

REPORT OF THE FIRST REGIONAL EXPERTISE TRAINING WORKSHOP ON PEST INFORMATION MANAGEMENT

25-28 November 2014
Bangkok, Thailand



Summary

The 1st Regional Expertise Training Workshop on Pest Information Management has been implemented in Bangkok, Thailand on 25-28 November 2014 with 23 participants including 17 trainees from 5 participating countries, 2 experts and 4 RAP officers. Welcome remark was delivered by Dr. Yongfan Piao, Lead Technical Officer of the project and Senior Plant Protection Officer, and Mr. Daniele, FAO/RAP Senior Field Programme Officer and Budget Holder of this project.

Dr. Young-Mi Park, Senior Researcher of Animal and Plant Quarantine Agency of the Korean Government, gave lectures on “Necessity of database construction for biological resources and international trend”, “International protection of copyright and related rights” and “Basic theory and understanding of database”. These lectures were followed by individual practical training with test version of pest information system (PIS) that has been developed suitable for Korea’s plant protection environment and is currently being used in NPPO-Korea, introducing and practicing its diverse functions and data management methods in order for the trainees to get used to it under the technical guidance of Dr. Park and another Korean expert. There were country presentations by the five National Project Coordinators on “Past activities, current situation and future plan in pest information management in participating countries”. A half-day field trip was taken to the Insect Museum located in the Department of Agriculture (DOA), Thailand. Two topics were prepared by Mr. Chang-Ho

Shin, Regional Project Coordinator, for discussion session, which were “Current issues/challenges in pest information management and desirable management system for pest identification” and “How to improve the PIS in the country and how to prepare for the tentative country action plan for the improvement”. Group discussion had been going on the country by country and the results of the discussion were presented by NPCs.

The workshop was evaluated by trainees through a questionnaire, asking to rate the level of lectures and lecturers, training contents and logistics. Closing remark was delivered by Dr. Piao, expressing his gratitude to all participants for their hard works and cooperation as well as highlighting the importance of the next step for action plan of developing or updating their PIS program.

REPORT

1. Welcome remark

Dr. Piao, Lead technical officer of FAO/RAP delivered the opening remark. He welcomed the participants and experts to the workshop and explained the background and objectives of the workshop, highlighting the importance of pest identification related to ISPM 6. He also emphasized the development of capacity on data management and its practical operating skill, noting the technical gap among participating countries and invited the countries to develop the action plan on how to approach and how to start the data management during the workshop to maximize the benefit from the workshop.

Mr. Salvini, Project Budget Holder, also welcomed all participants and emphasized FAO’s role not only as an administrative support, but also human resources networking and technical consultation. He wished participants fruitful time in the workshop, steering committee and Bangkok stay.

2. Lecture on Pest Information Management

Three topics of the lectures related to the pest information management were delivered by Dr. Park, Senior Researcher of Animal and Plant Quarantine Agency of the Korean Government. The details of lectures are as follow.

Necessity of database construction for biological resources and international trend

Dr. Park introduced International Standard on Phytosanitary Measure (ISPM) 27 “Diagnostic protocol for regulated pests” as a key guideline regarding proper pest detection and identification in connection with database management. She explained various factors and problems in identifying the pest such as dimorphic and variation, different key of taxon and detection of new species of the pests. She also introduced the necessity of database and

database system as an instrument of information management, emphasizing the importance on how to develop the database and how to use the database.

International protection of copyright and related rights

Dr. Park introduced basic concept of copyright and its international legal system such as Berne Convention, Rome Convention, TRIPS Agreement. She explained the requirements for copyright protection, making examples on what can be protected or cannot be protected as well as five kinds of right on copyright holder. She also explained the factors of “Fair Use” and how to use the copyright fairly in order not to infringe on others’ copyright in addition to how to protect our intellectual property. Participants had expressed much interest in when the cases are legal or illegal, making some examples.

Basic theory and understanding of database

Dr. Park introduced the basic definition of the data information and their close relationships highlighting that information is the results of processing data. It was expressed that understanding of the relationship is crucial as it will affect how the database is constructed and used. She also explained the characteristics and elements of database including entities and attributes. In addition, she described the database management system (DBMS) in detail, highlighting not only the importance and purpose of DBMS but also advantages and disadvantages of using the database approach. She also introduced several types of database and database structure models as well as elements of database system.

3. Country reports

Each participating country presented country report on “Past activities, current situation and future plan in pest information management in participating countries”.

Cambodia

Dr. Hean Vanhan, NPC of Cambodia, introduced past activities on information management divided into two stages as before and after the year 2005. He explained that pest surveillance activities started in 1995 with a few experts on rice, corn, vegetable etc., but all pest information has been recorded manually. Since 2005, pest surveillance activities have been performed with partly improved human resources supported by foreign donors such as AusAid, NZAid and AADCP, but still have no pest list and specimen completed. All pest information could be recorded in the server in 2009 by the support of FAO and specimens were labelled and stored in laboratory. However, system of pest recorded has been collapsed currently due to frequent movement and limited capacity of maintenance, so pest record has been kept manually in preparation of system restoration. He also introduced future plan such as focusing the pest list activities on potential export crop and expanding the pest record activities to regional office

Lao PDR

Mr. Khanxay Somchanda, on behalf of NPC of Lao PDR, briefly introduced Surveillance Information Management System (SIMS) in Laos from data collection and verification to data reporting process. He also introduced past achievement of pest surveillance activities regarding general survey, pest listing and export protocol with china implemented from 2001 to 2013. He pointed out main constraints on pest surveillance such as lack of technical staff, lack of equipment, poor information management etc. and introduced that future activities would be focused on the crops such as cassava, banana, water melon etc.

Nepal

Mr. Sharma, NPC of Nepal, introduced that there has been no pest information system in Nepal and that pest information has been recorded and scattered on hard copy. He also introduced current activities regarding pest survey and surveillance programs in connection with relevant organizations. As for the main constraints of pest information management, he pointed out as follow: no PIS, lack of close linkage between related organizations, lack of technician and software for PIS management etc. He mentioned that he would focus on the pest listing for all agriculture and forestry pest and on the development of database software and GIS program as a future plan.

Thailand

Dr. Siriporn Zungsontiporn, on behalf NPC of Thailand, introduced past activities and present situation divided into three areas, entomology, plant pathology and plant-weed. Regarding entomology, she introduced Insect Museum located in Department of Agriculture (DOA) of Thailand, describing its housing size of over 541,000 of insect specimens and its improvement and management process. As for the data management, she explained that collected data has been recorded in paper and kept in the wood cabinet, introducing two kinds of record handling system: local database with general excel spreadsheet and keeping at the servers belonging to the group of interest. Regarding plant pathology, she introduced Culture Collection Center of DOA and its function, which is composed of three units including Plant pathogenic micro-organism unit, Plant Disease Herbarium and Plant disease control potential micro-organism collection unit. Regarding plant-weed, she emphasized Bangkok Herbarium's establishment and functions such as collection and preservation of plant disease material. Finally she introduced synthetic establishment of plant pest database in the Plant Protection Research and Development Office as a future plan.

Viet Nam

Mr. Le Son Ha, NPC of Viet Nam, introduced past activities on stored grain pest as a general surveillance and on fruit-fly surveillance program and Mexican bean weevil as a specific survey. Regarding the information management, he highlighted that pest lists and identification keys were developed and stored in the hard copy files, Atlas or books such as "Results for general surveillance of pests in Viet Nam", but currently pest lists on some important crops are developed and stored in CD-ROM. He also explained that future plan would be to develop the plant pest database as well as the network related to plant pest situation.



4. Field trip

As an event of field trip, participants visited the Insect Museum located in DOA of Thailand under the guidance of NPPO-Thai officers, which is the oldest with the biggest collection in South-East Asia. Over 541,000 insect specimens are housing across the country and, in total, approximately 8,000 species have been identified. Over 100 type specimens are deposited in the Museum.

5. Practice training

For the practice training, NPPO-Korea provided a test version of PIS which has same format with Korean PIS currently being used for database management. As the participants were already requested to bring their laptops, individual practical training on data management has been implemented under the technical guidance of Dr. Young-Mi Park and Mr. Yong-Kon Shin, Korean expert. Two special websites were provided for training and each country received country-specific credentials (login and password) in order to access the websites. Dr. Park explained the basic composition and functions of the system. Practical exercises were focused on (1) Basic pest information management regarding pathogen, pest and host name on how to search, register, edit and delete the datasheet and image and (2) Basic code management for pest, country, region, and so on.

She informed that test PIS would be provided for at least three more months after the workshop so that every country may practice and get used to it. She introduced that Korean PIS has been developed for over 10 years in order to be most suitable for only Korea's own environment in consideration of implementation of quarantine inspection, distribution and detection of the pests, effective data management, accessibility to the stored information, efficient data operation and so on. She also emphasized that, if it is needed, every country could find the ways how to update, how to revise, how to develop and how to customize the program adaptable to the specific situation of the country in comparison with Korean PIS.

6. Discussion session

“Current issues/challenges in pest information management and desirable management system for pest identification” and “How to improve the PIS in the country and how to prepare the tentative country action plan for the improvement” were discussed. The output of the discussions and draft action plan were presented by NPCs respectively.

Topic 1: Current issues/challenges in pest information management and desirable management system for pest identification

The summary of the discussion for each country was as follow.

Cambodia

The NPPO has not been able to develop PIS till now. There is need to collect information in associated with pest surveillance, diagnosis and pest recording, but while there are lack of diagnosis support for database. The NPPO has not enough financial support for surveillance activities and not enough capacity for pest identification. Capacity building is the priority to conduct pest surveillance, diagnosis and pest recording.

Lao PDR

There is only Excel format of database and no database system. They need to practice and be trained with Korean PIS for development of database system.

Nepal

They have only hard copy of database and no database system. They need to establish PIS to save all pest information. They have to seek financial assistance for developed database system from the project or other sources. To seek promoting export of agricultural products, database system is very important and urgent to Nepal.

Thailand

Not all pest information is in digital system and they are not updated and enough data. There are difficulties to identify new pest and need to get information from neighboring countries. Each expert group has its own separated database, which have to shift to synthetic database system so that all relevant staff can access to it.

Viet Nam

The NPPO has database for only plant pest. Their information sources are only research paper, articles or books, which reflects a lack of resource on pest information.

Topic 2: How to improve the PIS in the country and how to prepare the tentative country action plan for the improvement

The summary of the action plan presented was as follow.

Cambodia

In the 2015, NPPO will nominate the staff who will be in charge of PIS. They also will repair the existing server and prepare other reserved computer while keep practicing with Korean PIS. In addition to this, they will try to install the new program into existing server. They will start to prepare a draft sub-decree on national PIS, raising the awareness of related stakeholders in 2016 and then continue to upload and maintain the database from 2017.

Lao PDR

In 2015, NPPO will nominate 3 people who will be in charge of PIS and then review the existing data while practicing Korean PIS format. In addition, they will develop and establish PIS database software program with technical and financial assistance from Korea during 2015-2017. Human resource will be also developed through the training for the officials during 2015-2016. Collected data will be input in PIS from 2016 and updated after 2017.

Viet Nam

The goal of NPPO is to develop a web-based database and network that the plant pest situation can easily updated and shared by authorized members. In 2015, they will review the pest lists of plant pest on some important crops such as rice, dragon fruit, mango, litchi, longan and rambutan while drafting the project for pest information management. Completed project will be submitted to the authorities for approval and then seek for the financial support in 2016.

Nepal

In 2015, NPPO will seek for experts from university, research or freelancer while they try to develop and establish PIS database software with technical and financial support from Korea. In addition, they will develop human resource through the training for officials and review and collect the existing data as well as validate the data during 2015-2016. Data will be input in the software from 2016.

Thailand

NPPO-Thai will form the Working Group on information technology in order to improve current database system. They will also combine the similar database program as well as review current PIS to update. Meanwhile, they will introduce Korean PIS to practice for 6 months, seeking for the budget allocation, if possible, from COPIA or Korean government.

After the presentation, Dr. Yim, Chairperson of CPM, emphasized that, in developing the new PIS, every country needs justification, decision making and practical plan based on what it needs, what it should do and how to implement, thinking of practical step. Dr. Piao also

highlighted that development of PIS should be implemented on the concrete idea and action plan with reasonable time schedule.

7. Workshop Assessment

As the last session of the workshop, a questionnaire was distributed to the participants to evaluate the workshop. The questionnaire was composed of five sections such as overall assessment of the project, rating the lecture and lecturers, rating the impact of the workshop, rating the logistics and description on the strength, weakness of the workshop and suggestion.

According to the result of the analysis of the questionnaires collected from 16 participants, all the participants were content with overall project content, structure and organization and 93% of the participants were “satisfied” or “fully satisfied” with the lectures, practice and field trip while all participants were satisfied with lecturer’s presentation and expertise level. However, 19% of participants did not think that this workshop would be impact on their professional activities or work. As for the workshop logistics such as flight arrangement, accommodation, meeting facilities and other things, 93% of the participants expressed their satisfaction.

Meanwhile, participants described the main strength, weakness of the workshop and made suggestion as follow.

<Strength>

- Good opportunity to improve knowledge on PIS and database management
- Useful Korean PIS to countries
- Document is clear and useful
- Good level of practice

<Weakness>

- Short duration of workshop and less practice time
- Lack of group work with other participants
- Different background and expertise level of participant

<Suggestion>

- Longer duration of workshop and more practice than lecture
- Divide the participants into group with same background and expertise level to facilitate the progress of workshop

8. Closing Remarks

Dr. Piao expressed his gratitude to the lecturers and other participants for their hard work and cooperation. He stressed that the workshop is a very important step and good opportunity for the trainees to increase their expertise and to share information on each country’s status on

database management as well as to develop their practical capacity through the lab practice training. He also stressed that Korean PIS is not the reference example for countries to demonstrate usefulness and role in pest surveillance management. He encouraged the countries to keep practice with PIS provided by NPPO-Korea for further improvement of country system and to explore possibility of establishing similar system with assistance of the Korean experts if necessary and required.

To conclude the workshop, he emphasized the importance of the in-country training that is going to be implemented from next year, requesting the countries to make a decision on what will be the next step and options and how to improve practical operating skill on long-term point of view. He also highlighted that all participants need to digest the contents of the lectures and the practice to maximize the benefit from the training program.

9. The results of the Workshop

This workshop produced significant results in association with forthcoming training workshops as follow.

Firstly, participants could increase basic and specialized knowledge on pest information system and database management. Huge volume of documentation provided by lecturers also enables the participants to have further study and to share the contents with other colleagues.

Secondly, presentations on country reports are good material for the participants to share and exchange information on each country's pest information system and database management status.

Thirdly, despite the different background and expertise level on database management among countries as well as participants, practical training was good opportunity for the participants to experience Korea's advanced PIS and to learn how it works and how it is composed. Furthermore, continuous provision of Korean PIS for the practice use will provide the countries with a good motivation to design more detailed action plan to develop or update their PIS.

Lastly, due to lower level of expertise on database management and PIS, some participants had hard time to catch up the lectures and practice training, which led the progress of training delayed. In this regard, every country needs to send IT experts or high-level of participants for the better achievement.

10. A list of follow-up actions

Based on the project work-plan and the results of this workshop, some actions to be taken in implementation of the project will be as follows.

- Preparation of customized national (in-country) training workshop on database management and pest information system based on the country's request.
- Preparation of updated training program and work-plan based on the results of the workshop.
- Preparation of national training on pest surveillance for bacteria and phytoplasma.
- Consultation with Korean government on the financial support for participating countries to update or establish the PIS.
- Preparation of intending plan of establishment of customized PIS in participating countries in consultation with Korean experts and participating countries in details

Annex 1, Agenda of the workshop

Day-1 (Nov. 25, 2014)

Time	Session	Facilitator
09:00 – 09:30	Registration	
<i>Opening Session</i>		
09:30 - 09:45	Welcome remark	Dr. Yongfan Piao
09:45 - 10:00	Group photo and Coffee break	
<i>Session 1: Lecture(1)</i>		
10:00 - 12:00	- Necessity of database construction for biological resources and international trends.	Dr. Young-Mi Park
12:00 - 13:30	Lunch	
<i>Session 2: Country Report</i>		
13:30 – 15:00	- Past activities, current situation and future plan in pest information management in Cambodia, Lao PDR and Myanmar	NPCs of participating countries
15:20 – 17:00	- Past activities, current situation and future plan in pest information management in Nepal, Thailand and Viet Nam	
18:30 – 20:30	Welcome party	

Day-2 (Nov. 26, 2014)

Time	Session	Facilitator
<i>Session 3: Lecture(2)</i>		
09:00 – 12:00	- International protection of copyright and related rights	Dr. Young-Mi Park
<i>Session 4: Field Trip</i>		
13:00 – 17:00	Field trip (place will be confirmed)	NPC of Thailand

Day-3 (Nov. 27, 2014)

Time	Session	Facilitator
<i>Session 5: Lecture(3)</i>		
09:00 – 10:30	- Basic theory and understanding of database - Introduction of Pest Information database System (PIS)	Dr. Young-Mi Park
10:30-11:00	Coffee Break	
11:00- 12:30	- Practical use of application program for database information management	Dr. Young-Mi Park
12:30- 14:00	Lunch	
14:00-15:20	- Data management for Pest Information database Systems(PIS)	Dr. Young-Mi Park
15:20-15:40	Coffee Break	
15:40-17:00	- Program design and human resource management for efficient database operation	Dr. Young-Mi Park

Day-4 (Nov. 28, 2014)

Time	Session	Facilitator
<i>Session 6: Discussion Session</i>		
08:30- 09:30	- Current issues/challenges in pest information management and desirable management system for pest identification	Project Coordinator
09:30-10:30	- How to improve the pest PIS in the country and how to prepare the tentative country action plan for the improvement	NPCs
10:30-10:50	Coffee Break	
10:50-11:30	- Country presentation on the improvement and action plan	NPCs
<i>Session 7: Workshop Assessment</i>		
11:30-11:45	Questionnaires on Workshop	Project Coordinator
<i>Session 8: Closing</i>		
11:45 – 12:00	Closing remark	Dr. Yongfan Piao

Annex 2, List of participants

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