

Transfer of Technology in Chemical Contaminants Testing in the Region through Setting up of Methodologies and Human Resource Training

1. Introduction

At the 1st planning meeting, Marine Fisheries Research Department (MFRD) informed the Meeting that there would be four training activities under this project. The Activities were: Activity 1.2 “On-site training on heavy metal analysis”, Activity 2.1 “On-site training on pesticide residues analysis”, Activity 3.2 “On-site training on histamine analysis” and Activity 4.2 “Regional training course in seafood safety for laboratory personnel”. These training activities aimed to transfer technology in chemical contaminants testing in the region through setting up of methodologies and upgrading the technical capability in testing in the region. Member countries identified the training schedule and the countries that required training. The Meeting agreed that the country hosting the training would appoint an officer to assist MFRD’s trainer and ensure that all requirements including equipment, glassware and columns were available and adequate.

2. Training Courses conducted from 2005 to 2007:

Activity 1.2: On-site training on heavy metals

Activity 1.2 “On-site training on heavy metals” was successfully conducted in Indonesia from 1 to 8 July 2005 for a total of 12 participants from provincial laboratories in Indonesia, Myanmar from 7 to 11 November 2005 for a total of 13 participants from provincial laboratories in Myanmar and Ho Chi Minh, Vietnam from 28 August to 1 September 2006 for a total of 11 participants from Vietnam provincial laboratories. Two MFRD staff were the trainers for this course. The methods used for the training were MFRD’s in-house methods. Using the Atomic Absorption Spectrometry.

Activity 2.1: On-site training on pesticide residues analysis

MFRD together with a Japanese expert, Mr. Kazuki Maruyama, successfully conducted the training on pesticide residues analysis in MFRD from 6 to 15 June 2005 for a total of 8 participants from Indonesia, Malaysia, Myanmar, Philippines, Thailand and Vietnam. MFRD conducted on-site training in Malaysia from 27 November to 1 December 2006 for

12 Malaysia provincial officers. The multi-residues method used for the training was MFRD’s in-house method. Using the Gas Chromatography Mass Spectrometry (GC-MS).

Activity 3.2: On-site training on histamine analysis

Activity 3.2 “On-site training on histamine analysis” was successfully conducted in Jakarta, Indonesia from 16 to 20 May 2005 for a total of 14 participants from Indonesia provincial laboratories and Philippines from 25 to 29 September 2006 for 12 participants from Philippines governmental and private laboratories. An officer from Thailand’s DOF led the on-site training on the fluorometric method for histamine analysis and 2 MFRD staff led the HPLC method of histamine analysis.

Activity 4.2: Regional training course in seafood safety for laboratory personnel

Activity 4.2 “Regional training course in seafood safety for laboratory personnel” was successfully conducted in Thailand Fish Inspection and Quality Control Division (FIQD) from 15 to 19 August 2005 for 16 participants from Indonesia, Malaysia, Myanmar, Philippines, Thailand and Vietnam. A Japanese expert from Japan Food Research Laboratory (Tama branch), Ms Sasakura Naoko, was the advisor for the training course. The main trainers for this training were MFRD and FIQD staff. The training covered three methods namely, Chloramphenicol Analysis by ELISA, Chloramphenicol Analysis by LC/MS-MS and Nitrofurans Metabolites Analysis by LC/MS-MS.

The 2nd workshop was successfully conducted in Singapore from 2 to 5 October 2007. The Workshop was jointly conducted by MFRD and the National Agriculture, Forestry and Fisheries Quality Assurance Department (NAFIQAD). A total of 8 participants from Brunei, Cambodia, Laos, Indonesia, Malaysia, Philippines, Thailand and Vietnam attended the Workshop. Mr Nguyen Anh Dung from Vietnam shared his valuable experience and covered methods on Chloramphenicol, Nitrofurans and Malachite Green Analysis using Liquid-Chromatography Mass-Spectrometer-Mass Spectrometry (LC-MS/MS) during the Workshop.

3. Review of Training Program:

In view of the increased testing capability in member countries, it is envisaged that participating countries, especially those countries exporting to European Union, would host the training courses in their countries. This could also facilitate the sharing of their experiences in ensuring the reliability of their analyses, which would be beneficial to the other member countries.

Due to the stringent export requirements, the host countries could recommend experts from importing countries to conduct the on-site trainings. This could better help the exporting member countries to identify the technical problems and meet their requirements.