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REGIONAL NETWORK ON PESTICIDES FOR ASIA AND THE PACIFIC

DP/RAS/85/023

Technical report: Project Management Committee Meeting,
New Delhi, India, 30 November-2 December 1987*

Prepared for the Governments of the Member States of the Regional Network
(Afghanistan, Bangladesh, China, 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

Based on the work of M.H.J.P. Fernando, rapporteur, and adopted
by the Project Management Committee on 2 December 1987

Backstopping officer: B. Sugavanam, Chemical Industries Branch

United Nations Industrial Development Organization
Vienna

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I INTRODUCTION

1. The second PMC meeting of the Regional Network on Pesticide for Asia and the Pacific was held in New Delhi from 30th November to 2nd December, 1987.
2. The meeting was convened to review progress of the programme approved by the PMC meeting, during the period from July 1986 to Nov. 1987 on policies in order to improve regional cooperation among the member countries and consider proposals for continuation of the Network beyond 1988.
3. The meeting was attended by the representatives each from Afghanistan, Peoples' Republic of China, Indonesia, India, Philippines and Sri Lanka and representatives of the United Nations Organisations including UNDP, UNIDO, WHO and ESCAP. The list of participants is attached as Appendix I of the report.
4. The proceedings of the meetings are summarized below:

II. OPENING SESSION

5. In his welcome address Mr. Sugavanam of UNIDO mentioned that this Regional Project is unique in bringing an understanding on a regional basis of the various disciplines involving the safe development of pesticides in the Network region and he thanked the Governments of Philippines, Thailand and India for playing a major role in the implementation of the project; the associated agencies for providing technical support and UNDP for funding the Network activities. He welcomed the participation of People's Republic of China as the tenth member of the Network. Mr. Sugavanam also mentioned that all the Network countries have been benefited by the RENPAP programme including a few non-member countries such as Malaysia, Papua New Guinea and Nepal. He commended the role played by the Pesticide Development Programme of India and the Ministry of Agriculture and Cooperative of Thailand. He emphasized that in order to make the Network more effective, in pesticide development on a long-term basis it is essential to put emphasis in the future to select areas and provide in-depth training.
6. Mr. Hamdy, Resident Representative of UNDP mentioned that the role of pesticides for increasing the productivity of agriculture and to help in health programmes

is undisputable, but cautioned that due care should be taken for the safety of workers and applicators, therefore, application technology should be improved. He emphasised that RENPAP is totally dedicated for the development of pesticide industry in the Regional Network countries. He thanked the Govt. of India for hosting the Pesticide Evaluation and Safety programme during October/ November, 1987 and the present PMC meeting and praised the role of PDPI as an advanced centre in the field of pesticide formulation and quality control and hoped that this centre will be a guiding force for all the Network countries. He thanked the UNIDO experts who helped PDPI Centre to come up to such a stage of technology development in the field of pesticides. He hoped that the proper projects of the Network region will be identified, in-depth work on R&D will be carried out and all aspects of safety and application should be kept in mind.

7. In his key-note address, Shri H.K. Khan, Secretary, Deptt. of Chemicals & Petrochemicals, Min. of Industry, Govt. of India emphasised the need for promoting the objectives of RENPAP, and underlined that the pesticides play a vital role in the economy of the developing countries both for agriculture as well as health. He mentioned that the pesticides could be used in a judicious way and over use and abuse of the pesticides should be stopped through proper quality control and extension activities. He mentioned that through innovative research, Network countries may not only meet their own requirements but may emerge as a big export horse in future. Shri Khan emphasised the need of safety standards, quality control and interest of the farmers to be kept in mind as extensive use of pesticides by farmers sometimes becomes unremunerative to him and a danger to the environment. He expected that the National programme of PDPI will soon serve as a clearing house for new technologies in pesticides development and serve as a basis for regional information system on production, marketing and control of pesticides. He called upon the delegates for stepping up the work on harmonization of registration requirements, development of pesticide specifications, standardisation of safety steps and proper analysis of residues for fixing the safety limits. He welcomed the promise given by UNDP to extend the period of RENPAP beyond 1988 and hoped that UNDP will help both physically and financially. He also expected that UNDP will soon consider setting up of a permanent Secretariat of RENPAP in India.

8. In his inaugural address the Hon'ble Minister of State of the Min. of Industry, Shri R.K. Jaichandra Singh expressed his happiness on witnessing FAO, WHO, World Bank, ESCAP, UNIDO & UNDP standing on the same platform to assist the ten participating countries of the Network in realising their objectives of developing, modernising and strengthening the pesticide industry in the Region. He expressed his happiness over the joining of People's Republic of China as a new member of the Network and extending the programme beyond 1987 by UNDP. He emphasised that the economy in developing countries of Asia and the Pacific is based on agriculture and we have to cover a long distance to become self-sufficient on food front. He mentioned that major share of our food-grains is lost due to different pests, diseases and weeds which are to be controlled through the use of agro-chemicals. He expected that the use of agro-chemicals will be increasing regularly in the developing region but due care should be taken for judicious use, and more extension work among farmers. Hon'ble Minister mentioned that India is producing sufficient pesticides not only to meet its requirement, but also for export purposes. The Minister emphasised the need for new safe and effective formulations of pesticides and making technological advancement in the field of pesticide application. He gave a brief account of different pesticide activities being undertaken by the Govt. of India and the research institutions. He outlined the policy in the field of agro-chemicals which is to go for the latest technology in producing new generation of products which are selective, safe, effective and least hazardous and urged for more R&D work on botanical pesticides and biocides. He desired that the participating countries will draw the maximum benefits for developing and modernising their respective pesticide industries through sharing expertise under the RENPAP programme.

III ADOPTION OF THE AGENDA

9. Agenda circulated was adopted without any alteration (Appendix Ia)

IV. DESIGNATION OF OFFICERS

10. Mr. S.P.Dhua, Regional Coordinator, RENPAP was proposed as Chairman of the PMC meeting by Ms. Sri Aritar Suryosunarko of Indonesia and was seconded by Dr. M.H.J.P. Fernando of Sri Lanka. With the consensus of delegates, Mr. M.H.J.P. Fernando and Ms. Aida Ordas were selected as Rapporteur and Secretary, respectively.

V. **STATEMENTS OF THE NATIONAL COORDINATORS**

11. The statements highlighted the benefits derived from participation in the project, the problems encountered during the implementation of the project activities; future needs of each country and commitments for future cooperation in support of the project. The country reports and their summaries are attached as Appendix III.

VI. **REPORT OF THE REGIONAL COORDINATOR**

12. The Regional Coordinator was happy to note the overall satisfaction of the Project Management Committee on the achievements of the project and support extended from both the member countries and the associated UN agencies. He mentioned that although there has been some slippages in the areas of data collection, appointment of consultant and training programme, the objectives which were laid down have been truthfully carried forward and the extension upto Dec. 1988 provided now would help to achieve what was originally planned.

13. The Second Expert Group Meeting on Pesticide Data Collection System was held at Pattaya, Thailand from 18-22 May, 1987 as decided in the last PMC meeting. The Expert Group was encouraged to receive data on the prescribed RENPAP format from the participant countries. The Group also felt that good interpretation and exchange of information between the member countries would be extremely valuable for planning the usage of pesticides in the RENPAP countries. The Group therefore recommend further strengthening of the data collection programme and assured full support for this.

14. The training programme on Quality Control of Pesticide Formulations under the Pesticide Evaluation and Safety Testing (PEST) programme was conducted in New Delhi from October 12 to November 13, 1987. The training programme was attended by representatives from Peoples Republic of China, Sri Lanka, Republic of Korea, Indonesia, Thailand and India. The faculty consisted of international experts drawn from USA, UK, West Germany, Hungary and India and "hands on" training was organised at the PDPI Centre. From the evaluation made at the end of the Programme it was evident from the response of the participants that the programme was successful in achieving the desired result.

15. The Pesticide Residue Analysis Training Programme under the PEST programme has started on the 9th November, 1987 in Thailand and is progressing satisfactorily.

VII. STATEMENT FROM UN ORGANISATIONS

16. Representatives from UNIDO, WHO and ESCAP presented reports of activities conducted in relation to their respective involvement in the Network and proposed activities which could further strengthen cooperation among member countries and UN agencies. In general, the agencies expressed their support for the Network and reiterated their commitment to provide assistance to member countries within the limits of their respective areas of competence. The statements appear as Appendix IV of this report.

VIII. CONSULTATION / COMMUNICATION BETWEEN NATIONAL COORDINATOR, REGIONAL COORDINATOR.

17. It has been discussed in the last PMC meeting that there is no practical guidelines being adopted for communicating information between UNIDO, Regional and National Coordinating units as the project itself is flexible in nature. This has caused lot of delay in the communication channel. Mr. Sugavanam suggested that Regional Coordinating unit should be the nucleus for communicating information to National Coordinators as well as to UNIDO, Vienna especially in regard to various activities namely training and consultancy services. Regional Coordinator invited the comments of the National Coordinators based on the decision of the past PMC meeting and their experience, keeping in mind the efficiency for the implementation of the project.

18. After discussion it was agreed that the National Coordinator should play an important role in selecting persons for training and the decisions be communicated to the Regional Coordinator with an advance copy to UNIDO, Vienna for taking necessary action. This would result in expediting the process of selecting the right candidates. Selection should be made by National Coordinator, not by UNIDO. In case UNIDO is not happy with the choice, the matter should be decided in discussion with the Regional Coordinator.

19. With regard to the appointment of consultants within the Region, the Regional Coordinating unit should be sub-delegated powers to select consultant from the Region. However, in case of appointment of international consultant, the job description for the consultant should be prepared by the recipient country and the same should be sent to UNIDO, Vienna through Regional Coordinating unit to enable UNIDO to identify and select candidate on the job roster maintained by UNIDO. It was suggested that

communication to the National Coordinators should be routed through Regional Coordinator by UNIDO and any communication addressed to National Coordinating unit by UNIDO should be made through UNIDO Resident Representative of the respective countries, for example, the aide memoire. In case of group training, UNIDO suggested that all the nominations from the participating countries should be sent to Regional Coordinating unit for forwarding the same to UNIDO office for necessary action. National Coordinators should make sure that all the relevant Ministries are informed about the courses and suggest two or three candidates with ranking for selection in order to expedite implementation of the activities. The National coordinating units could communicate with the Regional Coordinating unit either through UNDP, New Delhi or telex directly to the Regional Coordination Office, Hindustan Insecticides Limited, Hans Bhawan, Wing I, Bahadur Shah Zafar Marg, New Delhi-110 002, telex No. 03165928 HIL IN.

IX. PROPOSAL FOR CONTINUATION OF THE NETWORK PROGRAMME BEYOND 1988 AND THE NATURE OF SUPPORT FROM UNDP

20. The Regional Coordinator reported that a consultation was held with the National Coordinators and the participating countries expressed satisfaction with the progress of the project and pledged continued support for effective implementation of the programme upto the end of 1988. The participating countries felt that this programme is very appropriate for the region. All the countries felt that they have desired significant benefit out of the programme. Taking note of the progress achieved and the international recognition which has been given to the RENPAP, it was the unanimous view of the National Coordinators that the project must be reinforced and continued beyond 1988, initially for a period of three years. The National Coordinators felt that since the region has already shown perceptible development in many areas of pesticide formulation, residue analysis, environmental toxicology etc., it would be possible to make use of the expertise developed within the region for the benefit of those countries needing these. Therefore, the requirement of external support from outside the region would be limited and would result in considerable savings in the proposed extended part of the project. The requirement of institutional support would also be very limited.

21. The National Coordinators felt that having developed a specialised group in the RENPAP it would only be appropriate for the international agencies to support and strengthen it otherwise the stature and expertise already created in the RENPAP would be jeopardised.

22. In consideration of the above, the National Coordinators resolved to request UNDP, UNIDO, WHO, FAO, World Bank and ESCAP to consider extension of RENPAP for a period of three more years beyond December 1988 for ensuring total development of the pesticide programme as originally envisaged for the RENPAP.

23. The National Coordinators felt that as there are countries within the region which have expressed willingness to join, they should be encouraged to come under the fold of the RENPAP programme.

24. The Regional Coordinator anticipated that the extent of funding for a period of three years beyond 1988 would be of the order of US \$ 500,000 most of which would be used for personnel component (19-99) and training (39-99). In case more countries of the region opt to join as China did then the Network would need more funds to support their participation. There will be little or no institutional support required from UNDP.

25. It was also agreed that the National Coordinators will try to get commitment from their respective Governments on long term contribution in cash and kind to carry on with selected activities beneficial to the region.

26. Mr. Hamdy, Resident Representative of UNDP expressed his satisfaction over the progress made by the RENPAP particularly during the last one year. He informed the PMC of the procedure for the evaluation and the extension of the ongoing Regional Network Projects. He said that any proposal for the extension of the project must bring out clearly as to how the countries would continue with the programmes after the withdrawal of the UNDP support and for this the countries must be prepared to meet the local cost. Taking note of the progress of the project and the unanimous view of the Project Management Committee to extend the project beyond December 1988, he suggested that a well articulated case should be prepared. This would also bring out clearly as to how the participating countries would be able to carry on and how RENPAP would continue to function independently after the withdrawal of the UNDP assistance. The proposal should also describe how the RENPAP would work on its own. He congratulated the Govts. for having come together to demonstrate their ability to implement the RENPAP as he had seen the upsurge of activities during the last 12 months as a result of which very concrete benefits to the countries accrued. He appreciated the good work done by the project management in strengthening the RENPAP activities which has benefited greatly the participating countries.

X. UN AGENCIES

UNIDC

27. Sugavanam of UNIDO expressed his thanks to the National Coordinators for the confidence given in the RENPAP Programme and the unanimous suggestion made by them for continuation of the project for a few more years so that whatever has been achieved does not go as waste. Infrastructural facilities created within the Network should be fully utilised. He also mentioned that the project is recognised now not only among the agencies but also outside the agencies, namely GIFAP, CIPAC etc. It is a very good foundation on which RENPAP may continue to work. We should first approach UNDP for necessary assistance for extending the project beyond Dec. 1988. He also suggested that there should be possibility for the member countries to contribute in cash/kind for smooth functioning of the programme, so that institutional support is not necessary.

WHO

28. Copplestone said that WHO would continue support for the continuation of RENPAP programme as far as its resources permitted. The programme was fitted as concerning Asia and the Pacific countries and the Network should spread to more countries in the region. In seeking assistance for such activities REN^{DA} may need to seek support from more than one source until it becomes self supporting.

ESCAP/ARSAP

29. Mr. Hegenbarth of ESCAP expressed ESCAP/ARSAP support for the continuation of the programme and proposed that the plans ESCAP has formulated should be synchronised with the activities of the RENPAP. He also suggested that ESCAP may extend support, if required, to the extent possible

XI. ADDENDUM

30. Prior to shifting of the Regional Coordinator Unit from the Philippines to India the Second Regional Harmonization meeting on Pesticide Data required for pesticide registration was held in the Philippines organized by FAO and FPA. The meeting was attended by all the member countries including a few non-member countries and GIFAP. The meeting strongly advocated all measures to regional harmonization and a few member countries notably Philippines and Sri Lanka have already taken measures to adopt the resolution of the meetings and other countries are taking necessary steps.

31. Another major activity was the meeting in Delhi in March 1987 on Formulation Technology organized by UNIDO in collaboration with PDPI. There was emphasis in modern technologies and promotion of locally available raw materials in pesticide formulations. The meeting was attended by all member countries except Bangladesh and the Philippines. GIFAP and other local industries also participated in the training course.

32. The PMC unanimously agreed to hold a third PMC meeting before the completion of the project. People's Republic of China agreed to host the meeting in October 1988.

33. The meeting also recorded its appreciation and gratitude to Mr. Copplestone of WHO for his dedicated services and advice to the RENPAP and solicited his continued association with RENPAP even after his retirement at the end of 1987.

34. The meeting also decided to change the name from RENPAF (Regional Network for the Production, Marketing and Control of Pesticides in Asia and the Far East) to RENPAP (Regional Network on Pesticides for Asia and the Pacific).

XII. APPENDICES

- i) Appendix I - List of Participants
- ii) Appendix Ia - Agenda
- iii) Appendix II - Work Plan
- iv) Appendix III - Country Reports
- v) Appendix IV - Statements from agencies

LIST OF PARTICIPANTS

1. AFGHANISTAN

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**PROJECT MANAGEMENT COMMITTEE MEETING OF
THE REGIONAL NETWORK FOR PRODUCTION, CONTROL AND
MARKETING OF PESTICIDES IN ASIA AND THE PACIFIC, NEW DELHI**

(NOVEMBER 30 TO DECEMBER 2, 1987)

PROGRAMME

MONDAY, 30TH NOVEMBER, 1987

0900 - 1000 hrs	Opening Session a) Welcome Address b) Address by Chief Guest c) Inaugural address d) Vote of Thanks
1000 - 1015 hrs	Tea
1015 - 1030 hrs	Adoption of the Agenda. Designation of Officers. Appointment of Rapporteur
1030 - 1300 hrs	Country reports by National Coordinators.
1300 - 1400 hrs	Lunch
1400 - 1500 hrs	Country reports by National Coordinators. Report of the Regional Coordinator.
1500 - 1600 hrs	Reports from the Agencies
1600 - 1800 hrs	Visit to the Pesticide Development Programme India.

TUESDAY, 1ST DECEMBER, 1987

0900 - 1100 hrs	Discussions of future activities Meeting / Training Programme/ Study Tours/Fellowships/ Consultation
1100 - 1115 hrs	Tea
1115 - 1300 hrs	Continuation of discussions of future activities.
1300 - 1400 hrs	Lunch
1400 - 1600 hrs	Proposal for continuation of the Network Programme beyond 1988 and the nature of support from UNDP.
1600 - 1615 hrs	Tea/coffee
1615 - 1645	Consultation/ communication between National Coordinator/ Regional Coordinator.
1645 - 1745 hrs	Support from UN agencies.

WEDNESDAY, 2ND DECEMBER, 1967

0900 - 1100 hrs	Proposed revisions Project documents. Work plan. Budget.
1100 - 1115 hrs	Tea/coffee
1115 - 1145 hrs	Other business
1145 - 1300 hrs	Recommendations
1300 - 1400 hrs	Lunch
1400 - 1500 hrs	Adoption of the Reports
1500 - 1515 hrs	Tea/coffee
1515 - 1715 hrs	Closing Session.

**WORK PLAN
PLANNING TABLE
CONSULTANCY**

Appendix 11

<u>COUNTRY GROUP</u>	<u>NEED SUBJECT</u>	<u>DURATION</u>	<u>PROPOSED DATE</u>	<u>PRIORITY</u>	<u>POSSIBLE REGIONAL COUNTRIES THAT CAN PROVIDE</u>	<u>REMARKS</u>
	Pesticide Data Collection	2 weeks	May 87	1	Thailand	Completed
	Harmonisation of Registration	1.5 m/m	Dec. 88	1	Philippines	Completed
	Quality Control (PEST)	1 m/m	June 86	1	USA (WB)	Completed
	Residues (PEST)	1 m/m	June 86	1	USA (WB)	Completed
	*Pesticide Data Collection in 3 Groups	1 m/m		1	Thailand, Philippines, India	1 m/m saved from Group
	Environmental aspects of production and use of pesticides	1 m/m	Aug. 88	1	Indonesia	To support group training activity
INDIVIDUAL						
1. Afganistan	Handling/ Packaging and storage	1 m/m	Mid 88	1	India	Await job description
	Instrumentation analysis	1 m/m	May 88	1	India	
2. Bangladesh	Residue	1 m/m	Oct. 86	1	Korea	Completed in UK
	Packaging	2 weeks	Dec. 86	2	India	Not completed
	Instrumentation	2 weeks	March 87	2	UK	

* Group : (1) China, Korea, Thailand; (2) Indonesia, Sri Lanka, Philippines, (3) Bangladesh, Pakistan, Afganistan, India. Leader countries to be selected with concurrence from respective Governments.

3. Indonesia	Residue Packaging	1 m/m 1 m/m
4. India	Pesticide planning including product diversification	1 m/m
5. Korea	Herbicide efficacy	1 m/m
6. Philippines	Occupational Health Assessment	1 m/m
7. Pakistan	Environmental Tox.	1 m/m
8. Sri Lanka	Residue Analysis	1 m/m
	Insecticide efficacy	1 m/m
9. Thailand	Quality control/ specifications	1 m/m
10. China	Instrumentation	1 m/m

- 2 -

June 87	2	Korea	Cancelled Job descrip- tion handed over.
Jan. 88	1	India	
Mid. 88	1	UK	
1988	1	Pakistan	Difficult to find a person with the given job descrip- tion. Japan to be tried.
May 88	1	USA or UK	Outside/within region
1st Qr. 88	1	Japan or UK	UK consultant declined. Looking for another from region.
June 88	1	Indonesia or Thailand	
May 87	1	Within region	
Jan. 87	1	Portugal	Completed with UK
June 88	1	UK	Job description to be worked out.

GROUP ACTIVITIES**TRAINING**

Sl.No	No. of Participants	Subject	Type T.Assistance	Proposed Date
1.	10	R&D Formulation	Training	Feb. 87
2.	10	Data Collection	Expert Trg.	May 87
3.	15	Harmonization of Registration	Expert consultation	Dec. 86
4.	10	P M C	-do-	July 86
5.	10	Pesticide Residue	Expert Meeting	Oct. 87
6.	10	Environmental aspects of production and use of pesticides	Seminar	Aug. 88
7.	10	P. M. C.	Seminar	Feb. 87
8.	12	Quality control (PEST)	Training	Oct./Nov. 87
9.	12	Residue (PEST)	Training	Nov. 87
10.	12	Quality Control (PEST)	Training	Nov. 88
11.	12	Residue (PEST)	Training	Dec. 88
12.		P.M.C	-	Oct. 88

Period and Duration	Proposed Venue	Priority	Remarks
3 weeks	India	1	Completed
1 week	Thailand	1	Completed
1 week	Philippines	1	Completed
3 days	Philippines	1	Completed
1 week	Sri Lanka	1.	Not budgeted.
1 week	Indonesia	1	
3 days	Indonesia	1	Held in India
6 weeks	India	1	Completed
6 weeks	Thailand	1	Completed
5 weeks	India	1	
5 weeks	Thailand	1	Reduced to 5 weeks
3 days	China	1	

INDIVIDUAL

1. Indonesia	*Toxicology Environmental)	Training
	Effluent Treatment	Study Tour
2. India	Pesticide manufacturing and formulation based on local raw material	Study tour
	Instrumentation analysis	Training
3. Bangladesh	Biological Screening	Training
	*Environmental Tox.	Training
4. Korea	R&D Formulation	Study Tour
	*Environmental Tox.	Training
5. Sri Lanka	Analytical Methods	Training
	*Environmental Tox.	Training
6. Thailand	*Environmental Tox.	Study Tour
	Instrumental Analysis (Formulations)	Training

Ist/2nd Qr. 88	1 m/m	Japan	UK added
April 88	1 m/m	Germany/USA	UK/Belgium added
Early 88	2/15 days	Within the region	
June 86	2 weeks	Austria	Funds used for CIPAC.
Mid. 88	1 m/m	England	Project Management office to find a place.
Ist/2nd qr. 88	1 m/m	Japan	UK added
Mid. 88	1 m/m	USA/Europe	
Nov. 87	1 m/m	Japan	In progress
June 86	2 weeks	Austria	Funds used for CIPAC
Ist./2nd Qr. 88	1 m/m	Japan	UK added
Ist/2nd Qr. 88	1 m/m	Japan, Austria New Zealand	request for indepth training.
Mid. 88	1 m/m	UK	

7. Pakistan	Analytical Method (Formulations)	Training	June 86	2 weeks	Austria	Funds used for CIPAC
	*Environmental Toxicology	Study tour	1st/2nd Qr. 88	1 m/m	Japan	UK added
8. Philippines	Environmental Impact Assessment	Training(2)	May 88	2 m/m	USA	2 Training with 1 m/m each.
9. Afganistan	Formulation Technology	Training	June 88	1 m/m	India	
	*Environmental Toxicology	Training	1st/2nd Qr. 88	1 m/m	Japan	UK Added
10. China	Biological Screening	Training	Mid. 88	1 m/m	UK	Project management office to find a place
	*Environmental Toxicology	Training	1st/2nd Qr. 88	1 m/m	Japan/UK	

* Environmental *Toxicology Training programmes of different countries should be grouped together. Time and Venue to be determined depending on the availability of a place and the Project Management Office to look into this aspect.

REPORT FROM DEMOCRATIC REPUBLIC OF AFGHANISTAN

Afghanistan is an agro-economical country mainly depend on agriculture. About 85% of the population is engaged in farming and agriculture.

Afghanistan agriculture loses between 25-30% of its potential crop production to various pests.

Afghanistan like other under developed countries imports all of its pesticide requirements from abroad because there is no local formulation and manufacturing plant in the country. However, the raw-materials are locally available.

In the direction of the safety measures of pesticides I have to mention that recently we have established a pesticide analytical laboratory (quality control residue analysis) equipped with advanced instruments, funded jointly by the Government and FAO/UNDP project to control the quality of pesticides imported in the country and to control the maximum acceptable residue limits on necessary agricultural products.

In order to develop pesticide registration system and for proper functioning of pesticide analytical laboratories further technical and training assistance of FAO/UNDP is necessary.

A survey programme of raw material for pesticide industry, study of possibilities of establishing local formulation and installation of repacking industry in the country is also needed.

To overcome all above mentioned problems in the country assistance of technical training and consultancy of United Nations Organisation is necessary.

It is a great honour for me to have the opportunity, as a member of Regional Network on Pesticide for the Asia and the Pacific (RENAP), on behalf of the P.R. of China to attend this meeting.

It is well known that China is a big agricultural country. To provide people, nearly one-quarter of the total population of the world, with enough food and clothing, China must increase input to agriculture.

China is also one of the biggest among the pesticide producer and user in the world. At present there are more than 200 pesticide manufacturers in China, producing over 130 kinds active ingredients of pesticides. The annual output is about 150,000 tons in active ingredient. Also there is some amount of pesticides for exportation and importation every year. About 146 million ha are treated by insecticides and fungicides and 10 million ha are treated by herbicides every year.

Since China is still a developing country, there is a great gap in economy, technique and management between China and those advanced countries in the world. There was no pesticide registration system in China until 1982. Pesticide law is now being worked out. Since we have a very short history of pesticide management and lack experiences, we are willing to learn more about pesticide management from the other countries to raise the level of safe use of pesticide in China. There is now doubt that the activities organised by the Regional Network will be beneficial and helpful to the pesticide

production and management as well as safe use of pesticide in China. We are very interested and willing to take an active part in these activities. Meanwhile, we shall also actively support the work of RANAP, as far as possible.

The most important problem which has to be solved in China is to establish and complete legislation of Pesticide and to enforce them. The important thing right now is control of pesticide quality, although we have national as well as 14 provincial center for control of pesticide. But the technique and the laboratory condition of the centers are far from meeting the demands of the work. We are short of qualified staff who can enforce the law of pesticide, check and monitor the quality of pesticide.

We hope that the Regional Network could organize some study tours on the control of pesticide and enforcement of pesticide law, and some training courses on pesticide formulation and residue analysis to strengthen the contacts and relations among the member countries. We also hope that Committee can consider more chinese chemist to be able to take part in the Training Course on Quality Control of Pesticide Formulation in Asia and the Pacific, if it is possible.

Meanwhile, we welcome conferences and activities of the Network to be held in China. Next year, we are willing to be the host of a meeting such as expert group meeting on environmental toxicology.

I suggest that the program beyond 1988 to make effort on improving and encouraging the technique and quality of pesticide produced locally. China hopes to become a training base of formulation analysis of pesticide in the region if we can get some support from international organizations. It will be great improvement of quality level of pesticide both in China and regional network area.

REPORT OF REGIONAL COORDINATOR FOR RENPAP PROJECT: AND COUNTRY PAPER
INDIA

As a result of withdrawal hosting Regional Coordinating Unit of RENPAP from Philippines, UNDP approved India taking responsibility for hosting Regional Coordinating unit. Govt. of India entrusted M/s. Hindustan Insecticides Ltd., A Government of India Enterprise, with the responsibility of playing the role of Regional Coordinating Unit with Dr. S.P. Dhua, Chairman & Managing Director as Regional Coordinator to assist UNIDO in the implementation of the various activities of the participating countries.

Expert Group Meeting on Pesticide Data Collection:

As a result of taking over as Regional Coordinating Unit India attended the IInd Expert Group Meeting on Pesticide Data Collection System at Pattaya, Thailand from 18th to 22nd May, 1987. The Expert Group Meeting on Pesticides Data Collection System organised by UNIDO in cooperation with ARSAP was the implementation of the recommendation made by Project Management Committee at its meeting held at Manila from 16th to 18th July, 1986, with objectives (a) to review the current situation in member countries with respect to production, import, export and use of data on pesticides; (b) to discuss major difficulties in national data collection; (c) to acquaint participants with the latest developments in pesticide data collection and dissemination; (d) to evaluate the past data collection and dissemination performance of the network, identify the reasons for shortcomings and decide upon measures for improvement.

The modality and the methodology of data collection system was discussed by Network countries through exchange of information of mutual interest. The conclusion and the recommendations are:

1. The Expert Group on the Pesticide Data Collection System felt that the Data Collection systems have, for the first time, functioned properly with the reporting of the relevant data in the prescribed RENPAP format by the participant countries. Good interpretation and exchange of information between members would be extremely valuable for planning the usage of pesticides in the RENPAP countries and further felt that the collection system, which has got geared up to meet all requirements, must be strengthened and continued.
2. The Expert Group further recognised that the time has now come for refinement beyond the prescribed 5 formats, having priority to information on demand and more detailed analysis of pesticide use by coops and imported pests.
3. In view of the importance of the current collection of data and the critical importance of expending it and facilitating analysis, it is recommended that the FMC be asked to allocate sufficient funds for these purposes.
4. Having noted and agreed the desirability of expanding and improving pesticide data available to RENPAP, the delegates agreed to complete the submission of their data for 1983, 1984 and 1985 according per format by the end of June 1987 with the exception of Sri Lanka who agreed to submit their information by the end of July 1987.

All the delegates undertook to submit 1986 data by the end of August 1987 including an analysis of pesticide use

by coops and major pests, diseases and weeds.

5. The Expert Group considered that it should meet once every year to review and update the regional data. These annual meetings should be located, amongst the participating countries giving such country a chance to demonstrate the status of pesticide production and usage as well as the operation of the data collection systems.
6. The Expert Group felt that an orientation programme for the national data collectors should be organised to ensure good quality of information and standardisation of data collection.
7. The Expert Group appreciated the offer made by DACOM of the Republic of Korea for an on-line electronic mailing system and recommended it be accepted.
8. All members of the Expert Group expressed their interest to be included in the Regional Agro-pesticide index and offered to supply the required data by the end of Nov., 1987.
9. Delegates from the Republic of Korea, Indonesia, India and Thailand pointed out that they are in process of starting or will start computerising their information on pesticides and agreed that, when these operations are completed, they will submit their data in an agreed form for the RENPAP computer data base.

Based on the conclusion and recommendations an additional suitable format for analysis of pesticides use was designed by Regional Coordinating Unit and circulated to all national coordinators for obtaining their reactions and also to supply information by the participating countries.

None of the member country except Indonesia & Sri Lanka have supplied information till now. Sri Lanka has supplied information upto 1984. It was decided that PMC may be asked to allocate funds in view of the importance of current collection of data and critical importance of expanding it to expedite implementations of the conclusion/recommendations by this group and facilitating analysis. It is suggested that PMC should consider during this meeting the recommendations as given above for the speedy implementation.

PEST PROGRAMME:

In the 1st PMC meeting held at Manila it was decided that a Pesticide Evaluation and Safety Testing (PEST) Programme covering (i) Training Programme on Quality Control of Pesticides Formulation; (ii) Training on Pesticide Residue Analysis be organised as a part of World Bank/FAO and co-sponsored of UNIDO & UNDP to provide an opportunity by giving participants to review/renew their skills and learn new methods and procedures as are developed by Industry and scientific community.

TRAINING PROGRAMME ON QUALITY CONTROL OF PESTICIDE FORMULATIONS:

Under PEST a programme on Quality Control of Pesticides Formulation was organised by HIL and PDPI from October 12th to Nov. 13th, 1987. The training programme was attended by representatives from China, Sri Lanka, Korea, Indonesia and India. The training programme aimed at:

1. enable trainees from Network Member Countries to carry out comprehensive physical and chemical analysis of pesticide formulation to determine their adherence to defined product specifications.

2. Introduce trainees to a wide range of traditional and state-of-the-art analytical methods, some of which may be more practical and efficient than those with which they are familiar;
3. Increase the productivity and efficiency of pesticide labs. in Member Countries by developing trainees' capabilities to select, install and maintain laboratory instruments in good working order;
4. promote the harmonisation of pesticide product specifications in the region; and
5. enable chemists in Member Network Countries to participate more fully in the international collaborative development and testing of pesticide analytical methodology through CIPAC.

To achieve the above objectives following were included in the training programme for the benefits of member countries:

1. Factors responsible for quality of pesticides formulations;
- (2) Pesticide Formulations specifications; (3) Sampling techniques and statistics; (4) Chemical method of analysis; (5) Set up and management of a quality control laboratory; (6) Selection, maintenance and repair of laboratory equipment.

In addition to above there were practical and experimental demonstrations were organised at FDPI India. Lectures were delivered by eminent scientists from India and abroad. The participants were also taken to various institutes to acquaint them with the R&D, quality control and others facility available in the country. The participants were benefited by the programme arrived at the following conclusions:

1) Safety of analysts:

The Analysts are often unaware about the potential toxicological hazards of various pesticidal systems they analyse in an enclosed laboratory and can be subjected to toxic exposures. It was therefore agreed that the safety guidelines for undertaking analysis and operating procedure for the analysis should be prepared in collaboration with FAO/GIFAP. It was also recommended that necessary information may also be collected from EPA and also to take due note of good laboratory practices.

2) Collaborative analysis.

The participants were of the view that in order to follow reliable analytical procedures, participation in collaborative analysis with international bodies like AOAC and CIPAC would be useful.

3) There was a good deal of discussion on the method of handling of pesticidal products after deterioration in storage as there were two prevalent views whether the product should be disposed off or reformulated. The participants were of unanimous view that necessary strategy should be worked out in cooperation with GIFAP.

4) Participants were of the view that the developments made in the PDPI laboratories on the Quality Control specifications for mineral clays and emulsifier systems can be used by the member countries for developing their own quality control parameters for formulation inputs. It was also decided that the participating countries may also be supplied the PDPI News Letter, when published, for keeping them informed about the developments taking place at the PDPI.

5) In view of certain delays in communications from UNIDO/HIL and the participating countries it was recommended that the plans and recommendations for the next course may be started early so that delays may be avoided.

PESTICIDE RESIDUE ANALYSIS:

Pest Programme on training of Pesticide Residue Analysis of World Bank, FAO in collaboration with UNIDO, UNDP under REMPAP Project is being hosted by Govt. of Thailand at Bangkok from 9th November to 11th December, 1987. The inaugural session of the programme was attended by the Regional Co-ordinator. Conclusions and recommendations drawn on the completion of the above programme would be communicated to Network for implementation.

SUMMARY
COUNTRY REPORT OF INDONESIA

Activities undertaken by Indonesia under or in connection with Rampaf Project from 1986 till to day are as follows :

1. Mrs. Amber Suryosunarko, Director of Agrochemicals Industry, participated in the first FMC meeting in Manila, Philippines, 16 - 18 July 1986.
2. Mr. Mulyani Sukardi, Secretary of Pesticide Committee, participated in the Experts Consultation on Harmonisation of Registration in Manila, Philippines, 1 - 5 December 1986. Mr. Erick F. Djohan, from Pesticide Association, has also participated as observer.
3. Mr. Djumarman, Head Division for Research of Fertilizer and Petrochemicals, Institute for R&D of Chemical Industry, participated in the Workshop on R&D Formulation in New Delhi, India, 9 - 27 March 1987. (Proceeding has not been distributed)
4. Mr. Mulat Wibowo, Head of Pesticide Section at Directorate of Agrochemical Industry, participated in the Experts meeting on data Collection in Pattaya, Thailand, 18 - 22 May 1987.
5. Mr. Tri Widiyanto and Mrs. Rahayu Susilowati, both from the Institute for R&D of Chemical Industry, participated in the training of Pesticide Formulation Quality Control in New Delhi, India, 12 October - 13 November 1987.
6. Mrs. Sri Sugiharti Slamet, from the Agency for Health Research and Development, participated in training of Pesticide Residue Analysis in Bangkok, Thailand, 9 November - 11 December 1987.

The second FMC meeting was scheduled in Jakarta in November 1986. Due to first FMC held only in July 1986 and delay in implementation schedule and change of Regional Coordinator, UNIDO Viena recommend postponing the second FMC to end of 1987 or early 1988. Unfortunately

that recommendation could not be implemented because the available budget expired on 1 April 1987. Then the second meeting of PNC is held here in New Delhi.

Up to now there is no information about implementation of other group activities, i.e. :

- Training on Quality Control scheduled in Philippines, January 1987.
- Experts' meeting on Pesticide Residues scheduled in Sri Lanka, October 1987.
- Seminar on Environmental Toxicology scheduled in Pakistan, December, 1987.

Indonesia has sent nomination for training on Environmental Toxicology and Study Tour on Effluent Treatment as individual training activities. But up to now there is no further information about the implementation of those activities.

In October 1987 UNIDO has informed that Mr. Bhupendra Nath Chatterjee from India was proposed to be an expert for one month packaging consultancy in Indonesia. The administrative procedure is now under process by the government of Indonesia.

Indonesia recognized the benefits gained through participation in the activities of Rempaf Project. For that reason we propose to extend the project for a third phase of the years duration in order to consolidate the results achieved and to take up certain new issues relating areas require particular attention.

APPENDIX III(5)

COUNTRY PAPER - PHILIPPINES

1. Proposals for activities for the next year:

The Work Plan and corresponding budget for 1986 and 1987 were updated and revised to incorporate the PEST programme of the World Bank during the Project Management Committee Meeting held on July 16-18, 1986 in Manila. As there had been delays in the implementation of the various activities, the work plan should be changed and for the Philippines the following are proposed:

1. Consultancy:

Subject : Occupational Health Assessment

Date : from April 1987 to May 1988

2. Individual Trainings:

Subject : Environmental Impact Assessment

Date : from August 1987 to August 1988

It is further requested that the approved 2m/m training for one individual be amended to 2 participants for one m/m training.

Report presented by Ms. Aida V. Ordas, FPA Chief Chemist during the Second Project Management Committee Meeting on November 30 - December 2, 1987 in New Delhi, India.

II. Offers to provide host facilities for meetings, workshops, study tours, etc., and future commitment and contributions in support of the Network.

The Philippines, through the Fertilizer and Pesticide Authority will, in general, continue to support future activities of the project specifically hosting meetings, workshops and study tours, for which in the past, we had proven our capabilities. In line with this, the government still stand to support its earlier commitment to offer the facilities at the Philippine Institute of Pure and Applied Chemistry (PIPAC) to serve as follow-up for the Second Course on Quality Control. It is to be understood, however, that this commitment for support and cooperation for the project will only be within the limits of our current resources and institutional thrust in the light of FPA's support to the developmental thrust of the new government. Correspondingly, a reduction in government contribution in-kind (US-dollars) is proposed in the light of its new status as to that of a National Coordinating Unit. The proposed budget reduction is as follows:

<u>Particulars</u>	<u>Original (USD)</u>	<u>Proposed (USD)</u>
Personnel	60,000	48,000
Facilities	80,000	40,000
Equipment	65,000	35,000
Meetings, workshop and training	20,000	20,000
Miscellaneous	10,000	10,000
	<hr/>	<hr/>
Total	235,000	153,000

III. Proposals relating to policy issues and implementation procedures:

There is no specific proposals at the moment and still stand to support the proposed scheme of implementation unanimously endorsed by the participating member countries during the last PHC Meeting in Manila.

IV. Proposals for extension of the project beyond 1988 with special reference to production of pesticides:

The Philippines is for the idea of extending the project beyond 1988 to continue some of the important activities and to add new areas of concern.

In keeping with one of the immediate objectives of the course project, that is, "to provide guidance on research and development activities conducted in the member countries, concerning pesticide utilization", an extension of the project which would directly address to the details of this activity, e.g. evaluation on the availability of raw materials for pesticide manufacture and formulation in member countries and other economic technological, and health and safety aspects of pesticide production, is recommended.

SRI LANKA
UNIDO/UNDP REGIONAL PESTICIDE NETWORK
DP/RAS/85/023¹
M.H.J.P.Fernando²

The participation in DP/RAS/85/023 RENPAF Project has helped Sri Lanka in the Implementation of Code of Conduct on Distribution and Use of Pesticides and Regulation (International and Regional) on the control of pesticides through the Pesticide Control Act of 1980. This report presents some of the activities in the past, and proposals for the future.

(A) HARMONIZATION OF PESTICIDE REGISTRATION REQUIREMENT

In Sri Lanka the registration of pesticides is compulsory. Any one can apply to the Registrar of Pesticides for registration of a pesticide provided it conforms to the legislation and regulation laid down in the pesticide act. Sri Lanka follows the FAO guidelines, as far as possible, on the data required to be submitted when applying for registration. However, due to limited resources the toxicological data are not available locally and are therefore obtained from the developed countries. The data on residues and their impact on the environments are rarely considered, again due to difficulty in generating these data locally due to lack of expertise.

¹ Country Report presented at the PMC Meeting of DP/RAS/85/023 REPAF Project held in New Delhi India from 30th November - 2nd December, 1987.

² Deputy Director of Agriculture (Research)
Central Agricultural Research Institute,
Gannoruwa, Peradeniya.

The data on efficacy are however generated locally and only those provided by government institutions are considered. The largest number of pesticides are used in domestic agriculture sector for which the Department of Agriculture is responsible. In the development of these pesticides and the generation of data a fee is levied from the firms requesting the data, just to cover the research expenses.

Once the data is submitted evaluation is done by the Pesticide Release Committee which is made up of experts in different fields. Unless this process is followed no pesticide is accepted for registration.

Except for the colour coding for the classification pesticides by hazard, WHO recommendations are strictly implemented in labelling pesticides. However, the labelling in Sri Lanka is complicated due to the requirement of printing them in three languages and also due to the size of the lettering stipulated. Due to the difficulty of conforming to this requirement a flap label for small containers is designed which is acceptable to the pesticide industry and also to the end user.

The regulations are enforced through inspectors who are field officers of the extension division (pest control section) of the department of agriculture, and even the help of police is requested to apprehend anyone suspected of violating the provisions of the law.

The number of pesticides registered in Sri Lanka is around 98 (pesticides - 90, rodenticides - 4, fumigants - 3, molluscide - 1). Depending on the toxicity of the pesticide, registration scheme has the provision either to totally ban a pesticide, restrict its use to trained applicators or issue to specific target application. For example 1a group of fumigants (Aluminium Phosphide, Methyl Bromide and Hydrogen Cyanide gas) are allowed only for trained applicators and 1b allowed only for special projects until such time a suitable alternative is found. The pesticides falling into different categories are given in table 1.

Table 1. Regulatory Status of Pesticides in Sri Lanka

<u>Highly restricted</u>	<u>Prohibited</u>
Aldrin	DDT
BBC/Lindane	Endrin
Chlordane	Heptachlor
Dieldrin "used for construction purposes"	Leptophos
	Organo Mercurial Compounds
	Parathion
	2,4,5-T
	(Camphechlor
	Kepone
	TDE
	Toxaphene
	Strychnine and
	TEPP "have not been used
	or registered in
	Sri Lanka).

(B) STANDARDIZATION OF ANALYTICAL METHOD FOR QUALITY CONTROL AND RESIDUE ANALYSIS

In Sri Lanka only three laboratories are available for pesticide work, Ceylon Institute for Scientific and Industrial Research (CISIR), Community Medicine Section of University of Colombo, and Central Agricultural Research Institute (CARI) of Department of Agriculture.

The laboratories of CARI has Formulation Analysis Laboratory and a Residue Analysis Laboratory, which are responsible for providing information for the implementation of the pesticide control act.

I Formulation Analysis Laboratory

Quality control of pesticides is done in this laboratory. It concentrates on determining the chemical and physical properties such as active ingredient content, particle size, acidity, alkalinity, emulsion stability, flash point, wettability etc., of pesticides available in the market.

Service rendered

1. Analysis of pesticide formulations submitted by the registrar of pesticides.
2. Survey on the quality of mosquito coils in Sri Lanka.
3. Degradation studies of pesticide formulations under different climatic conditions.
4. Help in the implementation of the act.

This laboratory is essential for the enforcement of the law on pesticides.

The analytical methods are based on (CIPAC) hand book. (Collaborative International Pesticide Analytical Council).

II Residue Analysis Laboratory

The analysis of insecticide residues in various commodities is being carried out in this lab.

Service rendered

1. Analysis of some samples submitted from time to time by the Department of Agriculture and various other sources.
2. Participating in the ring analysis organized by the Pesticide Residue Project, GTZ in Darmstadt, West Germany.
3. An all island survey on organochlorine insecticide residues in vegetables and fruits.
4. Survey on organo-chlorine residues in breast-milk.
5. Survey of Cholinesterase levels in the blood of farmers who had recently been spraying pesticides. (this survey was only small and suffered few set-backs).
6. Survey of organochlorine residues in drinking water.
7. Survey on pesticide usage by vegetable farmers.

Now the attention is shifted to the use of organo-phosphate and carbamate pesticides in agriculture.

The work of these laboratories are severely handicapped by the lack of

- (a) trained personnel
- (b) high quality reagents
- (c) literature and information, and
- (d) equipments and spares.

(C) RESEARCH AND DEVELOPMENT OF PESTICIDE FORMULATIONS

There are no pesticide manufacturers in Sri Lanka. However, all the importers of pesticides - one state corporation and eleven companies - are involved in repacking while only 5 companies are involved in formulations (G, EC & LC). The raw materials, solvents, dyes and emulsifiers, for the formulation of EC & LC, are imported while the raw materials, sand and dolomite, for formulation of granules are locally obtained.

There is no restriction on the import of pesticides as long as one can comply with the requirements of pesticide control act. However, for repacking and formulations (Industry part), clearance is required from the Environmental Authority, Ministry of Labour and Ministry of Industries.

(D) PESTICIDE DATA COLLECTION

Sri Lanka participation in the ESCAP/ARSAP pesticide data collection commenced from the inception of the programme in 1983. A programme for the collection of data on pesticide imports, local manufacture, and availability from 1980 was initiated as a result of this participation. This has helped in establishing a data base in an area long neglected in customary data collection programmes. The programme has therefore helped Sri Lanka by assisting in

1. identification of types of data useful for planning and development of the pesticide industry
2. initiating a mechanism to obtain and report such data

The programme has functioned as a forum for sharing the experiences on the pesticide data collection systems in other countries in the region and with latest developments in this regard. Statistics on inter-country differences in usage, problems in data collection and regulation of pesticide activities have been shared among members with mutual benefit.

The success of the programme currently depends to a large extent on the cooperation from the industry. Quality of data provided by the industry is believed to be good although the timeliness of availability is not very satisfactory. Steps are being taken to rectify this situation.

The new format (Table iv) for collection of data could help in the collection of very useful information on pesticides usage. However, it will take sometime before Sri Lanka develops an effective data collection system to match this format. This is due to the complications caused by the use of same insecticide to control different pests in different crops in domestic agriculture which is the biggest user of pesticide in Sri Lanka. This may not be the case when it comes to fungicides and weedicides.

(E) CODE OF CONDUCT ON DISTRIBUTION AND USE OF PESTICIDES

The implementation of the above code is a shared responsibility of many segments in society, but the major responsibility is with the Government and Pesticide Industry.

The Sri Lanka Government has yet to develop the infrastructure required, but within the available resources, pesticide legislation enacted in 1980 is being enforced in several priority areas. Further, the present activities of the Department of Agriculture which is the implementing body, lies within the framework of the Code. Major emphasis is being paid to the following:

1. The process of pesticide registration.
2. The requirement of adequate labelling in the local languages.
3. Developing strategies to prolong the useful life of valuable pesticides, (pyrethroids).
4. Inclusion of alternate pesticide management systems in agricultural programmes.

5. The extension of integrated Pest Control in rice.
6. Provisions of educational and training facilities on safe pesticide handling to Governmental and Non-Governmental bodies as well as to farmers.

The Health Authorities have initiated the establishment of a Poison Centre to provide information for treatment of pesticide poisonings.

In line with Government directives, the Industry is obliged to act in accordance with items 1-3 above. Since the provision of the Code and GIFAP's affirmation that it supports the Code, the Pesticide Industry in Sri Lanka has shown both jointly and independently, a stepping up of activity on education, safe handling and application of pesticides. The greatest impact however has been the effort made by individual firms to adhere to guidelines drawn up for activities based on Article 11 of the Code.

(F) EDUCATION AND TRAINING

Sri Lanka has a record of very high rate of pesticide accidents. This situation could be remedied only through education and training of all those who are involved in handling of pesticides officers to farmers.

All the available instruments training classes, audio-visuals T.V., Radio, Workshops and Seminars - are made use of for this purpose. It is claimed that incidence of pesticide poisoning are on the decline often these programmes.

Another important strategy for this purpose is to introduce the farmers to Integrated Pest Management where ever possible. IPM programme in rice is fairly successful in Sri Lanka, and it should be extended to other crops as well. The reduction of use of pesticides due to these programmes could be monitored only through a very comprehensive data collection system.

(G) ARSAP - CIRAD - REGIONAL AGRO-PESTICIDE INDEX

Sri Lanka has almost completed the compilation of data on Agro-Pesticide Index and will be soon available for publication.

(H) PROJECT INPUTS

Sri Lanka has participated in the following consultation meeting and training programmes under the project.

<u>Programme</u>	<u>Country</u>	<u>Year</u>	<u>No. of Participants</u>
Regional Workshop on Pesticide Formulation.	India	March 1987	1
Pesticide Residue Analysis.	Thailand	Nov. 1987	1
Pesticide Analysis	India	Oct. 1987	1
Expert Consultation on Data Collection.	Thailand	May 1987	1

(I) PROPOSALS

1. The training programme on Toxicology and Eco-Toxicology which was approved for the year 1987 was not implemented. It is again requested for the next year. It is suggested that this be arranged in Japan or in Europe.
2. A consultancy on Analytical Instrumentation in urgently needed as laboratory facilities is a limiting factor for harmonization of registration requirements. This was accepted during 1987 but not implemented.

3. Net work to arrange a suitable place in the region from where to obtain high quality analytical reagents for pesticide work as the processes involved in obtaining these are highly elaborate and time consuming.
4. Consultation of safe disposal of pesticides is required. Guidelines for safe disposal of pesticides at farm level is now worked out by GIFAP.
5. At least two positions for training under the PEST Programme is requested for the year 1988 one for the Department of Agriculture and the other for the Department of Health.
6. Publications - It is suggested that the net work subscribes for important publications viz.
 - (a) CIPAC (Vol. III is now required)
 - (b) IRPTC (UN Publication)
 - (c) Bulletins and Dossiers on Toxicities.

APPENDIX IV(A)

UNIDO

In line with its mandate, UNIDO is providing assistance to developing countries in the manufacture of pesticide formulations and in some cases active ingredients. This technical assistance includes market study, pre-feasibility/feasibility studies, survey of raw-materials, testing suitability of raw-materials, rehabilitation of existing units, product diversification and establishment of pilot plants.

UNIDO is giving assistance to Cuba in the manufacture of wetttable powder at 6 tonnes per day, to Egypt in the manufacture of organo-phosphorous pesticides and to Burma soon in the manufacture of pesticides EC formulations.

During the last 12 months alone, UNIDO assisted in organising six meetings under RENPAP. Pesticides Formulation Technology Course arranged by RENPAP and PDPI is unique for a developing country to conduct a course in a technology that is available mainly to developed countries.

UNIDO Pesticides Formulation technology organised by the German Democratic Republic has become very popular with the developing countries. UNIDO in collaboration with the International Atomic Energy Agency organised a course on Trace Element Analysis which attracted about 200 applicants for a mere 20 places.

...2...

UNIDO also organised a world forum funded by the Federal Republic of Germany on hazardous materials/waste management - industrial safety in the chemical industries which attracted 120 participants from developed and developing countries.

UNIDO's book on pesticide formulation in developing countries has become very popular and the Spanish and French versions have been published. We are going for another edition giving more information on technology, safety and effluent control. Over all the progress made during the last 12 months has been very satisfactory.

ESCAP's (ARSAP) activities since the last PMC Meetings concentrated on three areas:

1. Pesticides data collection including the regional agro-pesticides index,
2. Pesticide safe and efficient use publications programmes,
3. Pesticide safety, training, information and communication network for Asia and the Pacific (RESTRAP).

On pesticide data collection, ESCAP co-operated with UNIDO and the Department of Agriculture, Ministry of Agriculture and Co-operatives, Thailand in organising the Expert Group Meetings on Pesticide Data Collection Systems in Asia and the Pacific, in May 1987 in Pattaya, Thailand. At this occasion, the ARSAP/CIRAO Regional Agro-pesticide Index 1987 was presented.

ESCAP reported that the support received from the expert group meeting have started edition of the index for the 1988 which is expected to include for the first time data on pesticide collections from India, Indonesia, Malaysia and Sri Lanka and also updating the data for the Philippines and Thailand. Its publication is expected by the middle of 1988.

ESCAP (ARSAP) has continued to circulate its pesticide safety and efficient use publications. With its illustrated guideline for safe Handling and Application of Agro-pesticide.

Recently the publication is translated in Sinhala and is now available in seven languages (Bengali, English, Laotian, Nepali, Sinhala, Thai and Urdu). A translation in Vietnamese has recently been circulated and another one is in progress for Burmese. Requests from other countries could be considered.

The training manual Agro-pesticides: Their Management and Application which had found worldwide interest is being updated and a revised version would be available by the second half of 1986.

ESCAP (ARSAP) with the Netherland funding reported on its efforts to develop a new framework for regional pesticide activities and presented the PESTMAP proposal which was discussed under future activities.

Queries raised by the delegates included the publication of pesticide news, the evaluation of the effectiveness of pesticide trainings programmes and the customs classification of imported pesticides.

ESCAP (ARSAP) stressed that its quarterly publication Agro-chemicals News-in-Brief regularly included a column on pesticides and that this would be maintained. RENPAP also plans to revive the publication of newsletters. Close co-operation was suggested with ESCAP concentrating on in-depth features and RENPAP on the more compact news items.

With respect to evaluation of training programmes ESCAP admitted that this had not been done and this was the major shortcoming of its own safety and efficient use training programmes conducted in ten countries of the region.

So far ESCAP (ARSAP) had not looked into trade and customs classifications of pesticides but could request assistance from its International Trade Division.

W.H.O.

WHO had not been as active in the second phase of the project as in the first as no specific activities had been proposed. However, the suggestions that now attention should be paid to formulation plants had much merit. It has to be remembered that a number of national authorities has responsibilities in respect of all chemical plants and therefore the project should concentrate on the surveillance control of health effects due to pesticide exposure.

Related to this was the need for more data on the exposure of applications and a WHO standard protocol for such studies was available.

With regard to the need for education down to farmer level, WHO had a multi-level modular course which might be of use to countries wishing to develop it. This course will be revised during the coming year.