They remain open for acceptance.

In summary, there are three sets of amendments open for acceptance by the Contracting Governments as show in the following table:

| Contracting Government | | Acceptance of 1983 amendments regarding mandatory contributions | Acceptance of 1999 amendments designed to bring the Agreement into line with the IPPC and the SPS Agreement | Acceptance of 1999 amendments deleting measures to exclude "South American Leaf Blight of Hevea" from the Region |
|---|---|---|---|---|
| 1 | Australia | 27 Dec 1994 | 12 Aug 2011 | 12 Aug 2011 |
| 2 | Bangladesh | 31 Jul 1984 | | |
| 3 | Cambodia | 16 Aug 2006 | | |
| 4 | China | 6 Jun 1990 | | |
| 5 | Democratic People's Republic of Korea | 23 Nov 2006 | | |
| 6 | Fiji | 23 May 2006 | | |
| 7 | France | | | |
| 8 | India | 19 Aug 1986 | | |
| 9 | Indonesia | 19 Jan 1993 | | |
| 10 | Lao People's Democratic Republic | 6 Dec 2006 | 6 Dec 2006 | |
| 11 | Malaysia | 12 May 1994 | | |
| 12 | Myanmar | | | |
| 13 | Nepal | | | |
| 14 | New Zealand | 16 Dec 1997 | | |
| 15 | Pakistan | 27 Jun 1988 | | |
| 16 | Papua New Guinea | | | |
| 17 | Philippines | 27 May 2008 | 11 Apr 2005 | |
| 18 | Republic of Korea | 17 Apr 1990 | 10 September 2013 | 10 September 2013 |
| 19 | Samoa | | | |
| 20 | Solomon Islands | | | |
| 21 | Sri Lanka | 13 Feb 1985 | | |
| 22 | Thailand | 20 July 2010 | | |
| 23 | Timor-Leste | 20 April 2012 | 20 April 2012 | 20 April 2012 |
| 24 | Tonga | | | |
| 25 | Viet Nam | 31 Aug 2006 | 31 Aug 2006 | |

In order to facilitate, as far as possible, a process of acceptance of a consolidated Agreement thereby reducing the inconvenience of several legal regimes, the Contracting Governments which are considering to accept some or all of these amendments are invited to contact the **FAO Legal Office**.

**notes**

[1] Present title valid as of 16 February 1983.

[2] Last update: 19 April 2013.

[3] Applied to Cook Islands and Niue.

[4] On 9 June 1969, Pakistan made the following declaration: *"The Government of Pakistan regards Taiwan as an integral part of the People's Republic of China and as such, the Government of that State alone is competent to accede to the Plant Protection Agreement for the South-East Asia and Pacific Region in respect of its territory, including Taiwan."*

Annex III

# REGIONAL STANDARDS FOR PHYTOSANITARY MEASURES

## Approval of Irradiation Facilities

## INTRODUCTION

### Scope

This standard provides guidelines to National Plant Protection Organisations (NPPOs) for approval (certification or accreditation) of facilities irradiating commodities for phytosanitary purposes consistent with ISPM No.18 *Guidelines for the use of irradiation as a phytosanitary measure* and ISPM No.28 *Phytosanitary treatments for regulated pests*.

### References


ASTM E2303. 2003. *Standard guide for absorbed-dose mapping in radiation processing facilities.*

ASTM F1355-06. *Standard guide for irradiation of fresh agricultural produce as a phytosanitary treatment.*

ISO 9000, 2005, *Quality management systems – Fundamentals and vocabulary.*

ISO 14470. 2011. *Requirements for the development, validation and routine control of the process of irradiation using ionising radiation for the treatment of food.*

ISO 11137-1, 2006. *Sterilization of health care products. Radiation. Part 1 - Requirements for development, validation and routine control of a sterilization process for medical devices.*

ISO/ASTM 51261. 2002. *Guide for selection and calibration of dosimetry systems for radiation processing.*

ISO/ASTM 51275. 2004. *Practice for use of a radiochromic film dosimetry system.*

ISO/ASTM 51276. 2002. *Practice for use of a polymethylmethacrylate dosimetry system.*

ISO/ASTM 51431. 2005. *Practice for dosimetry in electron beam and x-ray (bremsstrahlung) irradiation facilities for food processing.*

ISO/ASTM 51538. 2002. *Practice for use of the ethanol-chlorobenzene dosimetry system.*

ISO/ASTM 51539. 2005. *Guide for use of radiation-sensitive indicators.*

ISO/ASTM 51607. 2004. *Practice for use of the alanine-EPR dosimetry system.*

ISO/ASTM 51608. 2005. *Practice for dosimetry in an x-ray (bremsstrahlung) facility for radiation processing.*

ISO/ASTM 51631. 2003. *Practice for use of calorimetric dosimetry systems for electron beam dose measurements and dosimeter calibrations.*

ISO/ASTM 51649. 2005. *Practice for dosimetry in an electron beam facility for radiation processing at energies between 300keV and 25MeV.*

ISO/ASTM 51702. 2004. *Practice for dosimetry in gamma irradiation facilities for radiation processing.*

ISO/ASTM 51707. 2005. *Guide for estimating uncertainties in dosimetry for radiation processing.*

ISO/IEC. 1991. *ISO/IEC Guide 2:1991, General terms and their definitions concerning standardization and related activities*. Geneva, International Organization for Standardization, International Electrotechnical Commission.

ISPM 5. *Glossary of phytosanitary terms*. Rome, IPPC, FAO.

ISPM 15. 2002. *Guidelines for regulating wood packaging material in international trade*. Rome, IPPC, FAO. [revised; now ISPM 15:2009]

ISPM 18. 2003. *Guidelines for the use of irradiation as a phytosanitary measure*. Rome, IPPC, FAO.

ISPM 28. 2007. *Phytosanitary treatments for regulated pests*. Rome, IPPC, FAO.

**Definitions and abbreviations**

Except where noted, the definitions are specific to this standard.

| | |
|---|---|
| **absorbed dose** | Quantity of radiating energy absorbed per unit of mass of a specified target. [Note, for the purposes of this Standard, the term dose is used to mean absorbed dose and the unit of absorbed dose is the gray (Gy) where 1Gy is equivalent to the absorption of 1 joule per kilogram].<br>[ISO 11137-1:2006] |
| **ASTM** | Standards development organisation originally known as the American Society for Testing and Materials but now known as "ASTM International". |
| **calibration** | Set of operations that establish, under specified conditions, the relationship between values of a quantity indicated by a measuring instrument or measuring system, or values represented by a material measure or a reference material, and the corresponding values realised by standards.<br>[ISO 11137-1:2006] |
| **commodity** | A type of plant, plant product or other article being moved for trade or other purpose. [ISPM 5] |
| **contamination** | Presence, in a commodity, storage place, conveyance or container, of pests or other regulated articles not constituting an infestation.<br>[ISPM 5] |
| **correction** | Action to eliminate a detected non-conformity. A correction can be made in conjunction with a corrective action.<br>[ISO 9000:2005] |
| **corrective action** | Action to eliminate the cause of a non-conformity or other undesirable situation. There can be more than one cause of non-conformity. Corrective action is taken to prevent recurrence whereas preventive action is taken to prevent occurrence. (There is a distinction between correction and corrective action).<br>[ISO 9000:2005] |
| **cross-contamination** | Process where one product is contaminated directly or indirectly by the exchange of contaminants from another product and/or raw material. |
| **customer** | Organisation or person that requests the irradiation treatment of a product to the irradiator operator under specified requirements. |
| **dose** | The term dose refers to absorbed dose. |
| **dose distribution** | Spatial variation of absorbed dose throughout the process load, integrated over a complete treatment. The extreme values are the maximum dose (Dmax) and the minimum dose (Dmin). |

| | |
|---|---|
| **dose mapping** | Measurement of dose distribution and variability in material irradiated under defined conditions.<br>[ISO 11137-1:2006] |
| **dose uniformity ratio** | Ratio of the maximum absorbed dose to the minimum absorbed dose (Dmax:Dmin) within a process load. |
| **dosimeter** | Device having a reproducible, measurable response to radiation, which can be used to measure the absorbed dose in a given system.<br>[ISO 11137-1:2006] |
| **dosimetry** | Measurement of absorbed dose by the use of dosimeters.<br>[ISO 11137-1:2006] |
| **dosimetry system** | The procedures and interrelated elements used for determining absorbed dose, including dosimeters, instruments and associated reference standards.<br>[ISO 11137-3:2006] |
| **installation qualification (IQ)** | Process of obtaining and documenting evidence that equipment has been provided and installed in accordance with its specification.<br>[ISO 11137-1:2006] |
| **irradiation** | Treatment with any type of ionizing radiation. [ISPM 5] |
| **irradiation container** | Holder in which product is transported through the irradiator. The holder can be a carrier, cart, tray, product carton, pallet, tote or other container.<br>[ISO 11137-1:2006] |
| **irradiation facility** | Establishment where the irradiation process is performed. There are different types of irradiation facilities depending on the irradiator type, the radiation source, the conveyor system and the operating mode. An irradiation facility consists of an irradiator, shipping and receiving docks, storage zones for irradiated and non-irradiated products, conveyor system, safety systems and the infrastructure for personnel and facility services including record control. |
| **irradiator** | The assembly of equipment and its housing where product is exposed to ionizing radiation. The irradiator provides for safe and reliable radiation processing and includes the source of radiation and associated mechanisms together with the conveyor, safety devices and biological shield. |
| **irradiator operator** | Organization or body responsible for irradiating the product.<br>[ISO 11137-1:2006] |
| **ISPM** | International Standards for Phytosanitary Measures. [ISPM 5] |

| | |
|---|---|
| **loading configuration** | Defined arrangement of product (food) placed in or on the irradiation container. Dose mapping is carried out for a particular loading configuration and this loading configuration is replicated to ensure consistent irradiation of product. [Australian Interstate Certification Assurance document on Irradiation Treatment.] |
| **NPPO** | National Plant Protection Organization. [ISPM 5]<br><br>Note: For the purposes of this standard activities designated for the NPPO may be performed by other organisations approved by the NPPO. |
| **operational qualification (OQ)** | Process of obtaining and documenting evidence that installed equipment operates within predetermined limits when used in accordance with its operational procedures.<br>[ISO 11137-1:2006] |
| **performance qualification (PQ)** | Process of obtaining and documenting evidence that the equipment, as installed and operated in accordance with operational procedures, consistently performs in accordance with predetermined criteria and thereby yields product meeting its specification.<br>[ISO 11137-1:2006] |
| **phytosanitary measure** | Any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests. [ISPM 5] |
| **preventive action** | Action intended to eliminate the cause of a potential non-conformity or other undesirable potential situation. There can be more than one cause for a potential non-conformity. Preventive action is taken to prevent occurrence whereas corrective action is taken to prevent reoccurrence.<br>[ISO 9000:2005] |
| **process interruption** | Intentional or unintentional stoppage that acts to prevent the irradiation process from proceeding continuously.<br>[ISO 11137-1:2006] |
| **process load** | A volume of material with a specified loading configuration and treated as a single entity. [ISPM 5] |
| **process parameter** | Specified value for a process variable. The specification for a process includes the process parameters and their tolerances.<br>[ISO 11137-1:2006] |
| **radiation-sensitive indicator** | Material which may be affixed to, or printed on, the process load and which undergoes a visual change when exposed to ionizing radiation. These indicators do not provide a quantitative measure of dose and may not work or be unreliable at low doses (for example in the dose range employed for phytosanitary treatments). [Adapted from ISO/ASTM 51539:2005] |
| **radiation source** | Device that emits ionizing radiation. |
| **radionuclide** | Radioactive isotope of an element (e.g. cobalt-60 or cesium-137). |

| | |
|---|---|
| **requalification** | Repetition of part of validation for the purpose of confirming the continued acceptability of a specified process. [ISO 11137-1:2006] |
| **regulated pest** | A quarantine pest or a regulated non-quarantine pest. [ISPM 5] |
| **re-infestation** | The renewed presence, in a commodity, of a living pest of the plant or plant product concerned. Re-infestation includes re-infection. |
| **Sanitary and Phytosanitary (SPS)** | The WTO Agreement on the Application of Sanitary and Phytosanitary Measures on how member governments apply food safety, animal and plant health measures. |
| **specification** | Approved document stipulating requirements. [ISO 11137-1:2006] |
| **treatment** | Official procedure for the killing, inactivation or removal of pests, or for rendering pests infertile, or for devitalisation. [ISPM 5] |
| **validation** | Documented procedure for obtaining, recording and interpreting the results required to establish that a process will consistently yield product complying with predetermined specifications. [ISO 11137-1:2006] |
| **WTO** | World Trade Organisation |

**Outline of requirements**

NPPO approval, in addition to those of nuclear agencies and food safety authorities, will be required. This includes a number of requirements audited when NPPOs conduct site assessments such as:

- Facilities should provide segregated storage for irradiation and non-irradiated commodities
- Additional specifications for gamma irradiation and for electron beam and x-ray irradiation should be available
- The irradiation and its mode of generation should be specified
- Validation exercises to show the facility is operating to design specification should be undertaken
- Performance qualification is carried out to show the facility consistently performs to predetermined criteria
- Process specification documents, including information from validation studies, should be available for each commodity
- Procedures for product handling and monitoring product integrity should be specified
- The product loading configuration shown in the process specification should be used
- There should be a process inventory control
- Personnel should be adequately trained
- Equipment should be subject to a maintenance plan and records reviewed by a designated person.

Dosimetry must be performed to ensure that specified doses are received by the commodities being treated. Dose mapping to determine does distribution and variability, using dosimetry, should be undertaken. Dosimeter location and placement frequency should be sufficient and verify the process is under control.

Quality management responsibilities will include a defined quality management system, methods for measurement and analysis, equipment calibration, procedures for commodity release, documentation and irradiation certificate and phytosanitary certificate provision.

Product security after treatment needs to be maintained.

## BACKGROUND

This standard provides a common framework for NPPO's to approve irradiation facilities used for phytosanitary purposes by assess the effectiveness and ability of a facility to fulfil all the requirements for the irradiation of commodities. This is particularly important for irradiation phytosanitary treatments, as onshore inspection of a consignment treated by irradiation is an impractical means to evaluate treatment effectiveness, as live but non-viable insects may be present.

The standard addresses applications for phytosanitary treatment of non-food commodities (e.g. timber, flowers, cotton) as well as some food commodities (e.g. mango, papaya). NPPOs should note that where phytosanitary treatment overlaps with food treatments the regulations and controls imposed need to recognise national and international requirements for both applications (i.e. Codex Alimentarius).

This standard has been developed to be used in conjunction with ISPM 18.

Specific efficacy requirements for the control of quarantine pests are not dealt with in this standard and should be determined during bilateral discussions between exporting and importing NPPOs.

## Purpose

This standard provides elements of a quality management system that are the minimum necessary for the operation of irradiation facilities using either radionuclides (cobalt-60 or cesium-137) or machine generated sources (electron beam or x-rays).

The application of the standard does not exempt compliance with current and applicable regulations. They do not specify requirements for occupational safety associated with the design and operation of irradiation facilities, nor specify a complete management system for the control of all stages of phytosanitary treatment.

## Acknowledgement

These guidelines are, with permission, largely based on the *Guidelines for the Audit and Accreditation of Irradiation Facilities used for Sanitary and Phytosanitary Treatment of Food and Agricultural Products* which were developed in an International Atomic Energy Agency funded project (RAS05/050).

## REQUIREMENTS

### 1. Irradiation facility approval

A facility is approved by the relevant authorities (e.g. nuclear agencies and food safety authorities) in the country where the facility is located. For phytosanitary uses additional approval (certification or accreditation) will be required by NPPOs. The approval should be based on a common set of criteria plus those specific to the site and commodity programmes (see Annex 2 of ISPM No.18). NPPOs should conduct site assessments (audits) in order to establish the irradiation treatment provider’s

capacity to perform phytosanitary treatments to the specifications required and that the equipment used, and operating protocols undertaken, are sufficient to perform an effective treatment.

- Assessment for facility approval will include:

a. equipment and site;
b. ability to conduct treatments;
c. cleanliness and safeguarding of integrity;
d. evaluations on the level of risk from possible re-infestation or contamination following treatment; and
e. documentation and record keeping.

The irradiator operator should agree, as part of the approval process, to immediately notify the NPPO of any problems, concerns or irregularities in commodity treatments.

Approved facilities should be periodically audited by NPPOs.

### 1.1 Facility requirements

Facilities should provide segregated storage for irradiated and non-irradiated commodity and prevent cross contamination and post treatment re-infestation. This separation can be accomplished by controlled, single direction movement of commodity through the facility and by separated storage areas for irradiated and non-irradiated commodities.

Irradiators must be able to provide the doses within the limits specified and prescribed for phytosanitary treatments. In addition, the NPPO may consider characteristics of each facility in assessing the degree to which unique physical and production process specifications are necessary to ensure adequate safeguarding.

### 1.2 Radiation source

The type of radiation (e.g. gamma) and radiation source (e.g. cobalt-60) should be specified. In the case of electron accelerators the energy of radiation should be specified.

### 1.3 Additional specifications for gamma irradiators

- For gamma irradiators, specifications should describe the:

a. type of radionuclide, its activity, and source geometry;
b. means of indicating the position of the gamma source;
c. means of automatically returning the gamma source to the storage position and automatically ceasing conveyor movement if the process control timer or the conveyor system fails; and
d. means of returning the gamma source to the storage position, and automatically ceasing conveyor movement or identifying affected product if the gamma source is not at its intended position.

### 1.4 Additional specifications for electron beam and x-ray irradiators

- For electron beam and x-ray irradiators, specifications should also describe:

a. the characteristics of the beam (electron or x-ray energy and, if applicable, average beam current, dose rate, scan width and scan uniformity);
b. for x-ray irradiators, the dimensions, materials and construction of the x-ray converter;
c. the means of indicating that the beam and the conveyor system are operating;
d. the means of ceasing irradiation if any failure of the conveyor occurs which affects the dose and commodity requirements; and
e. the means of ceasing conveyor movement or identifying affected commodity if any fault in the beam occurs.

### 1.5 Equipment

- The irradiator and its method of operation should be specified. The irradiator specification should be revised as necessary and retained for the life of the irradiator. The specifications should at least describe the:

a. premises, including the location of the irradiator;
b. means provided for the segregation of non-irradiated and irradiated commodities;
c. construction and operation of any associated conveyor system;
d. conveyor path(s) and the range of conveyor speed;
e. dimensions, materials and construction of the irradiator container(s); and
f. manner of operating and maintaining the irradiator and any associated conveyor system.

Software used to control and/or monitor the process should be in accordance with a quality management system with documentary evidence that the software meets its design intention (e.g. as documented by the software provider).

### 1.6 Validation

Validation encompasses a series of exercises designed to verify that an irradiation facility meets its installation requirements (installation qualification or IQ), operates to its design specification (operational qualification or OQ) and will consistently deliver the required process to a given loading configuration within predetermined tolerances (performance qualification or PQ). Validation of information generated during IQ and OQ is undertaken by other agencies. Information generated during PQ must be reviewed by NPPOs and the outcome of the review must be recorded.

### 1.7 Performance qualification

The purpose of PQ is to demonstrate that the facility, as installed and properly operated, consistently performs in accordance with predetermined criteria. During PQ dose mapping is used to determine the appropriate process parameters (including timer setting, conveyor speed and product-loading configuration) for ensuring that the dose requirements for a particular commodity can be satisfied. This is accomplished by dose mapping of irradiation containers with specific commodity and loading configurations. The aim of which is to determine the value and locations of the minimum and maximum doses.

Dose mapping should comply with ISO/ASTM Standard 51204-2002(E) or current ISO/ASTM standards, Practice for the Application of Dosimetry in the Characterization of a Gamma Irradiation Facility for Food Processing, or ISO/ASTM Standard 51431-2002(E) or current ISO/ASTM standards, Practice for Dosimetry in Electron and Bremsstrahlung Irradiation Facilities for Food Processing.

### 1.8 Process specifications

- From a consideration of the information generated by the validation studies above and its review, a process specification should be documented and approved for each commodity. These documents should include:

a. description of packaged product, including dimensions, density and orientation of product within the package and acceptable variations;
b. loading configuration of product within the irradiation container;
c. irradiator operating conditions and limits (e.g. beam characteristics, conveyor speed and source configuration);
d. conveyor path(s) to be used;
e. minimum and maximum doses;
f. routine dosimeter monitoring position(s);
g. relationship between the dose at the monitoring position(s) and the minimum and maximum doses;

h. for a product that is to be given multiple exposures, documentation should include any special requirements needed between exposures (e.g. change of level within the carrier or time restrictions); and
i. where applicable the handling and storage conditions required (e.g. temperature and humidity conditions).

### 1.9 Routine monitoring and control

Prior to processing, any specific periodic tests, calibrations, maintenance tasks and necessary requalification should be performed and outcomes recorded. Procedures for product handling and maintaining product integrity before, during and after irradiation should be specified.

Process parameters (e.g. irradiation time, conveyor speed, product loading configuration) should be set, controlled, monitored and documented, taking into account uncertainty in routine dosimetry, to ensure that the commodity in each process load is processed within specifications. If process parameters deviate outside prescribed processing limits appropriate actions should be taken. The NPPO should be informed and remedial action undertaken.

### 1.10 Process interruptions

If a process interruption occurs it should be recorded, the NPPO informed and remedial action undertaken.

### 1.11 Process loads

Commodities should be loaded in the product loading configuration according to the process specification. The effect of changes or variations in the product loading configuration on the dose distribution should be assessed. Commodities must be presented for processing in the same configuration to that which was used for dose mapping.

### 1.12 Processing inventory control

Systems for quantifying product and maintaining product inventory should be implemented throughout product receiving, loading, unloading, handling and release. Discrepancies in the inventory should be resolved before processing and/or release.

Incoming products should be logged and given a code related to the customer lot identification in order to identify products at each step in their path through the irradiation facility. Procedures should ensure that irradiated and non-irradiated products are segregated.

### 1.13 Personnel

The irradiator operator must be able to demonstrate the capability to conduct irradiation treatments. Personnel performing work affecting the effectiveness of the process should be competent on the basis of appropriate education, training, skills and experience.

### 1.14 Maintenance of equipment

A maintenance plan (including preventive actions), maintenance procedures and records should be reviewed at specified intervals by a designated person and the results of the review should be documented.

Equipment should not be used to process product until all specified maintenance tasks have been satisfactory completed and recorded.

## 2. Dosimetry

Dosimetry must be performed to ensure that the specified doses are received by the commodity. The selection and use of specific dosimetry systems in a given application should be justified, taking into account the dose range, radiation type, effect of influence quantities, required level of uncertainty and required spatial resolution (see ISO/ASTM 51261, ISO ASTM 51707:2005).

## 2.1 Dose mapping

Dose mapping is carried out to determine dose distribution and variability by placing dosimeters throughout an irradiation container filled with homogenous material (OQ) or the commodity (PQ). The number of dosimeters and their placement should be such that the locations of the maximum and minimum doses can be properly determined.

Dose mapping should be carried out in a sufficient number of irradiation containers with the same loading configuration and irradiation conditions in order to estimate the variability of dose values and distribution. Dose mapping records should include a description of the irradiation container, product loading configuration, conveyor path, irradiator operating conditions, dose measurements and conclusions drawn.

For gamma irradiators, the relationship between the source activity, timer setting, conveyor speed and dose shall be established for each loading configuration taking into account uncertainties.

For electron beam and x-ray irradiators, the relationship between the beam characteristics, the conveyor speed and dose shall be established for each loading configuration taking into account uncertainties.

The effect on dose distribution when product of different densities is present in a gamma irradiator shall be determined to define products that can be processed together.

## 2.2 Routine dosimetry

Different types of dosimeters can be used for dose mapping and routine dosimetry. For phytosanitary applications reference should be made to ASTM F1355-06.

If the locations of dose extremes identified during dose mapping procedures are not readily accessible during production runs alternative positions may be used for dose monitoring. The relationships between the doses at these alternative reference positions and the maximum and minimum doses shall be reproducible, established and documented.

Dose mapping must be repeated whenever changes are made, either in the facility, its operation or to the loading configuration (commodity, packaging, arrangement of product within packaging etc).

### 2.2.1 Dosimeter location

Dosimeter(s) should be placed in the process load at the predetermined maximum and minimum dose positions, or at a qualified reference dose location.

### 2.2.2 Placement frequency

The frequency of dosimeter placement in the process load should be sufficient to verify that the process is in control. For example, a placement frequency that ensures there is at least one dosimeter in the irradiator at any given moment, with at least one dosimeter on the first and last irradiation containers of each process load. The frequency and its rationale should be specified.

## 3. Quality management

### 3.1 General responsibilities

The irradiator operator should be approved by the NPPO to treat commodities. For phytosanitary treatments additional requirements may be defined by the NPPO.

### 3.2 Management system

- The facility should be managed in accordance with:

a. a defined quality management system;
b. relevant domestic regulations; and
c. NPPO requirements.

### 3.3 Monitoring, measurement and analysis

Appropriate methods for monitoring, measuring and analysing the process should be applied by the irradiator operator.

### 3.4 Equipment calibration

Procedures should be established for implementing and documenting calibration and control systems. All systems should be periodically checked to ensure that they are functioning according to specifications. The calibrations should be traceable to national or international standards. Instrumentation used to control, indicate or record the irradiation process should be recalibrated at defined intervals.

Following any modification or servicing of the instruments they should be recalibrated.

### 3.5 Procedures for commodity release

Procedures for commodity release following irradiation treatment should be specified. Procedures should take into account the uncertainties of the measurement system.

Radiation sensitive indicators should not be used as a proof of satisfactory radiation processing or as the sole means of differentiating irradiated products from non-irradiated products.

#### 3.5.1 Non-conforming commodity

Procedures for control of commodities designated as non-conforming and for correction, corrective or preventive action should be specified and documented. These procedures should comply with the applicable clauses of the quality management system. Documented procedures and records should be maintained and may be used to identify the causes of the non-conformities.

### 3.6 Documentation

The irradiator operator should manage documentation in accordance with Section 7 of ISPM No.18 and their quality management system.

A technical agreement between the irradiator operator and the customer should be undertaken as specified in Section 4.4 of ISO 14470.

### 3.6.1 Irradiation certificate or report

- Treatment certificates or reports should accompany all commodities treated by the irradiator operator. All details should be legible and free from erasures and non-certified alterations.
- The certificates or reports should be signed, dated and contain the following details:

i. Description of the commodities including quantity and distinguishing numbers such as irradiation lot number, specification number or a reference to load configuration.
ii. Target pest and purpose of treatment (e.g. mortality or devitalisation).
iii. Radiation source, and energy level for electron beam and x-ray.
iv. Date of treatment.
v. Name of treatment facility.
vi. Minimum and maximum doses (specified and actual).
vii. Consignment owner.
viii. Any deviation from the treatment specification.

### 3.6.2 Phytosanitary certificate

After the irradiator operator has completed the irradiation certificates or reports, phytosanitary certificates can be issued by the NPPO in accordance with the requirements of Section 8.2 of ISPM No.18.

## 4. Post treatment security

Product security needs to be maintained after treatment to prevent re-infestation or contamination of commodities. Procedures need to be in accordance with Section 6.1 of ISPM No.18.

All shipments using solid wood packing material should comply with ISPM No.15.

Annex IV

# REGIONAL STANDARDS FOR PHYTOSANITARY MEASURES

## Approval of Fumigation Facilities

### Content

## INTRODUCTION

### Scope

The standard provides guidance to assist NPPOs assess whether fumigators can undertake fumigations effectively and can provide an approved service.

The standard also outlines in appendices the general principles of fumigation and general procedures for fumigation.

### References

**ISPM 5.** *Glossary of phytosanitary terms*. Rome, IPPC, FAO.
**ISPM 13**. 2001. *Guidelines for the notification of non-compliance and emergency action*. Rome, IPPC, FAO.
**ISPM 28**. 2007. *Phytosanitary treatments for regulated pests*. Rome, IPPC, FAO.
FAO Manual of Fumigation for Insect Control (1984) FAO PLANT PRODUCTION AND PROTECTION PAPER 54 FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

### Definitions and abbreviations

Except for the definitions below, definitions are from ISPM 5 *Glossary of phytosanitary terms*

| | |
|---|---|
| **enclosure** | A gas-proof structure to keep fumigant in contact with the commodity |
| **equilibrium** | Even distribution of fumigant where all concentrations readings are within 15% of one another |
| **fumigator** | Refers to the person or persons performing the fumigation |
| **PPE** | Personal Protective Equipment |
| **SCBA** | Self-contained Breathing Apparatus |
| **stack** | Any fumigation where the enclosure is created using a fumigation sheet |
| **TLV** | Threshold Limit Value |
| **treatment provider** | Refers to the company or other entity that provides fumigation treatment services |

**Outline of requirements**

This standard provides guidance to assist NPPOs assess whether fumigators can undertake fumigations effectively and can provide an approved service.

Fumigation treatment providers should be assessed by their NPPO to show the facilities, staff and management are suitable for the scope of the approved treatments. Specific information is required from approved treatment providers before they can be listed by NPPOs. Guidance on the obligations of competent fumigators is provided.

Approved fumigation treatment providers should be subject to regular audits. The approval should be withdrawn if requirements are not met.

NPPO responsibilities include: establishing criteria for competencies; ensuring training meets requirements; establish assessment and audit systems and conduct these; take prompt action upon non-compliance.

Approved fumigation treatment providers should: ensure all treatments meet requirements; ensure documentation is appropriate; cooperate as required with their NPPO.

The principles of fumigation and general procedures for fumigation are attached as appendices.

## BACKGROUND

Fumigation is a useful measure to reduce the risk of introduction and spread of regulated pests through the international movement of commodities or regulated articles. However, little guidance has been available to assist NPPOs in assessing whether fumigators have carried out fumigations effectively to allow NPPOs of importing countries to have confidence in the fumigation.

### Purpose

The guidelines are to assist fumigators to carry out effective fumigations reliably and NPPOs with guidance on developing appropriate systems for regulating and certifying fumigations to meet importing country requirements.

### Acknowledgement

It is acknowledged with thanks that much of the material in this standard is drawn from documentation produced by the Australian Fumigation Accreditation Scheme. For further information refer to:

http://www.daff.gov.au/aqis/import/general-info/pre-border/afas

## REQUIREMENTS

### 1. Regulation of fumigation treatment providers

### 1.1 Approval of fumigation treatment providers

Each treatment provider applying for approval must be assessed by the NPPO to determine if they meet the approval requirements. The treatment provider should be notified in writing if they meet the approval requirements, be allocated an approval number and advised of the date from which their approval will take effect.

If the approval requirements have not been met, the treatment provider should be notified in writing of the reasons why approval was not granted.

#### 1.1.1 Approval assessment

To be eligible for approval by the NPPO, each treatment provider should be able to demonstrate that they have:

- a documented organisational structure that clearly defines the roles and responsibilities of all persons either directly involved in performing the treatments or have managerial responsibility for ensuring that adequate procedures, resources and training are in place to meet requirements
- sufficient suitably qualified and experienced fumigators
- facilities suitable for the scope of the approved treatments
- procedures in place to ensure that fumigations are performed in accordance with the requirements
- appropriate and sufficient equipment available to perform the treatments in accordance with requirements
- record management procedures in place to provide access to all documentation relating to individual treatments for at least two years from the date of treatment
- a commitment to undergo audits to demonstrate compliance.

A documented quality management system that covers their fumigation activities and addresses the requirements would facilitate the approval process by the NPPO.

#### 1.1.2 List of approved treatment providers

The NPPO should establish and administer a list of approved treatment providers containing the following minimum information on each provider:

- approval number
- date of approval
- approval validity period
- company name and contact details
- name and position of persons with management responsibility
- names of competent fumigators employed by the company
- scope of approval e.g. fumigants the provider is qualified to use, phytosanitary verses domestic purposes etc.

### 1.2 Competency of fumigators

Fumigation treatment provider personnel responsible for managing fumigation must be adequately trained to ensure fumigations are performed safely and effectively. The training should cover the

general principles of fumigation, the practical application of these principles in the field, the equipment and facilities needed and the information they need to record to demonstrate compliance.

To be considered competent the treatment provider personnel should be able to demonstrate that they understand and can satisfy their obligations when doing fumigations, such as:

- Selection of suitable sites
- Ensuring the consignment is suitable for fumigation
- Ensuring the enclosure is sufficiently gas-tight to retain the fumigant for the duration of the exposure period
- Applying the correct dosage
- Achieving even gas distribution throughout the enclosure
- Verifying that the fumigant is evenly distributed throughout the enclosure and concentration levels are at or above minimum requirements at the start of the fumigation
- Verifying that fumigant concentration levels at the end of the exposure period are at or above the minimum requirements.
- Ventilation of the enclosure to ensure that the consignment is safe to handle
- Conducting the fumigation in a manner that is safe
- Recording all relevant information on-site and at the time the fumigation is performed.

Refer to appendices 1 and 2 of this Standard for more detailed information about fulfilling these requirements.

### 1.3 Compliance surveillance

Approved fumigation treatment providers should be subject to regular audits to assess their ongoing compliance with requirements. The audit should determine that:

- management and administrative procedures are in place to ensure that treatment requirements are understood and consistently achieved.
- there are sufficient competent personnel available
- the facilities meet requirements
- equipment is suitable and properly maintained
- sufficient equipment is available and is used in accordance with requirements
- fumigation practices meet requirements
- adequate, accurate documentation is kept to demonstrate compliance.

In addition to formal audits, informal un-announced inspections of fumigations may also be undertaken to verify that requirements are consistently being applied in practice.

### 1.4 Withdrawal or suspension of fumigation provider approval

The NPPO should withdraw or suspend the fumigation provider’s approval if they are not adequately meeting the approval requirements.

## 2. Roles and responsibilities

### 2.1 NPPO

The roles and responsibilities of the NPPO include, but are not limited to, the following:

- Establish the criteria for assessing fumigation personnel competency
- Ensure that the training and assessment of fumigation personnel adequately meets the competency criteria.

- Establish and administer systems for the assessment, approval and auditing of fumigation treatment providers.
- Ensure only treatment providers that adequately meet the requirements are approved.
- Establish and maintain a list of all eligible fumigation treatment providers.
- Conduct audits and inspections of approved fumigation treatment providers in accordance with the requirements to determine their level of compliance.
- Take prompt, appropriate action (e.g. withdrawal or suspension of approval), where an approved fumigation treatment provider fails to demonstrate their capacity to conduct effective fumigation treatments.

## 2.2 Approved fumigation treatment providers

The roles and responsibilities of approved fumigation treatment providers include, but are not limited to, the following:

- Ensure all fumigation treatments are performed according to the relevant requirements
- Ensure all documentation is completed according to the requirements, maintained for a period not less than two years and made available upon request.
- Ensure any company changes that may affect their ability to meet the requirements are promptly reported to the NPPO (e.g. movement of competent persons or changes in address details)
- Cooperate with the NPPO to demonstrate their compliance with the requirements.

**Appendix 1**

## Principles of fumigation

### 1. Fumigants

A fumigant is a chemical which, at a required temperature and pressure, exists in the gaseous state in sufficient concentration to be lethal to a given pest organism.

An important feature of fumigants is they exist in a gaseous state under normal treatment conditions so they diffuse as separate molecules, enabling them to penetrate into the material being fumigated and to diffuse away afterwards. This is an important distinction from aerosols, which are particulate suspensions of liquids or solids dispersed in air, popularly referred to as smokes, fogs or mists. These are unable to penetrate even a short distance into materials because their particles are deposited at the outer surfaces.

### 2. Fumigant suitability

Fumigants vary greatly in their mode of action. Some kill rapidly while others kill slowly. In sub-lethal dosages, some fumigants may have a paralysing effect on the pest while others will not allow the pest to recover. Some fumigants have no effect on commodities while others are detrimental even at low concentrations. Commodities vary in their sorption of fumigants and in the effort required to aerate the commodities after fumigation.

There are a number of factors that will determine the suitability of a fumigant to treat a particular commodity and/or pest. These include:

- toxicity
- mode of action
- potential to cause damage to the commodity and/or associated materials
- ability to penetrate into the commodity being treated

### 3. Fumigant properties

Each fumigant has different properties and characteristics that will affect how it should be applied to consistently achieve an effective fumigation.

#### 3.1 Boiling point

Some fumigants have a relatively high boiling point at normal atmospheric pressure, for example, methyl bromide boils at 3.6°C. Fumigants with relatively high boiling points can condense back into a liquid as it is being release into the enclosure. A build up of back pressure in the supply system can result in liquid fumigant coming from the supply pipe with the potential to cause damage to the commodity.

The risk of releasing liquid fumigant can be reduced by heating the fumigant using a vaporiser (volatiliser) and by controlling the rate of gas flow through the supply system. The internal diameter of the pipes used in supply system should be the same or increase progressively from the fumigant supply towards the enclosure to minimise potential choke-points that could create sufficient back-pressure to condense the fumigant back to a liquid.

#### 3.2 Rate of diffusion

The rate at which a fumigant will diffuse throughout an enclosure is dependent on a number of factors. The heavier the gas the slower it will diffuse throughout an open space. The rate of diffusion is also directly related to temperature, so that a given gas will diffuse more quickly in hot air than in cold air.

If a gas is heavier than air, it will have a tendency to stratify resulting in lower concentrations in the upper reaches of the enclosure. The use of fans or other means to force thorough mixing of the fumigant with the air will ensure uniform distribution throughout the enclosure.

Once heavier than air fumigants are thoroughly mixed with the air, any tendency to stratification is of no practical importance during normal fumigation exposure periods.

### 3.3 Flammability

Some fumigants are highly flammable and can present a risk of explosion unless suitable precautions are taken. Dilution of the oxygen content in the enclosure by purging with an inert gas to non-combustible levels, sometimes combined with fumigation under vacuum, plus the removal of any potential source of ignition is commonly used to manage the risk associated with flammable fumigants. Specific details to manage this risk are described in the appendices for each relevant fumigant.

### 3.4 Sorption

Sorption is the term used to describe the total uptake of fumigant resulting from the attraction and retention of the molecules by any solid material present in the system. Such action removes some of the molecules of the fumigant from the free space so that they are no longer able to diffuse freely throughout the system or to penetrate further into the interstices of the material.

The amount of fumigant used must be sufficient both to satisfy the total sorption during treatment and also to leave enough free gas to kill the pest organisms.

When the enclosure is ventilated to remove the fumigant from the space and the material, the fumigant slowly diffuses from the material. With the common fumigants and the commodities usually treated, residual vapours are completely dissipated within reasonable periods, although the length of time varies considerably according to the gas used and the material treated.

## 4. Fumigant concentration levels

To achieve an effective fumigation, the target of the fumigation must be exposed to a sufficient concentration of fumigant for a sufficient length of time to achieve a lethal dose. The amount of fumigant required to achieve the lethal dose is referred to as the dosage rate and is expressed as a function of concentration and time. For example, timber is typically fumigated with methyl bromide at a dosage rate of 48g/$m^3$ for 24 hours.

The dosage rate and any minimum retention rate, is set to effectively treat all life stages of the target pest.

Fumigation must be done in enclosures that are sufficiently gas-tight to maintain concentration levels above the minimum requirement over the duration of the exposure period. Typically, there will be a reduction of fumigant concentration in the enclosure over time due to penetration into or sorption by the commodity and leakage from the enclosure. To ensure that the target pest is subjected to a lethal concentration of fumigant over the entire exposure period a minimum final retention rate may be required. The minimum retention rate is a percentage of the dosage rate concentration which must be met or exceeded at the end of the fumigation exposure period.

Some fumigants, such as phosphine, require fumigant concentrations to be maintained within lower and upper ranges over the fumigation exposure period. This is intended to avoid inducing protective narcosis in the insects which may result in insects surviving the fumigation because they do not take up a lethal dose.

### 4.1 The effect of temperature on the dosage rate

The most important environmental factor influencing the action of fumigants is temperature as the toxicity of a fumigant depends on the respiration rate of the target organism. Generally, the lower the temperature, the lower the respiration rate of the organism which tends to make it less susceptible. Fumigation at lower temperatures requires a higher concentration of fumigant than fumigation at higher temperatures.

Unless specified otherwise, the minimum expected ambient air temperature within the enclosure during the exposure period should be used to determine any adjustments to the dosage rate.

Some commodities, particularly perishables, require treatment at a specific temperature or within a specific temperature range to ensure the treatment is effective while minimising any adverse effects on the quality of the commodity that may result from increased temperatures. If the treatment requires measurement of the internal or pulp temperature of the commodity then suitable temperature probes must be used. Fumigations that require a specific temperature or temperature range must be performed in a facility capable of heating the commodity to the desired temperature and maintaining it for the duration of the fumigation exposure period.

The expected minimum ambient temperature for fumigations performed outside or in facilities without adequate temperature control should be obtained by checking the official forecast minimum temperature of the nearest locality to the fumigation site.

For practical purposes, it is increasingly difficult to kill insects with fumigants as the temperature is lowered to 10°C. In general, the effectiveness of fumigants becomes unreliable below 10°C so, unless otherwise specified, fumigation is not normally permitted where the temperature is expected to fall below 10°C during the exposure period. If the ambient temperature is expected to fall below 10°C, heaters can be used to increase the temperature and maintain it at a satisfactory level for the duration of the exposure period. There will be a gradient within the enclosure where the temperature will progressively decrease the greater the distance from the heat source. The temperature used to determine the dosage rate must be the ambient temperature expected in the coolest part of the enclosure.

Sufficient time must be allowed for the enclosure and the commodity to reach the desired temperature prior to starting the fumigation.

The adjustment of dosage rates to compensate for lower temperatures will vary depending on the fumigant. Any adjustment to the dosage rate must be done before calculating the dosage.

## 5. Safety

All fumigants are toxic gases which can be harmful to humans if not handled carefully. Appropriate precautions must be taken to avoid exposure to unsafe levels of fumigant by fumigation personnel as well as any other persons in the vicinity. This includes the establishment of an exclusion zone (see Appendix 2, section 2.7.1).

## 5.1 Personal protective equipment (PPE)

Fumigation personnel must wear appropriate respiratory protection when inside the exclusion zone while it is in force.

## 5.2 Full-face respirators

A full-face respirator with a suitable filter canister attached will provide adequate protection against exposure to unsafe levels of fumigant. The filter canister must be appropriate for the fumigant and should be used in accordance with the manufacturer's instructions.

## 5.3 Self-contained breathing apparatus

Self-contained Breathing Apparatus (SCBA) consists of a full-face respirator attached to a cylinder of breathable air. SCBA provides protection against all toxic gases and at higher concentrations than a respirator and gas filter is capable of providing protection for.

Personnel must be suitably trained in the use of SCBA.

## 5.4 Threshold Limit Value

The Threshold Limit Value (TLV) is the maximum concentration of fumigant that the average person can be safely exposed to over a working week (40 hours). The TLV is usually expressed as parts per million (ppm) or parts per billion (ppb).

The TLV is different for each fumigant and may also vary from country to country.

**Appendix 2**

## General procedures for fumigation

### 1. Site selection

Fumigations are commonly performed at ports, in container terminals or at the exporter's premises. The fumigator should assess the site's suitability to ensure that the fumigation can be done safely and effectively. The site should be away from unprotected personnel, well ventilated, sheltered from high winds (as much as possible) and access restricted to authorised personnel.

If a fumigation sheet is used for the enclosure, the surface must be impervious to the fumigant, flat, clear of stones or other sharp objects that may damage the sheet and free of cracks or joins that will reduce the gas-tightness of the enclosure. There should be sufficient space to set up an exclusion zone around the enclosure.

### 1.1 Risk assessment

The fumigator needs to conduct a risk assessment of the fumigation site to ensure that the fumigation can be performed safely. They need to consider the prevailing wind direction, proximity of occupied buildings and any unprotected personnel in the vicinity. The fumigator must plan for safe ventilation of the enclosure before the fumigation starts.

The risk needs to be continually re-assessed as it will change depending on the activities taking place and the circumstances at the time.

### 2. Consignment suitability for fumigation

It is the responsibility of the owner or their agent to present the consignment in a condition that will allow it to be effectively fumigated.

### 2.1 Adverse effects on the commodity

Some commodities or any other associated materials in the enclosure may be adversely affected by some fumigants. This may include chemical reactions causing undesirable residues, corrosive effects or unacceptable deterioration in quality.

If there is a concern that a commodity may be adversely affected by a fumigant expert advice should be sought regarding its effects or tests conducted on the commodity.

### 2.2 Free airspace

An important factor in getting good air circulation and therefore even fumigant distribution is the amount of airspace around and between the commodity. The enclosure should be configured to ensure that there is adequate space above, below, at
the sides and throughout the commodity. Putting the commodity on pallets, creating space between the sheets and the commodity and stacking the commodity so there is space between items, will improve fumigant circulation.

Commodities in shipping containers are often packed tightly to utilise as much of the available space as possible. If a container is presented for fumigation without adequate free airspace then it cannot be

fumigated effectively unless sufficient space is created by removing some of the commodity which can then be fumigated as a free-standing stack.

## 3. Penetration into the commodity

In many cases the fumigant must be able to penetrate into the commodity to effectively treat pests (for example, wood borers) that can exist inside the commodity itself. The fumigator should inspect the consignment to verify that it can be treated effectively prior to fumigation. If the consignment cannot be adequately inspected, the fumigator may need to rely on information from the manufacturer/exporter of the goods to ascertain whether there is anything that may prevent the fumigant from penetrating into the commodity to a sufficient degree.

### 3.1 Impervious surfaces and wrapping

If the commodity is wrapped in materials that are impervious to the fumigant the wrapping should be cut or removed prior to fumigation.

If the commodity has impervious surfaces that will prevent effective penetration of the fumigant then an alternative method of treatment must be used. Where practical, the commodity should be fumigated prior to any impervious surfaces being applied.

### 3.2 Maximum thickness

The degree of penetration into the commodity will depend on the fumigant used, the nature of the commodity and the exposure period. If there is a maximum depth which the fumigant can penetrate, there may be restrictions on the size of that commodity which can be effectively treated with that fumigant. In general, the maximum thickness of a commodity that can be treated will be twice the penetration depth because the fumigant can penetrate from all sides. If, however, the commodity is partially coated with an impervious surface the maximum thickness from the uncoated surface will be the same as the penetration depth.

## 4. Fumigation enclosures

Fumigations must be performed in enclosures that are sufficiently gas-tight to retain the required minimum concentrations of fumigant for the duration of the exposure period.

Each enclosure is considered a separate fumigation even if it is for the same consignment and all the requirements apply to each enclosure as a stand-alone fumigation.

### 4.1 Fumigation chambers

A fumigation chamber is a fixed structure designed for regular use as a fumigation enclosure. The most important characteristic of a chamber is that it can be reliably sealed by simply closing the door. Monitoring tubes, supply pipes and electrical leads enter the chamber through holes in the walls that are sealed to prevent leakage. Chambers should be fitted with a circulation system with an air flow capacity sufficient to move the equivalent of the chamber volume of air every one to three minutes.

They must have an exhaust system to allow safe ventilation of the chamber and complete aeration of the commodity. Ideally the exhaust outlet should extend at least three metres above the chamber or, for chambers situated inside a building, above the building roofline. An air inlet port is necessary to allow fresh air to enter the chamber while it is being ventilated. Better ventilation will be achieved if the inlet port is located at the opposite end from the exhaust port so that fresh air is drawn through the length of the chamber.

Chambers situated inside a building should be in an area that is well ventilated and capable of being isolated from unprotected personnel during fumigation.

Fumigation chambers must pass a pressure test at least every six months. The pressure test must be conducted under normal fumigation conditions, that is, the chamber must be sealed in the same way it would for the actual fumigation.

A pressure decay time from 200 to 100 Pa of 10 seconds or more must be achieved to verify that the chamber is gas-tight. To check this the pressure in the chamber should be raised by 250 Pa and the time taken for pressure to fall from 200 to 100 Pa measured. If the time taken is 10 seconds or more then the chamber can be considered gas tight.

### 4.2 Vacuum chambers

Some treatments are performed under vacuum which greatly increases the rate of penetration of fumigant into the commodity allowing the exposure time to be reduced accordingly.

The chamber must be capable of achieving the desired vacuum and maintaining it for the duration of the fumigation. At the end of the exposure period normal air pressure is restored to allow the fumigant to be vented and the commodity aerated until it is safe to handle.

### 4.3 Shipping containers

Fumigations are routinely performed in shipping containers without being enclosed in a fumigation sheet.

The condition of the door seals should be checked and the body of container inspected for any damage that will make it incapable of retaining the fumigant for the required exposure period. If the container is not considered suitable it must be fumigated under a sheet.

Seal the air vents from the outside using tape and install the monitoring tubes and fans. Take care when closing the doors that the monitor tubes are not crushed or kinked which may cause inaccurate concentration readings. The fumigant should be introduced into the container using a metal tube or other suitably rigid material inserted through door seals and withdrawn after dosing is complete. This is easiest at the top or bottom where both doors meet.

It is important to carefully check for leaks around the door seals. It may be necessary to use some temporary sealant to prevent excessive leakage where the tubes and leads enter the container. Leakage from around the doors can usually be fixed by taping along the seals.

The container floor is another potential source of leakage. While the container is on the ground it is not possible to thoroughly leak check the floor. In windy conditions, gas retention can be improved by preventing air flow under the container using sand snakes or other suitable means around the base of the container. If there are leaks in the floor the wind can create pressure differentials, the Venturi effect, that will draw gas from the container.

### 4.4 Sheeted stacks

Any fumigation that uses a gas-proof sheet to create a fumigation enclosure is considered to be a stack. The ability of a stack to retain sufficient fumigant for the duration of the fumigations is largely determined by the sheet, the fumigation surface and the quality of the seal created between them. If one or more containers are covered by a sheet it is considered a stack fumigation.

## 4.5 Fumigation surface

The fumigation surface must be impervious to the fumigant and free of cracks (including unsealed expansion joints) and drains or any other opening that will reduce the gas tightness of the enclosure.

The surface should be flat and free from stones and any other sharp objects that may cause damage to the sheet or reduce the gas tightness of the enclosure.

If the fumigation surface is not suitable a gas-proof sheet can be used to cover the surface to create a gas-tight enclosure.

## 4.6 Fumigation sheets

Fumigation sheets must be impervious to the fumigant being used. They must be able to easily retain sufficient fumigant concentrations for the entire exposure period without the need to add additional fumigant. The ability of the sheets to retain fumigant will deteriorate with use and they should be carefully monitored to ensure their condition is good enough to reliably meet the gas retention requirements.

The sheets must be inspected for any damage before each use. Any tears or holes can be temporarily repaired using cloth or other suitable tape capable of adhering to the sheet material. Permanent repairs should be made to sheets at the first opportunity by heat welding or gluing patches over the damaged area. Patches must not be sewn on as the needle holes will still allow too much gas to escape.

A variety of different materials are suitable for use as fumigations sheets. They range from relatively thin plastic sheets that last for only a few uses to heavier, more durable sheets that will last for many years if handled with care. Thinly coated, woven materials allow too much gas to be lost and are unsuitable for use as fumigations sheets.

## 4.7 Creating a gas-tight seal

A gas-tight seal between the sheet and the fumigation surface must be created to prevent excessive leakage of fumigant from the enclosure for the duration of the fumigation.

The sheet must be held flat against the fumigation surface to prevent excessive leakage. This is most easily done by the use of sand snakes, flexible tubes filled with sand around 100 mm in diameter and from 0.5–1.5 metres long. Sand snakes should only be filled to 65–75% with clean dry sand so they remain flexible enough to bend around corners and lie flat on the ground. A minimum of two rows of sand snakes should be used around the entire enclosure. They should be laid end to end with the second row offset to overlap the joins of the first row in a brick-work like pattern.

Water snakes can also be used. A single continuous water snake should be laid flush against the stack and filled 75–85% full. Care should be taken to ensure a complete seal where the ends of the snake meet. The water snake should not start or end on a corner. If water is used to create snakes similar to sand snakes, they should be laid in the same way as sand snakes.

Loose sand or soil can also be used to seal the sheet to the floor. Sufficient sand or soil must be used to create a continuous seal around the entire enclosure.

Fumigation sheets should extend at least 500 mm from the base of the stack to allow more sand snakes, water snakes or the like to be added to improve the seal between the sheet and the fumigation surface if a leak is detected. The additional snakes should be placed alongside the existing rows rather than on top.

The sheet at the corners of the stack should be folded so the sheet will lay flat against the surface making it easier to get a good seal. Once folded the corners should be secured with clamps or tape to prevent the wind from pulling the sheet apart.

## 5. Calculating the dosage

The amount of fumigant that needs to be released into the enclosure to achieve the dosage rate concentration is referred to as the dosage.

The dosage is calculated by multiplying the volume of the enclosure by the dosage rate concentration.

Dosage = Dosage rate concentration x Volume

### 5.1 Volume of the enclosure

The volume of the enclosure must be calculated from the measured dimensions. When fumigating stacks the measured external dimensions should be used. The dimensions of stacks should be measured each time because significant variations in volume can occur depending the set-up of the enclosure.

If the enclosure is an un-sheeted container or a chamber, the known internal volume of the enclosure can be used. The volume of any gas circulation equipment external to the chamber must be included in the calculation of the enclosure volume.

No reduction in the volume and therefore, the dosage, is allowed to account for any displacement of air in the enclosure by the commodity.

### 5.2 Compensating for fumigant mixtures

Some fumigants can be supplied mixed with other gases so the fumigant is diluted to less than 100%. For example, methyl bromide is commonly supplied with a mixture of 2 % chloropicrin. Methyl bromide is colourless and odourless at concentrations normally encountered during fumigation so the chloropicrin is added as warning agent.

If the fumigant is mixed with another gas the dosage must be adjusted to compensate for the dilution. The dosage is divided by the percentage of the active fumigant in the mixture to give the total amount of fumigant mix that needs to be released into the enclosure to achieve the specified dosage rate concentration.

## 6. Even distribution of fumigant

The fumigant must be evenly distributed throughout the enclosure to ensure that a lethal concentration comes into contact with the target of the fumigation over the exposure period. Concentration readings must be taken from different locations within the enclosure to check that even distribution has been achieved. The fumigant can be considered to be evenly distributed when all the concentration readings are within 15% of one another. Even distribution of fumigant is called ‘Equilibrium’.

Equilibrium is calculated using the following formula:

$$\frac{\text{Highest Reading} - \text{Lowest Reading}}{\text{Lowest Reading}} \times 100 = \%\text{ age distribution}$$

If the result of the calculation is 15% or less, then the gas is sufficiently distributed throughout the enclosure. If the result is more than 15%, the fumigant requires further circulation until either equilibrium is achieved or the readings falls below any specified minimum concentration level.

In general, equilibrium is only required at the start of the fumigation.

## 6.1 Placement and number of monitoring tubes

Monitoring tubes must be placed at representative points within the enclosure to allow measurement of the fumigant to check if it is evenly distributed and that concentration levels are at or above any specified minimum amount.

Enclosures smaller than $30m^3$ only require at least one monitoring tube, therefore, equilibrium is not necessary. The monitoring tube should be placed at the top-centre of the commodity.

Enclosures larger than $30m^3$ must have at least 3 monitoring tubes. They should be placed towards the top-back of the enclosure, somewhere around the middle and at the front base. The purpose of positioning the monitoring tubes as recommended is to check that the fumigant is evenly distributed throughout the enclosure. If the configuration of the commodity in the enclosure makes placement of the monitoring tubes at the recommended locations impractical, they can be re-positioned to more accessible locations provided the even distribution of fumigant throughout the enclosure can still be determined.

Fumigation of multiple shipping containers under a fumigation sheet requires at least three monitoring tubes in the enclosure with at least one in each container. If two containers are being fumigated as a stack a monitoring tube must be placed at the top-centre of the commodity in each container with the third monitoring tube placed at the front-base of either container. Three or more containers fumigated as stack sheet require at least one monitoring tube in each container placed at the top-centre of the commodity.

## 6.2 Fans

One or more fans must be used in each enclosure to force the fumigant to mix thoroughly with the air and circulate throughout the entire enclosure until even gas distribution is achieved.

Fumigations in shipping containers, whether it is a single container or multiple containers in a stack, should have at least one fan placed in each container. The fans should be positioned so that an air current will be created to rapidly disperse the fumigant evenly throughout the enclosure. The capacity and/or number of fans used should be proportional to the volume of the enclosure. The total combined air flow capacity of the fans in each enclosure should be sufficient to move the equivalent of the enclosure volume of air every one to three minutes.

Fans should be turned on 10–15 minutes before releasing any fumigant into the enclosure and continue to run until equilibrium is reached. The time it takes to achieve equilibrium will vary depending on factors such as, how tightly packed the commodity is, the size of the enclosure, the capacity of the fans and the number of supply pipes used to introduce the fumigant. It is a matter of experience to judge how long to run the fans before taking the first readings.

Fans must be turned off prior to taking any concentration readings. Once even gas distribution has been achieved there is no practical benefit in continuing to run the fans so they can be switched off until required for ventilation unless there is a need to add additional fumigant during the exposure period.

## 6.3 Multiple supply pipes

Using more than one supply pipe in larger enclosures will help to achieve even fumigant distribution more quickly. The supply pipes should be positioned so the fumigant is directed into the free airspace to aid circulation.

Where more than one supply pipe is used the fumigant can be released into the enclosure through the pipes simultaneously if a balanced supply system has been created. A balanced system is where the supply pipes are of equal internal diameter and equal length so an equal amount of fumigant will flow through each pipe. If the multi-pipe supply system is not balanced an equal proportion of fumigant should be released through each pipe in turn.
Fumigations in shipping containers, whether it is a single container or multiple containers in a stack, should have at least one supply pipe placed in each container

## 7. Releasing the dose into the enclosure

### 7.1 Exclusion zone

An exclusion zone should be established around the enclosure by setting up a physical barrier to warn people in the vicinity that a fumigation is taking place. Use tape, rope, bunting or other suitable material held up by stands or bollards to encircle the enclosure at around waist height. Warning signs should be placed so that they are visible on all sides and clearly indicate that the area is potentially dangerous. The warning signs should be large enough to be read from a distance, contain the fumigators contact details, be in more than one language if appropriate and prominently display a readily recognised symbol for danger (e.g. skull and crossbones).

The exclusion zone is in force from the time the fumigator is ready to release the fumigant into the enclosure until the enclosure has been fully ventilated and the commodity is safe to handle by un-protected personnel. While the exclusion zone is in force, only personnel wearing suitable PPE are allowed inside.

The fumigant supply and the fumigation supply system must be inside the exclusion zone while fumigant is being released into the enclosure.

### 7.2 Final checks

Before releasing the fumigant into the enclosure do a final check:

- Check the fans are turned on.
- If a vaporiser is used it must be at the required operating temperature.
- Inspect the enclosure for any holes or obvious sources of leaks
- Close any un-used outlets on the supply system
- Ensure all un-protected personnel are outside the exclusion zone.

### 7.3 Measuring the dosage

The amount of fumigant to be used is usually measured out by weight or volume and slowly released into the enclosure through the supply system. All joins in the system should be connected using suitable clamps or fittings that prevent the joins from coming apart during the dosing process.

Check the joins and connections in the supply system for leaks by releasing a small amount of fumigant into the system. Fix any leaks before applying the full dosage to the enclosure.

The time dosage is fully released into the enclosure must be recorded.

## 8. Leak detection

Excessive leakage from the enclosure may allow the fumigant concentrations to fall below acceptable levels resulting in an ineffective fumigation.
Carefully check the enclosure for leaks. For stacks check where the sheet meets the fumigation surface around the entire circumference of the enclosure paying particular attention to the corners, where the monitoring tubes and leads exit the enclosure and any cracks or expansion joints in the floor. Check around the door seals of containers used as enclosures without sheeting.

### 8.1 Leak detection equipment

The leak detection equipment must be sufficiently sensitive to detect fumigant concentrations low enough to find a leak that warrants attention. As a general guide the leak detector should be capable of detecting concentrations down to 20 ppm.

The leak detection equipment must be fit for purpose and properly serviced and maintained in accordance with the manufacturer's instructions.

## 9. Monitoring fumigant concentrations

Fumigant concentrations must be measured at the start and end of the exposure period to verify that the target of the fumigation has been exposed to the minimum amount of fumigant specified by the treatment schedule. If the concentration readings from all the monitoring tubes are equal to or above the minimum requirement at both the start and end of the exposure period then a sufficient amount of fumigant has been maintained in the enclosure to effectively treat the target of the fumigation.

Additional readings may be required or advisable for fumigations with long exposure periods or where the commodity may warrant it.

### 9.1 Concentration measuring equipment

Suitable instruments must be available during all fumigations to measure fumigant concentrations as required. The equipment must be fit for purpose and capable of accurately and reliably measuring concentrations in the range typically encountered for the type of fumigation being performed.

Moisture, carbon dioxide and any other filters recommended by the manufacturer must be fitted and the operator must be properly trained how to use and maintain the equipment.

Regular maintenance, servicing and calibration must be done in accordance with the manufacturer's instructions.

### 9.2 Monitoring tubes

Monitoring tubes should be made of materials that don't absorb or aren't affected by the fumigant and aren't easily crushed or kinked. The monitoring tubes should be sealed between readings. Using monitoring tubes that are long enough to extend outside any exclusion zone or risk area may allow concentration readings to be taken without the need to wear PPE.

The internal diameter of the tubes should not be less than the internal diameter of the sampling probe fitted to the concentration measuring equipment.

## 10. Topping-up

In some circumstances, it may be permitted to add additional fumigant to the enclosure to prevent the fumigation from failing unnecessarily and avoid the need to retreat the commodity. Depending on the fumigant and the commodity there may be restrictions on the amount of topping-up allowed.

Topping-up of fumigant levels is not permitted to solely compensate for poor fumigation practices or excessive leakage from enclosures.

## 11. Ventilation

At the end of the exposure period the enclosure must be safely vented to remove the fumigant and aerate the consignment by exposure to fresh air until the concentration of fumigant is below unsafe levels.

Good free airspace and turning the fans on will help to ventilate the enclosure more quickly. The time taken to ventilate depends on a number of factors such as the size of the enclosure, how tightly the commodity is packed, whether there are sorptive materials in the enclosure and the nature of the commodity.

### 11.1 Risk assessment

The design of fixed or permanent fumigation facilities must allow for safe venting and aeration.

Prior to the ventilation of temporary enclosures, such as containers or stacks, the fumigator must do a risk assessment to plan how to vent the enclosure safely. The fumigator must take into account the direction of the wind, proximity of occupied buildings and unprotected personnel in the area. The fumigant will disperse rapidly once released into the atmosphere, however, unsafe levels are possible up to 50 metres or more from the enclosure depending on conditions.

### 11.2 Checking TLV

Ventilation of the enclosure and aeration of the commodity must continue until concentration levels in the enclosure are at or below the TLV. The monitoring tubes positioned in the centre or back of containers can be used to check if TLV has been reached at all points with the container.

The concentration levels in the free airspace will fall relatively quickly compared to the rate of fumigant diffusion back out of the commodity. It is particularly important that the consignment is fully aerated if it is fumigated in a shipping container. Once the container is closed concentrations levels can increase again to unsafe levels as fumigant continues to diffuse out of the commodity. This has the potential for unprotected personnel to be exposed to unsafe levels of fumigant when the container is opened at its destination.

The equipment used to test for TLV must be sensitive enough to accurately and reliably detect concentrations below the TLV.

## 12. Documentation

The fumigator must keep records with sufficient information to be able to demonstrate that they have been performing effective fumigations.

## 12.1 Record of fumigation

The fumigator must record all the relevant information for each fumigation. At a minimum the record of fumigation should record:

- Details of the consignment
    - job identification
    - customer name
    - start date of fumigation
    - location of fumigation
    - description of consignment
    - target of the fumigation
    - container number/s or other consignment identifications
- Fumigation details
    - fumigant name
    - type of enclosure
    - specified dose rate
    - exposure period
    - minimum temperature
    - any adjustment to the dose rate
    - volume of the enclosure
    - amount of fumigant used
    - time dosing finished
- Concentration readings
    - location of each monitoring tube
    - concentration readings from each monitoring tube
    - time each reading was taken
    - any top-up amounts added to the enclosure
- Ventilation
    - TLV value measured
    - time measurement was taken
- Fumigator details
    - name
    - signature
    - accreditation number

This information must be recorded on site at the time the fumigation was performed.

## 12.2 Treatment certificate or report

Treatment certificates or reports must be made available to the NPPO. All details should be legible and free from erasures and non-certified alterations. The treatment certificates or reports should be signed, dated and contain the following details:

- the registration number prominently displayed
- certificate or report number
- description and quantity of goods being treated
- name and address of the shipper/exporter
- country of origin and the port of loading
- name and address of the consignee
- port of entry
- date of treatment
- place of treatment
- fumigant used

- target of the fumigation
- dosage
- exposure period
- minimum ambient temperature during treatment
- date, time and threshold limit value (TLV) at clearance
- date the certificate was issued
- name and signature of the competent fumigator responsible for supervising the treatment.
- any declarations relevant to the treatment

### 12.3 Phytosanitary Certificate

After the treatment provider has completed the fumigation certificates or reports the phytosanitary certificates can be issued by the NPPO in accordance with the requirements of ISPM 12.

Annex V

# REPORT ON INFORMATION EXCHANGE

Information exchange is also one of the important areas of APPPC. Reporting and exchanging specified technical and official information is an integral part of the effective implementation of the International Plant Protection Convention (IPPC) and International Standards for Phytosanitary Measures (ISPMs) as well as Regional Standards for Phytosanitary Measures (RSPMs). The establishment of the APPPC website enables the member countries to have a platform for exchanging plant protection information, including plant quarantine, integrated pest management (IPM) as well as pesticide management. The APPPC website also facilitates sharing the plant protection information of Asia and the Pacific with other plant protection organizations in other regions of the world. To avoid duplication of the obligated information to be uploaded into the IPP under IPPC, automatic cross-linking between the APPPC website and the IPP has been established in this specific area. It is suggested that APPPC members regularly update their country information on the APPPC website, which includes new developments in plant protection including changes of regulations, legislation, policies, organizational change, implementation of ISPMs/RSPMs, pest outbreaks and control, list of regulated pests, registered and/or prohibited pesticides, ecological approach, training activities, projects, publications, etc. in addition to the obligated report. It is also encouraged that each member country may establish an internal mechanism of information collection, verification, dissemination and uploading. It is essential to share relevant information among the member countries in the region. Based on practice and findings, suggestions for further improvements of the website are welcomed.

In order to enhance information exchange through the APPPC website among member countries, regular monitoring of country updates have been made with the help of an assistant for information management at quarterly basis and summary of update status of each country were sent to members for their reference and reminder to accelerate follow-up actions for update countries' web pages in APPPC/IPP websites where the section of phytosanitary measures is automatically cross linked. Various reports and news on APPPC workshops, meetings and trainings have been uploaded timely. Meanwhile, advice and guidance on the use of the website were provided to various countries upon requests. Some countries such as the Philippines and Thailand organized national trainings on the use of the website as well as the use of IPP for the promotion of the information exchange. In addition, a series of extensive tests and adjustments have been made in 2013 after the FAO webpage was changed in June 2013. It was obvious that the information exchange programme requires the appointment of a part-time project staff (i.e. National Programme Officer), which has been discussed before and is noted in the information exchange programme. The officer would play a key role in the maintenance and update of the APPPC website at a timely basis and would facilitate monitoring and assistance services to member countries.

**During 2012-2013 five publications have been produced and distributed to all member countries in addition to uploading them to the APPPC and RAP websites.** The working group on information exchange, which was established at the 27th Session with participation of Malaysia, Fiji, Australia, Republic of Korea, Thailand and Vietnam and is led by Malaysia, initiated a questionnaire survey on capacity development updates. Details will be provided by a follow-up supplementary presentation by the lead country Malaysia.

## The percentage of contracting parties countries per region with reporting information

| **Reports available on the IPP (August 2013)** | | **APPPC (24 countries)** | |
|---|---|---|---|
| **No.** | **(a) Official Reports** | Countries with info | % countries with info |
| 1. | Official Pest Report (Art. VIII.1a) | 7 | 29% |
| 2. | Description of the NPPO (Art IV 4) | 12 | 50% |
| 3. | Emergency Actions (Art VI 6) | 2 | 8% |

| | | | |
|---|---|---|---|
| 4. | List of Regulated Pests (Art VII 2i) | 10 | 41% |
| 5. | Entry Points (Art VII 2d) | 13 | 54% |
| 6. | Legislation | 12 | 50% |

| **Information exchange through <u>APPPC website</u> (August 2013)** | **24 countries + Japan** |
|---|---|

| **Plant protection information** | **Countries with info** | **% Countries with info** |
|---|---|---|
| (a) Plant protection (in general) | 20 | 80% |
| (b) Plant quarantine | 15 | 60% |
| (c) Pest surveillance and pest outbreaks | 14 | 56% |
| (d) Pest management | 13 | 52% |
| (e) Pesticide management | 14 | 56% |

More details are available in the supplementary report on the use of the APPPC website.

**Appendix I**

**Summary of Information Exchange Activities through APPPC**

**Website (2012-2013)**

Information exchange and knowledge sharing are key activities of both the International Plant Protection Commission (IPPC) and the Asia and Pacific Plant Protection Commission (APPPC). Over the past years, the International Phytosanitary Portal (IPP) and the APPPC website have increasingly been used as main platforms for the Commissions to communicate and share knowledge with their members as well as for the members to exchange plant protection information with others.

While the IPP focuses on the plant quarantine information, the APPPC website plays both complementary and supplementary roles to the IPP. The APPPC website focuses on countries' plant protection profiles which cover all areas of plant protection, including pest management as well as pesticide management in addition to plant quarantine. It is encouraging to see gradual increase of information exchange activities among APPPC members both through the IPP and the APPPC website during the current biennium (2012-2013), taking into consideration the percentage of the countries with information and reports, both official and optional, currently made available on the two websites.

| Report types (early August 2013) | | **APPPC (24 countries)** | | |
|---|---|---|---|---|
| No. | (a) Official Reports | Number of available info items | Countries with info | % Countries with info |
| 1. | Official Pest Report (Art. VIII.1a) | 67 | 7 | 29% |
| 2. | Description of the NPPO (Art IV 4) | 19 | 12 | 50% |
| 3. | Emergency Actions (Art VI 6) | 6 | 2 | 8% |
| 4. | List of Regulated Pests (Art VII 2i) | 18 | 10 | 41% |
| 5. | Entry Points (Art VII 2d) | 16 | 13 | 54% |
| 6. | Legislation | 73 | 12 | 50% |
| **No.** | **(b) Optional Reports** | | | |
| **7.** | Non-Compliance | 4 | 2 | 8% |
| **8.** | Rationale for Phytosanitary Requirements | 6 | 2 | 8% |
| **9.** | Organisational Arrangement | 6 | 4 | 16% |
| **10.** | Implementation of ISPM 15 | 14 | 6 | 25% |
| **11.** | Pest Status | 4 | 4 | 16% |
| **12.** | Pest Free Areas | 1 | 1 | 4% |
| **No.** | **(c) Others** | | | |
| **13.** | News | 53 | 10 | 41% |
| **14.** | Publications | 102 | 17 | 70% |
| **15.** | Events | 1 | 1 | 4% |
| **16.** | Country Editors | 34 | 22 | 91% |
| **17.** | IPPC Contact Point (Art. VIII.2) | 24 | 24 | 100% |
| **18.** | Members | 2 | 2 | 8% |
| **19.** | Websites | 82 | 9 | 37% |
| **Information exchange through APPPC website (early August 2013)** | | | **24 countries + Japan** | |

| Plant protection information | Info items | Countries with info | % Countries with info |
|---|---|---|---|
| (a) Plant protection (in general) | 77 | 20 | 80% |
| (b) Plant quarantine | 27 | 15 | 60% |
| (c) Pest surveillance and pest outbreaks | 21 | 14 | 56% |
| (d) Pest management | 23 | 13 | 52% |
| (e) Pesticide management | 42 | 14 | 56% |

**Information Exchange by APPPC Members and Japan**

Several countries have been relatively active in exchanging their plant protection information through the IPP and the APPPC website. Noteworthy is Australia which serves as an exemplary model in exchanging information through the IPP. Other countries including Bangladesh, Cambodia, China, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Sri Lanka, Thailand and Viet Nam should also be commended for their efforts in sharing their plant protection information through the two websites.

In particular, Philippines' NPPO, the Plant Quarantine Service (PQS) of the Bureau of Plant Industry, organized a training workshop on the use of the International Plant Protection Portal (IPP) in Quezon City, Philippines, from 14-15 March 2013. The Philippines' Plant Protection Profile was also discussed and reviewed at this workshop in order to update the information in light of the upcoming APPPC's 28th Session in September 2013. The workshop was attended by 51 participants. The initiative helps increase the information exchange capacity of the NPPO.

Also noteworthy is Thailand's hosting of the Workshop for Enhancement of Regional Collaboration in Pesticide Regulatory Management from 26-30 November 2012, Chiangmai, Thailand. After the workshop, several documents related to pesticide management have been uploaded to the country page.

Apart from uploading quarterly reports on plant protection information exchange through the APPPC Website and the IPP, the APPPC Secretariat has been regularly encouraging the members to upload any updates, recent developments, plant protection activities, projects, notifications, regulations, legislations, and policies which they would like to share with other members. Most recently in April 2013, as part of the biennial exercise, the Secretariat has encouraged the NPPOs to consider updating the various sections of their country's plant protection profile for the period 2011-2012 and upload them into the APPPC website.

Despite the encouraging overall status of the information exchange and knowledge sharing among the APPPC members and Japan, there's still room for further improvements. For example, with regard to the official reports of IPP, those members who have not yet fulfilled the commitments are strongly urged to upload or update their reports at their earliest convenience, with focus given to the official pest report, emergency actions, and the list of regulated pests.

In relation to the information made available through the APPPC website, the members are also encouraged to place more emphasis on the uploading/updating of information under other sections than the plant protection (in general). These sections include plant quarantine, pest surveillance and pest outbreaks, pest management, as well as pesticide management.

**Information uploaded by the APPPC Secretariat to the APPPC website**

During the biennium 2012-2013, the APPPC Secretariat has used the APPPC website as the main platform for communicating with its members. Several types of information have been uploaded under the various sections on the website. Apart from various publications, technical reports, guidelines and references, the uploaded information includes regional/country news of plant protection-related activities, calendar of IPPC and APPPC events, reports of standard committee meetings, group meetings, forums, training workshops, regional reviews of draft ISPMs and RSPMs, as well as useful web links.

| Time Period | Number of uploaded/updated information via IPP & APPPC website | | |
|---|---|---|---|
| | **APPPC members & Japan** | **APPPC Secretariat** | **Total** |
| 1st Quarter 2012 | 11 | 6 | 17 |
| 2nd Quarter 2012 | 36 | 12 | 48 |
| 3rd Quarter 2012 | 8 | 6 | 14 |
| 4th Quarter 2012 | 16 | 10 | 26 |
| 1st Quarter 2013 | 14 | 5 | 19 |
| 2nd Quarter 2013 | 11 | 5 | 16 |
| Total | 96 | 44 | 140 |

**Migration to the new platform (Drupal)**

The International Phytosanitary Portal (IPP) was migrated to a new software platform (Drupal) in the second quarter of 2013. As a result, the APPPC website, which is an associated web instance of IPP, also needs to be migrated. The Secretariat is in the process of preparing for the migration of the APPPC website, the completion of which is extended to October 2013. This is to avoid disruption to the uploading of updated country information by APPPC member countries prior to the 28th Session of APPPC.

**Constraints, issues and challenges**

In the biennium under review, there are still members who do not participate actively in the information exchange activities either through the IPP or the APPPC website. This might be attributable to a number of factors as follows:

- Lack of human resources and funds for collecting the information or supporting the information exchange in some countries.
- Lack of proper coordination among the state agencies concerned in such countries (most NPPOs of the APPPC are state agencies responsible mainly for plant quarantine).
- Frequent changes to the responsible heads and/or supporting staff of the NPPOs concerned.
- Information exchange at the regional level is not a regular responsibility of the staff of the state agencies concerned.

**Recommendations**

- Establishment of a mechanism of information collection, review and clearance at country level before uploading to the APPPC website or/and IPP.
- Enhancement of coordination among various sections of plant protection in countries. The NPPO may set up a committee (or task force, etc.) with representatives from the agencies. This is a mechanism which has been set up by Thailand's NPPO. The committee meets from time to time to decide on what information to be uploaded to the two websites. The committee may find it helpful to decide beforehand what information could be regularly uploaded by the country editor(s) without having to seek prior consent from the committee.
- The working group on information exchange may review current formats of the country plant protection profiles to determine which tables should be maintained or left out as well as what additional tables could be introduced.

**Report of Working Group for Information Management & Exchange**

At the 27th Session of the Asia and Pacific Plant Protection Convention (APPPC) which was held in Philippines from 15 - 19 August 2011, on Item 13 with regards to the APPPC programme of work for 2012 - 2013, a decision was made in the meeting on Item 13.3.2 (c) that it was proposed an information working group (WG) to develop a strategy and a plan for information management & exchange. This could include the following:

I) Determination and development of information requirements of APPPC NPPOs;

II) options/means/structures to meet the requirements;

III) determination of the resources (IP systems, workers) needed.

Members of the information WG include Australia, Fiji Islands, India, Malaysia, Republic of Korea, Thailand and Viet Nam with Malaysia and Fiji Islands to be proposed to serve as chair and vice chair of the WG respectively.

Malaysia was given the task to lead the information WG. Malaysia had drafted a proposal on four priority activities on information management and exchange as below.

The four activities are listed as below:

1) Sharing information on Capacity Building of crop protection and plant quarantine activities (national and regional) from all NPPO's members in the Asia and Pacific Region

2) Share information of success story on best practices for the management or mitigation of quarantine pest incursion in the NPPO's Country

3) Sharing information on experts in specific areas or fields (e.g. South American Leaf Blight(SALB), mites, nematode, Pest Risk Anlaysis (PRA), etc) from NPPO's country in the Asia and Pacific Region or possible outside the region

4) The blogspot page site www: salb-asia.blogspot.com

The above draft proposal was sent by email on 21 July 2013 to all the WG for comments and inputs.

All comments and inputs must be returned to the Chair of the WG by 5 August 2013.

If no comments and inputs were received after 5 August 2013, it will be considered that all WG members were agreeable to the proposal. If there were comments and inputs received, Malaysia will take into consideration of the inputs and comments provided by the members and will develop a new improve version of the proposal. This new proposal will then be circulated back to the WG groups to seek consensus on the new proposal.

Malaysia proposed to the WG that activities (1) and (2) above can be implemented immediately by communicating with all the NPPO's in this region by email to seek for the information before the APPPC meeting to be held in Republic of Korea from 23 – 28 September 2013.

Finally, some comments on the draft proposal was received from DAFF Australia on 8th August 2013.

Annex VI

# REPORTS ON PLANT QUARANTINE

## 1. WORKSHOP ON TRAINING OF TRAINERS ON PROTECTION AGAINST SOUTH AMERICAN LEAF BLIGHT OF RUBBER IN THE ASIA-PACIFIC REGION, PENANG, MALAYSIA, 2-6 JULY 2012.

This workshop was attended by 19 participants from Cambodia, China, India, Indonesia, Laos, Malaysia, Philippines, Sri Lanka, Thailand and Vietnam, while 8 persons from Malaysia attended as observers. Two experts on SALB and quarantine from FAO and Malaysia were invited as consultants and trainers.

The overall objective of the workshop was to enhance capacity building on the protection against SALB in the APPPC region. The specific objectives were:

i) To train and establish a core group and core trainers on SALB and the prevention of SALB in the APPPC region;

ii) To enhance trainers' expertise and knowledge on SALB and the prevention of SALB;

iii) To create networking among plant protection and rubber research personnel on the protection against SALB within the region;

iv) To familiarize the trainers with the SALB reference materials and the measures to be taken when an incursion happen;

v) To provide opportunities for participating officers to share knowledge and gain expertise from experts in this field;

vi) To gather feedback on the use of SALB reference materials for trainers.

This workshop was expected to set up a core group of competent trainers on SALB for the protection against SALB in the region. The trainers were expected to perform the following tasks:

i) To be able to conduct training on SALB to stakeholders in their respective countries;

ii) To use the reference materials according to the needs of each country;

iii) To be subject matter officers (SMOs) on SALB of each country;

iv) To convey information to the higher authorities to conduct SALB activities;

v) To review and update on the reference materials from time to time, from the feedback.

Feedbacks and recommendations from this workshop were:

i) A small pictorial booklet or pocket book on SALB should be produced;

ii) Photographs that are used for leaflets, brochures or posters should mention their source to guarantee their authenticity;

iii) Information that was derived from this and previous workshops should be uploaded to a webpage to increase awareness among stakeholders and the public;

iv) An internal communication system between agencies in a country to discuss about SALB should be established. Cooperation and collaboration among government agencies and the private sectors that are involved in rubber industries should be further emphasized;

v) All training materials should be translated into the national language of the respective countries to facilitate the understanding on SALB for local target groups;

vi) Participants have agreed that Malaysia, as the leader of this workgroup, should launch a SALB blog to connect SALB experts, pathologists, quarantine officers, stakeholders and the public. This blog should provide a platform for discussing new issues on SALB in an interactive manner;

vii) The NPPOs and research agencies should control the information for the public and should come out with standard information, so that there would be no conflicting information between countries.

viii) Participants in the workshop pointed out that current plant protection legislation and laws in some countries are not adequate to prevent, manage or eradicate SALB.

## 2. SUMMARY OF THE RESULTS FROM A QUESTIONNAIRE ON THE IMPLEMENTATION OF ISPM 15

ISPM 15 was selected as the first ISPM for study, and the questionnaire was circulated in 2011 to the official contact points of IPPC or APPPC. Only 17 countries (including Japan and Singapore) responded by early 2012. Hence, this report may not reflect the latest situation.

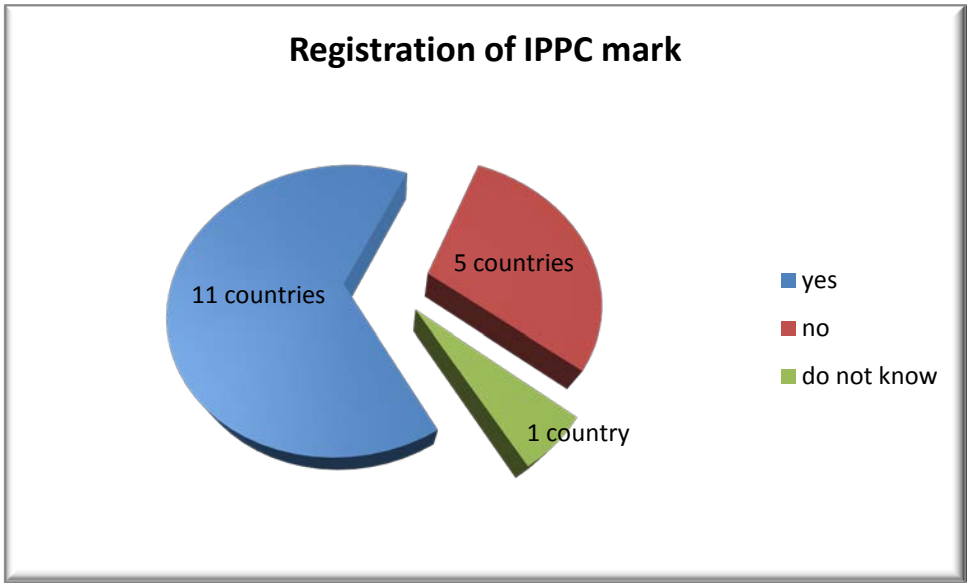
It was clearly stated that the purpose of the implementation working group and the questionnaire was not to verify compliance by a certain country, but to understand the status and difficulties with implementation and to look for effective way to assist in the implementation.

### 1. Registration of the IPPC mark

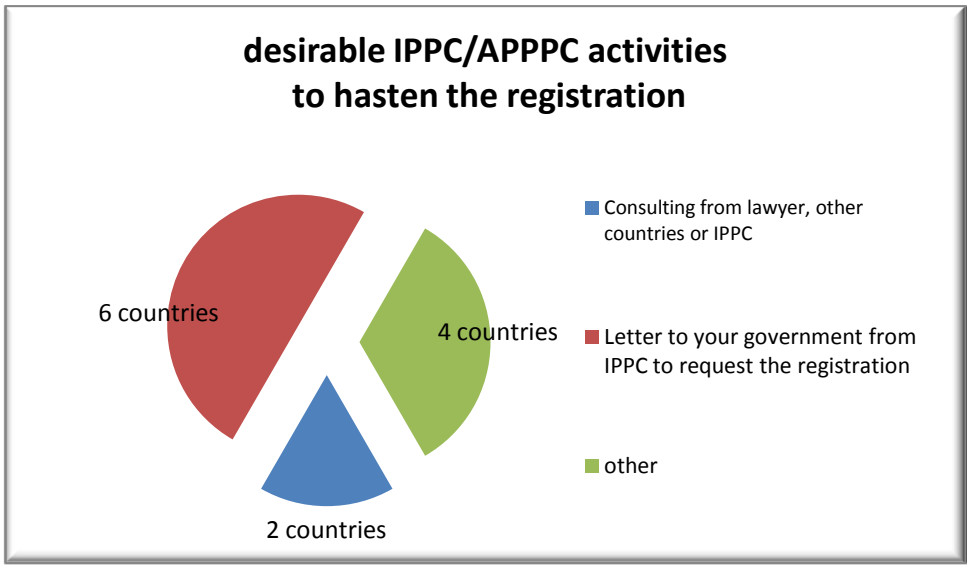
The understanding of the status of registration of the IPPC mark is not appropriate for some APPPC countries. Some NPPOs misunderstood their own status; eleven countries answered that the symbol was registered in their country, but three of those countries had no registration according to the IPPC Secretariat's record. Five countries answered that the symbol was not registered, but actually it was registered in two countries. One country answered that it did not know the status (there was no registration according to IPPC records).

Six countries without a registration responded that they were looking into ways for registration; two countries have not yet initiated any efforts.

Two countries asked for assistance from lawyers, other countries or IPPC, and six countries wanted a letter to their government to request the registration. One NPPO asked for an explanation of the Madrid system. Three countries asked for assistance on reasoning for the importance of the registration and its implementation.




In conclusion, some NPPOs were not aware of their correct status of registration and those NPPOs without registration wanted to learn about the experience and consult with other countries or the IPPC. They asked for input from the outside to increase awareness about the importance of the registration.




## 2. General Implementation

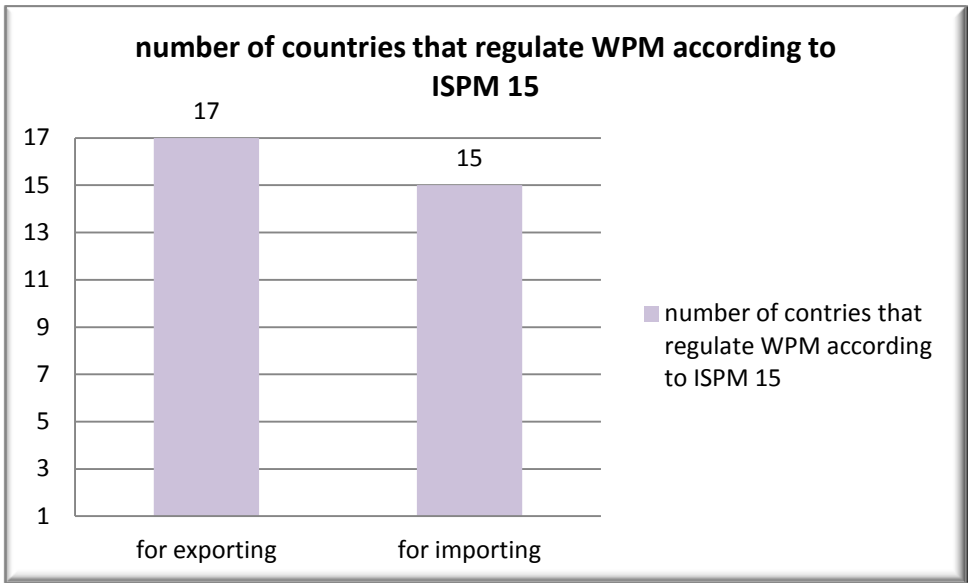
All responding countries answered that they had regulations for export, and two countries answered that they did not regulate WPM for import.

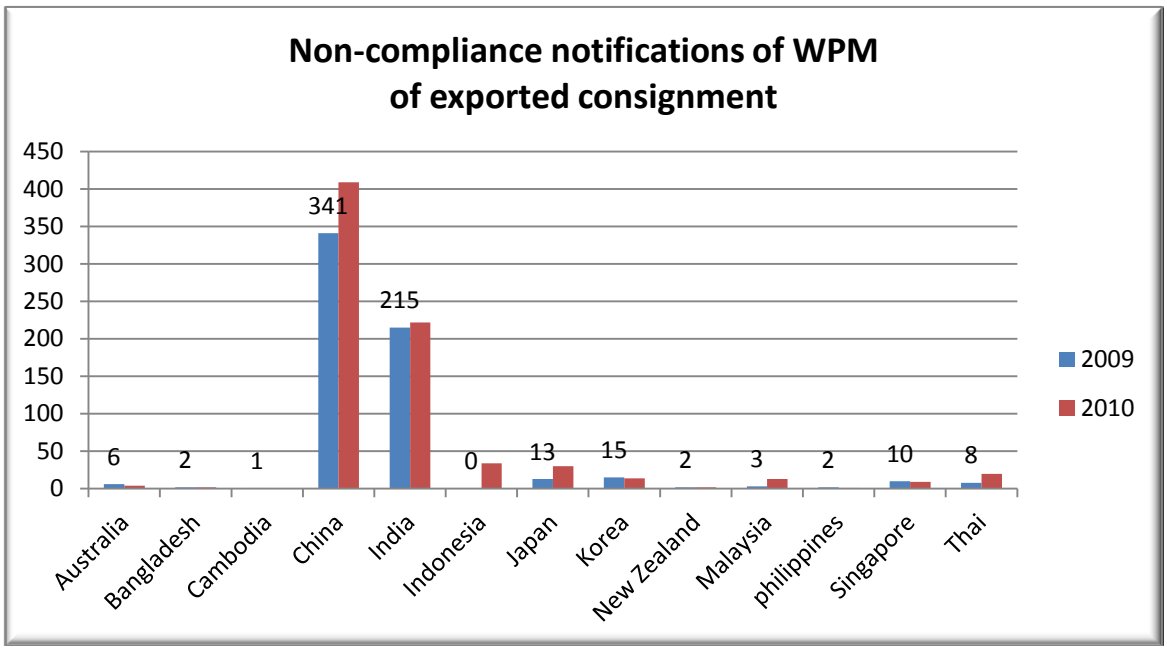
## 3. Export implementation

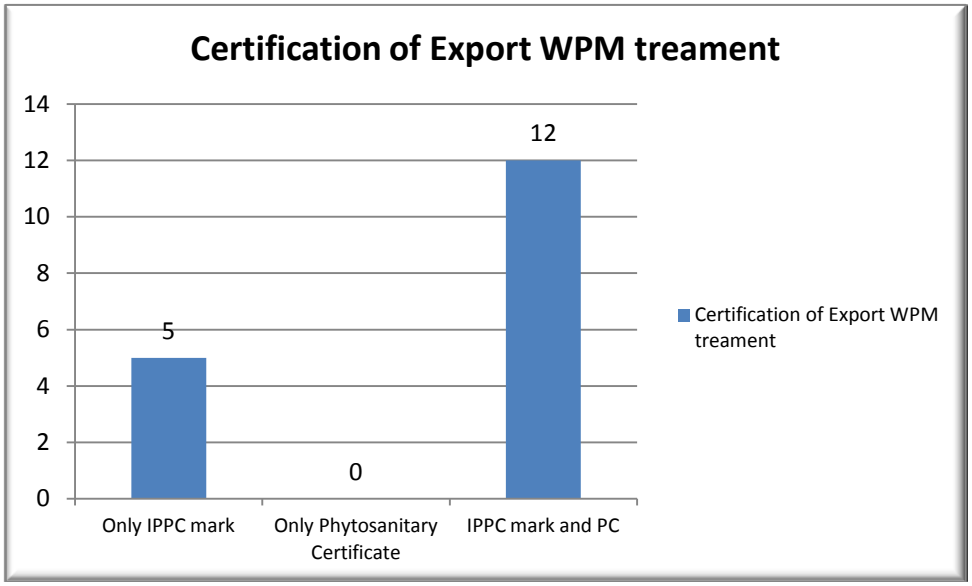
Twelve NPPOs use the IPPC symbol or the phytosanitary certificate (PC) (if the importing country requires PC) for export certification, and five NPPOs use only the IPPC symbol. Fourteen NPPOs use methyl bromide and heat treatment for WPM, while one uses only methyl bromide and two only heat treatment. The reason for using methyl bromide was for convenience or because of the lack of a heat treatment facility.

Most NPPOs authorize treatment providers except for one country which has a (semi-) private organization and another country where the ministry authorizes the providers. Most NPPOs audit or monitor the treatment providers and register the stamps to prevent forgery or misuse of the IPPC symbol.

The repair of WPM happens in 2 countries often and not often in 15 countries. Only three countries have specific regulations about repaired WPM. The number of received notifications about the non-compliance of WPM varies greatly from zero to more than 400. The main causes of non-compliance of exported consignments was the lack of the IPPC symbol or the PC (12 cases), or the detection of live pests (5 cases). Upon notification, 11 NPPOs traced back to the treatment providers. Three NPPOs only trace back when there was repeated non-compliance, while three NPPOs did not have any measures to deal with non-compliance notifications.

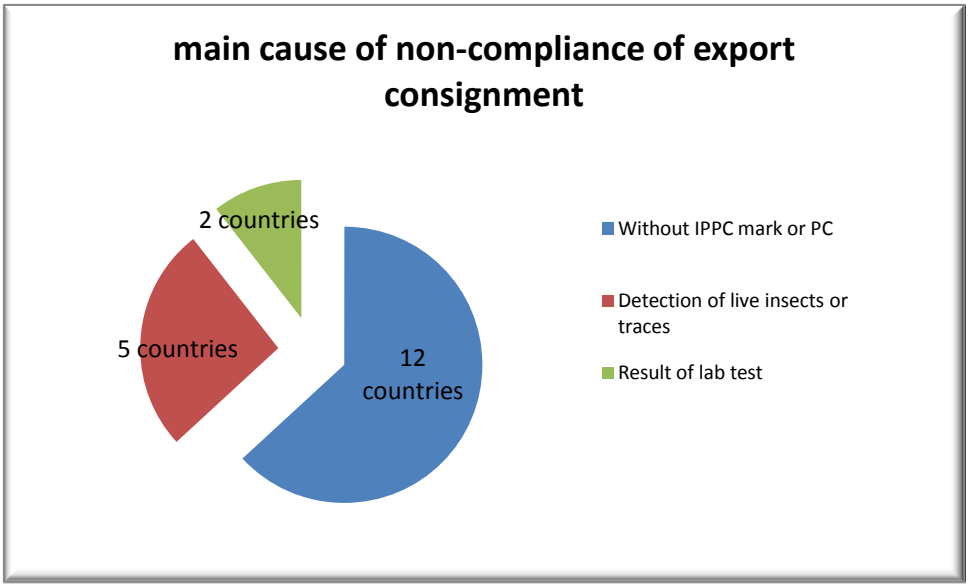

number of countries that regulate WPM according to ISPM 15
17
15
17
15
13
11
9
7
5
3
1
for exporting
for importing
number of contries that regulate WPM according to ISPM 15


Non-compliance notifications of WPM of exported consignment
450
400
350
300
250
200
150
100
50
0
6
2
1
341
215
0
13
15
2
3
2
10
8
Australia
Bangladesh
Cambodia
China
India
Indonesia
Japan
Korea
New Zealand
Malaysia
philippines
Singapore
Thai
2009
2010


Certification of Export WPM treament
14
12
10
8
6
4
2
0
5
0
12
Only IPPC mark
Only Phytosanitary Certificate
IPPC mark and PC
Certification of Export WPM treament

The main concerns of NPPOs about the export of WPM were:

- Lack of registered treatment providers
- No specific regulation on WPM
- No regulation on re-used or repaired WPM
- Unclear treatment method and guideline
- Environmental concern about methyl bromide
- Lack of public awareness
- Dual requirement of the IPPC symbol and PC
- Expiry date of treated WPM by some countries
- In case the consignment itself is WPM, not sure whether the WPM regulation is applicable
- Need to update the list of ISPM 15 implementing countries
- Need of a reasonable and reliable monitoring system
- Too many treatment providers to oversee
- Hard to know whether each piece of second-hand or repaired pallets complies with ISPM 15
- Contaminated or dirty WPM with IPPC symbol
- Non-compliance notification comes to the last export country (not to the country that treated)
- Confusion of exporters with KD and IPPC symbol
- Fraudulent stamp



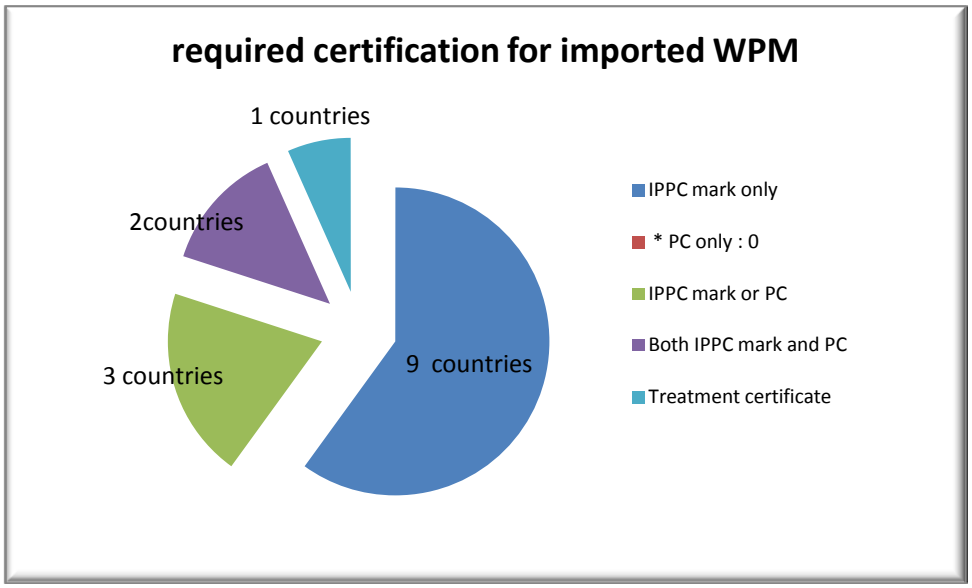

## 4. Import implementation

For imported WPM, nine NPPOs require only the IPPC symbol while three NPPOs accept either the IPPC symbol or the PC. Two NPPOs require both the IPPC symbol and the PC.

Most of NPPOs do not regulate the articles which are exempted from the ISPM 15. However, one NPPO regulates wine barrels and sawdust wood shaving and two NPPOs inspect all wood consignments, including WPM, based on their PRA results. In most of countries, the imported WPM are only inspected by NPPO inspectors. But in one country, WPM are inspected either by NPPO inspectors or staff from other organizations, while customs carries out the inspections in one country and accredited organizations or persons in two countries.

In case of excessive bark is found in WPM, six NPPOs do a re-treatment and seven NPPOs destroy or return it to the exporting country.

Two NPPOs issue non-compliance notifications immediately, while four 4 NPPOs do it monthly or quarterly; one NPPO notifies if necessary. Two NPPOs do not notify and three NPPOs do not yet have any experience.



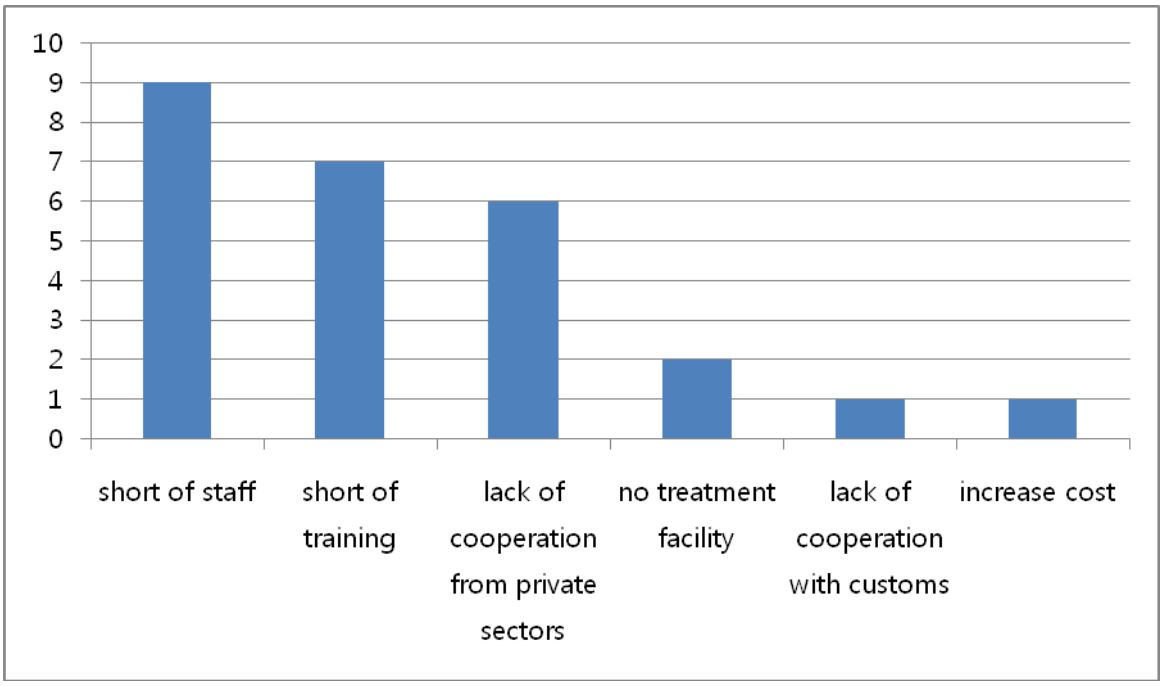

The major concerns of NPPOs about imported WPM were:

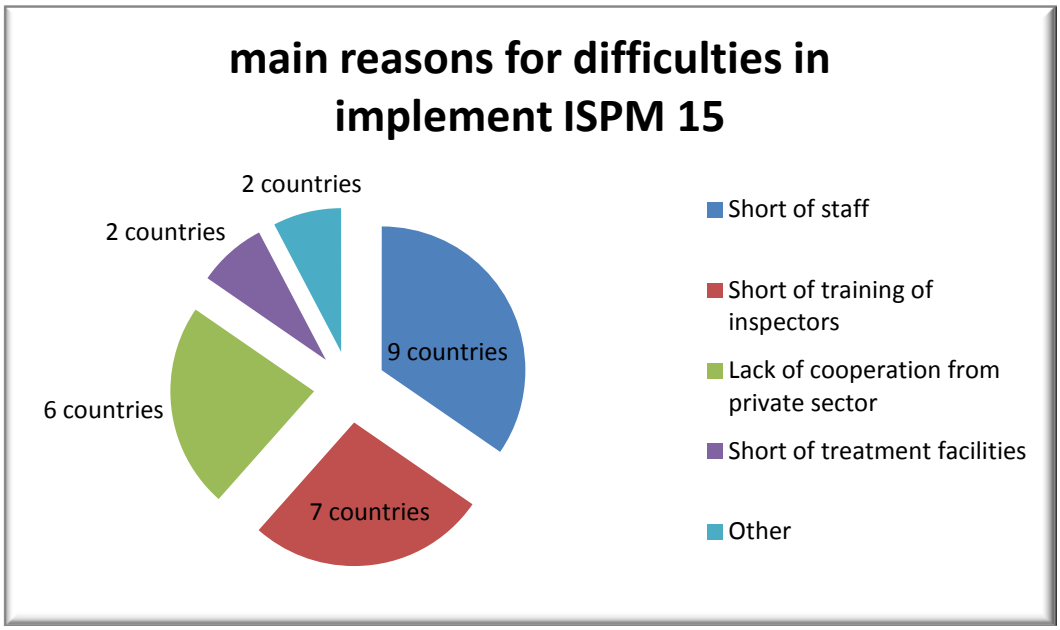
- Effectiveness of the treatment on pathogens
- Not enough inspectors for monitoring
- Lack of awareness of customs and port authorities on WPM regulation
- Customs takes charge of inspection
- Unclear guidelines on treatment
- Protect forest against wood pest through WPM
- Compliance with bark and marking requirements
- Not clearly visible marking
- Not possible to carry out reliable inspections due to too many WPM
- Lack of alternative treatment
- Lack of inter-linked system between NPPO and customs
- Unclear guidelines for repaired and re-used WPM
- Live insects intercepted from WPM with IPPC symbol

## 5. Other problems

- Long-used WPM have fungi re-infection
- Increased operational cost to maintain accreditation scheme
- Challenges in approval of IPSM 15 alternative treatment
- Expiration date of used WPM
- Benefit of implementation of ISPM 15 is not clear
- No experience with notifications of non-compliance
- Cost of registration of IPPC symbol in a country
- Notification of reused WPM to the last port or original country?

## 6. Main limits for implementation




## 7. Categorization of barriers for implementation

| Area | Concerns | Suggested assistance |
|---|---|---|
| Domestic capacity | No protection of the IPPC symbol (cost) | Workshop on the registration process<br>Consultation |
| | Lack of understanding on the importance of the registration of the IPPC symbol | Workshop |
| | Shortage of training capacity | Workshop on training |
| | Lack of cooperation from private sectors | Workshop on case study of other countries |
| | Lack of cooperation with customs | " |
| | Lack of registered treatment providers | Workshop/guidance on<br>- Treatment provider registration procedure |

| | | |
|---|---|---|
| | | - Requirement of treatment provider (MB, heat treatment) |
| | Absence of regulation on WPM | Workshop/guidance on -Regulation of WPM |
| | Absence of regulation on re-used and repaired WPM | Share info. on regulation of re-used and repaired WPM |
| | Lack of public awareness | Share experience on public awareness |
| | Lack of reasonable and reliable monitoring system | " |
| | Lack of interlinked system between NPPO and customs | " |
| | Too many treatment providers to audit | " |
| | Too many WPM to monitor | " |
| | Fraudulent stamp | " |
| Implementation of importing country | Dual requirement of IPPC symbol and PC | Information sharing |
| | Expiry date of treated WPM | |
| ISPM content | Unclear treatment method and its guideline | Submit to IRSS |
| | Contaminated or dirty WPM with IPPC symbol | Submit to SC |
| | Not enough effect of the treatment on pathogens | " |
| | Unclear guideline on repaired and re-used WPM | Submit IRSS |
| ISPM interpretation | Consignment is WPM itself | Forward to IRSS |
| | Destination of non-compliance notification (exporting country/origin country) | " |
| | Symbol not clearly visible | " |
| | Compliance with bark and symbol requirements | " |
| Information sharing | Updated list of ISPM 15 implementing countries | Forwarded to IRSS with Asia info. |
| Others | Concern with MB | - |
| | Confusion of exporters with KD and IPPC symbol | Include in info package for workshop |
| | Interception of live insects from WPM with IPPC symbol | Forward to IRSS |

## 8. Recommendation from the working group

Regarding the registration, up-to-date information about the registration should be provided with easy explanations about the purpose of the registration and its possible impact.

a. The working group suggests that the IPPC Secretariat sends a letter to the NPPOs regarding concerns about the IPPC symbol registration, including information about the benefits from registration and the world status: this was already approved by CPM-8 after suggestions from Asian bureau member (see CPM-8 document in Appendix 1).

b. In general, the ISPM 15 is implemented in most of APPPC member countries with a few exceptions. A large-scale workshop by APPPC on the implementation may not necessary, but opportunities by IPPC or other organization may be used to improve the implementation in the APPPC region.

c. A small-scale workshop with a few countries (for example: Laos, Myanmar, Cambodia, Timor, Samoa, etc.) is recommended in 2013, possibly in a country that has a sound system for WPM treatment and monitoring to share.

d. Concerns about the ISPM 15 content may be submitted to the Standard Committee of IPPC.

**Appendix**

# ISPM 15 Symbol Registration: A Strategy for Going Forward

## Background

- Members of the Commission on Phytosanitary Measures (CPM) have discussed on an on-going basis the challenges and persistent concerns related to the registration of the ISPM 15 symbol at the national level among all contracting parties. Both the costs and legal complexities associated with the registration process have been the subject of countless CPM, Bureau, IPPC Secretariat, Strategic Planning Group (SPG), and other meetings and sessions.

- Many, if not all, members engaged in these discussions agree on the necessity to register and protect the symbol in order to ensure the safety and credibility of the trade system as it relates to the movement of millions of shipments annually -shipments which involve wood packaging material (WPM) and billions of dollars in commercial activity. The plant protection stakes are high. Still, there remain a number of countries (70 at present) where the symbol has not been registered and another set of countries (114) where the symbol needs to be renewed. These gaps pose a significant risk from a global plant health perspective and a legal and commercial standpoint as well.

- It is the unanimous view of the Bureau that decisive action is required to address this priority phytosanitary concern. There have been numerous exhaustive discussions. Now it is time to act. The Bureau proposes the below 2-stage strategy.

## Strategy

**1. Five Year Plan: A plan is proposed for the next five years. This plan includes the following elements:**

- A senior level FAO letter will be prepared and sent to senior foreign affairs counterparts and senior permanent representatives in the countries where registration has not occurred. This letter will communicate the urgency and importance of registration in order to effectively manage the ubiquitous commercial movement of wood packaging materials between countries, prevent pest spread, and avoid agricultural crop and other losses in their territories.

- It is thought that higher level governmental officials in many countries, at least where the symbol remains unregistered, need to get engaged in order to get the registration process initiated. NPPOs may not always be in a position to initiate and pursue these legal registration actions. The IPPC Secretariat will take the lead in drafting this high level letter and engage senior FAO officials in sending this communications.

- The FAO legal office will be available to advise and support the registration process within countries. The average cost of registration is an estimated USD 4 500 This effort to complete the registrations over the next five years will be undertaken in collaboration with the FAO legal office.

- The Bureau recommends that this registration and renewal work be funded by allocating a minimum of USD 70 000 per annum over the next five years from FAO Regular Programme funds. Countries will be informed of the cost of registration of the symbol in their country. Consistent with previous CPM discussions, countries are expected to reimburse FAO for the renewal of registrations (not first time registrations).[1]

**2. Long Term Plan:**

[1] Trade volume will be the primary criteria for ordering the registrations over the next five years for those countries where the symbol remains unregistered, consistent with the criteria used by the Legal Office thus far.

- To address the long term future, beyond five years, it is proposed that the SPG be directed to develop longer term options and approaches for maintaining registrations into the future, as renewals will be required (normally 10 year life span of registrations).

- SPG would be requested to consider alternative funding mechanisms, including Trust Funds, special fee collection/reimbursement options, and other possibilities for funding, sustaining and protecting the ISPM 15 program and symbol on an ongoing basis.

- The SPG may also be requested by CPM to consider other relevant aspects of maintaining the ISPM 15 standard and symbol in the long run, such as implementation or other issues.

## Summary

- The plant health and legal stakes are significant. The billions of dollars associated with agricultural and forestry resources, pest eradication programs, and disruptions in trade dwarf the costs associated with registering the symbol. Such registration has become an integral part of implementing ISPM 15 around the world and managing the WPM pathway.

- The Bureau feels that the phytosanitary community, through the IPPC, needs to move forward with some decisive action to address these high risk issues. The proposed set aside of a minimum of USD 70 000 from the FAO Regular Programme (for the next five years) reflects a high priority need to close the gaps in ISPM 15 coverage around the world and ensure phytosanitary security in the global trade system. The SPG would identify long term funding mechanisms and options to sustain the ISPM 15 program and symbol into the future.

- The Bureau urges the CPM to *endorse* and *support* this way forward.

Annex VII

# REPORT ON INTEGRATED PEST MANAGEMENT

During the last APPPC-SC-IPM meeting in Manila in August 2011, member countries agreed on focus areas and concerns for the 2012-2013 biennium. These included: Strengthening of national early warning and surveillance and forecasting systems for brown planthopper (BPH) in rice; formulation of a policy and advocacy for the promotion of IPM, Pesticide Risk Reduction and biological control (biological control agents, bio-pesticides and botanicals). The meeting also emphasized the need to address spread prevention and the management of invasive agricultural crop pests and diseases, including *Bactrocera* fruit flies, golden apple snails (*Pomacea spp.)* and various phytoplasma diseases in cassava, sugarcane and coconut.

Since 2011, with APPPC approved seed funding (US$30,000) and FAO regular programme and trust fund initiatives, APPPC member countries have invested own resources and made good progress during the last two years in addressing the above mentioned concerns and work areas, at in-country and regional levels. These efforts have contributed towards strengthening of national flagship programs (e.g. on food security and food safety, on sustainable crop intensification, and on the facilitation of better market access for smallholder farmers). These efforts have also strengthened regional and in-country information sharing and capacity building for spread prevention and management of invasive agricultural crop pest and diseases and have promoted IPM and reduced the risks related to the distribution and use of pesticides in agriculture.

**APPPC-SC-IPM supported regional workshops**

APPPC supported regional activities focusing on information generation and exchanges among APPPC member countries through the conduct of expert workshops and technical consultations.

With APPPC funding support, the Government of Malaysia organized a "Regional Workshop on Spread Prevention and Control of Golden Apple Snail (*Pomacea spp.)* in Rice", held in Kuala Lumpur, Malaysia, from 3 to 7 December 2012. Experts, participants and observers, 40 in total from seven countries, attended the workshop. The workshop programme consisted of lectures that covered the biology and ecology of the invasive snail species and control strategies, presentations of country reports on the status and control of *Pomacea* spp. in the respective countries, and breakout sessions to discuss and present action plans for strengthening research on control strategies, capacity building and training materials, as well as communication and awareness raising activities.

http://www.vegetableipmasia.org/images/News/Enlarge/News56_1.gif

http://www.vegetableipmasia.org/images/News/Enlarge/News56_3.gif

In cooperation with the APPPC, the Government of Thailand organized a "Regional Training Workshop on Biological Control" in Bangkok, Thailand, from 25 February to 2 March 2013. The rationale for organizing this workshop was identified by member countries in the 27th Session of the APPPC. Fifteen participants (8 women) representing ten member countries under the APPPC Standing Committee on Integrated Pest Management (IPM) reviewed concepts and principles of biological control (BC) within the context of IPM strategies, shared experiences and discussed opportunities and challenges for the production and sustainable application of BC agents, and identified best options and actions to facilitate better access and the application of BC by IPM farmers.

**Other FAO supported regional initiatives in IPM, pesticide risk reduction and sustainable crop intensification in the Asia and Pacific Region.**

Whereas APPPC member countries have continued to promote and implement *in*-country IPM and pesticide risk reduction policies, regulations and capacity building activities during the last two years, FAO has continued *inter*-country exchanges and assistance for innovation, strengthening and expansion of important regulatory, standard setting and capacity building work under various regional projects and programmes during the 2011-13 period. Below is a summary of projects implemented by FAO; for further information see the weblink: www.vegetableipmasia.org

*The programme "Toward a Non-Toxic Environment in South-East Asia" and the FAO Regional Project on Pesticide Risk Reduction (GCP/RAS/229/SWE)*

With Swedish government funds, the Swedish Chemical Agency implemented the programme "*Toward a Non-Toxic Environment in South-East Asia*" which aims at reducing health and environmental risks by strengthening the capacity to manage industrial and agricultural chemicals in the countries of the Greater Mekong Subregion (Cambodia, China [Yunnan and Guangxi], Lao PDR, Thailand and Vietnam). Programme partners include the FAO (Regional Office for Asia and Pacific and HQ-Pesticide Risk Reduction Group) and regional civil society organizations (Pesticide Action Network Asia Pacific and The Field Alliance). As part of this programme, FAO supports policy reform and the strengthening of the regulatory control of pesticides as well as enhancing the capacity to innovate and scale up IPM and pesticide risk reduction training. Since the inception of the GCP/RAS/229/SWE project in 2007 and up to June 2013, some 58 716 farmers in the Greater Mekong Subregion had participated in 'fortified' Farmers Field Schools or 3-day Pesticide Risk Reduction Farmer Trainings that were supported by FAO Trust Fund Project resources. Thousands of additional farmers benefited from participation in local government and/or other donor funded FFS and pesticide risk reduction programmes implemented during this period with FAO technical and coordination support. The Programme underwent an external evaluation in November 2011. The evaluation findings were positive and recommendations were made for a 2nd phase programme extension. In June 2013, the Swedish International Development Agency (SIDA) approved funding for a 2nd phase up to June 2018. The inclusion of Myanmar is foreseen as part of this GMS-focused programme extension. Other ASEAN countries will also be invited to participate in various activities, including regional meetings and workshops. For further information on this programme, see the weblink: http://www.vegetableipmasia.org/docs/Index/229%20SWE%20website.pdf

*Management of the cassava pink mealybug*

During the 2011-13 period, FAO implemented the Technical Cooperation Project (TCP) "Capacity Building for Spread Prevention and Management of Cassava Pink Mealybug in the Greater Mekong Subregion". This project (TCP/RAS/3311) provided support for the countries (Cambodia, China, Lao PDR, Thailand and Vietnam) to develop pest-spread prevention strategies and ecological biocontrol options to manage the invasive pest species cassava pink mealybug (*Phenacoccus manihoti*). With Thailand's technical expertise and source of parasitoids, FAO facilitated the introduction, mass rearing and field releases in other GMS countries of the parasitoid *Anagyrus lopezi* which is specific against the cassava pink mealybug. For a brief on this project, see the following weblink:
http://www.vegetableipmasia.org/docs/Index/Technical%20Cooperation%20Programme.pdf

*Area-wide Management of Bactrocera Fruit Flies in fruit and vegetable crops*

FAO implements the regional project GCP/RAS/268/AIT "Area-wide integrated pest management of Bactrocera fruit flies in Southeast Asian countries" with technical and financial support from the Asian Institute of Technology. FAO supported fruit fly IPM training and action research activities in the GMS region during period 2010-August 2013. Smallholder farmers learned about innovative and effective management practices (lures, protein baits and sanitation) that were applied on an area-wide basis. Project results showed that a consistent application of this innovative and area-wide management approach can result in substantially higher yields, a better quality of fruits and vegetables and higher profits for smallholder farmers. The project included functional collaboration with private sector partners for the testing and supply of innovative management tools/inputs. For more details on the project progress, see the website:
http://ipm.ait.asia/?page_id=27

Under the project GCP/RAS/253/ASB, which was funded by ADB as part of their support to the GMS-Core Agricultural Support Programme (CASP-2011-15), FAO implemented activities aimed at building capacity for spread prevention and management of invasive plant pests and diseases in the Greater Mekong Subregion. Results of this collaboration were regularly presented at Working Group of Agriculture meetings convened by ADB and attended by senior agricultural officials from all GMS countries. This project was completed in December 2012. For a short brief on this project, see the website:
http://www.vegetableipmasia.org/docs/Index/ASB.pdf

*Sustainable crop production intensification*

In 2011, FAO launched its latest policy campaign to member countries for the sustainable intensification of

crop production. The policy is known under the banner of *Save and Grow* and guidelines can be downloaded at the FAO website: http://www.fao.org/ag/save-and-grow/

Following concerns over food security and the 2008 food prices crisis, many countries in the Asia and Pacific Region have initiated crop intensification programmes. Countries stand to benefit from the application of the *Save and Grow* guidelines for *sustainable* crop intensification. In 2013, FAO launched a regional rice initiative with pilot field work in Indonesia, Lao PDR and Philippines. This initiative aims to facilitate support for sustainable rice intensification by generating a better appreciation among policy makers of the importance of ecosystem services that underpin intensification efforts. It also involves training of smallholder rice farmers in the practical application of the *Save and Grow* policy guidelines. Other countries, including Vietnam, have also embarked on the promotion of rice intensification, including the System Rice Intensification (SRI).

In Vietnam alone, over a million rice farmers are now applying the SRI principles, concepts and practices. The Vietnamese Government also enacts a "Scheme on reduction of greenhouse gas emissions in agriculture and rural areas by 2020" and promotes other schemes (e.g. Three Reductions-Three Gains; One Must Do-Five Reductions) for up-scaling effective solutions to reduce the use of agro-chemical inputs and cut back on greenhouse gas emissions in rice cultivation.

Applying the *Save and Grow* sustainable crop intensification concepts and practices, one such initiative promotes the minimum tillage potato production in rice-based farming systems. In Vietnam, potato production remains constrained by a lack of quality seeds and high labor costs in conventional potato production. The practice of burning rice straw contributes to environmental pollution and greenhouse gas emissions. In 2008, an FAO-supported innovative pilot project on minimum tillage in potato IPM in lowland rice production systems was implemented by the PPD-MARD and its National IPM Programme in one province. Between 2009 and 2011, profits from growing potatoes increased by 60 to 73 percent using minimum tillage potato IPM compared with conventional potato growing methods. For the winter crop in 2012, the practice of minimum tillage in potato was applied in 22 provinces. For a Save and Grow case study on this innovative work, see the weblink: http://www.fao.org/fileadmin/templates/rap/files/Field_programme/VietNam_SaveandgrowFinal.pdf

Finally, the Ramsar International Wetlands Convention adopted at its 11th Conference of Parties, held in Bucharest in July 2012, a resolution calling on countries to cut back on the use of agro-chemicals in rice paddy production, particularly on pesticides. The resolution also calls on countries to invest in developing Communication, Education, Participation and Awareness (CEPA) efforts to benefit smallholder rice paddy farmers through the conservation and wise use of wetlands. The resolution, formulated with FAO and IRRI technical support in support of FAO's Save and Grow-based sustainable crop intensification policies, can be downloaded from the Ramsar website. http://www.ramsar.org/

**Other relevant regional initiatives in support of the work mandate of APPPC- SC-IPM**

The ASEAN-German cooperation project titled "ASEAN Bio-control for Sustainable Agrifood System" aims to develop selected regionally coordinated policies and strategies for a sustainable agriculture and food sector. The project was established in 2011 and provides support for the harmonization of biopesticide regulations and registration processes and for the promotion of biocontrol agents and sustainable crop management practices.

The ADB-IRRI Rice Planthopper Project was completed in 2012. It aimed to share knowledge and develop sustainable ways to manage BPH problems, specifically in China, Thailand, and Vietnam. The Project supported research and provided advice for farmers to manage pests in a sustainable way. It developed pest-resistant rice varieties, IPM strategies, and ecological engineering approaches.

Annex VIII

# REPORT ON THE ROTTERDAM CONVENTION

**Progress of ratification and implementation**

Over the last two years, progress has been made in the ratification and implementation of the Rotterdam Convention. As of September 2013, there are 153 parties worldwide, 17 parties among the APPPC members (Australia, Cambodia, China, DPR Korea, India, Lao PDR, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Republic of Korea, Samoa, Sri Lanka, Thailand, Tonga and Viet Nam). We welcome Cambodia as a new party in 2013.

With regard to the status of implementation by the APPPC members, the average rate of import responses for the chemicals listed in Annex III is 67 percent (worldwide average is 71 percent). There are two parties that have not yet submitted any import responses. In 2011 and 2012, one APPPC member country submitted six notification of final regulatory action (worldwide 20 parties submitted a total of 41 notifications in that period). Over the same period, no proposal for severely hazardous pesticide formulations has been received from APPPC members while one proposal was received form Chad.

In order to build national capacity for the effective implementation of the Conventions and sound management of pesticides, the secretariat of the Rotterdam Convention, in cooperation with the FAO regional and sub-regional offices, APPPC and the Secretariat of the Pacific Community (SPC), continued to provide technical assistance. Priority was given to address the low level of submission of pesticide incident reports under Article 6 of the Convention, the trade aspect of the Convention and awareness raising for ratification in the Pacific sub-region (currently four parties). Consequently, pilot projects on pesticide incident monitoring and reporting have been conducted in Sri Lanka in 2011 and in Thailand in 2012. A national workshop for the effective implementation of the Convention and strengthening trade control took place in China in 2013. An information session on the Rotterdam Convention was conducted at the 5th Pacific Regional Meeting of the Heads of Agriculture and Forestry Services (HOAFS) in 2012 with the result that the Rotterdam Convention was included in the Resolution, which was adopted at the ministerial session.

With respect to the Rotterdam Convention, there are needs for continued assistance, in particular for the development of national action plans and training for new parties. In the broader perspective of pesticide life cycle management, and in particular in the risk reduction from HHP, there are opportunities for further cooperation with the FAO Code of Conduct, IPM and the Basel and Stockholm conventions. The Rotterdam Convention Secretariat takes the opportunity of the 28th APPPC to discuss with member countries on opportunities in the upcoming biennium.

Annex IX

# REPORT ON PESTICIDE MANAGEMENT

## PROGRESS REPORT ON PESTICIDE MANAGEMENT IN THE ASIA AND PACIFIC REGION

APPPC STANDING COMMITTEE ON PESTICIDES MANAGEMENT

1. INTRODUCTION

1.1. Several activities were carried out with regards to pesticides management between 2011 to 2013. These were :

1.1.1. FAO-TCP Project on pesticide regulatory harmonization – Final Meeting of the Pesticide Monitoring Committee
1.1.2. GIZ Project on Harmonization of Bio-pesticides Registration
1.1.3. Regional workshop on pesticide regulatory management
1.1.4. Implementation of the Rotterdam Convention
1.1.5. Information exchange and data base
1.1.6. Other activities in line with pesticide control & management

2. PESTICIDE MANAGEMENT ACTIVITIES

2.1. FAO-TCP Project on pesticide regulatory harmonization – Final Meeting of the Pesticide Monitoring Committee

2.1.1. The 3rd Pesticide Monitoring Committee (PMC) was held from 31 October – 4 November 2011, Kuala Lumpur and was attended by delegates from Cambodia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand and Vietnam. Representatives from FAO & Croplife Asia as well as consultants to the Project also attended.

2.1.2. Five guidelines were adopted on harmonization of pesticide registration data requirements.

2.1.3. Follow-up action by countries included translation of guidelines into local language, implementation of guidelines/amendment of existing legislation, self-assessment and capacity-building activities.

2.1.4. The PMC also considered activities and work plans that had been agreed upon for pesticides management at the 27th Session of the APPPC held in Manila in 2011, and agreed on the use of the APPPC website for information exchange as well as the need for support from APPPC on capacity-building.

2.2. GIZ Project on Harmonization of Bio-pesticides (or Biological Control Agents BCA) Registration

2.2.3. This Project is conducted by the German International Corporation (GIZ) in cooperation with ASEAN countries. It aims to develop harmonized ASEAN Guidelines for Registration and Application of BCA, establish an ASEAN Biocontrol Database and form an expert group for regulation and application of BCA.

2.2.4. The Project has agreed on four categories of BCA - microorganisms, macroorganisms, botanicals and semiochemicals. Minimum data requirements for registration of microorganisms have been drafted while minimum data requirements for registration of botanicals are presently being discussed. Post registration monitoring has been suggested to ensure availability, distribution and good quality of BCA in ASEAN countries

3. Workshop for Enhancement of Regional Collaboration in Pesticide Regulatory Management (26 – 30 November 2012, Chiang Mai, Thailand)

3.1. The FAO-TCP project on Pesticide Regulatory Harmonization including the 5 guidelines was reviewed at the workshop. The GIZ Project on Harmonization of Bio-pesticides Registration was also discussed and an expert from the Project was also present to provide details and clarification.

3.2. Areas for greater regional collaboration and use of internationally available information resources were identified, while targets and indicators for regulatory harmonization were updated and prioritized. Participating countries also prepared their Action Plans towards greater food safety.

4. Implementation of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals & Pesticides in International Trade

4.1. Many countries in the Asia-Pacific region attended the Conference of Parties to the Convention in May 2013 in Geneva, Switzerland. The new line-up of member countries in the Convention's Chemical Review Committee included 4 countries from the region i.e. China, Malaysia, Pakistan & Thailand

4.2. Laos and Malaysia have identified several activities under their National Action Plans for implementation of the Convention. Malaysia's application for the SAICM Quick Start Program Trust Fund for its National Action Plan has been approved and the funds are now in the process of being transferred to the relevant authority

5. Information exchange and data base

5.1. This issue, particularly on exchange of information on national regulatory status (banned, restricted, registered pesticides) has been discussed at many forums such as the FAO-TCP, the ASEAN Sectoral Working Group on Crops (ASWGC) and the APPPC itself. Generally it was agreed that a mechanism to maintain the information exchange process is required. There was a proposal to use the APPPC website & linkage to the other websites.

5.2. In this context, it must be stated that a dedicated ASEAN Network Database under Malaysian initiative had been developed since 2001; however it has been underutilized by member states, due to constraints faced by individual countries. The ASWGC has agreed that the database should continue to be used and continuously updated. The database will be placed under the website of the ASEAN Secretariat until an integrated website on crops for ASWGC is established. It was proposed that Malaysia communicates with the ASEAN Secretariat for the transfer and migration of the present data and information into the ASEAN Web.

6. Activities in line with pesticide control & management

6.1. Reports have been obtained from Lao PDR, Malaysia and Thailand on some activities regarding pesticide management.

6.2. Lao PDR has carried out training of trainers on pesticide inspection for some government personnel including 3 inspection exercises. Other activities include development and publication of several guidelines such as on pesticide registration, manuals and checklists for pesticide inspectors, as well as translation of the 5 guidelines developed under the FAO-TCP

6.3. Laos has also prepared a National Implementation Plan for POPs Pesticide Inventory under the Stockholm Convention Inventory, supported by GEF and technical support by UNIDO. In addition, several activities have been planned under the Lao PDR National Action Plan under Rotterdam, Stockholm and Basel Conventions. These include new legislation and monitoring of compliance to such legislation, establishment of a single National Chemicals Authority and promoting sound management of chemicals practices in all relevant national programs

6.4. Malaysia is in the process of revising The Pesticides Act 1974 including guidelines such as labeling and advertisement of pesticides, to be not only in line with the Regulatory Harmonization under the FAO-TCP but also taking into account new developments in pesticide management and her experiences in enforcing the Act.

6.5. Malaysia's combat illegal pesticides campaign is ongoing, along with a pesticides container recycling program, both at national level and with active participation from all stakeholders particularly the pesticide industry.

6.6. There is also a Good Agriculture Practice Demonstration Project being carried out in cooperation with the pesticide industry, which complements the country's efforts to instill a culture of GAP among farmers and the agriculture sector in general.

6.7. Thailand actively participates in the Bio-pesticide (GIZ project). She has also introduced new legislation regarding determination of concentration for formulations allowed for registration, GHS labeling and classification of pesticides.

6.8. In the field of risk reduction, Thailand has proposed to ban 4 pesticides while 35 pesticides will not be allowed for use on rice because they cause resurgence of brown plant hopper.

6.9. Statistics on issuance of certificates for licenses, registration, inspection and analysis between January to March 2013 are also available

6.10. The ASEAN Expert Working Group (ASEAN-EWG) on harmonization of pesticide Maximum Residue Limits (MRLs) continues to discuss MRLs for tropical crops, and at the 17th ASEAN-EWG held in Ho Chi Minh City, Viet Nam in January 2013, proposed 6 MRLs to the ASWGC for consideration as ASEAN Harmonized MRLs. Some of the MRLs that have already been adopted by ASEAN have also been adopted as Codex MRLs while others have been submitted to the Codex Committee on Pesticide Residues for consideration and adoption.

6.11. ASEAN countries are working on an ASEAN Pesticide Residue Data Generation Project with the United States Department of Agriculture, funded by the World Trade Organization – STF and with support from some pesticide companies. This project, which applies Good Laboratory Practices (GLP), gives technical personnel from ASEAN countries an opportunity to gain experience in field and laboratory work in generating MRLs for certain pesticide-tropical crop combinations.

Annex X

# SUMMARY REPORT OF THE 24TH TECHNICAL CONSULTATION AMONG REGIONAL PLANT PROTECTION ORGANIZATIONS (RPPOS)

The 24th Technical Consultation among regional plant protection organizations (TC-RPPOs) was hosted by the Pacific Plant Protection Organization (PPPO) in collaboration with Biosecurity Fiji (BAF). The meeting was held at the Tanoa International Hotel in Nadi, Fiji, from the 27 to 31 August 2012. Present at the Consultation were representatives of the IPPC Secretariat, the CPM Bureau and six RPPOs: Asia and Pacific Plant Protection Commission (APPPC), Comité de Sanidad Vegetal del Cono Sur (COSAVE), European and Mediterranean Plant Protection Organization (EPPO), North American Plant Protection Organization (NAPPO), Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA), and Pacific Plant Protection Organisation (PPPO).

The Andean Community (CA), Caribbean Plant Protection Organization (CPPC), Inter- African Phytosanitary Council (IAPSC), and Near East Plant Protection Organization (NEPPO) were not represented at the meeting.

The full report is avaiable from IPP.

## I. Review of the RPPO's Activities

Each participating RPPO presented their activities over the past year within their region related to the following:

- ☐ Standard setting process
- ☐ Information exchange
- ☐ Technical assistance
- ☐ Dispute issues
- ☐ Funding the IPPC and other activities undertaken by RPPOs.

## II. TC among RPPOs - Work Plan for 2013-2015

All RPPOs reported on emerging major pest issues in their region; the detailed Power Point presentations are posted in the IPP.

With regards to **pest presence of domestic importance / pests of national concern**, COSAVE presented a paper and a Power Point on the issue for discussion by the TC. The power point presentation on this issue is available in the IPP.

There was no agreement on the final statement of the paper, but the RPPOs expressed interest in the idea and will follow up with their member countries. COSAVE agreed to withdraw the final paragraph of the text under discussion.

The TC discussed the issue and recommended considering it in the next TC and to prepare a discussion paper for the Bureau and SPG.

With regards to **developments for PRA, e.g. climate change and pest introduction potential, invasive species, pathway risk analysis**, NAPPO presented a power point presentation on Climate Change and Pest Risk Analysis and on the IPP.

On **emergency response and contingency planning**, EPPO provided information on development of standards related to contingency planning. EPPO is currently working in several future standards of contingency plans for individual pests.

**Systems approach**. COSAVE presented a Power Point on Systems Approach: concept and application, that was discussed by the TC, as committed to the 22nd TC. The paper and related power point presentations are available in the IPP.

**International movement of seeds**. NAPPO presented a Power Point on the International Movement of Seeds and the current development of a regional standard. In this particular stage NAPPO is developing the Annexes of the standard and presented an example of possible contents for the Annexes on seed-borne and seed transmitted pests. NAPPO offered to other NPPOs to keep them in the loop in the development of this standard.

EPPO informed that they are going to create a set of diagnostic protocols for seed pests. The TC considered this issue very relevant.

The RPPOs supported COSAVE suggestions regarding the Annexes in the draft NAPPO standard to be more specific in references, quoting the authors of the original reference and not just databases and years. There was also mention to the need to clearly define what is understood as seed. There was general interest by the RPPOs and a suggestion to NAPPO to circulate the Annexes to RPPOs, prior to country consultation, for comments.

## III. Brainstorming on Topics for Future CPM Scientific Sessions

The TC decided to put forward the following proposals which are not in any particular order of priority:

- PRA developments at regional level: express PRA, risk management and pathway PRA, regional guidelines on PRA.
- Global experiences in the use of e-Phyto.
- Lessons learned from jurisprudence: revisiting the role of science in phytosanitary disputes at the WTO.
- Use of technologies to improve phytosanitary inspection in points of entry (for instance X-ray technologies and canine units).

## IV. Other Business

**Issues raised by the Bureau in June 2012**. The TC addressed the following requests of opinion coming from the June 2012 Bureau meeting: Priorities and constraints to fill contracting parties' obligations on Information Exchange and surveillance of pests. Regarding how to overcome the constraints, the TC recommended that:

- CPM adopt a progressive program to address the national reporting obligations of IPPC contracting parties, establishing determined time frames to fulfil each obligation;
- the Secretariat conduct an implementation workshop for national reporting obligations at CPM time each year. The process should be preceded by sending a request to confirm details of the contact points before CPM and link it to the credentials to allow confirmation of IPPC contact points;
- support systems are set to increase reporting through RPPOs with a firm commitment of the Secretariat to work on this issue.

- an incentive system is set up for NPPOs to report and also obligations to review the information before coming to CPM;
- the title of the subject area is changed from Information Exchange to Fulfilment of Reporting Obligations.

With regard to the **identification of the utility of IPPC diagnostic protocols**, the RPPOs expressed caution on taking decisions on the usefulness of future diagnostic protocols, based on the limited number of IPPC protocols approved by CPM currently.

All RPPOs considered that diagnostic protocols are useful tools, especially for developing countries.

RPPOs need to consult on the issue in their regions asking if the IPPC protocols are used, by whom and for which use. RPPOs committed to send the answers to the Secretariat before the end of September.

A new process to establish priorities and select the protocols to be developed need to be put in place, allowing broad consultation to NPPOs and RPPOs. One of the RPPOs stated that if resources are not available for the production of IPPC diagnostic protocols, it should be possible to post ready available protocols in the phytosanitary resources page.

On the **feasibility to draw up a list of priority pests**. (National, Regional, Global) and under which modalities, the TC considered that it was appropriate to develop for CPM approval, criteria for assessing whether RPPOs continue to meet their obligations as RPPOs. in the IPPC framework.

On the procedure to set these criteria, the TC recommended that the IPPC Secretariat and the FAO Legal Office put together a proposal for the next TC.

The TC also considered it would be advisable to establish mentoring programs for RPPOs that wish to be more active in order to maintain or regain the RPPO status.

Concerning the **IPPC** f**inancial mobilisation**, OIRSA proposed to discuss ways to increase IPPC funding to support IPPC activities including generation of funds and donations. The TC recommended that OIRSA take this forward to the Financial Committee.

Annex XI

# SUMMARY OF THE REPORT OF THE APPPC PLANNING MEETING
May 2013

The APPPC working group meeting on arrangement of recommendations on work plan of next biennium (2014-2015) were prepared for discussion at the 28th Session of APPPC.

The working group members considered the status of activities of the three work areas Plant Quarantine, IPM and Pesticides. The work programme for the remainder of the 2012-13 biennium was discussed in detail. This included: the work on ISPM 15 with NAPPO and on ISPM 14 with a meeting proposed for November 2013; the 14th Regional workshop on draft ISPMs in Korea; further work on surveillance in particular with surveillance information management; the submission of two draft RSPMs to the 28th session of the APPPC; and training programmes on SALB diagnostics in Brazil.

Recommendations for the 2014-15 biennium work programme were considered at length. The recommendations to be presented to the 28th session of the IPPC included: further work on ISPM 15 and 14; the beginning of implementation work on ISPM 31 with a survey; work of ISPM6 implementation concerning pest surveillance data management; regional workshops on draft ISPMs; and information exchange programme on pest status, phytosanitary treatments, PRA and capacity development projects; a work programme planning group meeting in 2015; the development of RSPMs on alternatives to methyl bromide fumigation and pest risk management for seed production for vegetable and flower seeds; an implementation survey on RSPMs; the continuation of SALB work; and pre-CPM consultations. Workshops on IPM and pesticides will be discussed at the 28th session of the APPPC.

The costs of the 2014-15 work programme was estimated for the consideration of the 28th session of the APPPC. It was proposed that members consider a raise of 5% in the level of mandatory contributions in consideration of inflation factor.

Working group participants were requested to promote the adoption of the revised plant protection agreement in their countries.

Details of the recommendations are as follows:

## 1. Recommendations of work plans supported by the mandatory contributions from contributing contracting countries for 2012-2013

### 1.1 Work plan for the remainder of the 2012-2013 biennium

1.1.1 Implementation of ISPMs in the region

ISPM 15 - project with NAPPO. A joint steering committee could be established for this project. APPPC wants to have countries familiar with the systems for dealing with the mark. It is suggested that NAPPO prepares a concept paper and the APPPC comments on this.

ISPM14 - systems approach –this would concentrate on practical implementation and not the Bayesian system that requires a lot of information. Many of the current systems are systems approaches and should be recognised. The problems of how we deal with components that have a certain efficacy and the application of over-strong measures were noted. Good judgement needs to be used with the methods that are available for fruit flies and other pests. A concept paper should be developed by July and invitation letters sent to APPPC members. The nomination process may take

2-3 months – so this should be taken into account. It is suggested that there be a workshop in November 2013. This will look at sharing experiences and look how other countries work. This may lead to the production of new material – training material and guidance documents.

1.1.2 Fourteenth APPPC Regional Workshop on Draft ISPMs – will be organized in Seoul in October, 2013, Korea will provide some funds for the workshop. It was stressed that countries should review the drafts in advance and bring with them country comments to the workshop for sharing with other participants. It was also stressed that countries should send consolidated country comments to the IPPC through on-line system after the regional consultation.

1.1.3 Training workshop on pest surveillance
The projects noted by IPPC Secretariat (Sosa and Hammons) were noted – Import verification/export certification, NPPO management, surveillance, external/internal relationships, international relations, PRA – policy and advocacy, dielectric treatment. The group expressed interest in continuing work with surveillance. The work on surveillance proposed by Dr Rossel from Australia, surveillance information management, was discussed. This would have some funds attached from Australia and may implement during next biennium. Pre-arrangements on this project include agreement and fund transfer will be remainder of 2013.

1.1.4 Information exchange – Malaysia will continue to lead the working group on information and set priority for pest information exchange on pest status, phytosanitary treatments, capacity development project and PRA on priority pests. This group would collaborate with the working group on SALB.

1.1.5 Planning working group meeting – held from 13-15 May 2013 in Bangkok, Thailand.

1.1.6 Development of RSPMs regarding fumigation, and irradiation. The RSPM on the movement of used machinery will not go ahead as the IPPC is developing a standard. The fumigation standard picks up the general principles of fumigation. Two draft RSPMs will be submitted to the 28$^{th}$ Session for consideration of the adoption.

1.1.7 There will be training workshops on diagnostics for SALB in Brazil. This will use APPPC funds with contributions from Brazil, industry and NPPOs. The lead country-Malaysia will coordinate with the rubber growing countries to identify technical staff to participate in the training in Brazil, and communicate with Brazil NPPO on detailed logistic arrangements. The training workshops are most likely to happen between September-October 2013.

1.1.8 IPM Programme – allocated budget was spent on two workshops during 2012-Feb. 2013, no further workshops will be possible.

1.1.9 Pesticide programme – allocated budget was spent on a regional workshop in 2012, no further workshop will be held for the remaining period of 2013.

1.1.10 Pre-CPM consultation – this was held in 2012 and 2013 during the CPM7 and CPM8.

1.1.11 The 28$^{th}$ Session of APPPC-Arrangements are being taken, this includes country nomination of delegates. The Session will be held from 23-27 September 2013 in Korea.

## 2. Recommendations for the work plan for the 2014-2015 to be presented at the 28th Session of the APPPC

### 2.1 Plant Quarantine standing committee

2.1.1 Implementation of ISPMs

ISPM15-Working group on ISPM15 will continue to work on. A workshop on ISPM15 will be organized to clarify what registration is and why it is necessary. This could be extended to deal with export certification. Because there are difficulties with treatment with wood with high water content, treatments that do not control all fungi and re-infestation that may occur, it is suggested that the APPPC investigates additional potential treatments.

ISPM 31 – Sampling is a big issue for some countries. This exercise will be led by Indonesia. Indonesia suggested that a survey be undertaken, regarding implementation of ISPM31 for sampling of pests in grain.

ISPM 6 – Regarding pest surveillance, the Australian funded pest surveillance data management project will be implemented.

2.1.2 Regional workshop on draft ISPMs – the 15th and 16th regional consultations will continue in 2014 and 2015 respectively, and wish to receive continual funding from Korea.

2.1.3. Training workshops on pest surveillance by using manuals- will wait for guidelines from IPPC for utilization or Australian manuals for training.

2.1.4. Information exchange programme led by Malaysia. The working group will continue to collect information on pest status, phytosanitary treatments, PRA and capacity development projects for sharing with countries. Regarding pest status, the group would gather information on common pests, and quarantine pests (e.g. SALB). The Working group would decide on the list of pests for this work and then arrange a survey. The group would also collect information on the treatments for the pests and work on PRA. The group may look at RSPMs and do a survey for the implementation of RSPMs.

This would include regular website maintenance, monitoring status of country update, staffing assistance, publications, etc.

2.1.5. The planning group meeting for work plan (2016-2017) would be held before the 29th session in 2015.

2.1.6. Development of RSPMs – this biennium has produced two RSPMs concerning the approval of fumigation and irradiation facilities. Suggestions for the next biennium included: alternatives for MB for fumigation; Pest risk management for seed production for vegetable and flower seeds. APPPC has already had training programmes in this area and now the need is more specific relating to commodities etc. There should be more collaboration among countries with NPPOs and the seed industry. It was observed that the movement of seed is difficult to handle and the development of common measures will be needed.

The final decision on the selection of RSPM topics will be considered at the 28th session.

2.1.6bis Implementation survey of RSPMs
This suggestion will be considered further at the 28th session, which might be covered by the working group on information exchange or establish a new working group depending on the decision by the 28th Session.

2.1.7. SALB working group will continue – There would be a follow up from the diagnostic training visit to Brazil with in-country training programmes and manual development (with translation) including a diagnostic protocol for SALB. The group will monitor training in countries and the development of country translations. Twice-yearly surveillance programmes will be developed. Data from the region will be collected and exchanged with a specific database being developed by the SALB working group (with the information exchange working group). Funds may be required for the training.

2.1.8 There will be a Pre-CPM consultation in connection with CPM9 and CPM10. No expenditure will occur.

2.1.9 ISPM 14 (system approach) implementation - Production of resource materials and one workshop.

## 2.2 IPM Standing Committee

2.2.1 Viet Nam noted the training on golden snail for risk reduction and biological control. Such training and workshops need to be continued with shared experiences and regional cooperation be promoted. Information sharing regarding new pests should occur. Experience with IPM in this area is considerable. It is suggested that workshop(s) be held and details be discussed at the 28th session.

## 2.3 Pesticides Standing Committee

2.3.1 Pesticide management – It was noted that a regional network on pesticide management has been set up. This needs to be continued. It is suggested that workshop(s) be held and details be discussed at the 28th session.

## 3. Estimated costs of the work plans and level of mandatory contributions by contributing contracting countries for 2014-2015

## 3.1 Cost of work plan for the remainder of the 2012-2013 biennium

A workshop on systems approach (ISPM14) - $48,000 (Australia contribution). Australia will develop a concept paper and a tentative agenda by end of July. The meeting will be held centrally in the region e.g. Bangkok. Meeting could last 4-5 days. Resource experts may be required. Jakarta (70k from), Indonesia expressed interest in providing a venue – Applied research institute for plant quarantine. Thailand (Bangkok) also offered to host the meeting. The tentative dates suggested for the workshop are 4-8 November 2013.

The training on diagnostic for SALB will be held in Brazil by participation from the rubber growing countries in the region-$10,000 together with each country's funds and additional support from Brazil NPPO and industries.

Information exchange including publications-$25,000.

Joint workshop on ISPM15 with NAPPO (in 2013 or 2014, pending finalization and the information should be available for the 28th session.)- APPPC would supply limited funding for countries from this region, while NAPPO would host the meeting in the Asia and Pacific Region.

The 14th Regional workshop on review of draft ISPMs from 28 Oct.-1 Nov. 2013 in Seoul, Korea-Korea and FAO funds.

28th Session of APPPC – FAO and Korea funds

It was noted that additional contributions from Australia and Korea resulted in some savings of APPPC funds from assessed contributions, the estimated balance of the current biennium might be about $120,000 which can be carried over to the next biennium (referring the trust fund of assessed contributions received).

### 3.2 Cost of recommended work plan for the 2014-2015 biennium to be presented to the 28th Session of the APPPC

Total cost of proposed programme for the next biennium is about 474,600$ US including overhead.

**Table 1. Proposed work plan and estimated costs for 2014-2015**

| No. | Activity Planned | Remarks | Estimated budget (US $) |
|---|---|---|---|
| 6.2.1 | Implementation: ISPM 15 workshop will make clear what registration is and why it is necessary. This could be extended to deal with export certification. It is suggested that the APPPC investigate additional potential treatments. | Led by the working group (2014-2015) | 40,000 |
| | ISPM 31 – Sampling Indonesia suggested that a survey be undertaken. Implementation for sampling for pests, for pests in grain | Led by Indonesia (2014-2015) | 20,000 |
| | ISPM 6 – Surveillance data management workshop | Led by Australia (2014) | 100,000 (Australia fund to be provided) |
| 6.2.2 | Regional workshop on review of draft ISPMs – continue | Hosted by Korea (2014, 2015) | Korea fund + FAO |
| 6.2.3 | Training workshops on pest surveillance: wait for guidelines from IPPC & use these or Australian manuals for training. | (2014-2015) | 40,000 |
| 6.2.4 | Information exchange programme.<br>-Working group on information exchange will continue | Led by Malaysia (2014-2015) | 90,000 |

| | | | |
|---|---|---|---|
| | functioning. Pest status, phytosanitary treatments, PRA and capacity development projects will be considered. The group would share pest status information. The working group would decide on the list of selected pests for a survey. The group would also collect information on the treatments for the pests and work on PRA.<br>-Website maintenance, update and monitoring at quarterly basis<br>-staffing assistance<br>-publications | | |
| 6.2.5 | Planning group meeting to be held before 29th Session. | (2015) | 25,000 |
| 6.2.6 | Development of RSPMs | (2014-2015) | 25,000 |
| 6.2.7 | Survey on implementation of RSPMs?? | To be finalized at 28th Session<br>(could be part of WG on information exchange or a new WG) | ?? |
| 6.2.8 | SALB working group will continue<br>- follow-up from the diagnostic training visit to Brazil with in-country training programmes and manual development (with translation)<br>-The group will monitor training in countries and development of country translations of relevant materials as follow-up actions after previous regional assistance.<br>-Twice-yearly surveillance programmes will be developed. -Data from the region will be collected and exchanged | Led by Malaysia | 30,000 |

| | | | |
|---|---|---|---|
| | with a specific database being developed by the SALB working group (with the information exchange working group). | | |
| 6.2.9 | SC-IPM<br>-It is suggested that workshop(s) be held and details discussed be at the 28th session. | | 60,000 |
| 6.2.10 | SC-Pesticide management<br>It was noted that a regional network on pesticide management has been set up. This needs to continued. It is suggested that workshop(s) be held and details discussed be at the 28th session. | | 40,000 |
| 6.2.11 | ISPM 14 implementation: Production of resource materials and one workshop | Led by Australia (2014-2015) | 50,000 |
| 6.2.12 | There will be a Pre-CPM consultation. | | No expenditures |
| 6.2.13 | 29th Session of APPPC | Indonesia | |
| | **Total costs** | Including 13% service charge | 474,600 |

### 3.3 Level of mandatory contributions by contributing contracting countries for 2014-2015

The level of contributions was discussed. It was noted that a zero increase of total amount of the budget based on the current biennium level would not cover inflation. So a 5% increase of the total amount in comparison to current biennium budget was proposed and agreed to (detailed reference of various percentages on the increase, see Annex 3). Regarding country contributions - it was observed that some countries have difficulty with the present economic problems and the change-over of staff. Contribution of funds was more forthcoming this year compared to previous years. However there are a few countries that did not provide assessed contributions. The group called for provision of assessed contribution in timely manner and NPPO should take follow up actions regarding provision of the contribution.

The calculation of the scale of each country was based on the “Assessment of Member States' contributions of the United Nations regular budget for the year 2013 (Reference - ST/ADM/SER.B/866 dated 24 December 2012); On 25 December 2012, acting by consensus, the General Assembly at its 67th session retained the existing formula for assessing Member States'

financial contributions to the UN regular budget during 2013-2015 period. It also maintained that 0.01 percent ceiling for assessing the rate of least developed countries (LDCs) and the 22 percent maximum assessment rate for all other countries.

**Table 2. Budget levels with increase of 5% of total amount than current biennium (2012-2013) and corresponding scales of assessed contributions of APPPC contracting parties for 2014-2015 based on UN scale of assessments for 2013**

| APPPC member countries endorsing mandatory contributions | UN scale of assessments for 2013 | APPPC Scale for 2014-2015 | Proposed budgets (US$) for 2014-2015 | | |
|---|---|---|---|---|---|
| | | | 2014-2015 | 2014 | 2015 |
| | | | 355,950 | 177,975 | 177,975 |
| Australia | 2.074 | 22.00 | 78,309 | 39,155 | 39,155 |
| China | 5.148 | 22.00 | 78,309 | 39,155 | 39,155 |
| Republic of Korea | 1.994 | 22.00 | 78,309 | 39,155 | 39,155 |
| DPR Korea | 0.006 | 0.10 | 345 | 173 | 173 |
| Fiji | 0.003 | 0.05 | 173 | 87 | 87 |
| India | 0.666 | 10.77 | 38,336 | 19,168 | 19,168 |
| Indonesia | 0.346 | 5.60 | 19,917 | 9,959 | 9,959 |
| Malaysia | 0.281 | 4.54 | 16,175 | 8,088 | 8,088 |
| New Zealand | 0.253 | 4.09 | 14,563 | 7,282 | 7,282 |
| Pakistan | 0.085 | 1.38 | 4,893 | 2,447 | 2,447 |
| Philippines | 0.154 | 2.49 | 8,865 | 4,433 | 4,433 |
| Sri Lanka | 0.025 | 0.40 | 1,439 | 720 | 720 |
| Thailand | 0.239 | 3.87 | 13,757 | 6,879 | 6,879 |
| Viet Nam | 0.042 | 0.68 | 2,418 | 1,209 | 1,209 |
| Bangladesh | 0.01 | 0.01 | 36 | 18 | 18 |
| Cambodia | 0.004 | 0.01 | 36 | 18 | 18 |
| Lao PDR | 0.002 | 0.01 | 36 | 18 | 18 |
| Timor-Leste | 0.002 | 0.01 | 36 | 18 | 18 |
| Total | 11.334 | 100.00 | 355,950 | 177,975 | 177,975 |

While total cost of proposed programme for the next biennium is about US$474,600 including overheads (excluding voluntary based fund, i.e. Australia and Korea funds for specific activities), it was noted that amount of assessed contribution ($355,950) proposed together with the estimated balance ($120,000) of current biennium (2012-2013) from the trust fund of assessed contributions received , which would be carried over to the next biennium, is about $475,950. It is rightly balanced the estimated budget required for implementation of the proposed work plan for the next biennium. The detailed finance report including expenditures and balance of current biennium will be presented at the 28$^{tth}$ Session.