



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th 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 for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

RESTRICTED

DP/ID/SER.B/510
15 October 1985
ENGLISH

REGIONAL NETWORK FOR THE PRODUCTION, MARKETING
AND CONTROL OF PESTICIDES IN
ASIA AND THE PACIFIC

DP/RAS/82/006

Terminal report*

Prepared for the Governments
of the Member States of the Regional
Network (Afghanistan, Bangladesh, India,
Indonesia, Pakistan, Philippines, Republic of Korea,
Sri Lanka and Thailand) by the
United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme
in co-operation with the Food and Agriculture Organization
of the United Nations and the Economic and Social
Commission for Asia and the Pacific

Based on the work of Cecilia P. Gaston, regional co-ordinator

United Nations Industrial Development Organization
Vienna

*This document has been reproduced without formal editing.

V.85-32132
2486T

TABLE OF CONTENTS

	Page
Acknowledgements	i
Explanatory Notes	iii
I. Introduction	1
A. Project Background	1
B. Justification of the Project	2
C. Contributions	3
D. Monitoring and Evaluation Reports	3
II. The Project	5
A. Development Objectives	5
B. Immediate Objectives	5
C. Expected Outputs	5
D. Description of Inputs	6
E. Project Activities	7
F. Institutional Framework	9
III. Implementation of the Project	10
A. Establishment of Priority Areas and Workplan	10
B. Designation of Regional and National Coordinators	10
C. Rephasing Project Beyond December 1984	11
D. Project Activities	11
1. Harmonization of Pesticide Registration Requirements	11

2. Standardization of Quality Control and Pesticide Residues Methodologies	13
3. Production and Formulation of Pesticides	16
4. Pesticide Data Collection	20
5. Toxicology	21
6. Trade and Tariff Considerations	23
7. Documentation and Information Exchange	23
IV. Analysis of the Project	25
A. Implementation of Workplan	25
B. Achievements	27
C. Constraints and Proposed Solutions	30
V. Conclusions and General Recommendations	34

.....

Annexes

I. Workplan Adopted by Project Management Committee
II. Implementation Procedures
III. Summary of Meeting Recommendations
IV. Details of Activities Implemented
V. List of Reports and Publications
VI. List of Equipment

ACKNOWLEDGEMENTS

The Regional Coordinator wishes to express appreciation and gratitude for the encouragement and support extended by the following, without which it would not have been possible to achieve what the project has attained during the past 2 1/2 years:

.....The External Assistance Staff of NEDA, particularly, Director Romeo Reyes, Mr. Edwin Sangoyo, Mr. Vicente Salazar, and Mr. Eric Lopez;

.....The UNDP Resident Representative Office in Manila, especially Mr. Euan Smith, Mr. Ross Miley, Mr. Anders Frismark, Mrs. Lourdes Santos, and Mr. Romeo Seachon;

.....The UNIDO Office in Manila, most especially Mr. Ivan Pluhar, Mrs. Auring Escueta, Mr. Eric Bos, and Ms. Bethel Tassew;

.....The UNDP Resident Representative Offices and staff in Afghanistan, Bangladesh, Korea, India, Indonesia, Pakistan, Sri Lanka, and Thailand;

.....The UNIDO SIDFAs and Assistant SIDFAs in the Network member countries;

.....The UNIDO headquarters staff, especially Mr. K. Szabo, Mr. Panfil, Mr. Maung, Mr. Sugavanam, Ms. Alfarr of the Chemical Industries Division; and those from the Recruitment and Training Divisions;

.....The associated agencies - FAO, particularly Dr. A. Adam; and ESCAP, especially, Mr. Luc Maene;

.....The WHO staff, especially, Dr. John Copplestone;

.....The UNDP Regional Asia Bureau, especially Mr. Roy Morey;

.....GIFAP, especially the Asia Working Group

.....All the experts who served under the project and those who provided assistance through other projects, particularly Mr. Edwin Johnson, Mr. Roy Pavey and Dr. Michael Bates (ADB Consultants) and Dr. Jack Snelson;

.....The Fertilizer and Pesticide Authority, most especially Mr. Miguel Zosa who gave all the needed support to carry on our work as Regional Coordination Unit, and the staff for their patience and assistance;

.....and most especially the National Coordinators who gave their best to ensure the success of the project. To them we owe whatever achievements we had attained.

EXPLANATORY NOTES

The following abbreviations of organizations and groups are used in this report:

- RENPAF - Regional Network for Production, Marketing, and Control of Pesticides in Asia and the Pacific
- FPA - Fertilizer and Pesticide Authority
- NEDA - National Economic and Development Authority
- UNDP - United Nations Development Programme
- UNIDO - United Nations Industrial Development Organization
- FAO - Food and Agriculture Organization of the United Nations
- ESCAP - Economic and Social Commission for Asia and the Pacific
- WHO - World Health Organization
- ARSAP - Agricultural Requisite Scheme for Asia and the Pacific
- APPPC - Asia and Pacific Plant Protection Commission
- SPREP - South Pacific Regional Environmental Programme
- CIPAC - Collaborative International Pesticides Analytical Council
- AJAC - Association of Analytical Chemists
- GIFAP - International Group of National Associations of Pesticide Manufacturers
- TAC - Technical Advisory Committee
- PMC - Project Management Committee

I. INTRODUCTION

The report presents an analytical review of the project as a whole and describes the justification for the project; the steps taken to attain the objectives; the activities undertaken; and the achievements for the region. In addition, since it introduced the innovative concept of the Network scheme for regional projects, considerable discussions are focused on this modality, with the corresponding problems encountered and recommendations for their solutions.

A. Project Background

The Regional Network for Production, Marketing and Control of Pesticides in Asia and the Pacific (RENPAF), under the project DP/RAS/82/006 is an intercountry project consisting of a network of participating national institutions in the region with the Philippines through the Fertilizer and Pesticide Authority as the Regional Coordinating Unit. It is a multisectoral project executed by UNIDO in association with FAO and ESCAP. The project was approved in May 1982 with an initial budget of US \$500,000 for 2 1/2 years and the following countries participating through their designated National Coordination Units:

Bangladesh	-	Department of Agricultural Extension
India	-	Ministry of Fertilizers and Chemicals; Hindustan Insecticides Limited
Korea	-	Agricultural Chemicals Research Institute, Office of Rural Development.
Pakistan	-	Pakistan Agricultural Research Council
Sri Lanka	-	Ministry of Agricultural Development and Research; Central Agriculture Research Institute
Thailand	-	Department of Agriculture
Afghanistan	-	Afghanistan Fertilizer Company
Indonesia	-	Agency for Industrial Research and Development
Philippines	-	Fertilizer and Pesticide Authority

The institutional framework of the project is the first of its type in the United Nations system, where the concept of a Network of government institutions is introduced, with one of them, the Fertilizer & Pesticide Authority of the Philippines (FPA), assigned as the Regional Coordination Unit. The participating governments through the Project Management Committee (PMC) composed of National Coordinators, assume responsibility for decision-making, management and implementation of the project. The day-to-day management is delegated to the Regional Coordinator. UNDP provides the funds for external assistance to the Network, while UNIDO as the executing agency is responsible for delivery of inputs, such as experts, equipment, subcontracts, fellowships and technical backstopping. Having multisectoral implications, UNDP and ESCAP are associated with the project execution.

B. Justification for the Project

In most countries in Asia and the Pacific, agriculture is the backbone of the economy. Advancements in technology has brought about an increase in production and a corresponding dependence on vital inputs like pesticides. Unfortunately, developing countries in the region depend to a large extent on imports of pesticides from distant geographic points. However, an increasing amount of formulations of the final pesticide products are being produced among these countries. There exists in the region excellent potential for sources of adjuvants, solvents, inerts and other materials needed for local formulation.

Although considerable efforts have been exerted to enhance the development of the pesticide sector in developing countries of this region, such efforts have usually been hampered by a number of factors such as: lack of reliable supply and demand information; complexity of technologies; lack of facilities for quality assurance of products; ineffective or no regulatory practices; lack of basic technical information and data.

The increased use of pesticides resulted in a corresponding increase in awareness on the hazards involved in their use and the consequent need for effective control mechanisms in order to safeguard the health of the users and the safety of the environment.

In order to deal with the above issues, the participating governments endorsed the project document which established the Regional Network for Production, Marketing and Control of Pesticides in Asia and the Pacific. The Network was intended to enhance the development of the pesticide sector by strengthening technical cooperation among the member countries specifically in the areas of pesticide production, quality assurance, regulations and control.

C. Contributions

The total duration of the project was expected to be 2 1/2 years at a cost of US \$500,000. The in-kind contributions from the governments amounted to \$493,181.

In the last project budget (Mandatory Revision D) dated December, 1984, the revised UNDP input was \$552,394.

During the course of the project, the budget was revised two other times: on June 24, 1983 to \$500,032 (Mandatory Revision B) and on April 27, 1984 (Mandatory Revision C) to the same total of \$500,032, indicating actual breakdown of expenditures in 1983 and 1984.

D. Monitoring and Evaluation Reports

Three progress reports were submitted by the Regional Coordinator to the Project Management Committee during the Second TAC Meeting, the Tripartite Review Meeting, and the Third TAC Meeting. The reports which summarized the progress of project implementation, the problems encountered, and the proposed solutions, were discussed extensively during the meetings. In addition, two project evaluation reports were submitted to UNIDO headquarters as required.

A Tripartite Review Meeting was carried out at Baguio City on October 28, 1983 by the National Economic and Development Authority (NEDA), the Fertilizer and Pesticide Authority (Regional Coordinator), with the participation of UNDP, UNIDO, FAO, and WHO, the governments of India, Korea and Pakistan and observers from Malaysia, Thailand, Bangladesh.

The meeting was convened to review the progress of project implementation, identify problems and recommend solutions. Among the salient points discussed were: a) the roles of UNDP, UNIDO, and the Regional Coordinator; b) the problems with the objectives and outputs as stated in the original project document; c) the management functions of the Technical Advisory Committee (TAC); d) revision of certain items in the budget to sustain information dissemination activities.

The meeting was informed that UNDP regards all projects it is funding as government projects, with the assistance provided by the United Nations system representing support for a government undertaking. The countries participating in the project are responsible for its management through the Regional and National Coordinators. The meeting clarified that the TAC should be regarded as the governing or managing body, and the Regional Coordinator as effectively the day-to-day project manager who would have decision making powers when TAC is not in session. Accordingly, the TAC was named Project Management Committee (PMC) to reflect more accurately its role and responsibilities.

In view of questions raised over the objectives and outputs as presented by the project document, it was recommended that the document be revised and its scope reduced without introducing new factors. The revision should be undertaken jointly by the UNDP office in Manila, the UNIDO SIDFA and the project's Regional Coordinator, and the revised project document be presented by the Regional Coordinator to the participating governments for approval.

II. THE PROJECT

As mandated by the Tripartite Review Meeting, the project document was revised to reflect the following: a) revision of objectives, outputs and activities; b) change of status of the Technical Advisory Committee (TAC) to Project Management Committee (PMC); c) budget revision to provide allocations for publications. The revised project document outlines the objectives, outputs, inputs, activities, and institutional framework of the project.

A. Development Objectives

The programme is intended to strengthen and support the expansion and improvements of the pesticide industry including the production and control of pesticides and to facilitate the adaptation of appropriate and most economical technologies for production in the region.

B. Immediate Objectives

1. Survey pesticide demand and supply in the region
2. Improve the existing pesticide formulation technology in the individual countries through technical consultancy and training
3. Encourage promotion of local pesticide production with emphasis on utilizing available raw materials in the region
4. Develop common criteria for
 - (a) harmonization of regulations
 - (b) standardization of analytical methods for quality control and residue analysis
5. To disseminate technical information through the publication of periodic bulletins and other materials

C. Expected Outputs

At the end of the project period of December 1984, the following outputs would have been attained:

1. Annual Reports on:
 - (a) Pesticide supply and production in the region

- (b) Basic pesticide registration data
 - (c) Pesticide demand/consumption data
 - (d) Survey of comparative retail prices of key pesticide products
2. Recommendations on the utilization of locally-available carriers, surfactants, emulsifiers, solvents, etc. for pesticide formulations.
 3. Recommendations on the promotion of trade in the above materials among the member countries.
 4. Strengthened research and development facilities in the member countries in pesticide formulation technology.
 5. Agreed procedures and guidelines for harmonization of pesticide registration requirements in the region.
 6. Procedures on standardization of quality control and pesticide residue methodologies developed through collaborative laboratory studies.
 7. Regional documentation and information exchange system providing the network with:
 - (a) Quarterly Newsletter on project activities
 - (b) Technical bulletins on selected technical topics
 - (c) Reports on technical meetings
 - (d) Reports of consultants/fellows
 8. Training:
 - 30 experts trained through 3 workshops and
 - 22 experts trained through fellowships and study tours (average duration of 1 month) in the field of pesticide control, formulation, residue analysis and toxicology

D. Description of Inputs

1. UNDP Inputs

The project document provided for total UNDP inputs of \$500,000 which consisted of the following:

- a. Experts - international consultants as well as those from member countries limited to short-term assignments and selected on the basis of knowledge and expertise.

BL 11-50 \$187,200.

- b. Mission Costs - covering estimated travel cost for UNDP, UNIDO and associated agencies' participation in Network meetings.
BL 16 \$25,000
- c. Regional Coordination Unit Staff - consists of support extended to the Regional Coordination unit for administrative, technical and professional staff.
BL 13 \$34,000
- d. Training - consists of individual fellowships and study tours organized by the Network.
BL 31 \$116,400
- e. Meetings, Workshops and Seminars- organized to provide group training
BL 32 \$93,000
- f. Equipment
Expendable equipment- miscellaneous office supplies, for documentation

Non-expendable equipment - photo copier, word processor, printer
BL 40 \$40,000
- g. Miscellaneous - BL 50 \$4,400

2. Government Inputs in Kind .

The participating governments provided certain in-kind contributions from the existing resources and facilities of their national institutes. These were in the form of local counterpart experts, support staff, equipment, etc. In some cases, land, buildings and facilities for research were also provided. Total government inputs were estimated at \$493,181.

E. Proposed Activities

The revised project document described the following activities which were deemed necessary to achieve the expected outputs and objectives:

- 1. A network of participating national institutions concerned with technical and/or regulatory aspects of pesticides will be established by the project. The activities will be implemented by a Regional Coordinator located in the host country and National Coordinators who will be appointed by their respective governments to act as the national focal points of the network. The management and technical

direction of the project will be provided by the Project Management Committee consisting of the Regional and National Coordinators and representatives from UNDP, UNIDO, ESCAP and FAO. The Committee will meet annually. During the first meeting, the areas of cooperation will be defined and the work plan prepared accordingly. Subsequent meetings will review the progress and revise the work plan if needed.

2. It may be necessary to form sub-networks for activities, such as: harmonization of pesticide registration requirements, standardization of analytical methods for pesticide residues and quality control of pesticides, pesticide manufacturing and formulation technology, etc. The need to set up such sub-networks will be decided by the Project Management Committee.
3. To carry out the survey of demand and supply of pesticides in the region, the project will organize a meeting of experts which will be instructed in the methodologies for collection, collation, and reporting of the relevant data by a short-term international consultant. The participants will subsequently undertake demand/supply surveys in their respective countries and will submit the collected information to the Regional Coordination Unit for the compilation of a regional report.
4. To improve the pesticide formulation technology the Network will provide consultancies to member countries upon request. In addition, a week long workshop will be organized to exchange information and make recommendations on the utilization of locally available carriers, surfactants, emulsifiers and solvents. Several study tours and fellowships will be offered in this area principally for study within the region. The workshop and study tours will include technicians from industry who, in this way, will be encouraged to use local raw materials in the production of pesticides.
5. A short-term consultant will visit the member countries to assess the current regulatory practices as they conform to international criteria. Subsequently, a meeting of experts will be held with the participation of the consultant who will present his report. On the basis of this information the meeting will then discuss the possibility of accepting international procedures and guidelines adaptable to regional conditions. Agreement on this matter will provide necessary conditions for the harmonization throughout the region of requirements in the field of bioefficacy tests, toxicological data, residue tolerances and environmental protection.
6. An Expert Meeting will be organized to identify laboratory facilities for quality control and residue analysis, discuss the methods used in quality control and consider the possibility of standardization. Study tours will be organized for officials of government laboratories to observe the facilities and the methodologies used in the region. A separate workshop will be conducted in the field of residue analysis for laboratory technicians.

7. Technical support for both the quality control and residue analysis workshops will be provided by short-term international consultants.
8. The project will set up a documentation and information unit for the purpose of collecting technical information from the region and disseminating it to the members of the Network. It will publish technical bulletins on selected topics, a quarterly Newsletter on project activities, reports on technical meetings and consultants reports.

F. Institutional Framework

The institutional framework of the project as described by the revised project document shall consist of a network of participating institutions in the region with a small regional nucleus coordinated by assigned staff of the government hosting the Regional Coordination Unit. Each participating country shall nominate one of its existing national institutes to coordinate network activities locally.

The original project document assigns the responsibility to formulate work programme and evaluate the progress of the work of the Network to the Technical Advisory Committee which consists of experts from the national institutes. The revised project document changed the Technical Advisory Committee to the Project Management committee, to reflect its management functions.

The Project Management Committee will be composed of the Regional and National Coordinators or experts holding senior positions in the national institutes of the network nominated by the governments concerned. UNIDO, UNDP, ESCAP and FAO will be ex-officio members and will send their representatives at project expense to participate in the deliberations of the Committee. Other concerned international agencies may send representatives at their own expenses. The Committee will formulate the work programme, evaluate the progress of work of the network, advise on technical matters concerning the project and decide management questions regarding implementation. The Committee will meet once a year and will elect its own chairman.

III. IMPLEMENTATION OF THE PROJECT

Although the project document estimated the starting date for implementation to be 1 June 1982, it was actually only in November, 1982 that the project was initiated with the convening of the First Technical Advisory Committee Meeting. The activities and accomplishments of the project are assessed against the workplan adopted by the Technical Advisory Committee and the revised project document.

A. Establishment of Priority Areas and Work Plan

The First TAC Meeting identified the priority areas for regional cooperation and prepared the workplan, budget and procedures for the implementation of project activities for 1983-1984. Training programmes, consultancy services and group meetings were planned along the following priority subjects: a) Production, formulation and marketing of pesticides; b) Standardization of quality control and analytical methods; c) Harmonization of registration requirements; d) Toxicology; e) Trade and tariff considerations ; f) Data collection and information exchange.

Realizing that the network scheme was a new modality in the United Nations system, the meeting agreed to adopt implementation procedures to facilitate project implementation. The meeting also stressed the need to designate National Coordinators to act as focal points for the Network.

B. Designation of Regional and National Coordinators

Subsequently, the following National Coordinators were designated by their respective governments:

Bangladesh	- Dalil Uddin Khan
India	- Ram Hamsagar (1983) ; Shyamal Ghosh (1984 to present)
Korea	- Young-Sun Park
Pakistan	- Umar Khan Baloch
Sri Lanka	- Nallini de Alwis
Thailand	- Riksh Syamanonda

Afghanistan - Ghulam Sakhi Akbhari

Indonesia - R. B. Suhartono

Philippines - Cecilia P. Gaston (Regional Coordinator)

C. Rephasing Project beyond December, 1984

The Third TAC Meeting in September, 1984 noted that due to lack of time, two of the group activities in the workplan could not be completed by the end of the project period of December 31, 1984, and recommended that steps be taken to allow these activities to be carried out using available project funds. In implementation of the recommendations of the Third TAC Meeting, the project was rephased, with the corresponding budget revision (Mandatory Revision D), to allow these activities to be organized in 1985 using remaining project funds. These activities, which included the Regional Workshop on Residue Analysis, the Regional Forum on Pesticide Toxicology and the short-term consultancies, were completed by May 1985.

D. Project Activities

The activities described below were undertaken during the duration of the project following the workplan adopted by the Project Management Committee. Implementation of these activities enabled the attainment of outputs and objectives as described in the revised project document. The activities are presented and discussed according to priority subject areas identified by the Project Management Committee.

1. Harmonization of Pesticide Registration Requirements

a. Consultancy Services (Objective 4a, Output 5)

B. B. Watts (New Zealand) was engaged for 2 1/2 months in 1983 to visit the nine member countries under the following terms of reference for each country:

- Encourage interest and involvement in the harmonization of pesticide registration requirements in the region;
- Review administrative procedures for registration in each country;
- Collect copies of current or proposed legislations;
- Determine current registration status in each country;
- Recommend a regional harmonization scheme for discussion during the October meeting

In addition, for the regional mission,

- Provide an analysis of the current status of registration in the region for presentation during the October meeting;
- Assist the government of Sri Lanka in setting up a pesticide registration scheme.

The findings, conclusions and recommendations of the consultant are embodied in detailed individual country reports and a regional report which was used as background document for the Regional Consultation on Harmonization of Pesticide Registration Requirements held in October, 1983.

- Outputs :
- (1) Individual country reports which reviewed current legislation, registration scheme, data requirements and recommended improvements and revisions in line with the overall objective of harmonization of pesticide registration requirements in the region.
 - (2) Summary report which outlined the similarities and differences in legislations, registration procedures and data requirements among the countries and identified areas of harmonization. The report recommended adoption by the countries, of the FAO and WHO guidelines on data requirements and the proposed registration scheme which was embodied in the report of the Second Government Consultation on Harmonization of Pesticide Registration Requirements. (Rome, 1982). The report of the consultant and its findings and recommendations was used as the basis for discussions during the Regional Consultation on Harmonization of Pesticide Registration Requirements.
 - (3) A pesticide registration scheme was set up in Sri Lanka following the proposed FAO model scheme for registration.

B. B. Watts (New Zealand) also visited the Philippines in 1985 and reviewed its bioefficacy and labelling guidelines and recommended improvements in procedures in line with the objective of harmonization of data requirements. Accordingly, the Philippine government revised its guidelines on efficacy trials and labelling for immediate implementation.

In compliance with the terms of reference for the consultant, the Aide Memoire for the Second Regional Consultation on Harmonization of Pesticide Registration Requirements for the next project was prepared.

- Outputs :
- (1) Revised guidelines on bioefficacy trials and on labelling for use in the Philippines and eventually in the region.
 - (2) Aide Memoire for Second Regional Consultation on Harmonization of Registration Requirements for the next project.

b. Regional Consultation on Harmonization of Pesticide
Registration Requirements (October 24 - 29, 1983; Philippines)
(Objective 4a; Output 5)

The consultation reviewed the status of registration in the region and noted the existence of major similarities and differences in the registration scheme among member countries.

In general, the meeting accepted the concept of harmonization of registration requirements and agreed in principle to adopt as far as practicable the guidelines and procedures recommended by FAO and WHO on registration. The meeting recommended that countries agree to consider modifying, where necessary, their legislation and/or registration procedures to achieve greater degree of harmonization, and in particular to require: 1) all pesticides to be registered before they can be sold without the need to gazette or list same before the registration process can be undertaken; and 2) the use of the WHO Classification of Pesticides by Hazard for labelling of pesticides. The meeting noted that the label should be considered a vital part of registration and that color coding should be harmonized and be based on hazard rather than type of use.

The meeting recommended that provision be made for further activities to promote harmonization in specific areas like: a) labelling/packaging guidelines; b) toxicological data requirements and evaluations; c) the development of agreed protocols for bio-efficacy trials among countries with similar climatic and pest conditions; d) the adoption of harmonized pre-harvest intervals after pesticide application on crops; and e) the generation and submission of data for consideration by the Joint Meeting on Pesticide Residues and Codex in order that maximum residue limits be set on crops exported by countries in the region.

Output : Acceptance by member countries of the concept of harmonization of registration requirements and agreement in principle to adopt as far as practicable the recommended FAO and WHO procedures and guidelines on registration data requirements and procedures.

2. Standardization of Quality Control and Pesticide Residue Methodologies

a. Consultancy Services

R. Amin (Bangladesh) was recruited to assist the government of Afghanistan under the following terms of references:

- Review existing pesticide formulations in use in the country;
- Review current facilities and methodologies for quality control, as well as available chemicals, standards, etc.;

- Assist in training chemists and technicians in utilizing available facilities for quality control;
- Suggest improvements on current quality control methods and if need arises, assist in setting up new laboratory facilities.

The consultant reported that the laboratory facilities for quality control of pesticides were still being developed under a separate UNDP/FAO project, with target of completion by 1985. There was no laboratory therefore, capable of undertaking any work on quality control. Nevertheless, auxiliary matters relating to quality control were reviewed to draw attention to the government of a number of guidelines which could be useful for those who would be involved in quality control work. The adoption of FAO and WHO specifications whenever available was recommended, particularly in checking quality of imports. It was also recommended that international specifications for packaging and bulk labelling be followed. The technicians were introduced to the CIPAC methods of analysis and the publications available on other methods. The report noted the dire need for long-term training of personnel involved in quality control of pesticides.

Output : Consultant's report with recommendations on training of laboratory personnel; use of FAO and WHO specifications for pesticides and CIPAC methods of analysis; suggestions on efficient utilization of laboratory for quality control purposes.

b. **Experts Group Meeting on Quality Control of Pesticides**
(May 13 - 17, 1984, Bangladesh) (Objective 4b ; Output 6)

The quality control measures, practices and methodologies among member countries of the region were evaluated and the facilities and equipment available, identified. The meeting recognized the importance of quality control measures in ensuring that pesticides applied are effective and safe to use and agreed to strengthen cooperation among member countries of the Network by working towards adoption of common standard specifications and methods of analysis. As a step towards this goal, the participating countries recommended that collaborative trials for identified analytical methods be undertaken.

Recognizing the need for specialized training on latest methods developed on formulation analysis and noting that hardly any training programmes are conducted for laboratory personnel, the meeting recommended that the Network organize workshops aimed at upgrading the knowledge and techniques of analytical laboratory personnel.

The following problems which affected the implementation of quality control measures were identified: a) the difficulty of obtaining some required chemicals; b) difficulty in procuring spare parts and components of instruments; c) unavailability of analytical standards. To resolve these problems, the meeting suggested that the Network explore the possibility of setting up a special fund to be utilized for urgent procurement of chemicals, reagents, spare parts, and recommended that an analytical standards bank for the region be set up. The support of FAO, WHO, UNIDO, GIFAP, and the US EPA was solicited.

In general, the participating countries agreed to adopt whenever possible, FAO and WHO specifications for pesticides and utilize CIPAC methods of analysis. It was observed however that FAO specifications and CIPAC methods are not available for pesticides considered important in the region and therefore recommended that the Network urge FAO and CIPAC to give due consideration to the above.

- Outputs: (1) Identification of procedures for standardization of quality control methodologies and adoption of standard specifications.
- (2) Steps taken such as conducting collaborative trials and participation in collaborative studies conducted by CIPAC, and review of national specifications to conform as far as practicable with FAO and WHO specifications for pesticides would eventually lead to attainment of objectives on standardization of quality control procedures.

c. Study Tour on Quality Control (Objective 4b; Output 8)

The study tour organized for five fellows (two from Bangladesh, one each from India, Indonesia and Thailand) enabled them to observe laboratory facilities and to train on quality control methodologies and procedures among the other countries in the Network. The study tour included visits to government laboratories and industry-run quality control facilities in pesticide plants. The report of Dr. Pillai (India) which compared quality control measures, methods and equipment used, practices and available facilities in the region, was used as one of the background documents for the Experts Group Meeting on Quality Control of Pesticides. The recommendations in his report were discussed and incorporated into the meeting report.

Output : Five fellows trained on current practices and methods, equipment, facilities available for quality control of pesticides.

d. Regional Workshop on Residue Analysis
(Jan. 21 - Feb. 5, 1985 , Thailand) (Objective 4b; Output 6)

The workshop provided intensive training on basic principles and analytical methods for residue analysis. The first five days were devoted to background lectures on general techniques and analytical methods for specific compounds. The last six days were allotted to actual laboratory exercises. Residues of the following compounds were analyzed, using the methods suggested by the experts:

Endosulfan/vinclozolin by GLC-ECD
Diazinon/Malathion/Monocrotophos by GLC-FPD
Butachlor by specialized GLC-AFID method
Paraquat by specialized spectrophotometric method
Carbaryl /Carbendazim by HPLC
Dithiocarbamates, in particular, mancozeb by head space analysis

The samples used were vegetables obtained from market sources.

During the lecture sessions, laboratory facilities, methods of analysis and training needs relative to residue analysis in the respective countries were discussed. Among the problems identified were; lack of stabilized voltage supply; problems of obtaining gases and solvents of sufficient purity for chromatographic purposes; problems of maintenance of instruments; need for training on specialized equipment.

The participants found the course very useful, the lecturers very informative; the laboratory exercises very practical and suggested that a similar course be conducted at least once every two years, of a longer duration and more limited number of participants.

Output : Basic background materials on residue analysis prepared by the lecturers, and methods of analysis for the compounds analyzed during the laboratory exercises. Following these would lead to eventual standardization of methodologies on residue analysis.

3. Production and Formulation of Pesticides

a. Consultancy Services

R & D Pesticide Manufacture (Objective 3; Output 2)

K.Szabo (USA) was engaged for 2 months as consultant on R & D Pesticide Manufacture for Indonesia and Pakistan. Among his terms

of reference are : to provide guidance in utilization of local resources for manufacture of technical grade material; and to review current status of research and development in the field of manufacture of pesticide technical material.

The detailed reports for each country discuss the status of research and development work, the problems relative to this, and the directions to be taken and recommendations for strengthening facilities for such purpose. The consultant also noted availability, sometimes to a large excess of chemical raw materials in Pakistan which could be gainfully used in the production of additional chlorinated pesticides. Products such as phenoxy herbicides, copper oxychloride, and dicofol offer unique opportunity for product diversification and fuller utilization of raw materials locally available. The consultant likewise encouraged Indonesia to concentrate on utilization of local raw materials and processing of natural products such as revitalization of rotenone production and production of microbial pesticide agents.

R & D Formulation (Objective 2; Outputs 2 and 4)

N. K. Pillai (India) completed a two - month mission to Indonesia and Bangladesh for the purpose of updating the respective governments on current trends on formulation development; assist in development and utilization of local materials for formulation; assist in development of special formulations like ULV's, flowable concentrates, etc. Among his recommendations for future research and development work, which were based on findings of types of materials locally available for formulation of pesticides, included systematic testing of these indigenous materials as to their stability as carriers; development of process technology for preparation of precipitated silica; development of technology for manufacture of emulsifiers and surface active agents; and development of new formulations.

S.H.Khetan (India) provided technical assistance to the government of Korea (May 1983) in the field of formulation technology, particularly on the new slow release formulations. While in Korea, he visited various formulation plants and advised on research and development activities needed to shift to the newer formulations.

Consultant on Packing and Handling

M. Kayastha (India) visited Afghanistan to provide technical assistance in the field of packing and handling of

pesticide formulated products; carry out detailed discussions with officials involved in pesticide imports, sale, distribution and use; and visit warehouses, retail outlets and manufacturers of packaging materials.

The consultant reported that no formal guidelines have been drafted and issued for safe handling of pesticides during importations, storage, distribution and use. There are no packaging facilities for pesticides available in the country at present. His recommendations included suggestions for the government to consider appointment of a working group to draft the guidelines for safe and proper use of pesticides, including safety measures and treatment of poisoning cases, and to review the import procedures and lay down details in the tender regarding specifications, packing details, and other requirements like test report, inspection, etc. He also recommended that feasibility and techno-economic studies be carried out for packaging materials like proper cartons and plastic bags for solid packing and glass or aluminum containers for liquid packings.

Output : Individual reports to requesting countries outlining directions to be taken relative to research and development work on pesticide production, packaging and handling as well as identification of available raw materials for pesticide production and recommendations on their utilization.

b. Training on R & D Formulation (Objective 2; Output 8)

Four fellows from Bangladesh, Indonesia, Pakistan and Korea were trained in India on various aspects of formulation technology. The training programme included discussions and demonstrations whenever feasible, on formulation development; quality control procedures; development of formulations such as wettable powders, emulsifiable concentrates, granular formulations, and dust formulations. The programme consisted of lectures and actual visits to various formulation plants where discussions and demonstrations were carried out.

Output : Four fellows trained on formulation technology.

c. Study Tour on Pesticide Manufacture (Objective 2; Output 8)

Three fellows were awarded a study tour each aimed at providing them with the opportunity to observe and evaluate current trends in pesticide manufacture in other countries. Of these, two, Djumarnan (Indonesia) and Shin Yong Hwa (Korea) went to Europe and the U.S.A. A. R. Panicker (India) visited selected member countries in the region. The study tours proved useful to all fellows since they gained a general overview of research and development activities in pesticide manufacture which could be used in their respective research programmes.

The main observation of A. R. Panicker who visited the member countries was that there was hardly any effort exerted at developing and utilizing available raw materials in their countries for formulation and manufacture of pesticides. However, he noted the substantial scope available in the region to develop the pesticide industry toward utilization of local materials.

Output : Three fellows trained and provided opportunities for discussions and exchange of information on pesticide manufacture.

d. Regional Workshop on Formulation of Pesticides
(Feb. 6-10, 1984, India) (Objective 3; Output 2)

The workshop consisted of technical sessions dealing with various aspects of pesticide formulation technology. Local experts assisted in evaluation, understanding and enhancing local developments and capabilities within the region.

The following technical papers were presented by experts and discussed:

- (1) Development of Formulation with Special Reference to their Uses and Application
- (2) Selection of Adjuvants
- (3) Pesticide Formulation Design
- (4) Issues Concerning Establishment of Formulation Plants
- (5) Controlled Release Granules; Flowable/Wettable Powder Formulations
- (6) Surfactants and Pesticide Formulations
- (7) Pesticide Formulation: Engineering Aspects
- (8) Occupational Health Hazards
- (9) Packaging of Formulations

The workshop focused attention on the necessity of developing or strengthening research and development institutions in the region, dealing with research on pesticide formulations and recommended that these institutions be strengthened by making available assistance through international organizations. Intercountry cooperation should be facilitated by the respective governments.

Realizing the value of utilizing local raw materials, the workshop recommended that surveys be conducted to assess their availability and quality and to encourage their utilization within the region.

Output : Recommendations on means of strengthening research and development facilities in the member countries on pesticide formulation technology.

4. Pesticide Data Collection

a. Experts Group Meeting on Pesticide Data Collection System (March 8-11, 1983 , Thailand) (Objective 1; Outputs 1a and 1d)

The meeting designed the mechanism and workplan for data collection on the production and supply of pesticides in the region. The meeting agreed that data be submitted to the Regional Coordination Unit in June of every year. The Regional Coordination Unit should disseminate the consolidated data once a year, providing information on each country separately and a summary for the region.

The meeting agreed to implement the scheme and collect baseline data on production, supply and retail prices of selected key pesticides for 1980-1982.

The meeting recognized that the data on demand, distribution and consumption of pesticides in the region are essential for securing adequate supply and recommended that the TAC take appropriate steps for collection of such data on priority basis.

b. Study Tour on Data Collection (Objective 1 ; Outputs 1a, 1d, 8)

L. Teodoro of the Philippines who was designated by the Regional Coordination Unit as the Regional Data Collector, observed data collection methods, data processing and report presentation in several countries in Europe and the U.S.A. The experience acquired was applied to the regional data collection scheme and the summary data and report resulted.

- Outputs:
- (1) Computer print-outs of data on importations of technical materials and finished products on a per product basis, both by individual and regional summary, were disseminated in December 1984.
 - (2) Production capacities vs. actual production data were also incorporated in the same print-outs.

(3) Comparative retail prices of fifteen most commonly used pesticides in the region were also submitted.

(4) Report of data collection published in a special issue of Renpaf Gazette

5. Toxicology

a. Regional Forum on Pesticide Toxicology (April 22 - 26, 1985, Philippines) (Objective 4a; Output 5)

The forum was convened to provide a basis for regional harmonization of pesticide toxicological requirements; examine elements of toxicological assessments and implications for regulatory control; and consider the need for appropriate safety measures in the use of pesticides. The forum focused on methods of toxicological assessments rather than on methodology for generation of toxicological data.

It consisted of brief lectures by experts followed by group discussions. The topics dealt with the use of toxicological data for registration; classification of pesticides; mode of action; acute, subacute and longterm toxicity studies; studies on human exposure; and education in safe use of pesticides.

The meeting recognized the need for training on toxicological assessments and recommended that a course on this subject be organized within the region; that the Regional Coordinator should arrange a study on manpower needs for toxicological assessment; and that exchanges between staff of regulatory authorities in the Network and their counterparts in developed countries should be encouraged as a means of sharing practical experience on pesticide registration.

The meeting endorsed the recommendations on toxicological data requirements of the Regional Consultation on Pesticide Registration Requirements held in October 1983 and urged countries who have not done so to adopt these requirements. The forum further stressed the need to harmonize labelling practices in the region and recommended that the Regional Coordinator arrange a study on current labelling guidelines used by member countries, which will collate and analyze elements that could be harmonized successfully.

- Outputs:
- (1) Recommendations on harmonization of toxicological data requirements, assessment procedures and labelling of pesticides.
 - (2) Proceedings of the meeting, containing all lectures presented and highlight of discussions, will be published by WHO in addition to a report.

b. Consultancy Services

Dr. Qadri (India) was engaged for two months in Korea to provide information and training on : schemes for toxicological assessment; test animal maintenance; acute and subacute toxicity testing methodology; evaluation of fish toxicity studies. The terms of reference also asked for suggestions on how to improve and fully utilize existing toxicological laboratory facilities and to recommend methods of developing laboratory management skills.

Accordingly, the programme was carried out at the Agricultural Chemicals Research Institute in Suweon from September to November 1984.

c. Study Tours and Fellowships in Toxicology (Output 8)

One fellow from Pakistan (U.K.Baloch) was granted a study tour to observe the work of important institutions engaged in toxicological work in Europe and the U.S.A. This was designed to enable the fellow to recommend to participating countries strategies for adoption of final policies on toxicological issues related to registration of pesticides and eventually to draft a project proposal for submission to UNDP for establishment of such facilities in Pakistan as coordinator of the proposed sub-network on toxicology

The sub-network was envisioned to cover activities related to training, research and regulations. Some of these recommendations were submitted for discussion during the Regional Forum on Pesticide Toxicology and were adopted, although the sub-network was not established as originally proposed.

Two other fellows. Raffiq Khan (Pakistan) and Chutima Suthisatabut (Thailand), were trained in Japan on toxicology and quality control or formulation, respectively.

In addition, A. Ordas (Philippines) and Hyun Rae Lee (Korea) participated in a two-week training course on toxicology in Hyderabad, India. Mr. Lee also proceeded to Yugoslavia for a more intensive course on pesticide toxicology.

Output : Five fellows trained on toxicology, quality control and formulation.

6. Trade and Tariff Considerations

a. Study Tour on Trade and Tariff (Output 3)

G.S. Sandhu (India) reviewed current tariff structures and trade practices on pesticides among countries in the Network visited. The fellow prepared a comprehensive report which served as the background document during the Regional Consultation on Trade and Tariff Considerations.

b. Regional Consultation on Trade and Tariff Considerations (Output 3)

The consultation reviewed tariff structures and trade practices on pesticides among the participating countries and identified tariff and non-tariff barriers which affected trade.

A disparity in tariff structure was evident in the region but these were dependent on policies of individual governments. Import tariffs were not the key constraints in promotion of trade of pesticides but rather the non-tariff barriers such as registration requirements; lack of reliable information on supply and demand of pesticides; and financial and economic constraints.

Accordingly, the meeting supported the activities on harmonization of pesticide registration requirements and data collection and information exchange.

The meeting recommended that greater trade in pesticides among the countries of the region must be encouraged and all efforts should be made to remove the constraints that hamper possible enhanced trade.

Output : Recommendations on how to overcome impediments to intra-regional trade on pesticides, particularly the non-tariff barriers which were identified.

7. Documentation and Information Exchange

a. Fellowships on Information Exchange (Objective 5; Outputs 7 and 8)

L. Isobal and L. Teodoro (Philippines) observed the data collection and information exchange scheme set up by the ARSAP programme of ESCAP and were trained on how to organize a similar one for the Network.

Output : Two fellows were trained for a total of one month in Thailand on how to set up data collection and information scheme for the

Network, based at the Regional Coordination Unit in Manila. As a result of the training, the Renpaf Gazette was published. Two issues of 300 copies each were distributed to interested institutions and a special issue on data collection will come out soon.

b. Consultancy on Data Processing

J. Snellgrove (Australia) was recruited to undertake a mission on data processing in Thailand and assess existing pesticide data available, methods of collection, sourcing and dissemination; assess manpower and equipment used in data management; develop a system for data storage and retrieval; assist in actual processing of data.

The detailed report of the consultant presents the findings, limitations, and recommendations on how the information system could be implemented using available facilities and resources in Thailand.

Output : Recommendations on how to implement an information system and start work on data processing in Thailand, utilizing a mini-computer system.

IV. ANALYSIS OF THE PROJECT

The Regional Network for Production, Marketing and Control of Pesticides in Asia and the Pacific (RENPAF) is the only project of its type in the region. Its importance not only for the member countries but also for the region as a whole has been recognized by other regional and international organizations like APPPC, SPREP, CIPAC, GIFAP, AOAC, and the UN specialized agencies notably FAO, WHO, and ESCAP. In two and one-half years, RENPAF has established a name for itself and has generated interest internationally.

A. Implementation of Workplan

All the activities in the workplan adopted by the Project Management Committee were successfully implemented except for a few man-months of consultancy services and study tours, which were actually initiated but could not be carried out due to some technicalities.

The activities completed as compared to the original targets in the workplan are summarized below.

1. Fellowships and Study Tours

Target	:	25 m/m	;	22 experts trained
Completed	:	20.2 m/m	;	21 experts trained

The unattained targets consisted of : a) 3 m/m Study Tour on Packing and Handling planned for Afghanistan, which could not be organized since the government did not submit nominees when requested; and b) shortened duration of study tours, in particular for Indonesia and the Philippines, upon the request of the participants.

2. Consultancy Services

Target	:	20 m/m
Completed	:	17 m/m

The 3 m/m unaccomplished target consisted of consultancy on instrumentation for 1 m/m each for Pakistan, Philippines, and Sri Lanka. The consultant was identified and recruitment process initiated, but

unfortunately he could not obtain release from his government for the period requested.

3. Group Meetings/ Workshops/ Consultations

Target : 9 meetings ; 30 participants trained
Completed : 10 meetings ; 80 participants trained

Of these meetings, workshops and consultations, 7 were technical meetings in which about 55 participants from different countries attended. The 7 technical meetings are:

- Experts Group Meeting on Pesticide Data Collection System (March 8 - 11, 1983 ; Thailand)
- Regional Consultation on Harmonization of Pesticide Registration Requirements (October 24 - 29, 1983; Philippines)
- Regional Workshop on Formulation of Pesticides (February 6 - 10, 1984 ; India)
- Experts Group Meeting on Quality Control of Pesticides (May 13 - 17, 1984 ; Bangladesh)
- Regional Consultation on Trade and Tariff Considerations (August 13 - 17, 1984 ; Sri Lanka)
- Regional Workshop on Residue Analysis (January 21 - February 5, 1985 ; Thailand)
- Regional Forum on Pesticide Toxicology (April 22 - 26, 1985 ; Philippines)

It was noted that most benefits were derived from the group meetings, workshops, consultations, which provided the proper forum for exchange of technical know-how among the participants, on subjects of common interest to them. Such meetings resulted in concrete, practical recommendations with implications of commitment for implementation, which were necessary to attain the long-term over-all objectives of the project.

The consultancies proved beneficial especially to the individual requesting countries which expressed appreciation for the technical assistance provided. The recommendations of the consultants in their reports, if carried out, would lead to improvements in research and development directions in the field of pesticide formulation and manufacture; adoption of harmonized registration procedures and guidelines; development of standard procedures for quality control purposes; etc. All these specific recommendations addressed to

individual countries would contribute greatly to the attainment of project objectives for the region.

On study tours, however, there is a need to evaluate the value of one-month trips to five or six cities, particularly in Europe and the U.S.A., in the light of actual accomplishments and benefits to the country and the region. The objectives of such study tours should be studied more carefully and the tour organized so as to achieve such objectives more effectively.

On the other hand, study tours such as those organized within the region on manufacturing (Panicker), trade and tariff issues (Sandhu) and quality control (Pillai) can be very useful, especially if background documents for future meetings are prepared as in the cases cited.

Fellowships involving participation in organized technical courses, like those offered at Hyderabad, India and Yugoslavia, proved very useful since considerable training was achieved.

B. Achievements

During the duration of the project, notable achievements have been attained in fulfillment of the objectives as outlined in the revised project document.

1. The following outputs have been achieved:

- (a) The scheme for regular collection of data on pesticide supply and production has been developed and adopted. As a result, computer print-outs on pesticide supply and production, including comparative retail prices on most commonly used pesticides in the region, were distributed in December, 1984. The print-outs consisted of data for the period 1980 to 1982. In addition, a consolidated report will be published as a special issue of the Renpaf Gazette.
(Objective 1 ; Outputs 1a and 1d)
- (b) Consultancy reports on research and development of formulation, manufacturing of pesticides, and related subjects, outlined specific recommendations for strengthening facilities for such purposes in the countries visited, like Indonesia (Szabo and Pillai); Bangladesh (Pillai); Pakistan (Szabo); Korea (Khetan); and Afghanistan (Kayastha).
(Objective 2 ; Outputs 2 and 4)
- (c) Collaborative trials designed to standardize methods of analysis have been started among participating countries, in an effort to arrive at standard procedures for quality control of pesticides. In addition, some countries, such as Thailand,

Philippines. Bangladesh and Korea have participated and continue to participate in collaborative studies conducted by CIPAC, in implementation of recommendations of the Experts Group Meeting on Quality Control of Pesticides.
(Objective 4b ; Output 6)

- (d) Network member countries are seriously considering adopting national standard specifications based on FAO and WHO specifications and using CIPAC and AOAC methods of analysis. These are positive steps toward standardization of quality control methodologies.
(Objective 4b ; Output 6)
- (e) The module for a two-week intensive training course on residue analysis, designed to train laboratory technicians on the use of basic instruments and methodologies for residue analysis, was successfully implemented. Actual laboratory exercises on specific methods of analysis were performed by the participants. The training course if conducted on a regular basis would introduce practical methods of residue analysis for use in the participating countries of the Network. This will lead to standardization of methods of residue analysis for the region.
(Objective 4b ; Output 6)
- (f) Countries which need to do so, have started to work on amendments to their legislations or registration procedures in line with the objectives of harmonization of pesticide registration requirements in the region. Sri Lanka has started to implement its registration law as a result of a consultancy mission under the project (Watts). The Philippines is currently revising its registration scheme to conform with the recommendations of the Regional Consultation on Harmonization of Pesticide Registration Requirements. Included in the revisions are proposals on efficacy and labelling for use in the region.
(Objective 4a ; Output 5)
- (g) Recommendations on harmonization of toxicological data requirements, assessment procedures, and labelling were adopted in the Regional Forum on Pesticide Toxicology. Guidelines on labelling requirements will be prepared accordingly. This will lead to harmonization of registration procedures in the region.
(Objective 4a ; Output 5)
- (h) Two issues of the Renpaf Gazette (300 copies each) were published and distributed to Network member countries and other interested parties. A special issue on data collection is under publication. (500 copies)
(Objective 5 ; Output 7a)

- (i) Reports of the nine meetings, workshops, and consultations were distributed to all participants and interested international organizations. In addition, reports of consultants were submitted to the countries concerned.
(Objective 5 ; Output 7c and 7d)
- (j) 21 experts were trained through various fellowships and study tours on formulation, manufacture, quality control, residue analysis, and trade and tariff issues. In addition, 55 experts were trained through participation in technical meetings, workshops, and consultations.
(Output 8)
- (k) Recommendations were adopted on how to overcome impediments to intra-regional trade on pesticides, particularly non-tariff barriers which were identified by the Regional Consultation on Trade and Tariff Considerations.
(Output 3)

In summary, all the outputs have been attained, except for outputs 1b and 1c. The Experts Group Meeting on Pesticide Data Collection System recognized that the data on demand, distribution and consumption are essential for securing adequate supply, however it noted the difficulties of obtaining such information under the present conditions and recommended that a follow-up meeting for such purpose be organized. The report on registration data has not been initiated under the project.

2. In addition to the above, the following accomplishments have been noted:

- (a) Participation in the project has stimulated interest in international activities aimed at standardization of procedures, such as the CIPAC collaborative studies, which the Network has supported. Several countries like Bangladesh, Korea, Philippines, and Thailand are participating in these CIPAC collaborative studies, particularly aimed at establishing methods of analysis for pesticides commonly used in the region. Through the Network, CIPAC has become aware of the needs of the region and has taken positive steps to consider our priorities.
- (b) The existence of the Network and its potential as the only project of its type in the region of Asia and the Pacific has been recognized by international organizations such as CIPAC, AOAC, GIFAP, and the UN agencies and all these have encouraged and supported the activities of the Network.
- (c) Through constant meetings and exchange of communications among national coordinating units, the foundation for the regional

network system has been firmly established. A greater amount of interest has been generated among member countries who are willing to continue activities already initiated by the project, towards attainment of long-term objectives.

C. Constraints and Proposed Solutions

In addition to the inherent constraints due to the complex nature of the project, i.e. the very broad and long-range objectives; the variety of areas covered in the field of pesticides requiring different types of technical expertise; the varying levels of interest and degree of development in the field of pesticides, of the nine participating countries, other problems arose basically due to the introduction into the project of the new concept of institutional framework which was applied for the first time in a United Nations inter-country project.

These problems, which affected the efficiency of implementation of the project can be summarized as follows: 1) organizational and institutional constraints; 2) implementation procedures; 3) inadequate coordination between the Regional Coordination Unit and the executing agency.

1. Organizational and Institutional Constraints

The original project document did not present a clear description of the institutional framework of the Network. Because of this, problems arose primarily due to the confusion of responsibilities and roles between the executing agency and the Regional and National Coordinators. The Tripartite Review Meeting clarified these issues which were incorporated in the revised project document. Despite these clarifications, however, the project continued to be hampered by the same problems, emanating most often from the confusion in interpretation of management and execution functions, so that unilateral decisions were taken by some branches of the executing agency without referral to the Project Management Committee. At the same time, the Regional Coordinator may have thread into execution functions which belonged to the executing agency.

Further, on the organizational aspects, the National Coordination Units are the focal points of the project and have the responsibility to coordinate all activities on pesticides within the individual member countries. The important role that they play can therefore not be overemphasized. It was noted that the efficiency of the

project was gravely hampered in countries where no National Coordination Units and corresponding National Coordinators have been assigned or when the assignment came mid-stream during the project period. It was also noted that in the choice of participants to meetings or nominees for study tours and fellowships, the tendency of National Coordinators was to choose from their own unit even if the responsibilities in the country belonged to another ministry.

Proposed Solutions

To resolve these issues, it is recommended that the institutional framework of the project be clearly described and responsibilities and roles of the Regional Coordinator, National Coordinator, executing agency and associated agencies be specified in detail. Management functions must be defined explicitly and in like manner the scope of execution be clarified so there remain no doubts as to the division of responsibilities. Once defined and clarified, all concerned should function within their limitations.

The recommendation of the Philippine delegation during the Third TAC Meeting in Indonesia on replacing current execution by a UN agency to governmental execution in association with UN agencies, should be taken into serious consideration for future projects of this modality. Although the recommendation was not implemented for the new phase of this project, it would be worthwhile for UNDP to study this proposal extensively and to try it out in some future UNDP inter-country project. It is important, however, that detailed guidelines be prepared beforehand and discussed with the countries involved. It should be noted that the recommendation seeks to eliminate the perennial problems which result from difficulties in delineating management from execution functions by incorporating both under the host government authority, while preserving technical backstopping functions to associated UN agencies.

The strategic role of the National Coordination Unit and the National Coordinator must be stressed for projects of this modality. It is therefore recommended that they be designated immediately upon implementation of the project. The National Coordinator should have the authority to coordinate all activities on pesticides within the country and therefore be able to exercise discretion in the choice of delegates to meetings. It is advisable that the National Coordinator be an official of the government who has the authority to decide in behalf of the government and ensure implementation within his own country, of recommendations agreed upon by the Project Management Committee during its meetings and other meetings convened by the Network.

The key to the efficient implementation of project activities lies in the coordination within the country between the government coordinating body, the UNIDO Senior Industrial Field Adviser (SIDFA), the UNDP Resident Representative Office, and the National Coordinator. It is strongly recommended that such a coordination be developed and encouraged in the individual member countries.

2. Implementation Procedures

The initial problems encountered involved implementation procedures for obtaining timely clearances for study tours and acceptance of consultants. These were resolved during the Second TAC Meeting and for some time the implementation went on smoothly until for some unexplained reason, other procedures were imposed by the executing agency without prior notification to the Project Management Committee, through the Regional Coordinator.

Regarding procedures for acceptance of nominees to meetings or workshops, the Project Management Committee in its third meeting in Indonesia stressed the fact that the responsibility of choice should be in the hands of the National Coordinators and since the executing agency has no alternative but to accept the single nominee, the current procedures which place this responsibility on the executing agency have to be reconsidered since these procedures have caused undue delays in arrival of delegates, and in some instances, even non-attendance to important meetings. It should be noted that for some governments, this acceptance is required before an official can even apply for government clearances.

In other cases, the delays in issuance of travel authorizations by the executing agency have been due to the late submission of nominations from the governments. These were mainly due, in turn, to the difficulties of processing nominations within individual countries, especially within a short time frame.

Proposed Solutions

To resolve the problems on implementation procedures, it is recommended that the Project Management Committee should adopt a set of procedures in consultation with UNDP and executing agency staff involved in recruitment of consultants and processing of fellowships and study tours. Once adopted, these implementation procedures must be adhered to by all concerned. Any changes or alterations should first be cleared by the Project Management Committee before implementation.

In consideration of the proposals of the Project Management Committee in its third meeting in Indonesia, it is recommended that in order to facilitate timely implementation of project activities, the local UNDP offices should be allowed to accept and issue the travel authorizations upon receipt of the nomination from the government. It is further recommended that the Aide Memoire and other invitations be prepared and issued well in advance to allow the governments enough time to process nominations and grant clearances for the travel of their representatives.

V. CONCLUSIONS AND RECOMMENDATIONS

The project DP/RAS/82/006 established the Regional Network for the Production, Marketing and Control of Pesticides in Asia and the Pacific in 1982, in answer to the need expressed by the participating countries to enhance the development of certain segments of the pesticide sector, by strengthening technical cooperation and exchange of expertise among member countries in the areas of production, quality assurance, regulations and control of pesticides. In line with the over-all objectives, the participating countries sought to lay the foundations for a Network scheme, which consisted of national institutions involved either in pesticide production or regulations, and in just 2 1/2 years, the project has succeeded in firmly establishing this framework. In the process, however, problems were encountered, but despite these, the Network succeeded in reaping numerous accomplishments for the individual countries and the region. Summarized below are the conclusions and recommendations described in earlier sections of the report.

A. Objectives and Outputs

The objectives and outputs as presented by the original project document were too broad and impossible to attain within the two year project period, and therefore, the Tripartite Review Meeting revised the project document to reflect, among others, limitations in scope of the objectives and outputs. On the basis of this revised project document, it can be concluded that the project has been a success and that the immediate objectives and targeted outputs have been attained to the extent possible within the limited period of 2 1/2 years.

As explained earlier, two of the expected outputs could not be attained, i.e, the a) annual report on demand and consumption of pesticides, and b) report on registration data.

1. The Experts Group Meeting on Pesticide Data Collection System held in March 1983, recognized the need to collect data on demand and consumption, however, it also noted the difficulty in doing so under current situations in individual countries.

RECOMMENDATION

..... Recognizing that the data on demand, consumption and distribution of pesticides are essential for securing adequate supply;

..... Noting, however, the difficulties to carry out collection of such data under current situations existing in individual countries;

..... It is recommended that a follow-up meeting be organized under the new project to discuss the problems involved and arrive at a scheme for collection of data on demand, consumption and distribution, in addition to the supply and production data currently collected.

..... Further noting the discussions and conclusions on the subject, of the Experts Group Meeting on Pesticide Data Collection System;

..... It is further recommended that the recommendations of the Experts Group Meeting on Pesticide Data Collection System regarding collection of data on demand, consumption and distribution, be given considerable attention.

2. The data on registration information could not be collated since the format has not been finalized and agreed upon. The need for such information was stressed in the technical meetings on registration and toxicology.

RECOMMENDATION

..... Recognizing the need for exchange of information on registration matters among the participating countries;

..... Noting that such information can be obtained without much difficulty;

..... It is recommended that the format for collection of information on registration matters be prepared and circulated by the Regional Coordination Unit for approval of member countries.

..... It is further recommended that steps towards collection of such information be undertaken immediately by the Network.

B. Activities

In implementation of the workplan adopted by the Project Management Committee, several activities were carried out on the following priority subjects: a) harmonization of pesticide registration requirements; b)

standardization of quality control and residue analysis methodologies; c) data collection; d) production and formulation of pesticides; e) toxicology; f) information exchange and documentation. Detailed descriptions of these activities are presented in earlier sections and summarized in Annex IV.

In general, it can be concluded that all the activities in the workplan have been successfully completed, except for a few man-months of consultancy services (3 m/m) and study tours (3 m/m), which were actually initiated but could not be carried out due to technicalities described earlier.

1. Of the activities undertaken, most benefits were derived from the group meetings, workshops, and consultations, which provided the proper forum for exchange of technical know-how among the experts, on subjects of common interest to them. In all cases, the meetings resulted in concrete, practical recommendations which carried with them implications of commitments for the governments to carry out in their own countries. If implemented as expected, these would lead to attainment of the long-term objectives of the Network. Details of these recommendations for follow-up action within individual countries, are summarized in Annex III.

RECOMMENDATION

..... Recognizing that the activities were so designed with continuity in mind and require regular follow up to produce the annual outputs desired;

..... Noting that the recommendations of the various technical meetings included the request for countries to implement certain activities on a regular basis;

..... It is recommended that the Network members continue to implement within their countries, the recommendations of all meetings, especially the activities which call for annual outputs and continued action, so that they become part of the normal activities of the countries, thereby ensuring that Network activities continue even after assistance for the project ceases.

2. Consultancies likewise proved beneficial especially to the individual requesting countries since they provided in-depth analysis and proposals for solutions to problems encountered. Most of the countries that requested for individual consultancies on various fields have started to implement the recommendations embodied in the reports of the respective consultants.

RECOMMENDATION

..... Noting that the reports of consultants to individual countries on the specific subject areas covered contain valuable recommendations for improvement of facilities or for conformity to existing standards;

..... Aware of the benefits derived by countries in implementation of such recommendations;

..... Further noting that some countries have not yet acted on the recommendations of the consultant that visited them;

..... It is recommended that countries that have not done so, take steps to consider, study, and implement, as far as practicable, the recommendations of the consultant that completed a mission in their country on the subject requested, in order to derive full benefits from the mission.

3. Doubts were expressed on the value of study tours conducted as observation trips to five or six cities in one month's time, especially those in Europe and the U.S.A. It is recognized that the level of development in these countries is far advanced and that considerable amount of training and information can be obtained from such study tours. However, it should be realized that in certain fields, as in manufacturing, there are certain confidential information and processes which cannot be divulged. The effectiveness of study tours of this type would depend therefore, to a large extent, on the subject under study and the manner it is organized.

RECOMMENDATION

..... Realizing the importance of individual training especially in the complex field of pesticides;

..... Recognizing the value of fellowships and study tours if properly organized and executed;

..... Noting the number of study tours of one month duration to several cities, including those in Europe and the U.S.A. merely for observation purposes;

..... It is recommended that the study tours be more carefully organized and their objectives clearly defined so as to derive more benefits not only for the individual country but also for the region.

4. There were hardly any training or fellowships offered for participation in organized courses on technical subjects relative to

pesticides. These short-term courses (three to six months duration) could be very informative and can provide more in-depth training.

RECOMMENDATION

..... Noting the value accrued from participation in organized short-term courses relative to pesticides, and the limited number of such courses available;

..... It is recommended that the Network explore the possibility of collaborating with international institutes in organizing short-term courses on various topics involving pesticides. It is also recommended that the Regional Coordination Unit conduct a survey on existing courses of such nature for use by the Network in planning future activities.

C. TCDC Concept

Although the project had considerable accomplishments, it has been noted that the concept of TCDC (Technical Cooperation among Developing Countries) has been applied only to a limited extent. The project incorporated the concept only in so far as responsibilities in hosting meetings or workshops, or in organizing study tours for other members. It was only India that actually organized a short course for trainees for the region, at their own cost. One of the reasons for this, could be the lack of expertise on the highly specialized field of pesticides, and the limitations of resources of individual countries.

RECOMMENDATION

..... Realizing that a Network system can work more effectively through mutual cooperation and assistance on a TCDC basis among the member countries;

..... Noting that the TCDC concept has not been applied to the full extent possible under the project;

..... It is recommended that the Network explore the possibility of applying the TCDC concept as far as practicable, for its future activities.

D. Institutional Framework

The project introduced the innovative concept of an institutional framework which was applied for the first time in a United Nations

inter-country project. It consists of a network of participating national institutions in the region with a small regional nucleus coordinated by assigned staff of the government hosting the Regional Coordination Unit. Each participating country has designated one of its national institutes as the National Coordination Unit to act as focal point for the Network.

The responsibility to formulate policies and work programme, evaluate progress, and manage the Network is assigned to the Project Management Committee which is composed of the Regional and National Coordinators, with representatives from UNDP, UNIDO, FAO and ESCAP as ex-officio members. The day-to-day management of the Network is delegated to the Regional Coordinator, while the functions of execution are assigned to UNIDO as the executing agency. Having multisectoral activities, other UN agencies provide assistance to the executing agency in execution of the project.

Since the institutional framework was introduced for the first time, with no corresponding detailed guidelines, problems arose which affected the implementation of the project. These problems, which were discussed extensively in an earlier section of the report, consisted of the following : a) organizational and institutional matters; b) implementation procedures; c) relationship between the Regional Coordination Unit and the executing agency.

1. From an analysis of the issues involved, it can be concluded that all the problems encountered emanated from the confusion in responsibilities and roles of the executing agency and the Regional and National Coordinators, and the lack of detailed guidelines on implementation procedures. Since the UN system has expressed interest in this new modality, it is important that these issues be resolved before applying the new institutional framework into other inter-country projects.

RECOMMENDATION

..... Recognizing that almost all the problems encountered were due to the new institutional framework introduced into the project;

..... Realizing that the basic problem was the confusion in roles and responsibilities of the executing agency and the Regional Coordinator;

..... Noting the urgent need to clarify these issues;

..... It is recommended that the institutional framework of the project be clearly described and responsibilities and roles of the Regional

Coordinator, National Coordinator, executing and associated agencies be specified in detail. Management functions must be identified and in like manner the scope of execution should be defined explicitly, so that there remain no doubts as to the division of responsibilities. Once defined and clarified, all should function within their limitations.

..... It is further recommended that the proposal of the Philippine delegation during the Third TAC Meeting in Indonesia, on replacing the current execution by a UN agency to governmental execution in association with UN agencies, should be taken into serious consideration for future UN inter-country projects of this modality. It should be noted that the recommendation seeks to eliminate the perennial problems which result from the difficulties in delineating management from execution functions, by incorporating both under the host government authority, while preserving technical backstopping functions to the associated UN agencies.

..... Further recognizing that the key to the efficient implementation of project activities is the coordination within the country, of the government coordinating body, the National Coordinator, the UNDP Resident Representative Office, and the UNIDO SIDFA;

..... Noting the efficiency of project implementation in countries that have succeeded in doing so;

..... It is strongly recommended that such coordination be encouraged and developed in the individual member countries that have not yet done so.

2. The important role of the National Coordinator as the focal point of the project, cannot be overemphasized. The success of the project in the individual countries depend to a large extent on the efforts exerted by the National Coordinator to implement the activities of the project.

RECOMMENDATION

..... Recognizing the strategic role of the National Coordinator in the Network scheme;

..... Further noting that the success of the Network depends to a large extent on the efforts of the National Coordinator;

..... It is strongly recommended that for future projects of this modality, the National Coordinator should be carefully chosen and immediately appointed. It is suggested that the National Coordinator be an official of the government who has the authority to decide in behalf of the government and ensure implementation within his country of the recommendations of the Network.

3. The problems related to implementation procedures can be traced to the lack of detailed guidelines acceptable to all involved in the management and execution of the project. In order to ensure timely implementation of project activities, it is important that these issues be resolved to the satisfaction of all concerned.

RECOMMENDATION

..... Recognizing the importance of timely implementation of project activities;

..... Noting the delays in implementation of project activities due to lack of understanding of prescribed procedures;

..... Further noting that the implementation procedures adopted by the Project Management Committee failed to consider requirements of some UN agencies;

..... It is recommended that the Project Management Committee should study once again the current implementation procedures and adopt a new set of procedures in consultation with UNDP, UNIDO, and the associated agencies, particularly their respective divisions involved in recruitment of consultants, processing of fellowships and study tours, and acceptance of nominees for group meetings. Once adopted, these implementation procedures must be adhered to by all concerned. Any changes or alterations should first be cleared by the Project Management Committee before implementation.

..... It is further recommended that the recommendations of the Third TAC Meeting in Indonesia on these issues be taken into consideration when drafting the new set of procedures for project implementation. The Third TAC Meeting recommended that in order to facilitate timely implementation of project activities, the local UNDP offices should be given the authority to accept the nominees and issue travel authorizations upon receipt of nominations from the government.

4. The coordination between the Regional Coordinator assigned to manage the project on a day-to-day basis, and the executing agency, particularly the backstopping officer assigned to execute the project, is of utmost importance for the success of the project.

RECOMMENDATION

..... Realizing that the coordination and cooperation between the executing agency and the Regional Coordinator is most important for the success of the project;

..... Noting the problems that were encountered in this regard and the effect on the efficiency of implementation of project activities;

..... It is strongly recommended that steps be taken to bridge whatever gaps still exist between the executing agency and the Regional Coordinator and to ensure that similar problems do not arise in the future.

..... Further recognizing the importance of technical backstopping for the project which involves a highly complex subject;

..... Further noting the problems in this regard encountered in the past;

..... It is recommended that the executing agency appoint a backstopping officer on a permanent basis, to provide the needed technical support in addition to the usual administrative assistance to the project.

..... Considering the multisectoral nature of the project, it is recommended that the executing agency should explore all possible avenues in the UN system to subcontract activities to other agencies with responsibilities for such subjects and ensure that technical support is adequately provided from the planning stages to the final implementation of the activities. Assistance should therefore be provided in the preparation of the Aide Memoire, recruitment of experts, preparation of technical papers, and drafting of final report of the meeting.

E. The Project in General

Despite the problems encountered, the project proceeded very satisfactorily. Although long-range in nature, the objectives have been attained to the extent possible within the 2 1/2 years limitations. The most important achievement of the project is the establishment of the Regional Network on Pesticides in Asia and the Pacific. The Network has established strong ties among member countries and succeeded in fostering regional cooperation in the field of pesticide formulation, quality control, registration and control. The countries have unanimously expressed their appreciation for the benefits accrued from their participation in the Network and have endorsed their continued support and cooperation for the project. In just 2 1/2 years, the foundation for the network scheme has been firmly established, and the Regional Network on Pesticides has gained recognition and support not only from the member countries, but also from other regional and international organizations.

Since the objectives are long-range in nature, and the scope of activities varied, the project was only able to initiate activities in

the different priority areas. These activities were designed to be continuous in nature, with occasional follow up needed.

RECOMMENDATION

..... Recognizing the achievements of the project and the benefits derived by the countries from participation in the Network;

..... Realizing that the objectives are long-range in nature and that the outputs cannot be fully attained within the limited time frame allotted for project implementation;

..... Noting that despite all efforts exerted, the varied activities could only be initiated and some outputs only partially attained;

..... Further noting that the project is the only one on pesticides in the region and has therefore gained recognition from international bodies involved in pesticides;

..... It is recommended that a new phase of the project be endorsed by the participating governments and the resulting endorsement submitted to UNDP with request for urgent consideration and approval thereof, in order to complete the outputs, fulfill all objectives, and further strengthen regional cooperation among the Network member countries.

..... In order to extend the benefits of the Network to the region, it is recommended that the countries that have expressed interest to join the Network be encouraged to do so, for the new phase of the project. The appropriate budget should be provided for additional members.

..... It is further recommended that the executing agency, in collaboration with the Regional Coordinator should explore possibilities of obtaining other sources of assistance for the activities of the Network, so that RENPAF can continue for long years to come.

Annex I presents the workplan adopted by the First TAC Meeting in November, 1982 and the revised version as amended by the Second TAC Meeting in June 1984.

APPENDIX 4

MANNING TABLE

CONSULTANCY

<u>COUNTRY</u>	<u>NEED SUBJECT</u>	<u>DURATION</u>	<u>PROPOSED DATE</u>	<u>PRIORITY</u>	<u>Possible Regional Countries that can Provide</u>
Afghanistan	Formulation Packing & Handling	2 m/m	Oct. 1983	1	India, Korea
Bangladesh	R & D Formulation	1 m/m	June 1983	2	India, Pakistan, Korea, Sri Lanka
	Regulation	1 m/m	June 1983	1	Pakistan, Korea, India, Philippines
Indonesia	Formulation	1 m/m	Aug. 1983	2	India, Pakistan, Korea
	R & D Manufacturing	1 m/m	July 1983	1	Pakistan, Korea, India
Korea	R & D Formulation	1 m/m	April 1983	1	India, Philippines
	Toxicology	2 m/m	Jan. 1984	2	Pakistan, India
Philippines	Toxicology	1 m/m	March 1984	1	Pakistan, India
	Analytical Instrument Maintenance	1 m/m	Feb. 1984	1	India, Korea
Pakistan	R & D In Manufacture	1 m/m	Sept. 1983	1	India, Korea
	Quality Control	1 m/m	Nov. 1983	2	Philippines
Sri Lanka	Analytical Instrument Maintenance	1 m/m	March 1984	2	India, Korea
	Regulation	1 m/m	May 1983	1	Philippines, India Pakistan, India
Thailand	R & D Feasibility In Manufacture	1 m/m	May 1983	1	India
<u>GROUP ACTIVITIES</u>	Registration: Harmonization	2 m/m	March 1983		
	Trade and Tariff	1 m/m	Feb. 1984		
	Toxicology	1 m/m	April 1984		
	Quality Control	1 m/m	July 1983		
		<u>22 m/m</u>			

TRAINING

<u>GROUP ACTIVITIES</u>		<u>SUBJECT</u>	<u>TYPE OF</u> <u>F. ASSISTANCE</u>	<u>PROPOSED</u> <u>DATE</u>	<u>PERIOD &</u> <u>DURATION</u>	<u>PROPOSED</u> <u>VENUE</u>	<u>EP 10B 111</u>
<u>NO. OF PARTICIPANTS</u>							
1.	15	Harmonization of registration	Expert consultation of N.N. Coordinators	Sept. '83	1 week	Indonesia	1
2.	10	2nd TAC Meeting	-----	May '83	1 week	Korea	1
3.	10	Formulation	Workshop	Nov. '83	1 week	India	2
4.	20	Quality Control and Residues	Workshop	July '83	2 weeks	Philippines	1
5.	15	Trade, Tariff & relevant data	Expert consultation of N.N. Coordinators	Feb. '83	1 week	Sri Lanka	2
6.	10	3rd TAC Meeting	-----	Aug. '84	1 week	Bangladesh, Austria	1
7.	10	Toxicology	Workshop	April '84	2 weeks	Pakistan	1
8.	10	Survey & Data Collection	Expert Meeting	Feb. '83	1 week	Thailand	1
<u>INDIVIDUAL</u>							
9.	Afghanistan	Packing, Handling & Quality Control	Training Study Tour	May '84 June '83	2 m/m 1 m/m	GFR, USSR, Hungary	1
10.	Bangladesh	Formulation	Training	Feb. '83	1 m/m	India, Japan, Korea	2
		Toxicology	Training	March '84	1 m/m	Korea, Japan	
		Quality Control	Study Tour	April '83	1 m/m	Philippines, Pakistan India, Korea	1
11.	India	Pesticide Manu- facturing	Study Tour	June '84	1 m/m	Regional Countries	1
		Trade & Tariff	Study Tour	Dec. '83	1 m/m	Regional Countries	
		Quality Control	Study Tour	June '83	1 m/m	Regional Countries	1

<u>INDIVIDUAL</u>	<u>SUBJECT</u>	<u>TYPE OF T. ASSISTANCE</u>	<u>PROPOSED DATE</u>	<u>PERIOD & DURATION</u>	<u>PROPOSED VERGE</u>	<u>PRIORITY</u>
12. Indonesia	R & D Manufacture	Study Tour	Nov. '84	1 m/m	Canada, USA, Europe, India	2
	Formulation	Training	Feb. '83	1 m/m	India, Korea	1
	Quality Control	Study Tour	Apr. '83	1 m/m	India, Philippines, Pakistan, Korea	
13. Philippines	Formulation	Study Tour	Nov. '84	1 m/m	India, Pakistan, Korea	1
	Toxicology	Training	March '84	1 m/m	Canada, USA, Europe, Pakistan, India	2
14. Korea	Documentation & Information Service	Study Tour	Jan. '83	1 m/m	Thailand	1
	R & D Manufacturing	Study Tour	Nov. '84	1 m/m	Canada, USA, Europe, India	1
	Formulation	Training	Feb. '83	1 m/m	India, Philippines, Europe	2
	Toxicology	Training	March '84	1 m/m	Canada, USA, Europe, Pakistan, India	1
15. Pakistan	R & D Manufacturing	Study Tour	Nov. '84	1m/m	USA, Europe, India, Japan	2
	Formulation	Training	Feb. '83	1 m/m	India, Korea	1
	Toxicology	Study Tour	June '83	1 m/m	Canada, Europe, USA, India	1
16. Sri Lanka	Residue Methodology	Training	Nov. '83	2 m/m	Pakistan, India, Philippines	1
17. Thailand	Toxicology	Training	March '84	1 m/m	Canada, USA, Europe, Pakistan & India	
	Quality Control	Study Tour	April '83	1 m/m	India, Pakistan, Philippines, Korea	

MANNING TABLE

CONSULTANCY

<u>COUNTRY</u>	<u>NEED SUBJECT</u>	<u>DURATION</u>	<u>PROPOSED DATE</u>	<u>PRIORITY</u>	<u>Possible Regional Countries that can Provide</u>	<u>STATUS</u>
Afghanistan	Formulation	1 m/m	Oct. 1983	1	India	
	Packing & Handling					
	Quality control	1 m/m	Dec. 1983	1	-	
Bangladesh	R & D Formulation	1 m/m	Sep. 1983	1	India	
Indonesia	Formulation	1 m/m	Aug. 1983	1	India	
	R & D Manufacturing	1 m/m	Dec. 1983	1	-	
Korea	R & D Formulation	1 m/m	May 1983	1	India	COMPLETED
	Toxicology	2 m/m	June 1984	1	Pakistan	
Philippines	Toxicology	1 m/m	Aug. 1984	2	Pakistan	
	Analytical Instrument Maintenance	1 m/m	Jun. 1984	1	-	
Pakistan	R & D in Manufacture	1 m/m	Jan. 1984	1	-	
	Quality Control	1 m/m	Jun. 1984	2	-	
	Analytical Instrument Maintenance	1 m/m	Aug. 1984	2	-	
Sri Lanka	Regulation	1 m/m	May 1983	1	-	COMPLETED
	Analytical Instrument Maintenance	1 m/m	July 1984	2	-	
Thailand	Pesticide Data Processing	1 m/m	Nov. 1983	1	-	
<u>GROUP ACTIVITIES</u>	Registration: Harmonization	2 m/m	June 1983	1		IN PROGRESS
	Toxicology	1 m/m	Sep. 1984	2		
	Quality Control	1 m/m	Feb. 1984	1		
		20 m/m				

TRAINING

<u>GROUP ACTIVITIES</u> <u>NO. OF PARTICIPANTS</u>	<u>SUBJECT</u>	<u>TYPE OF</u> <u>T. ASSISTANCE</u>	<u>PROPOSED</u> <u>DATE</u>	<u>PERIOD &</u> <u>DURATION</u>	<u>PROPOSED</u> <u>VENUE</u>	<u>PRIORITY</u>	<u>REMARKS</u>	
1.	15	Harmonization of registration	Expert consultation	Oct. '83	1 week	Indonesia	1	
2.	8	2nd TAC Meeting	N.N. Coordinators consultation	June '83	1 week	Korea	1	COMPLETED
3.	10	Formulation	Workshop	Nov. '83	1 week	India	1	
4.	10	Analytical Methods (Quality control & Residues)	Training	Feb. '84	4 weeks	Philippines	1	
5.	10	Trade, Tariff & Relevant data	Expert consultation	May '84	1 week	Sri Lanka	2	
6.	10	3rd TAC Meeting	N.N. Coordinators consultation	Aug. '84	1 week	Bangladesh, Pakistan	1	
7.	10	Toxicology	Workshop	Sep. '84	2 weeks	Pakistan	2	
8.	10	Survey & Data Collection	Expert Meeting	March '83	1 week	Thailand	1	COMPLETED
<u>INDIVIDUAL</u>								
9. Afghanistan	Packing & Handling	Study Tour (2)	May '84	1.5m/m each	GDR, Hungary	1		
10. Bangladesh	Formulation	Training	May '83	1 m/m	India	2	COMPLETED	
	Toxicology	Training	May '84	1 m/m	Japan, Yugoslavia			
	Quality control	Study Tour	July '83	1 m/m	Philippines, Pakistan	1		
					India, Korea			
11. India	Pesticide Manu- facturing	Study Tour	June '84	1 m/m	Regional Countries	1		
	Trade & Tariff	Study Tour	Dec. '83	1 m/m	Regional Countries	1		
	Quality Control	Study Tour	July '83	1 m/m	Regional Countries	1		

50

<u>INDIVIDUAL</u>	<u>SUBJECT</u>	<u>TYPE OF T. ASSISTANCE</u>	<u>PROPOSED DATE</u>	<u>PERIOD & DURATION</u>	<u>PROPOSED VENUE</u>	<u>PRIORITY</u>	<u>REMARKS</u>
12. Indonesia	R & D Manufac- ture	Study Tour	Sep. '84	1 m/m	Canada, USA, Europe, India	2	
	Formulation	Training	May '83	1 m/m	India	1	COMPLETED
	Quality Control	Study Tour	July '83	1 m/m	India, Philippines Pakistan, Korea		
13. Philippines	Formulation	Study Tour	Nov. '84	1 m/m	India, Pakistan, Korea	1	
	Toxicology	Training	May '84	1 m/m	Canada, USA, Europe Pakistan, Yugoslavia	2	
	Documentation & Information Service		Jan. '83	1 m/m	Thailand	1	COMPLETED
14. Korea	R & D Manufacturing	Study Tour	Sep. '84	1 m/m	Canada, USA, Europe, India	1	
	Formulation	Training	March '83	1 m/m	India	2	COMPLETED
	Toxicology	Training	May '84	1 m/m	Canada, USA, Europe, Pakistan, Yugoslavia	1	
15. Pakistan	Quality Control/ Toxicology	Training	Sep. '83	1 m/m	USA, Europe, India, Japan, Korea	1	
	Formulation	Training	March '83	1 m/m	India, Korea	1	COMPLETED
	Toxicology	Study Tour	Oct. '83	1 m/m	Canada, Europe, USA,	1	
16. Sri Lanka	Residue Methodology	Training	Nov. '83	2 m/m	Philippines	1	
17. Thailand	Toxicology	Study Tour	March '84	0.5 m/m	Japan	1	
	Formulation	Study Tour	March '84	0.5 m/m	-do-	1	
	Quality Control	Study Tour	July '83	1 m/m	India, Philippines, Pakistan, Korea	1	

Annex II presents the implementation procedures for the project as adopted by the First TAC Meeting and revised by the Second TAC Meeting. The revised implementation procedures incorporated the recommendations from the UNDP and UNIDO offices in the different countries, as well as from headquarters staff.

IMPLEMENTATION PROCEDURES OF THE PROJECT ACTIVITIES IDENTIFIED IN THE
WORK PLAN

(Excluding Project Support Mechanisms and Actions)

- | <u>Steps</u> | <u>Nature of Activity</u> |
|--------------|---|
| | I. INTERCOUNTRY -GROUP-TRAINING, WORKSHOPS, ETC. |
| | (Assuming, as per work plan of activities, that subject matter, host country and target dates are known) |
| 1. | <u>Regional Coordinator</u> asks NCU in the proposed host country to provide as detailed as possible an outline of the course/workshop design within the limits set in the project document's work plan and budget; also a profile of the participants who should attend the activity as designed and a paper on practical information for participants. |
| 2. | <u>Regional Coordinator</u> consults UNIDO on No. 1 above, using services of local UNDP Office, if necessary. |
| 3. | <u>Regional Coordinator</u> consults NCU in the <u>host country</u> on modifications suggested, if any and obtains confirmation of dates. (Goes back to UNIDO if necessary). |
| 4. | <u>Regional Coordinator</u> drafts an aide-memoire together with instructions for the preparation of the report of the group training/workshop (as the case may be) at the completion of the activity. |
| | Regional Coordinator sends the two drafts to UNIDO through the local UNDP, if necessary. |
| | UNIDO or the R.C. in its behalf officially requests the Government of the host country, through the UNDP endorsement for holding the meeting. |
| 5. | <u>UNIDO</u> reviews No. 4 above and sends: <ol style="list-style-type: none"> 1) aide-memoire to various UNDP Representatives in participating countries who expressed interest, with copy of <u>Regional Coordinator</u>. ii) instructions for activity report back to <u>Regional Coordinator</u> (such instructions may be an outline of the report contents or a questionnaire). |
| 6. | Regional Coordinator sends instructions to NCU in <u>host country</u> with copy to UNDP local office. |
| 6.1 | UNDP RRs. send nomination forms and aide-memoire to respective Governments with a copy to local NCU. |

- | <u>Steps</u> | <u>Nature of Activity</u> |
|--------------|---|
| 7. | The NCU shall recommend to Government for nomination at least 2 candidates (if possible) per position available to each of them which shall then be officially submitted by the government to UNDP RRs. |
| 8. | <u>UNDP</u> sends No. 7 above to <u>UNIDO</u> , with copy to Regional Coordinator. |
| 9. | <u>UNIDO</u> selects participants and informs <u>UNDP</u> RPs |
| 9.1 | concerned, with copy to Regional Coordinator travel authorization to UNDP RRs. |
| 10. | <u>UNDP</u> in host country asks <u>UNIDO</u> to ensure visa issuance. |
| 10.1 | <u>UNDP</u> RRs inform Gov'ts and provide tickets. |
| 11. | <u>Govts</u> in consultation with NCU make travel arrangements (this may require cables to <u>UNDP</u> in host country re visas), with assistance of local <u>UNDP</u> Office if required. |
| 12. | <u>UNDP</u> RRs inform <u>UNDP</u> office in host country of ETA, with copy to <u>UNIDO</u> and <u>Regional Coordinator</u> . |
| 13. | Activity implemented by NCU in <u>host country</u> with <u>participants</u> . |
| 14. | At appropriate time, participants elect rapporteur who, with a small group, will draft group report. |
| 15. | NCU in host country ensures it is done and sends the draft report to R. C. who then forwards it to <u>UNIDO</u> |
| 15.1 | <u>Participants</u> depart after arrangements for return journey made by NCU in <u>host country</u> with help of local <u>UNDP</u> Office if any problems arises. |
| 16. | <u>UNIDO</u> reviews the draft report and sends with comments, if any, NCU in <u>host country</u> through <u>UNDP</u> local office or through <u>R.C.</u> via <u>UNDP</u> Manila, as appropriate. In any case it sends a copy to UNDP RR in the Philippines (as <u>PPR</u> for <u>UNDP</u>). |

<u>Steps</u>	<u>Nature of Activity</u>
	II. FELLOWSHIPS/STUDY TOUR (assuming who/when/where is known)
1.	Informally, R. C. asks NCU in each host country to design training programme as per project work plan for submission to R. C.
2.	Informally, R. C. consults NCU in each host country on modifications, if any, obtains confirmation of dates, and finalizes it.
3.	<u>R. C.</u> consolidates all work programmes and informs participating Governments, through their respective UNDP offices, of details of study tour fellowships, inviting official nominations to be sent to UNIDO via UNDP, with copy R. C.
4.	R. C. submits copies of endorsed nomination forms to host countries, through UNDP offices, for required Government acceptances and clearances.
5.	Host Government acceptances and clearances are forwarded to UNIDO, through UNDP offices in the countries concerned, info.
6.	Upon acceptance by all host Governments, UNIDO issues travel authorization (s) to UNDP offices. *
7.	Governments/UNDP make travel arrangements and cable ETA (Expected Time Arrival) to <u>host</u> .
8.	Implementation of training by fellow(s) in <u>host country</u> .
9.	Fellow(s) return(s) and submit(s) to <u>UNIDO</u> , cc: <u>R. C.</u> his/her report within 2 weeks
10.	R. C. sends report to UNDP office in the Philippines and circulates the report to member countries concerned
	* UNIDO through established channels to ensure that visa is issued

Step Nature of Activity

III. CONSULTANCY SERVICES
(Advisory or research consultants)

1. Informally, R.C. asks the NCU in requesting country to prepare and send as detailed as possible a description of the services required with all necessary background information to the offering country, cc: R.C.. It asks NCU both countries to agree (by direct exchanges cc R. C.) on "all" aspects of the consultancy: substantive, financial etc. within the limits of the project work plan and budget.
2. Bilateral contacts of NCU take place.
(cc R. C. ensures that no undue delays occur in this exercise).
3. Agreement reached bilaterally between NCUs on terms of reference (TOR) including qualifications of consultants, work programme and schedule and conditions.
 - 3.1 Both countries send No. 3 to R. C. (R. C. reverts to NCUS, if points remain to be clarified).
 - 3.2 Simultaneously, the NCU makes a formal request through the Government, to UNIDO, through UNDP offices.
4. R. C. sends No. 3 or 3.1 to UNIDO, together with curriculum vitae of candidate.
5. UNIDO, if satisfied, offers the consultancy contract to the expert from the offering country as per UN and Government legal procedures and pays the fee plus travel and DSA (Daily subsistence allowance).
6. UNIDO ensures clearance of selected consultant by the recipient country and also ensures timely visa issuance.
7. The expert submits his report to UNIDO, cc to NCU of the recipient country and the R. C. on the mission.
8. UNIDO elicits the views of the recipient country and the R. C.
 - 8.1 UNIDO decides whether to accept the report and, so informs the R. C.
9. R. C. sends reports with comments, if any, to UNDP RR in the Philippines.

SUMMARY OF MEETING RECOMMENDATIONS

The Network held seven technical meetings/workshops/consultations, all of which had recommendations for activities to be carried out on a regular or continuing basis at the national level. A summary of these important recommendations is presented below.

1. Regional Consultation on Harmonization of Pesticide Registration Requirements

- The Meeting recommended that countries agree to consider modifying, where necessary their legislations and/or registration procedures to achieve greater degree of harmonization, and in particular to require: 1) all pesticides to be registered before they can be sold without the need to gazette or list same before the registration process can be undertaken; and 2) the use of the WHO Classification of Pesticides by Hazard for labelling of pesticides.

- The Meeting noted that the label should be considered a vital part of registration and that color coding should be harmonized and be based on hazard rather than type of use.

- The Meeting recommended that provision be made for further activities to promote harmonization in specific areas like : a) labelling/packaging guidelines; b) toxicological data requirements and evaluations; c) development of agreed protocols for bioefficacy trials among countries with similar climatic and pest conditions; d) adoption of harmonized pre-harvest intervals after pesticide application on crops; e) generation and submission of data for consideration by the Joint Meeting on Pesticide Residue and Codex in order that MRL's may be set on crops exported by countries in the region.

2. Experts Group Meeting on Quality Control of Pesticides

- The Meeting recognized the importance of quality control measures in ensuring that pesticides applied are effective and safe to use and agreed to strengthen cooperation among member countries of the Network by working towards adoption of common standard specifications and methods of analysis. As a step towards this goal, the participating countries recommended that collaborative trials for identified analytical methods be undertaken.

- Recognizing the need for specialized training on latest methods developed on formulation analysis and noting that hardly any training

programmes are conducted for laboratory personnel, the Meeting recommended that the Network organize workshops aimed at upgrading knowledge and techniques of analytical laboratory personnel.

- The Meeting suggested that the Network explore the possibility of setting-up a special fund to be utilized for urgent procurement of chemicals, reagents, spare parts, and recommended that analytical standards bank for the region be set-up .

- The Meeting noted that FAO specifications and CIPAC methods were not available for certain pesticides considered important in the region, and recommended that the Network urge FAO and CIPAC to give due consideration to the above.

3. Regional Workshop on Formulation of Pesticides

- The Workshop recommended that R and D institutions be strengthened by making available assistance through international organizations. Inter-country cooperation should be facilitated by the respective governments.

- Realizing the value of utilizing local raw materials , the Workshop recommended that surveys be conducted to assess their availability and quality and to encourage their utilization within the region.

4. Experts Group Meeting on Pesticide Data Collection System

- The Meeting agreed that data on supply and production of pesticides as well as retail prices of selected formulations be collected and submitted to the Regional Coordination Unit in June of every year. The Regional Coordination Unit should disseminate the consolidated data once a year, providing information on each country separately and a summary for the region.

- The Meeting recognized that data on demand, distribution and consumption of pesticides in the region are essential for securing adequate supply and recommended that the TAC take appropriate steps for collection of such data on priority basis.

5. Regional Forum on Pesticide Toxicology

- The Forum recognized the need for training on toxicological assessment and recommended that a course on this subject be established within the region; that the Regional Coordinator should arrange a study on manpower needs for toxicological assessment; and that exchanges between staff of regulatory authorities in the Network and their counterparts in

developed countries should be encouraged as a means of sharing practical experience on pesticide registration.

- The Forum endorsed the recommendations on toxicological data requirements of the Regional Consultation on Harmonization of Pesticide Registration Requirements and urged countries who have not done so to adopt these requirements.

- The forum stressed the need to harmonize labelling practices in the region and recommended that the Regional Coordinator arrange a study on current labelling practices in the region, which will collate and analyze elements that could be harmonized successfully.

6. Regional Consultation on Trade and Tariff Considerations

- The Consultation supported the activities on harmonization of registration requirements and data collection and information exchange.

- The Consultation recommended that greater trade in pesticides among the countries of the region must be encouraged and all efforts should be made to remove the constraints that hamper possible enhanced trade.

7. Regional Workshop on Residue Analysis

- The Workshop recommended that a similar training course on residue analysis be conducted at least once every two years, of a longer duration, and more limited number of participants.

In addition to the technical meetings, the Network held three TAC (PMC) meetings. The recommendations of these meetings included matters such as adoption of the workplan; implementation procedures; budgetary considerations; and other policy issues.

DETAILS OF PROJECT ACTIVITIES

Activities	Name of Fellow Country	Countries of Study	Duration of Study
A. Fellowships/Study Tours			
1. R & D Formulation	Murshed Johan (Bangladesh)	India	May 16 - June 15, 1983
	Zafar Masood (Pakistan)	India	March 18 - April 17, 1983
	Byong Hua Song (Korea)	India	March 18 - April 17, 1983
	Hendartini Noeryanto Solano (Indonesia)	India	May 16 - June 15, 1983
2. Quality Control	Ruhul Amin	Korea, Philippines	July 18 - 30, 1983
	Sultan Ahmid Khan (Bangladesh)	India, Pakistan	July 30 - Aug. 18, 1983
	Emmy Ratnawati (Indonesia)	Korea, Philippines, India, Pakistan	July 18 - Aug. 18, 1983
	Preecha Chupanich (Thailand)	Korea, Philippines, India, Pakistan	July 18 - Aug. 18, 1983
	N. K. Pillai (India)	Korea, India Thailand, Philippines	July 18 - Aug. 18, 1983
3. Documentation/ Information	Luz Isobal (Philippines)	Thailand	January 24 - Feb. 7, 1983
	Laurencio Teodoro (Philippines)	Thailand	March 14 - 28, 1983
4. Data Processing	Laurencio Teodoro (Philippines)	USA, FRG, Switzerland, France, Italy	June 24 - July 24, 1984

5.	Residue Methodology	A. I. Chandrasekera (Sri Lanka)	Philippines	Dec. 5, 1983 Feb. 3, 1984
6.	Toxicology	Aida Ordas (Philippines)	India	November 7 - 15, 1983
		Hyun Rae Lee (Korea)	India	November 7 - 15, 1983
		Hyun Rae Lee (Korea)	Yugoslavia	May 8 - 30, 1984
		Umar Khan Baloch (Pakistan)	USA, FRG, UK Switzerland	November 1 - 30, 1983
7.	Toxicology/ Quality Control	Raffig Khan (Pakistan)	Japan	Sept. 3 - Oct. 3, 1984
8.	Toxicology/ Formulation	Chutima Suthisatabut (Thailand)	Japan	Sept. 3 - Oct. 3, 1984
9.	R & D Formulation	A. R. Panicker (India)	Thailand, Korea, Phils., Bangladesh, Pakistan	June 3 - July 6, 1984
10.	R & D Manufacture	Shin Yong Hwa (Korea)	FRG, UK, USA	September 3 - 21, 1984
		Djumarman (Indonesia)	FRG, UK, USA	September 3 -
11.	Trade and Tariff	G. S. Sandhu (India)	Thailand, Indonesia, Philippines, Korea, Sri Lanka	May 14 - June 10, 1984

	Activities	Consultant (Country)	Recipient Country	Duration
B. Consulting Services				
1.	Formulation, Packing and Handling	Madam Kayastha (India)	Afghanistan	March 14 - April 13, 1984
2.	Quality Control	Ruhul Amin (Bangladesh)	Afghanistan	January 20, February 20, 1984
3.	R & D Formulation	N. K. Pillai (India)	Indonesia	August 22 - Sept. 15, 1983
			Bangladesh	September 19 - October 15, 1983
		S. H. Khetan (India)	Korea	May 19 - June 15, 1983
4.	R & D Manufacture	K. Szabo (USA)	Indonesia	November 20 - December 20, 1983
			Pakistan	January 4 - February 4, 1984
5.	Data Proces- sing	John Snellgrove (Australia)	Thailand	
6.	Regulations	Brian Watts (New Zealand)	Sri Lanka	May 1 - 14, 1984 May 20 - June 3, 1985
			Philippines	December, 1984
7.	Toxicology	Syed Qadri (India)	Korea	September - November, 1984
8.	Instrumenta- tion	Possibly Mr. Warren Bontoyan	Sri Lanka Pakistan	November, 1984 December, 1984
9.	Data Proces- sing	John Snellgrove (Australia)	Philippines	November, 1984

Regional Missions/
Meeting Experts

1.	Registration	Brian Watts (Australia)	All member countries	2 months split mission: Use October, 1983
2.	Quality Control	J. Henriët (Belgium)	Bangladesh	May 11-17, 1984
3.	Trade and Tariff	F. R. Pavey (UK)	Sri Lanka	August 13 - 17, 1984
4.	Residue Analysis	P. Greve (Netherlands)	Thailand	January 21 - February 5, 1985
		E. Bolygo (Hungary)		
5.	Toxicology	A. Black (Australia)	Philippines	April 24-28, 1985
		R. Plestina (Yugoslavia)		
		M. Lotti (Italy)		
6.	Data Collect- ion	T. Matthews	Thailand	March 8-11, 1983

C. Meetings/Workshops,
Consultations

		No. Participants/ Observers	Venue	Duration
1.	First TAC Meeting	17	Manila, Philippines	November 8-12, 1982
2.	Experts Group Meeting on Pesticide Data Collection System	45	Chiangmai, Thailand	March 8-11, 1983
3.	Second TAC Meeting	14	Suweon, Korea	June 27 - July 1, 1983
4.	Regional Consultation on Harmonization of Pesticide Registration Requirements	65	Baguio City Philippines	October 24-29 1983
5.	International Workshop on Formulation of Pesticides	49	New Delhi, India	Feb. 6-10, 1984
6.	Experts Group Meeting on Quality Control of Pesticides	44	Dhaka, Bangladesh	May 13-17, 1984
7.	Regional Consultation on Trade and Tariff Considerations	20	Colombo, Sri Lanka	August 13-17, 1984
8.	Third TAC Meeting	15	Jakarta, Indonesia	September 24-28, 1984
9.	Regional Forum on Toxicology	50	Baguio/ Manila, Philippines	April 22-26, 1985
10.	Regional Workshop on Residue Analysis	21	Bangkok, Thailand	January 21 - Feb. 5, 1985
11.	Tripartite Review Meeting	15	Baguio City, Philippines	October 28, 1983

LIST OF REPORTS AND PUBLICATIONS

1. Reports of the following Meetings:

- Experts Group Meeting on Pesticide Data Collection System (March 8-11, 1983 ; Thailand)
- Regional Consultation on Harmonization of Pesticide Registration Requirements (October 24-29, 1983; Philippines)
- Regional Workshop on Formulation of Pesticides (February 6-10, 1984; India)
- Experts Group Meeting on Quality Control of Pesticides (May 13-17, 1984; Bangladesh)
- Regional Consultation on Trade and Tariff Considerations (August 13-17, 1984; Sri Lanka)
- Regional Forum on Pesticide Toxicology (April 22-26, 1985; Philippines)
- First Technical Advisory Committee Meeting (November 8-12, 1982; Philippines)
- Second Technical Advisory Committee Meeting (June 27 - July 1, 1983; Korea)
- Third Technical Advisory Committee Meeting (September 24-28, 1984; Indonesia)

2. Reports of following Consultants:

- B. B. Watts - Consultant on Registration (One report for each country and Report on Harmonization of Pesticide Registration Requirements in the Region, used as background document for meeting)
- R. Amin - Quality Control in Afghanistan
- K. Szabo - R & D Manufacture in Indonesia and Pakistan
- N. K. Pillai - R & D Formulation in Indonesia and Bangladesh

- S. H. Khetan - R & D Formulation in Korea
- M. Kayastha - Packing and Handling in Afghan.stan
- Dr. Qadri - Toxicology in Korea
- J. Snellgrove - Data Processing in Thailand

3. Reports of following fellowships and study tours:

- N. K. Pillai - Study Tour on Quality Control
(regional countries)
- Djumarman - Study Tour on Manufacture
(Europe and USA)
- A. R. Panicker - Study Tour on Manufacture
(regional countries)
- U. K. Baloch - Study Tour on Toxicology
(Europe and USA)
- G. S. Sandhu - Study Tour on Trade and Tariff
(regional countries)

4. Publications Distributed:

- Rempaf Gazette (2 issues of 300 copies each)
- Special issue on Data Collection (500 copies)

- S. H. Khetan - R & D Formulation in Korea
- M. Kayastha - Packing and Handling in Afghanistan
- Dr. Qadri - Toxicology in Korea
- J. Snellgrove - Data Processing in Thailand

3. Reports of following fellowships and study tours:


- N. K. Pillai - Study Tour on Quality Control
(regional countries)
- Djumarman - Study Tour on Manufacture
(Europe and USA)
- A. R. Panicker - Study Tour on Manufacture
(regional countries)
- U. K. Baloch - Study Tour on Toxicology
(Europe and USA)
- G. S. Sandhu - Study Tour on Trade and Tariff
(regional countries)

4. Publications Distributed:

- Renpaf Gazette (2 issues of 300 copies each)
- Special issue on Data Collection (500 copies)

The Regional Coordination Unit received a photo-copier, UBIX 300 MR and a computer system, HP-250, for use in the documentation and data collection activities. Attached are the inventory reports.

Country PHILIPPINES Project No. DP/RAS/82/006
 Project Title REGIONAL NETWORK FOR PRODUCTION, MARKETING AND CONTROL OF PESTICIDES FOR ASIA AND THE FAR EAST

Page 1 of 2
 Period ending 31 DEC 1983
 UNITED NATIONS  NATIONS UN
 UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
 NON-EXPENDABLE PROPERTY CONTROL RECORD

Q. No.	Item No.	Qty.	Unit	Description	US Dollar Equivalent	P.O./Shipping Advice Ref.	Received			Condition	Qty. on hand	Remarks
							Qty.	M	Y			
1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1/2				OFFICE COMPUTER:								
	1	1	EA	HARDWARE: 45260A HP 250 CPU WITH 256K MEMORY 5 ASI PORTS SYSTEM S/W ON 16MB TAPE	10,750.-	15-2-01532	1			G	1	
	1.1	1	EA	OPT. 022 4.7 MB WINCHESTER DISC DRIVE AND 1.2 MB FLOPPY DISC DRIVE, SYSTEM SW DELETES HP-IB I/F AND INSTALLATION	4,563.-	- " -	1			G	1	
	2	1	EA	2622D HP 250 PERSONAL WORKSTATION	2,813.-	- " -	1			G	1	
	3	1	EA	7470A 2-COLOUR PLOTTER FOR A4 PAPER SIZE	1,860.-	- " -	1			G	1	
	4	1	EA	8120-3258 RS232 M/M CABLE ASSEMBLY	4,313.-	- " -	1			G	1	
	5	1	EA	2601A FORMS TRACTOR FOR 2601A BIDIRECTIONAL	688.-	- " -	1		'83	G	1	
				SOFTWARE:								
	7	1	EA	45150A DSG/250 DECISION SUPPORT GRAPHICS/250	1,125.-	- " -	1			G	1	
	8	1	Ea	45160A TEXT/250 TEST EDITING AND DOCUMENT FORMATTING PACKAGE ON HP 250	938.-	- " -	1			G	1	
		1	EA	II-BIX PLAIN COPIER MODEL 300 MR	9,602.-	LP	1	12	'82	G	1	MOD. 19-2-4585

88

Country PHILIPPINES Project No. DP/RAS/82/006
 Project Title SEE PAGE ONE

Page 2 of 2
 Period ending 31 DECEMBER 1983

UNITED NATIONS  NATIONS I
 UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
 NON-EXPENDABLE PROPERTY CONTROL RECORD

Q No. of	Item No.	Qty.	Unit	Description	US Dollar Equivalent	P.O./Shipping Advice Ref.	Received			Condi- tion	Qty. on hand	Remarks	
							Qty.	M	Y				
1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
				WE CERTIFY THAT THE QUANTITIES OF NON-EXPENDABLE EQUIPMENT RECEIVED LESS THE QUANTITIES OF NON-EXPENDABLE EQUIPMENT WRITTEN-OFF REFLECT THE PHYSICAL COUNT OF THE ITEMS ON HAND AS AT <u>31 DECEMBER 1983</u> .									
				PROJECT MANAGER UNIDO or RESIDENT REPRESENTATIVE						Date			
				GOVERNMENT COUNTERPART <i>Benito J. Guter</i>						Date			

69