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THE FINAL REPORT

OF CONTRACT NO. 94/137P PROJECT NO. DP/RAS/93/061

BETWEEN

THE UNIDO

AND

DIRECTORATE OF CHEMICAL INDUSTRY

MINISTRY OF INDUSTRY AND TRADE

THE REPUBLIC OF INDONESIA

REGIONAL NETWORK OF PESTICIDE ON ASIA AND THE PACIFIC

(R E N P A P)

Jakarta, January, 1999

**THE FINAL REPORT
OF CONTRACT NO. 94/137P PROJECT NO. DP/RAS/93/061
BETWEEN THE UNIDO AND DIRECTORATE OF CHEMICAL INDUSTRY**

Summary

In considering with above-mentioned contract and elaborated in the Term of Reference of contract, Directorate of Basic Chemical Industry has been implemented several program, but also postpone other program such as outside training and hosting workshop. There was two even occur in the country that causes to delay and absence on program activities. The first was changed of organization structure of Ministry of Industry to be merged with Ministry of Trade to be Ministry of Industry and Trade, all unit Organization belong to Ministry has been changed already. Two times changed of the Directorate General that chemical industry belong their responsibility such as Directorate of Basic Chemical Industry has changed to be Directorate of Chemical Industry in 1996, and continued changed to be Directorate of Organic Chemical and Agrochemical in 1998. However, several personnel also had changed. The second is monetary crisis occur since the middle of the year 1997 continued with economy crisis that has been influenced to any sector of business included pesticide. Many industries has been reduced or closed their production and created unemployment problems. These all is affect to the contribution capability to the RENPAP program. Since the future program of RENPAP that has been directed as the result of Tree Partite Meeting held in New Delhi in 1997 have to find the self-fund resource between member's countries. National Coordinator, which his responsibility, has been proposed the project through the national budget mechanism, but in this year 1999/2000 the National Planing Agency has been rejected postponed due to the national social safety net is the priority.

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**CHAPTER I
BACKGROUND**

As stated in the above-mentioned contract and elaborated in the Term of Reference of contract, Directorate of Basic Chemical Industry should submit a final report to UNIDO regarding to the RENPAP activities in the country.

The effective starting date of contract since signed by UNIDO and Directorate of Basic Chemical Industry on January 15, 1995 will be terminated on January 1997.

Since Ministry of Industry has been merged with Ministry of Trade to be Ministry of Industry and Trade, all unit Organization belong to Ministry has been changed already. Two times changed of the Directorate General that chemical industry belong their responsibility such as Directorate of Basic Chemical Industry has changed to be Directorate of Chemical Industry in 1996, and continued changed to be Directorate of Organic Chemical and Agrochemical in 1998. However, several personnel also had changed. All those changes was affected to delayed of submitted the project report. Monetary crisis occurred since the middle of the year 1997 continued with economy crisis that has been influenced to any sector of business included pesticide. The utilization of the plant capacity has been decreased dramatically in about 30 to 40 percent. Many industries has been closed their production and created unemployment problems. These all is affect to the contribution capability to the RENPAP program. Several events of training and workshop that Indonesia had to follows was absent, while the government has no

budget to support fund resource to send the participant. Since the future program of RENPAP that has been directed as the result of Tree Partite Meeting held in New Delhi in 1997 have to find the self-fund resource between member's countries. National Coordinator, which his responsibility has been proposed the project through the national budget mechanism, but in this year 1999/2000 the National Planing Agency has been rejected due to the national social safety net is the priority.

This report concern with RENPAP activities, which has been carried out by Indonesia during extension of, phase III.

CHAPTER II

SCOPE OF CONTRACT

According to the Term of Reference, national coordinator has responsibility upon contract with UNIDO to facilitate smooth functioning of the various activities of the program. The following assistance throughout the lifetime of the project should includes:

- a) All necessary and administrative support within the country for UNIDO/RENPAAP personnel.
- b) Providing technical inputs when asked by UNIDO or Regional Coordinator.
- c) Providing necessary nomination forms for various activities within and outside the country for fellowships and training.
- d) Conducting of workshops/training courses/seminars as agreed in the work plan in topics assigned to the national coordinator.
- e) Providing training to fellows from member countries as requested.
- f) Participating in Project management Committee Meeting as agreed in the work plan.
- g) Assistance in producing reports and other materials needed for distribution to member countries.
- h) Raising Government requests for any project proposals emanating from the network activities.
- i) Providing assistance in finding national experts to be assigned to any activities.
- j) Providing pesticide data needed for establishment of pesticide data base.
- k) Providing review articles on topics of interest and calendar of events/meeting to regional coordinator.

CHAPTER III

PROBLEMS DESCRIPTION

During implementing the whole activities several problems has been found and have to be evaluated in the future such as:

- (a) The number of local formulators in the country are not many, so the short cycle transferred of knowledge found from the local expert who had been trained in the member countries through the RENPAP program.
- (b) Monetary crisis follows with economy crisis in the country cause to decreasing production and use of pesticide for domestic and export. These were created to disliked in participating on training and workshop to outside and local of pesticide formulator and manufacturer.
- (c) National Planing Agency has responsibility to select project proposal on the whole sectors. However, National Coordinator has no budget allocation for RENPAP contribution without approval by this institution. In the year 1999/2000, the proposal of RENPAP was rejected due to the highest priority have to be implement in the year.

CHAPTER IV

PROGRESS OF THE RENPAP ACTIVITIES IN INDONESIA

4.1. Integrated Program of FARM.

The Country Coordinating Committee (CCC) was officially established under the International Cooperation Bureau, Ministry of Agriculture, on 6 December 1994. Before this time, it was informally operating under leadership of UNDP and the Ministry of Forestry.

Several Country Coordinating Committee (CCC) FARM Meeting has been held as bellows:

- a) FARM CCC Meeting on 2 February 1995 at the Ministry of Agriculture, Jakarta was discussed the topic as follows :
 - Selection of the site area of FARM Program
 - Proposal of work plan of the sub program for 1995
 - FARM schedule activities.
- b) FARM CCC Meeting on 21 March 1995 at the office of the International Cooperation Bureau was discussed the topic as follows:
 - Preparing the material for "the Program Steering Committee" meeting on 23 - 25 May 1995
 - Discuss about the preparation of the "Roving Workshop and Planning Exercise" in Rembang District.
 - Report activities of the sub program.

c) CCC FARM Meeting on 3 May 1995 at Cinagara, Bogor was discussed the topic as follows :

- Preparation of the Roving Workshop in Rembang
- Discuss of FARM strategy in Indonesia and select the FARM site
- Review and complete FARM country report for China meeting

Presentation of Sub-Program workplan.

The participants of the meeting were from the National FARM secretariat and the chairman of CCC, head of Sub-Program and APAN, also the Chairman of Farmer Training Center Karya Nyata, Cinagara, Bogor.

d) CCC FARM Meeting on 16 August 1995 at the Research Center for Food Crops, Bogor was discussed the Topic as follows :

- Preparation of the training based on planning, monitoring and evaluation of farmer in Simalungun.
- General information of APAN Regional Program
- Review about FARM activities
- Explanation of the concept of farmer meeting in Rembang.

e) CCC FARM Meeting on 13 October 1995 at the office International Cooperation Bureau, MOA, was discussed the Topic as follows :

- Explanation of FARM Strategic Framework and the Indonesian response to that concept.
- Preparation of the Farmer to Farmer training in Rembang District.
- Report of the training based on the planning, monitoring and evaluation to farmer.
- Workplan of the Sub-Program for October 1995 - March 1996.

f) CCC FARM Meeting on 17 November 1995 at the Farmer Training Center Karya Nyata, Cinagara, Bogor was discussed the Topic of :

- FARM Program for October - December 1995.
- Discussion of the final draft of the FARM strategic and work plan.
- Explanation of the experience of the Farmer.

Roving Workshop and Planning Exercise.

The Roving Workshop and Planning Exercise Conducted by CCC FARM Indonesia on 17 - 19 April 1995 in Rembang, Central Java Province.

The participants in the Roving Workshop consist of the FARM Sub Programs, representatives of local agencies who are active in the field also played an important role. Participant came from research, extension, non-governmental organizations, farmer and international agencies.

The objectives of the workshop as follows:

- To observe on going integrated agriculture development activities in Rembang.
- To review on going development activities in Rembang to see if there is compatibility with the objectives of FARM.
- To discuss alternative strategies for implementation of FARM activities in collaboration with the local development agencies.
- To bring together coordinators from the FARM sub-Program to discusses work plan for 1995-1996.

The program steering committee (PSC) meeting of FARM conducted by the FARM Regional Program was held on 23 - 25 May 1995 in Beijing, China.

The participants of PSC meeting comprise representatives of FARM Countries, UNDP, FAO and UNIDO and observers form the two implementing agencies: the Asian Non Governmental Coalition for Agrarian Reform and Rural Development (ANGOC) and the India Government of Biotechnology. Chairman of CCC Mr. Sunaryo Husein was represented Indonesia to this PSC meeting. Indonesia FARM Project was closed by October 1997 with successful on

improving farmer society life in selected location as a model.

4.2. Pesticide Production and Information Program.

Activities under third phase RENPAP program as decided in the PMC meeting held in New Delhi India on October 6-8, 1993, several program was undertaking already. The program had been carried out were:

1) Country Group.

Mr. Agus Wahyudi, senior official of Directorate, represented the PMC meeting was held on October 6-8 in India for Basic Chemical Industry. The second PMC meeting was held in P.R. China was represented by Mrs. Bati Lestari, and the last PMC meeting held in New Delhi India was represented by Mrs. Sulistiyowati, official of the Environmental Impact Management Agency (EIMA)

As stated in the contract that national coordinator has obligation to propose program activities needed in the country. In the last meeting which was held in New Delhi, Indonesia has been proposed for future RENPAP activities with accordance to the priority needed that has been taken through coordination meeting within related institution and pesticide association as follows:

(a) Consultancy:

- Bio-pesticide formulation
- Registration of bio-botanical pesticides

(b) Training:

- Formulation of biological and botanical pesticides
- Waste disposal.

Activity for hosting workshop on Disposal of Pesticide Waste and Management of Effluent, where Indonesia has been appointed as Technical Coordinating Unit has reported on last PMC meeting. Preparation of the workshop is under cooperation with EIMA, which has training facility for

waste management and effluent treatment.

The schedule of the workshop will be in 1998.

2) Group Activities.

All group activities implemented in other member countries as bellows:

a) Training on Development of User and Environmental Friendly Pesticide Formulations and Quality Control.

Training was held in New Delhi India on 20-24 February 1995, Indonesia sent Mrs. Tuti Rahayu, staff of the Directorate for Basic Chemical Industry to represent this training and adopt her knowledge through practiced in the training. Training provided newer inputs such as making known not only technology but also quality control. Her knowledge is transferring to pesticide formulator by even that she give consultancy to people who work in the pesticide industry. However, her job related to-pesticide become more useable and more helpful for pesticide industry.

b) Training course on Bacillus Thuriengensis production and application.

Training was held on October 30 - November 9, 1995 in Wuhan P. R. China. Mr. Taufiq Bafadhah, staff of Directorate, represented Indonesia for Basic Chemical Industry.

That was the beginning that air ticket should provide by member's country. Although, found the difficulty for the Government to financed him, but by wishes form Pesticide Association Indonesia sent participant to this training. The consideration that not representative pesticide association to participated in this training was decided by them that more effective on transferring his knowledge if came from government official.

From the Indonesia point of view and experience, based on the number of attendance of Indonesia observers during a weeklong was always relative high. Knowledge and skill acquired from their attendance will be transferred to pesticide formulator.

c) Pesticide Data Collection.

One of the RENPAP program is supporting data of pesticide related to domestic production and use of pesticide.

Indonesia was submitted pesticide data until year 1991, but when Mrs. Chutima, senior data collector from Thailand had visited Indonesia, she brought data until year 1994. In the group meeting of pesticide data collection was held on September 6-10, 1994. Mr. Sutiono Ontorikso is data collector specialist was represented in this meeting.

So far Focal Point tried to collect economic data that suggested in the PMC meeting, but since limited data about price and marketing were not reported yet, several difficulties found in this case.

There was no counter data from member countries after they were collected. However that will become a barrier to cross transparency between each other.

d) Workshop on Residue Monitoring-Up grading of Laboratory Facilities for Monitoring Pollutants in Air, Soil & Waters.

Workshop was held on May 13-18, 1996, in Suweon, Republic of Korea. Mr. Wismo Budiono and Mr. Natsir represented Indonesia. Both of them from pesticide industry.

Proceeds of the workshop is expected to apply in their job and transferred to other laboratory facility.

e) Workshop on preservation of environment through proper control of effluents and disposal of wastes from pesticide production units.

Indonesia has been appointed in the PMC meeting to host a workshop on effluent control and disposal of wastes. The workshop was held in Jakarta Indonesia on 15 - 20 July 1996. Some of member countries of RENPAP sent their representative to present the workshop; they were Bangladesh, China, India, Indonesia, Korea, Myanmar, Nepal, Philippine, Thailand and Vietnam. How purpose of the workshop was individual training changed from participation 1 or many participants had followed 2 participants from Indonesia, from the pesticide industry.

Beside technical session, which presented by expert from UNIDO and local expert, participants also visited to central hazardous waste treatment plant (PPLI) at Ciulengsi, Bogor. This visit has been given newer knowledge of management waste industry. UNIDO experts DR. Sugavanam and DR. S.P. Dhua were interested to recommend UNIDO to arrange PPLI for the future individual training of member countries. This program has been realized by requisition of Mr. P.C. Rawals from India to visit PPLI, which purpose comparative study.

Indonesia as focal point of RENPAP has been facilitated the possibility, but Mr. P.C. Rawals has been cancelled due to particular reason in the same time. So long there is no news any more for confirmation of his program.

f) Workshop on Safe Application Technology of Pesticide.

Workshop was held in Kuala Lumpur, Malaysia, on September 23-28, 1996. Indonesia sent Mr. Irwan Kamal and Mr. Anton Awusi. They were expected to adopt newer technology on application of pesticide and will be insert to the future training program.

g) Workshop on Production of User and Environment Friendly Pesticide Formulation and Quality Control.

Workshop was held on 21 - 26 April 1997 in New Delhi, India. Mr. Hardoyo staff of the Directorate represented Indonesia for Chemical Industry and Mr. Pranowo from selected pesticide formulator. The workshop provided newer inputs about knowledge of environmental friendly pesticide formulation including quality control, packaging, waste management and laboratory test. Direct participation from pesticide formulator is expected to stimulate creation for developing quickly environmental friendly pesticide.

h) Training Workshop on Analysis of Pesticide Formulation

Training workshop was held on October 6-31, 1997 in Suweon, Republic of Korea. Pesticide Association was represented by Mr.

Kadarisman with his own cost, while one candidate Mr. Abdul Rochim staff of Directorate for Chemical Industry was sponsored by FAO/IAEA.

3) Evaluation mission by DR. Nag Bhusan Mandava.

On September 16-17 UNDP/UNIDO Consultant DR N.B. Mandava was visited Indonesia to evaluated the on going of RENPAP program and its existence for future operations.

CHAPTER V

ACTION PROGRAM

5.1. Pesticide application

The government of Indonesia has been issued a new regulation by October 1997 to prevent improper use of pesticide by certification of professional applicant and will be effective a year after issued. These action based upon suffers of problem lack of sufficient information in the farmer level

To implement of certification, the government will conduct training program for farmers with cooperation by Pesticide Company. But, with several considerations that these will be faced time lag and high cost of conduct, the regulation has been postponed. Consequently the government has to prepare tree category priority criteria of: the first pesticides use for farmer, the second pesticides use for professional application, and banned pesticides. The priority criteria has been followed under WHO Hazard classification.

5.2. Pesticide formulation

There were reported that some of formulation pesticide facilities may sub-standard from an environmental or occupational health and safety point of view. This can be a serious situation where the workers may suffer acute poisoning and long term effects, but could also be exposing other members of their family through their contaminated work cloths.

An essential training has been announced to these formulators with necessary education program. Member of the Philippine hosted the expert who had trained through RENPAP program, which was certified the local expert to trained, those formulators. That was a synergic transferred of knowledge between formulator each other. Beside of this the local government where plant is located has been

carried out an environmental audit of formulator facilities. The first result is a warning that the formulator manager has to implement national and international guidance of workers. The second step that the same conditions still occur, the plant operation is under control of the representative of Ministry of ManPower. The last step if the conditions still occur is closed their operation and phase out the industrial license.

5.3. Chemical information

Since Indonesia has been selected as a pilot country by United Training and Research (UNITAR) on the Capacity Building for National Information System for Chemical Management, the National Coordinator of RENPAP is also appointed to coordinate the task force team for established a chemical information system. In line with various aspects of development of the country, consumption of chemical substances included pesticides become indispensable in the human life. Inevitably, increasing usage of chemical substances might contribute to health and environmental problems at various stages during its life cycle from the raw material availability import or in country production, storage transportation, usage and disposal. For the time being control and regulation have been implemented through partial or sectoral cases in accordance with different responsibility and authority of the various institutions. Generally, all stages of life cycle of chemical substances have been regulated by various relevant institutions such as pesticide has to be registered in Pesticide Committee. But actually still has not yet addressed to the sound of management system as expected. Various types of data and information widely scattered come through different resources. Lack of common data based and availability of adequate information on chemicals and pesticide poisoning are the major problems in the absence of integrated system. Moreover many chemical substances information has found inadequate and mostly different reliable statistic data concerning certain chemicals. Considering with the above matters, an attempt is made to increase efficiency of dissemination chemicals information by printing materials, and completed it with an integrated system that has to be established through electronic data information network. Existing Data center of the Ministry of Industry and Trade has been facilitated an access of chemicals information through

electronic data information network. Existing Data center of the Ministry of Industry and Trade has been facilitated an access of chemicals information through the homepage with address: <http://indag.deprin.go.id/chemical> , fax modem number 6221-5265025 or for communication through e-mail : agus-w@pusdata.dprin.go.id. Detail instruction for connecting as described in attachment.

The member of international task force support by international agency UNITAR, WHO, IOMC, IRPTC are Argentina, Ghana, Slovenia, Tanzania, and Egypt. However, beside link to those agency this is also can communicate with other participants like US EPA, FAO, etc

This facility is also expected to link with RENPAP Regional Coordinator and all member countries. However Data collection program that coordinated by Thailand is expected continued in order to exchange information on pesticide. So far this activity did not stimulated suitably due member country were not gave information input.

CHAPTER VI

CONCLUSIONS

1. The national coordinator has been implemented necessary administrative and support within the country for UNIDO/RENPAF personnel in order to:
 - Providing nomination forms for various activities within and outside the country for fellowships and training.
 - Participating in Project management Committee Meeting as agreed in the work plan.
2. With consideration to national situation, conducting of workshops/training courses as agreed in the work plan has been postpone from year 1998 to expected year 2000 depending on situation post election.
3. Indonesia was absence for several outside training, because formulator were not gave response to nominate participants.
4. Indonesia still request to postpone its contribution cash payment in the annual budget 1999/2000, and expected to be on fiscal year 2000/2001 depend on proposal approval by National Planning Agency.