



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

## FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)

19926

CP  
taille

**REGIONAL NETWORK ON PESTICIDE  
FOR ASIA AND THE PACIFIC  
DP/RAS/88/031**

**THE FINAL SHORT REPORT OF CONTRACT NO.91/002  
BETWEEN THE UNIDO AND MINISTRY OF INDUSTRY  
OF INDONESIA**

**PREPARED FOR THE UNITED NATIONS INDUSTRIAL  
DEVELOPMENT ORGANIZATION**

**BASED ON THE CONTRACT NO.91/002  
FOR CO-ORDINATING ACTIVITIES IN THE FIELD OF INDUSTRIAL  
SAFETY AND EFFLUENT CONTROL LIMITATIONS**

**NOVEMBER 1992**

**THE FINAL SHORT REPORT  
OF CONTRACT No.91/002 PROJECT No.DP/RAS/88/031  
BETWEEN THE UNIDO AND MINISTRY OF INDUSTRY OF INDONESIA**

1. Background

As stated in the above mentioned contract and elaborated in the Terms of Reference of Contract that the National Coordinator should submit a short report regarding the RENPAP activities in the country. The effective starting date of contract since signed by UNIDO and Ministry of Industry on December 21, 1990 will be terminated on December 1992.

This report concern with RENPAP activities which had been carried out by Indonesia from Phase I to Phase III.

Progress of the RENPAP activities in Indonesia.

2. Progress of the project in Indonesia

Since Indonesia became a member of RENPAP, activities that has been carried out are as follows :

2.1. Phase I

2.1.1. Participation in Technical meeting

- (1) Experts Group meeting on Pesticide Data Collection System was held on 8 - 11 March, 1983 in Thailand.
- (2) Regional Consultation on Harmonization of Pesticides Registration Requirements was held on 24-29 October, 1983 in Philipine.
- (3) Regional Workshop on Formulation of Pesticides was held on 6-10 February, 1984 in India.
- (4) Experts Group Meeting on Quality control of Pesticides was held on 13-17 Mei 1984 in Bangladesh.
- (5) Regional Consultation on Trade and Tariff Consideration was held on 13-17 August, 1984 in Srilanka.

- (6) Regional Forum on Pesticide Toxicology was held on August 1985 in Phillipine.
- (7) Training Course in Pesticide Residue Analysis was held on 21 January - 5 February 1985 in Thailand.

#### 2.1.2. Participation in Non Technical Meeting

- (1) First Technical Advisory Committee Meeting was held on 8-12 November 1982 in Phillipine.
- (2) Second Technical Advisory Committee Meeting was held on 27 June - 1 July 1983
- (3) Tripartite Review Committee Meeting was held on 29 October 1983 in Phillipine.

#### 2.1.3. Providing Assistance to Visiting Consultants

- (1) Mr. K. Szabo visit to Indonesia to give recommendation in the field of R & D on manufacturing of pesticide.
- (2) Mr. N. K. Pellai visit to Indonesia to give recommendation in the field of R & D on pesticide formulation.

2.1.4. Sending Mr. Djumarman from Institute for Research and Development of Chemical Industry Ministry of Industry, to join a study tour on pesticide manufacture in Europe.

#### 2.2. Phase II.

In phase II the programme consist of group activities, individual training and consultancy.

##### 2.2.1. Group activities.

- (1) The first PMC meeting in Manila, held on 16 - 18 July 1986, was representated by Mrs. Sri

Ambar Suryosunarko Director of Agrochemical Industry.

- (2) Expert Consultation on Harmonization of Registration in Manila held on 1 - 5 December 1986 was represented by Mr. Mulyani Sukardi (Secretary of Pesticide Committee) and Mr. Erick F. Djohan (Pesticide Association) as observer.
- (3) Workshop on R & D Formulation in New Delhi held on 9 - 27 March 1987 was represented by Mr. Djumarman (Institute for R & D of Chemical Industry)
- (4) Expert Meeting on Data Collection in Pattaya held on 18 - 22 May 1987 was represented by Mr. Mulat Wibowo (Directorate of Agrochemical Industry).
- (5) The Second PMC Meeting in New Delhi on 30 November - 3 December 1987 was represented by Mrs. Sri Ambar Suryosunarko (Director of Agrochemical Industry) and Mr. Erick F. Djohan (Pesticide Association) as observer.
- (6) The Third PMC Meeting in Beijing on 18 - 20 October 1988 was represented by Mr. Djumarman (Institute for Research and Development of Chemical Industry), Ms. Harjati (Directorate of Agrochemical Industry) and Mr. Fatimano Mendrofa (Pesticide Association).
- (7) Organising Workshop on Environmental Aspect of Pesticide Production and Use on 28 November - 2 December 1988 was held in Jakarta attended by 20 participants and 45 observers.
- (8) Workshop on Pesticide Technology on 27 March - 14 April 1989 in India was represented by Mrs. Sri Pudji Rahayu (Institute for Research and Development of Chemical Industry).
- (9) CIPAC meeting in Greece on 16 - 22 Mei 1989 was represented by Mr. Djumarman (Institute for Research and Development of Chemical Industry).

(10) Workshop on Pesticide Formulation on 9-21 April 1990 in India was represented by Mrs. Rubiatun (Institute for Research and Development of Chemical Industry) and Ms. Sadiah Sophian (Directorate of Agrochemical Industry).

(11) Training under PEST Programme :

a. Pesticide Formulation Quality control in New Delhi on 12 October - 13 November 1987 was represented by Mr. Tri Widiyanto and Mrs. Rahayu Susilowati (Institute for R & D of Chemical Industry).

b. Pesticide Residue Analysis in Bangkok on 9 November - 11 December 1987 was represented by Mrs. Sri Sugiharti Slamet (Agency for Health Research & Development).

#### 2.2.2. Individual Training

(1) Training on Environmental Toxicology on 1 - 11 March 1988 in Washington was represented by Yanahar Murad (Agency for Health Research & Development).

(2) Study on Effluent Treatment in Baton Rouge New Orleans 4 - 11 March 1988 was represented by Mrs. Hendartini (Institute for Research & Development of Chemical Industry).

(3) Training on Quality Control of Pesticide Formulation in New Delhi on 1 November - 2 December 1988 was represented by Mr. Amirudin Josphial (Pesticide Committee).

(4) Training on Pesticide Residue Analysis in Bangkok on 9 January - 4 February 1989 was represented by Mr. Abdul Somad (Pesticide Committee) and Mr. Agus Wahyudi (Directorate of Agrochemical Industry).

(5) Industrial Training Effluent Control Waste Disposal on 7 - 27 July 1990 in USA and UK was represented by Ir. Hari Slamet Widodo.

2.2.3. Providing Assistance to Visiting Consultants.

Visit by Consultant on Pesticide Packaging, Mr.B.N. Chatterjee on 2 - 30 March 1988.

2.3. Phase III

In phase III the programme also consist of Group activities, Training and Consultancy.

2.3.1. Group activities

a. Group activities Implemented in Indonesia

(1) Workshop on Industrial Safety Related to Environmental Protection and Effluent Control in Pesticide Industry was held in Surabaya Indonesia on 10 -14 December 1990, attended by 12 participants from member countries, 5 observers from member countries, 37 observer from Indonesia, 1 representative from RENPAP Regional Office and 3 person from UNIDO (experts & officials).

The National Coordinator in cooperation with Directorate of Agrochemical Industry, Institute for Research and Development of Chemical Industry, Fertilizer Company PT.Petrokimia Gresik, Association of Indonesian Pesticide Producer and Assisted by the RENPAP Regional Coordinator as well as UNIDO official organized the workshop. The workshop's program and agenda had been thoroughly discussed with the Regional

Coordinator and UNIDO official before implementation, and was agreed to utilise local experts as speakers for the workshop. The evening program during the workshop was at the disposal of Association of Indonesian Pesticide Producer that organized it so well to ensure a memorable experience for each participant.

From the Indonesian point of view and experience, based on the number of attendance of Indonesian observers during a week long workshop that was always relatively high, the workshop was considered a success.

b. Group Activities Implemented in Other Member Country.

- (1) Workshop on Industrial Hygiene and Occupational Health Safety and Their Environmental Concerns held in Manila on 15-19 April 1991.

Indonesia was represented by Mr. Agus Wahyudi, from Directorate of Agrochemical Industry, Ministry of Industry.

- (2) Workshop on Bio/Botanical Pesticide Development on December 1991 in Bangkok.

Indonesia nominated Mr. Darjanto, an official of Ministry of Agriculture and currently a secretary of Pesticide Committee, Ministry of Agriculture. His name has been submitted to REMPAP Regional Coordinator. Unfortunately at the same week Mr. Daryanto had to attend a workshop on the Implementation of Prior Informed Consent for Decision Markers in Chemical Management in Kuala Lumpur. As a replacement Ms. Utari Damiati, also from Pesticide Committee was represented.



- (3) Workshop on Impurities In Technical Grade Pesticide Material held in Suweon, Korea on 12-17 October 1992, Indonesia submitted Ms. Siti Noer Hidayati from Institute of Research and Development of Chemical Industry and Ms. Upik Zahirna from Pesticide Committee. UNIDO accepted Ms. Siti Noer Hidayati to attend the workshop.
- (4) PMC meeting in New Delhi, held on 6-8 April 1992 was represented by Ms. Sri Ambar Suryosunarko, Director of Agrochemical Industry and Mr. Hari Slamet Widodo as observer.

#### 2.3.2. Individual Training

- (1) Training on Selection of Carrier/adjuvant Pesticide held in New Delhi on September 30, 1992. The former candidate was Ms. Rofienda from Institute of Research and development and Chemical Industry. Due to the health reason Ms. Rofienda was replaced by Ms. Emmy Ratnawati from the same Institution.
- (2) Training on Pesticide Regulatory control held in Manila on August 23, 1992 for three weeks was represented by Ms. Ida Masye Kandaw from Ministry of Trade. Fertilizer and Pesticide Authority was host the training.

#### 2.3.3. Consultancy

Job Description of Consultant in Pesticide Residue Analysis with Special Reference to Metabolite and Degradation Technology was formulated by representatives of Pesticide Committee (Ministry of Agriculture), Institute for Research and

Development of Chemical Industry and Directorate of Agrochemical Industry.

The above mentioned Job Description was submitted to Regional Coordinator and UNIDO. In return 2 CV's of proposed consultants was received.

Directorate for Plant Protection Ministry of Agriculture hosted the training for 3 weeks. Mr. Brian L. Mathews was selected to be an expert, he arrived to Jakarta on October 30, 1992 and had conduct the training from 2 - 20 November 1992. Thirtenth participants represented government institution and private surveyors who has related job with pesticide residue analysis were attended the training.

### 3. Information Network of RENPAP members.

- Indonesia has received Personal Computer set from UNIDO to enable the National Coordinator to participate in pesticide information network between the RENPAP members. The computer hardware has been installed in Data Processing center of Ministry of Industry, which is located in the same building with the office of National Coordinator.

Collected pesticide data has been inserted continuously and stored in a hard disk using Iphytrop program.

The reason in selecting Iphytrop because it has been used to solve plant protection problem for tropical areas.

- A quality publication RENPAP Gazette have been received regularly up to the latest edition of October 1991. Each package containing 50 copies.

In line with the wish of Regional Coordinator of RENPAP, Renpap Gazette have been distributed to Pesticide Association and pesticide industry. Appeal to pesticide industry to participate in publication of articles and advertising have been done but until now still no response.

4. Indonesia have been invited by UNIDO to participate on Expert Group Meeting to develop Integrated Safety Guidelines for Pesticide Formulation in Developing Countries. The meeting was in Brussel. Indonesia was represented by Mr. Agus Wahyudi from Directorate of Agrochemical Industry, Ministry of Industry. Directorate of Agrochemical Industry collected supporting data required for the meeting from pesticide formulator. From 22 formulators who received questionnaire only 11 responded returning the filled questionnaire.

UNIDO have been forwarded 16 copies of above guidelines. National Coordinator secretariate will distribute those guidelines to related institutions its concern to help pesticide industries in the introduction and use of cleaner technologis.

5. Indonesian Experts.

Since National Coordinator invited to submit data of Indonesian Experts, the National Coordinator office had distributed Personal History Statement Form to several institutions and universities. Personal History Statement Form of seven experts with various background have been collected. The list of experts are as belows :

List of Indonesian Experts

No.	Name	Back Ground	Specialization
1.	Dr. Hardjono Sastrohamidjojo	Master in Chemistry	Analysis of pesticide residue of ODS and OCS in soil, Water Vegetable and fish
2.	Dr. Julia Kartasubrata	Master in Chromatography	Chemical Analysis Technique Particularly Chromatography
3.	Made Sumatra MSc	Master in Environmental Science	Analytical Chemistry with Extensive experience in Environmental Aspects Related to the Production and use of Pesticide
4.	DR. Nani Djuangsih	Master in Biology	Bio Environmental Toxicology
5.	DR. Djoko Setiyanto.	Master of Residue Pesticide Analysis, Toxicology, Limology, Prostistology, Hydrology	Water Quality

6.	Sriwidodo	Chemical Engineering	Research and Development
7.	Umar Fahmi PhD.	Master of Public Health	Environmental Health/ Occupational Health

6. Other Activities Related to RENPAP

6.1. Project of National Pesticide Development Centre

In the mid of 1988 UNIDO mission lead by Ms. Tcheknavorian had visited Indonesia to investigate the possibility of granting project aid to Indonesia. Directorate General of Basic Chemicals Industry had proposed a project on Development Activity in the pesticide industry. A positive response was received and suggested that the project also cover National Pesticide Center with budget allocated in the amount US\$.1,300,000. To finalise the project document of National Pesticide Center on September to October 1990 UNIDO sent two consultants DR. Sushil K. Khetan (India) in the field of formulation technology and Mr. George M. Jett (USA) in the field of effluent control. The report of those consultants recommended that a suitable location will be at the Institute for R & D of Chemical Industry in Jakarta, and the proposed budget will be US\$.1,520,000 as UNIDO input and Rp.2,479,000,000 as government input in cash and in kind. Draft of Project Document have been delivered to Government of Indonesia for approval. The progress of the project is still being process by National Planning Board (BAPPENAS).

6.2. Pesticide Data Collection.

One of RENPAP programme is supporting data of pesticide related to domestic production and use of pesticide. Ms. Chutima Ratanasatien from Thailand visited Indonesia from 26 July - 2 August 1992 for collected pesticide data in Indonesia. Staff of Directorate for Agrochemical Industry assisted her to collected above data.