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REGIONAL NETWORK ON PESTICIDES FOR ASIA AND THE PACIFIC

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Technical report: Project management committee meeting,
New Delhi, India, 6-8 April 1992*

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Republic of), Myanmar, Malaysia, Pakistan, Philippines,
Republic of Korea, Sri Lanka, Thailand and Viet Nam)
by the United Nations Industrial Development Organization
acting as executing agency for the United Nations Development Programme

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and Mr. Umar Khan Baloch, Rapporteurs, and Ms. Li Bin, Secretary,
and adopted by the Project Management Committee on 8 April 1992

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1. INTRODUCTION

- 1.1. The 2nd Project Management Committee meeting of the Regional Network on Pesticides for Asia and the Pacific (RENAP) was held in New Delhi on the 6th, 7th and 8th April, 1992.
- 1.2 The meeting was convened to review progress of the approved programme through a Tripartite Review Meeting for the current phase of the project with the main aim of improving regional cooperation among the member countries in the field of pesticide production and usage.
- 1.3 The meeting was attended by the representatives each from People's Republic of China, Indonesia, India, the Islamic Republic of Iran, Malaysia, Republic of Korea, Pakistan, Philippines, Sri Lanka, Thailand and Viet Nam and representatives of the United Nations Organizations including United Nations Development Programme (UNDP), United Nations Industrial Development Organization (UNIDO), World Health Organization (WHO), Food and Agriculture Organization of the United Nations (FAO) and Economic and Social Commission for Asia and the Pacific (ESCAP). The list of participants is attached at Annexure I of the report.
- 1.4 The proceedings of the meetings are summarized below:

2.0 INAUGURAL SESSION AND TRIPARTITE REVIEW MEETING

- 2.1 The Tripartite Review Meeting (TPR) was chaired by Mr. Erling Dessau, Resident Representative, UNDP, New Delhi and inaugurated by Dr. M.S. Gill, Secretary, Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Government of India. The Project Performance Evaluation Report duly reviewed by the UNIDO Headquarters formed the basis for the TPR meeting. Initiating the Tripartite Review Meeting, UNIDO staff member traced the various stages through which RENAP grew from strength to strength to a viable network with 14 member countries including the new members Islamic Republic of Iran, Malaysia, Myanmar and Viet Nam and with the possibility of Singapore and Nepal joining the Network in the near future. It was noted that while the previous phase of the project dealt with generally all aspects of pesticides production and usage, the current phase of the project aims at augmenting the regional capability to promote safety and environment protection through a harmonized regional approach on effluent treatment, pollution control, waste recycling, industrial

safety, industrial hygiene, promotion of environment friendly pesticide formulations and bio-botanical pesticides.

2.2. Mr. Dessau mentioned that this network project is considered to be one of the major success of the UN systems operational activities for development of this region. He said that the landmark General Assembly Resolution 44/211 of 22 December, 1989 devolved special functions on the UNDP Resident Representative and defined his role as that of Resident Coordinator in the UN System to strengthen the degree of coordination to optimize the use of external assistance, alongside efforts to make better use of national capacity.

2.3 In response to this Resolution, the UNDP Governing Council has singled out the coordinated promotion of human development, the cooperation with the specialized agencies of the UN system through six areas of focus in the 1990s.

- * Poverty eradication and grassroots participation in development
- * Environmental problems and natural resources management
- * Management development
- * Technical cooperation among developing countries
- * Technology for development
- * Women in development

2.4 In this context, he commented that the RENPAP project is a rare example of an initiative which simultaneously addresses several of these thematic priorities and that it has been an excellent show case for development of appropriate technology to address urgent developmental needs; it has certainly jostened new management development concepts and is directly promoting technical cooperation among developing countries and it emphasizes safety and environmental protection.

2.5 The meeting noted with satisfaction that the member Governments have stepped up support for the purposeful implementation of the important project activities and in order to put the project on a more sound footing, six Technical Coordinator Units have been set up in 6 member countries; the Environment Protection, Effluent Control and Industrial Safety Unit in Indonesia, that for

Industrial Hygiene and Occupational Health Safety in Philippines, Eco-Toxicology in Pakistan, Environmental Friendly Pesticide Formulation Technology/ Quality Control in India, Bio-Botanical Pesticides in Thailand and Pesticide Specification and Impurities in Active Ingredients in the Republic of Korea.

- 2.6 It was observed that these six Coordinator Units (TCUs) have been set up utilizing the available infrastructural facilities and expertise in the participating countries and are providing training and consultancy services in the much needed specialized areas to meet the urgent requirements of the member countries of the region adopting the Technical Cooperation between Developing Countries (TCDC) concept.
- 2.7 The meeting also noted with satisfaction that all the Workshops and Training Programmes so far organized have had full participation of the Network member countries.
- 2.8 It was observed that it is a measure of success of the initiative that the 6 Technical Coordinator Units, the pillars of the RENPAP project, have started attracting donor country funding. While the Technical Coordinator Unit in India on pesticide Formulation Technology has got a second five year phase, the unit on Eco-Toxicology in Pakistan has recently received financial support from DANIDA and the Government of Pakistan. The pesticide centre in China is being developed as a country project and the local PAC has approved the programme document with UNDP contribution of US \$ 1.5 million and Government contribution RMB Yuan 19 million. The Technical Coordinator Units in Indonesia is being developed as a country programme with Govt. input of Rp. 2,479 million and is awaiting formal approval. The TCU in Thailand is also in advanced stages of consideration by the Govt. the donor agencies and the UNIDO.
- 2.9 It was further noted that these country projects are designed to make the Network Programme more purposeful and meet the demanding needs of the member countries in the areas of industrial safety, workers health protection, development of user and environment friendly technologies and the protection of the environment. These country programmes also lean heavily on the networking of the project for the effective dissemination and exchange of technologies and services being developed in the members countries.
- 2.10 The meeting carefully reviewed the various steps taken to attain self-sustainability. It was noted that RENPAP

Gazette, a quarterly scientific journal, is being sold in the member countries and advertisements are being collected for publication and this has started yielding funds for meeting part of the financial requirements of the project. The TPR meeting was pleased to note that the member Governments particularly those hosting the Technical Coordinator Units, have been providing significant financial assistance for upgrading and maintaining these units and for hosting workshops, training programmes and field experts for meeting the urgent needs of the member countries. The meeting further noted that the member Governments have demonstrated significant support for strengthening the project activities in view of the benefits they are deriving in the important spheres of environment protection, ensuring industrial workers and farmers health safety, introduction of environment friendly pesticides formulations and clean technologies as well as the naturally occurring bio-botanical pesticides.

- 2.11 While welcoming the four new member countries, Islamic Republic of Iran, Malaysia, Myanmar and Viet Nam, Mr. Dessau mentioned that the project would ensure that they receive support in full measure.
- 2.12 Dr. M.S. Gill, Secretary, Dept. of Chemicals and Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India mentioned that the Tripartite Review Meeting is having an impressive presence of delegates from member countries of the Network which has already membership of 14 countries and two more are to join in the near future. He noted that in terms of population, perhaps this programme covers more than half of the world's population and the activities of the project are such that one would like to promote more and more through the agencies like UNDP/ UNIDO. Mr. Gill specially emphasized the vital role that the project is playing in assisting the member countries towards the choice of environment and user friendly methods of pesticides production and usage to increase agricultural production without doing much damage to the environment and the health of the people. He emphasized that in choosing a technology or rejecting a technology, often many countries of the region needs technical advice and that UNDP is best placed to give the advice in the most objective manner through network projects like RENPAP and all the participating countries are looking forward to this. He commented that this regional network project which is growing, would grow beyond this region and that it needs all the support it can get from the member Governments of the region. He said that in his view the Governments of the region should build up this Network

into a long-term organization because the problems which this network is trying to handle are not only for today but would have to be handled better in the days and years to come by sharing experiences and exchanging better ideas amongst the participating countries of the Network. He said that this networking is enhancing not only the pool of knowledge and expertise but would ultimately influence the policies, the regulations and the laws to meet the emerging requirements. He expressed strong support of the Government of India for this regional network programme and pledged further support for continuation of the project beyond its current phase, which has been officially conveyed to the UNDP.

- 2.13 UNIDO staff member informed the meeting that taking note of the success of the RENPAP, the African and Arab regions are looking forward for a similar network and for this are desirous to draw upon the experiences of the RENPAP. He also mentioned the significant contribution the RENPAP has made for the organization of the meeting for the Development of Integrated International Safety Guidelines in Pesticide Formulation in Developing Countries, a programme financed by the Government of Finland. He said that besides fielding of experts from within the region through a sub-contract arrangement, the Regional Coordinator himself played an active role in the meeting which was attended by the delegates of the 36 developing countries of the world.
- 2.14 Mr. Islam, UNIDO Country Director mentioned that one of the important success areas of the project has been the setting up of a Permanent Secretariat in Delhi. He complimented the UNDP and the Government of India for this and desired that necessary assistance be provided in order to ensure that the Permanent Secretariat continue to run on a long term basis.
- 2.15 Mr. Kopish-Obuch representing FAO in the meeting, stated that the PMC meeting would identify areas needing further support and decide upon the nature of activities to be undertaken by the RENPAP in the region for the next several years. He said that the type of work that the FAO is doing will have a great effect on its region. He mentioned that due to acute shortage of staff in the area of pesticides, it was not possible for the FAO to participate much in the activities of RENPAP.
- 2.16 Mr. Plestina representing WHO in the meeting, emphasized that the policy of this programme is not to ban or restrict but to use the pesticides in the most modest and appropriate way. The attempt of this project is not to struggle against the use but to try to help to reduce

misuse of pesticides without forgetting that these chemicals are absolutely needed not to just produce more food but also to reduce and control the number of diseases which are vector borne.

- 2.17 The meeting while considering the Project Performance Evaluation Report (PPER) noted with keen interest the observations made by the UNIDO Headquarters. Having considered the observations, the meeting strongly recommended for the continuation of the project to carry out its work on long term basis. The meeting further recommended that long term links with the UN organizations are important to give this project the necessary status to influence the industry to change its approach and the Governments to provide the incentives and the necessary legislative measures to make pesticides user and environment friendly. The meeting also recommended the PMC in its deliberation to take into account the need for long-term functioning of the RENPAP to support the region in order to adjust to the enormous changes taking place in pesticide technology to make it safer. The meeting noted that a follow up project has been submitted to the UNDP Headquarters and that it is being considered to form a part of the overall inter-regional programme under the theme "Environment and Natural Resources Management" recently endorsed in the MAC-V meeting of the Development Coordinators for Asia and Pacific which met in Manila.
- 2.18 Mr. Makkar, UNDP mentioned that he had been handling the inter-country programmes of the UNDP Headquarters and this has been one of the projects on which he has commented upon. He informed the meeting that the UN Headquarters are very pleased with the impact of this programme generated throughout the region and hoped that in the course of the next ICP cycle, it should be possible to integrate this programme as one of the segments of the overall programme of the environment Natural Resources Management. The meeting was pleased to note this and urged for a positive decision from the UNDP at the earliest.
- 2.19 The Chairman of the TPR meeting, Mr. Dessau, noted with satisfaction the strong support that the Governments are giving to this project alongside the coordinating efforts of the UN Agencies, namely UNIDO, WHO, FAO and ESCAP and the very fact that Mr. Gill, Secretary, Govt. of India has taken his time off to be in the meeting manifests the interests of the Governments and specifically the Govt. of India towards this important project. He expressed his satisfaction with the various accomplishments of this project including the formulation of a related

Agricultural Inputs programme in China in which the Regional Coordinator has not only been the Team Leader of the Programme formulation Mission, but also has been instrumental in seeing the project taking off with UNDP funding. He was also pleased with the outcome of the recent visit of the UN Governing Council members to the project, which contains many important elements; firstly it is a UN sponsored project, secondly the project has an extensive regional coverage with intimate inter-action with the concerned UN agencies, thirdly it has inter-action between national and a regional programme with strong TCDC component and most importantly it is an effort to develop environment friendly technologies and products which demonstrates to the world that it is possible to make and use pesticides without damaging the environment. He particularly appreciated the role of the Regional Coordinator of the project who has demonstrated never-tiring belief that this project has to succeed and the resultant impressive accomplishments of the project.

3. ADOPTION OF THE AGENDA

3.1 The Agenda as adopted, is placed at Annexure II

4. DESIGNATION OF OFFICERS

4.1 Mr. V.K. Majotra from India was elected Chairperson, Mr. Umar Khan Baloch from Pakistan and Ms. Ambar Suryosunarko from Indonesia were elected as Rapporteurs and Ms. Li Bin was elected as Secretary of the meeting.

5. STATEMENTS OF THE NATIONAL COORDINATORS

The Country reports presented by the National Coordinators are summarized below:

5.1 PEOPLE'S REPUBLIC OF CHINA

5.1.1 The report was presented by Ms. Li Bin. Reviewing the progress of the project activities, she mentioned that China has taken part in all the 8 activities organized by the Project and that China has benefitted a great deal. The main advantages gained through attending the meetings, workshops and the training are:

5.1.1(a) One man month training provided to a trainee at the Pesticide Development Centre India has helped the trainee in gaining basic knowledge concerning preparation of standard samples both in theory and in practice. Necessary steps have already been taken in China for making RSMs.

5.1.1(b) Through the attendance of the Workshop on Development of Bio-Botanical Pesticides held in Thailand, the participant has got a clear understanding on development of bio-botanical products in the member countries of RENPAP and a better understanding on the type of data necessary for the registration of bio-botanical pesticides. Besides, the participant has learnt more about determination methods of bio-botanicals which would be very useful to the quality control of bio-botanical products in China.

5.1.1(c) The participation of an official from China in the CIPAC meetings has provided a good opportunity for China to learn how FAO specifications and CIPAC analytical methods are established and also the latest technology of pesticide analysis besides exchange of information and experiences with the experts from the different countries.

- 5.1.1(d) The attendance of the Workshop on Industrial Hygiene and Occupational Health Safety and the Expert Group Meeting on Development of International Safety Guidelines for Pesticide Formulation are of great use to her country and would help in finding solutions of health and environmental problems associated with the pesticide production and formulation and the necessary measures to be adopted to minimize the problems.
- 5.1.1(e) She proposed further participation of their nominees in the CIPAC meetings, provision of a study tour to learn registration requirements for "me-too" products and training on use of computer data collection and exchange of information. She emphasized that China would be taking part in all group activities to be organized by the project.
- 5.1.1.(f) She also appreciated the setting up of the Regional Pesticide Analytical Council and recognized the importance and necessity of setting up of RENPAC in which China would actively participate in the various activities.
- 5.1.1(g) She concluded by stating that China has recognized the benefits gained through participation of the activities of the project and for this reason her country proposed to extend the project for another two years. In support of the project, she offered that China would be able to field consultants in the area of pesticides registration and quality control to meet the needs of the member countries of the region.

5.2 INDONESIA

- 5.2.1 The country report of Indonesia was presented by the National Coordinator, Ms. Sri Ambar Suryosunarko. Reviewing the participation in the group activities implemented by the project so far, she said that the individual training on industrial safety, effluent control and waste disposal was attended in the USA and two participants are scheduled to undergo training in the selection of carriers/ adjuvants in the Institute of Pesticide Formulation Technology (IPFT) in India; the training on Pesticide Regulatory Control in Philippines is under finalization.
- 5.2.2 With regard to the consultancy, she mentioned that they have received a consultant on effluent control and waste disposal, whose services were also used for the Workshop on Industrial Safety related to Environmental Protection and Effluent Control held in December, 1990 in Indonesia and a consultant on Pesticide Residue

Analysis is awaiting placement after the clearance of the Pesticide Committee of Indonesia.

- 5.2.3 She said that Indonesia participated in the Expert Group Meeting to Develop Integrated International Safety Guidelines for Pesticide Formulation in Developing Countries held in Brussels, Belgium.
- 5.2.4 She highlighted the setting up of the Technical Coordinator Unit and hosting of the Workshop on Industrial Safety related to Environment Protection and Effluent Control in Pesticide Industry in Surabaya, Indonesia in December, 1990 which was attended by 12 participants and 5 observers from the member countries, 37 observers from Indonesia besides UNIDO/RENAP experts and officials. She commented that from the point of view of the experience of the delegates and the number of attendance of Indonesian observers during a week long workshop there is a clear indication of the good quality and success of the workshop.
- 5.2.5 She furnished a list of Indonesian experts for fielding in the region for meeting the specific needs in the areas of pesticide residue analysis, environment toxicology, occupational health, etc.
- 5.2.6 Summarizing her report, she said that based on the experience during the course of RENPAP project, lot of information, data, experiences, training, etc have been gained by the member countries which are very important to face the era of globalization in order to maintain the sustainable environment through introduction of better technology, and good handling, ensuring less residue of pesticides, and adopting correct standardization and methods of analysis.
- 5.2.7 In conclusion, she said that the activities of the RENPAP project must continue for the next phase particularly emphasizing on application of ISO 9000 for manufacturer and formulator in order to get international recognition in the quality of products and production system and sustainable environment and pollution abatement.
- 5.2.8 The meeting complimented the National Coordinator, Indonesia for her very active role in the organization of various activities of the RENPAP project and setting up of the Technical Coordinator Unit and particularly the organization of the Workshop on Industrial Safety related to Environment Protection and Effluent Control in Pesticide Industry which has been rated very high in terms of quality by the member countries. The meeting

was informed that a follow up programme has been drawn up on the basis of the recommendations made in this Workshop and has been submitted to the UNDP which would lead a long way to meet the urgent needs of the region in ensuring safety and environmental protection in the pesticide industry.

5.3 ISLAMIC REPUBLIC OF IRAN

5.3.1 The country paper was presented by the National Coordinator, Mr. Zokai. Mr. Zokai said that the Islamic Republic of Iran as a fast expanding country in the field of chemical and petrochemical industry, has quite a few technical pesticide projects under implementation as well as in the pipeline. He said that the growth rate of consumption is very high and is as high as 15% per year in some areas. He said that the Islamic Republic of Iran is desirous of stronger support from RENPAP in different areas specially in the areas of technology transfer, quality control, pollution control and occupational safety and health. Briefing the meeting, he said that although the Islamic Republic of Iran has joined RENPAP quite late, all efforts have been made to compensate for the time lost and in order to achieve an overall harmonized activity by all the involved organizations, a RENPAP National Committee has been established comprising of more than 20 representatives from the concerned Departments and Ministries. This committee has already met three times including one participated by the Regional Coordinator. He said that the National Committee has endorsed the Islamic Republic of Iran becoming the Technical Coordinator Unit in the area of identification of raw materials and intermediates and that the Agro Chemical Division of the Research Centre of Oil Industry would be willing to undertake such activities. The National Committee has also endorsed the Plant Protection Organization to become a member of the Regional Analytical Council and undertake RENPAC studies. He said that a system of data collection has already been set up with the NPC Planning Department and was looking forward to adopt the system designed under the pesticide data collection project of RENPAP. Briefing about their participation in the RENPAP Workshops, he said that so far 5 experts from different institutions have attended different workshops arranged through National RENPAP Coordination Office and the participants have benefitted significantly from these activities. He commented that the Islamic Republic of Iran is looking forward for strong and continued support from the RENPAP programme and would extend full support and cooperation for its further strengthening

and continuation.

- 5.3.2 The meeting congratulated Mr. Zokai for his personal efforts in setting up the National Coordination Committee and playing a very active role to make the RENPAP activities more purposeful. His initiative in offering the Technical Coordinator Unit in the vital area of identification and selection of raw materials and intermediates was well received. The committee expressed full support to meet all the requirements of the Islamic Republic of Iran through RENPAP as presented by Mr. Zokai.

5.4 MALAYSIA

- 5.4.1 The country paper from Malaysia was presented by the National Coordinator, Ms. Zam Abd Karim. She stated that the value of pesticides used has been increasing @ 8% per annum during the last 5 years and herbicides constitute 80% of the total agricultural pesticides used in Malaysia while insecticides constitute 13%, fungicides 4% and rodenticide 3%. The Pesticides Act is used as an instrument for the control of manufacture and import of pesticides through a process of registration.

- 5.4.2 She stated that Malaysia joined the RENPAP in April 1990 and felt that the focus of the current phase on safe manufacture, handling and use of pesticides with regard to safer environment is timely and would help countries address the issue in a more concerted manner. She added that Malaysia participated in all the workshops organized by the project including the Group Meeting on the Development of International Safety Guidelines for Pesticide Formulations in Developing Countries recently held in Brussels. She mentioned that Malaysia has nominated a country expert for the data collection sub-project and awaiting the expert advice for the full scale launching of the programme. She reiterated the offer of Malaysia to provide facilities for setting up a Technical Coordinator Unit in the area of application technology. It was noted that the next training scheduled for 1992 is being finalized and the organizing committee responsible for the training would be approached for organizing the training programmes for the RENPAP. In conclusion, she stated that Malaysia will continue to participate and support the activities formulated under this project and would welcome the formation of the Technical Coordinating Unit in addressing the current needs of the member countries. She desired that the recommendations and findings of previous workshops and meetings are implemented and

monitored closely. She proposed followup programmes on recommendations made on major areas of concern to ensure successful implementation and to strengthen the cooperation among the Network countries.

5.4.3 The meeting agreed with the recommendations of Ms. Karim and appreciated the TCU facilities offered in the area of application technology. UNIDO staff member mentioned that in the next phase of the project provision of funds for the TCU could be made to meet the requirements of Malaysia through RENPAP as proposed by Ms. Karim.

5.5 PAKISTAN

5.5.1 The country paper was presented by the National Coordinator Dr. Baloch. Dr. Baloch emphasized the need of usage of pesticides for increasing crop production in Pakistan where presently only 30% of the total crop area receive pesticides cover while remaining 70% of the farms completely lacked plant protection facility. He stated that the basic manufacture of pesticides in Pakistan is almost non-existent and that there is need for pragmatic approach for basic manufacture of some potential pesticides in the country. He mentioned that increasing amount of final pesticide products are being formulated locally and there are presently 14 formulation plants in the country where 57% of the total pesticides used are being formulated. Dr. Baloch highlighted the abuse of pesticides which invariably threatens the environment and the human health. He stated that the misuse of pesticides in Pakistan is due to lack of technical know-how and inefficient implementation of Pesticides Act/ Rules. He suggested that analysis may be carried out to determine the concentration of residues of these compounds in order to counter the threat posed by the pesticides to human health and other living creatures on the earth. He opined that the environmental and health considerations have now become an area of major concern for public and consequently for scientists forcing them to search for effective measures and in this context establishing facilities on eco-toxicology through the assistance of the Danish Government and the Government under the Project "Strengthening of Ec.-Toxicology Facilities in Pakistan" is appropriate. He offered the TCU facility for assisting the Regional Network Programme for training for which terms and conditions would be determined by the Government of Pakistan and UNIDO and the participating countries. He stated that Pakistan has taken active participation in all the activities of the RENPAP as has been indicated in the report of the

Regional Coordinator and extended support for the programme.

5.5.2 The Chairman appreciated Pakistan's active participation in the various activities of the RENPAP project. The meeting particularly appreciated the excellent hosting of the last PMC meeting in Pakistan and congratulated Dr. Baloch for all the arrangements made and also for the success in setting up of the TCU with the assistance of DANIDA/ UNIDO. UNIDO staff member pointed out the importance of eco-toxicology in the region and hoped that the newly approved project would be able to provide the necessary training and expertise to the RENPAP member countries.

5.6 PHILIPPINES

5.6.1 The country paper of Philippines was circulated by Mr. Deen. It was noted that Philippines have participated in all the group activities and has set up successfully a Technical Coordinator Unit on Occupational Health and Safety. The Fertilizer & Pesticides Authority (FPA) of Philippines hosted the Regional Workshop on Industrial Hygiene, Occupational Health and Safety and their Environmental Concerns, in April, 1991 and was very fruitful in identifying problems/ needs of various countries in the region as far as formulation and implementation of policies in these areas are concerned. The Workshop also made workable recommendations to effectively monitor compliance of pesticides plants with established occupational health and safety standards in countries where such standards are being implemented. The TCU under the FPA offered its assistance to the region in this particular area of concern in the pesticide industry of the region.

5.7 REPUBLIC OF KOREA

5.7.1 The country paper for the Republic of Korea was presented by the National Coordinator, Mr. Young Ho. Regarding the implementation of the RENPAP activities, Mr. Ho mentioned that they have participated in all the group activities and stated that the workshops organized under the project have been of practicable use and detailed the follow up actions taken after the organization of each workshop:

5.7.1(a) Workshop on R&D in Pesticide Formulation Technology held from April 9 to 21, 1990 at New Delhi. Participation in the workshop by Mr. Jin-Hwa Kim from ACRI has helped to establish standard specifications of pesticide formulations and the Pesticide Management Law

in Korea has been reinforced. In addition, a new formulation, smoking pellets (FW) has been developed for the control of pests under greenhouse which is labour-saving and without using application equipments. As of 1992 procymidone, dichlofluanid and bifenthrin has been registered as FW formulation and it is available in the market.

- 5.7.1(b) Workshop on Industrial Safety, Environmental Protection and Effluent Control held from December 4 to 8, 1992 at Surabaya, Indonesia.

As a Government delegate of Korea, Mr. Byeong-Hun Song from ACRI participated in the Workshop. Returning from the Workshop, an intensified research project on the selection of microbes from the soil and waste disposed site in pesticide manufacturing area is being carried out to utilize it as a biological means of decomposing chemicals in the contaminated soil by using enriched culture.

- 5.7.1(c) Workshop on Industrial Hygiene, Occupational Health Safety and their Environmental Concerns held from April 15-20, 1991 at Metro Manila, Philippines. Dr. Hae-Ken Lee of ACRI took part in the Workshop. As an output in the Workshop, a nation-wide survey on pesticide residues in the air of greenhouse is being undertaken to monitor farmers' health safety.

- 5.7.1(D) Workshop on Bio/Botanical Pesticide Development held from December 11 to 18, 1991 at Bangkok. Mr. Oh-Kyung Kwon, who is in charge of botanical pesticide development in ACRI, joined the workshop. He said that the Korean Government has given an emphasis on bio-pesticide development during the last five years. Bio and Botanical pesticide development will be accelerated with tremendous outcome, with the elucidation of bioactive compounds extracted from the natural plant species in Korea and the instrumental analysis using GC/MS, NMR, FT-IR will be performed for the proper identification and bio-assay.

- 5.7.2 With regard to the consultancy, he stated that one man month each consultancy on R&D on Controlled Release Pesticide Formulation and on Pesticide Specification has been obtained. He felt that his country has gained significantly out of these consultancies.

- 5.7.3 With regard to training, he stated that one man month training in R&D on Controlled Release Formulations has been undertaken in UK and one man month training on Microbial Pesticide Development in Japan has been

undertaken and all follow up steps have been taken to utilize the training for the benefit of the organization. He highlighted the social concern on contamination and risk from the applied pesticides and recommended the need for intensified activities of the RENPAP.

5.7.4 He stated that the Technical Coordinator Unit for Impurities in Technical and Formulation has been set up in order to provide training and consultancy needs in this vital area.

5.7.5 He stated that the proposed budget contribution for the future activities of RENPAP of South Korea would be as follows:

Items	Proposed (US\$)
Personnel (Counterpart)	62,800
Facilities (Building)	86,700
Equipment (GC/MS, NMR, FT-IR etc)	485,000
Workshop (Impurities)	25,000
Miscellaneous (Expendable)	10,000
Total	669,500

5.7.6 The follow up activities of the Republic of Korea was very much appreciated by the meeting. The countries hosting the TCUs were requested to extend similar facilities as that of the Republic of Korea and indicate the support provided in cash and kind as has been done by the Republic of Korea. The role of the Republic of Korea in generating funds through the sale of the copies of the RENPAP activities was very well appreciated.

5.8 SRI LANKA

5.8.1 Mr. Fernando, National Coordinator, presented the country report of Sri Lanka. He stated that Sri Lanka has participated in all the group activities and obtained consultancy on insecticide efficacy and training in environmental toxicology in the Federal Republic of Germany. The consultancy on Occupational Health Hazard and Study Tour/ Training on the disposal of outdated pesticides, application technology and packaging, handling and storage of pesticides remain to be completed. Dr. Fernando extended full support for

the implementation of the various activities of the RENPAP.

- 5.8.2 He informed the meeting that due to development of resistance and resurgence of pests, his Government has banned the use of synthetic pyrethroids and is in the process of re-examining data available on global basis on the subject. He stated that the environmental considerations of pesticides manufacture and use is very high in Sri Lanka and expected support from the outputs of the RENPAP project activities.
- 5.8.3 The participation of the Sri Lankan delegates in the Workshops was well appreciated in the meeting as it helped in more fruitful exchange of ideas and enrichment of the quality of the workshops organized by the RENPAP. The meeting also appreciated the active role played by Sri Lanka in the gainful utilization of the RENPAP project activities.

5.9 THAILAND

- 5.9.1 Dr. Montri Rumakom, National Coordinator, presented the country paper for Thailand. He stated that in accordance with the decision taken in the last Project Management Committee meeting in Pakistan, a Technical Coordinator Unit on Bio-Botanical Pesticides has been set up and an Expert Group Meeting and Workshop for participants from the RENPAP countries was organized in December, 1991. He said that in order to organize this Workshop, two participants from the Department of Agriculture were trained in the Bio-Pesticides and Botanical Pesticides respectively who formed the nucleus of the Technical Coordinator Unit. He mentioned that the Workshop was attended by 16 participants representing all the 13 member countries of the RENPAP and Viet Nam. Experts from GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit) GmbH, USDA (United States Department of Agriculture), ODA (Overseas Development Administration) and CIRAD (Centre de Coopération Internationale en Recherche Agronomique pour le Développement) participated in the meeting.

- 5.9.2 He also reported the progress of the pesticide data collection work in Thailand and the transformation of the former data collection programme to the new programme.
- 5.9.3 He also stated that Thai participants attended all seminars, workshops and meetings organized by the RENPAP.
- 5.9.4 The meeting appreciated the successful organization of the Technical Coordinator Unit in Bio-Botanical Pesticide Development and the very successful implementation of the Workshop on the subject in December, 1991. The meeting also noted the significant contribution made by the Government of Thailand in setting up of the Technical Coordinator Unit and also in conducting the Workshop and requested Mr. Montri Rumakom to furnish a statement containing expenditure being incurred by the Government of Thailand for the RENPAP programme.
- 5.10 VIET NAM
- 5.10.1 The country paper for Viet Nam was presented by the National Coordinator, Dr. Trung. He stated that Viet Nam has joined the RENPAP programme with the main aim of taking advantage of its activities in the areas of environmental protection, developing pesticides regulations and for ensuring proper use and promotion of bio-botanical pesticides.
- 5.10.2 He mentioned that the participation of Viet Nam started with their delegates attending the Workshop on Bio-Botanical Pesticides Development in Thailand and the Workshop on Development of Integrated Safety Guidelines for Pesticide Formulation in Developing countries in Brussels. He was pleased to mention that immediately after their participation in the Bangkok workshop, actions have been taken for growing 100 ha of Derris plantation and 5 ha of Neem plantation. He emphasized the need for training in the areas of pesticides toxic residue analysis, formulation technology, production and testing technologies and use of computer in data collection and exchange of information, study tours to cover the areas of pesticides manufacture, pesticides formulations and operation of pest control units. He requested for the copies of the RENPAP Gazette and urged priority to meet the requirements of Viet Nam in the current phase and proposed that any left over requirement may be met in the next phase of the programme.

5.11 GENERAL OBSERVATIONS

- 5.11.1 The general observations made in the country papers presented are as follows:
- 5.11.1(a) The member countries expressed their strong commitment to the project in view of the significant benefits they are deriving from the various outputs of the project
- 5.11.1(b) The focus of the programme on Environmental Protection, Industrial Health Safety, Environment and User friendly technologies and products and bio-botanical pesticides was considered appropriate to the emerging needs of the member countries.
- 5.11.1(c) The organization and quality of the workshops on R&D in formulation Technology of Newer Formulation & Quality Control in India, Industrial Safety related to Environment Protection and Effluent Control in Pesticide Industry in Indonesia, Industrial Hygiene, Occupational Health Safety and their Environmental Concerns in Philippines and the Bio-botanical Pesticide Development in Bangkok were considered appropriate to the needs of the member countries. The recommendations made in these workshops need to be actively pursued for ensuring greater benefit to the member countries. It was noted that the project proposal awaiting consideration of the UNDP is a followup of the recommendations of these four important workshops. The member countries accordingly supported continuation of the programme beyond the current phase.
- 5.11.1(d) The initiative taken by the Islamic Republic of Iran through setting up of National Coordination Committee for planning and implementing the RENPAP activities was appreciated and considered appropriate for ensuring purposeful implementation of the project activities.
- 5.11.1(e) The member countries appraised the meeting of the status of implementation of the project activities as per the approved work plan. Having reviewed the progress of activities the meeting expressed satisfaction on the achievements of the current phase of the project.
- 5.11.1(f) The member countries have been making increasing contribution towards the successful organization of the various activities of the RENPAP and leading the project towards self-sustainability.
- 5.11.1(g) The newly joined four countries desired to avail of the full benefits of the project activities through

fellowship training, participation in group training activities and consultancies. The meeting considered this and felt that there would be time overrun for meeting the requirements during the current phase and advised appropriate project revision to accommodate the pressing needs of the member countries.

5.12 REPORT OF THE REGIONAL COORDINATOR

5.12.1 The Project Performance Evaluation Report (PPER) was taken up for detailed discussion. It was explained that with the new orientation of the programme, the focus of the project has been on the safety aspects of manufacture and handling, environmental protection, workers' health, safety and promotion of environment and user and environmentally friendly process technology products and their formulations. He mentioned that due to three workshops conducted during December 1990 - December 1991, no PMC meeting could be organized during 1991.

5.12.2 The setting up of the 6 Technical Coordinator Units was considered a major achievement of the project as this would provide strong support to the various activities to meet the emerging needs of the countries. Centering these Technical Coordinator Units, the successful organization of the Workshops on R&D in Formulation Technology of Newer Formulations and Quality Control in India, Industrial Safety Related to Environmental Protection and Effluent Control in Pesticide Industry in Indonesia, Occupational Health Safety and Industrial Hygiene and their Environmental Concerns in Philippines and Bio-Botanical Pesticide Development in Thailand were appreciated by the meeting and the contribution of the hosting member countries was acknowledged for successful organization of the workshops.

5.12.3 The meeting noted the follow up steps taken on the various recommendations made in the workshops and the submission of a project document to enable the programme to intensify efforts in the vital areas of safety and environment protection. The meeting felt that the implementation of a new phase of activities based on the recommendations of the Workshops would result in selection of "clean technologies", minimizing pollution through proper management and effluent treatment/ control measures, ensuring workers health safety through regular health monitoring and development and use of personnel protective clothing and finally introducing more user and environmental friendly pesticide products and their formulations.

- 5.12.4 The meeting noted that with the strengthening of the activities, the countries have started deriving significant benefits in the important spheres of pesticides production, handling and usage and the donor agencies are coming forward to sponsor the Technical Coordinator Units as country programmes.
- 5.12.5 Yet another test of the successful implementation of the programme is the joining of more and more countries, the latest one being Viet Nam.
- 5.12.6 The meeting noted the close association maintained with WHO, FAO, ESCAP and CIRAD in the execution of the various components of the programme and particularly linking up of the pesticide data base with ESCAP with the financial assistance of Government of France.
- 5.12.7 The procedure of the preparation and the evaluation of the PPER was explained by UNIDO staff member and the Regional Coordinator and the members noted with satisfaction the commendation of the RENPAP activities made by the Divisional Head of the UNIDO Headquarters. Dr. Baloch commended that the efficient functioning of the RENPAP Regional Coordinator Secretariat has been instrumental in consolidating the activities of the RENPAP project and aiding significantly the smooth functioning of the Project Management Committee.

6. REPORTS FROM THE UN AGENCIES

6.1 FOOD AND AGRICULTURE ORGANIZATION (F.A.O)

- 6.1.1 Dr. Kopisch-Obuch presented the activities of the FAO in the field of pesticides. He said that the FAO has published the International Code of Conduct on the Distribution and Use of Pesticides which places the responsibility of safe handling and effective use of pesticides throughout all stages, commencing from manufacture, labelling, packaging, transporting, storage and application of pesticides on all parties concerned, namely, the FAO itself and other UN agencies, the pesticide industry, member Governments and public interest groups. He referred to the 25th session of the FAO Conference in 1989 which adopted amendments of Articles 2 and 9 of the International Code of Conduct on the Distribution and Use of Pesticides and introduced the principle of Prior Informed Consent (PIC). He said that the FAO and the UNEP have agreed to share the operational responsibility for the implementation of the PIC procedure which deals with the import, export and the

local production of chemicals which are banned or severally restricted for health or environmental reasons. He thereafter described the various steps taken by a joint FAO/UNEP Group of Experts on PIC to provide advice on the implementation of the procedure.

6.1.2 He stated that FAO is operating a project on the implementation of the Code of Conduct in Asia and the Pacific under a Trust fund financed by the Government of Japan and in addition FAO will be implementing projects in Central America with the support of the Government of Netherlands, in the Caribbean and parts of South America with the support of the Government of Japan while a project for Africa has been approved by the UNDP and is in the implementation stage. He said that these projects are aimed at assisting Governments in implementing the provisions of the Code of Conduct of which the PIC is an integral part. He mentioned that in addition to the implementation of the PIC, FAO has been publishing various guidelines on pesticides including bulk disposal, packaging, purchase, storage of pesticides, etc which are largely for the benefit of the developing countries. He said that FAO in close collaboration with WHO is also establishing maximum residue levels (MRL) of pesticides and urged all members to use these MRL especially in international trade for the benefit of all countries concerned and also to ensure that exports of food in particular from developing countries is not hampered. He requested the member countries to submit pesticides residue data to the JMPR so that their needs for residue levels can be considered. He mentioned of the computer list of MRLs prepared by the FAO which can be conveniently used in the PC. Concluding his statement he suggested that RENPAP and the group work closely for the benefit of developing countries in the region and that this is even more important in view of the possible termination next year of the Asia Pacific Regional Project on the implementation of the Code of Conduct.

6.1.3 The presentation of Dr. Obuch was well appreciated by the meeting. The Regional Coordinator mentioned that all efforts have been made by him to keep the FAO fully appraised of all the activities of the project and that FAO has been fully involved in the planning and management of the project also. He expressed his earnest desire to work together as the member countries would be able to get benefit more from the activities of both the FAO and the UNIDO programme through a well-coordinated implementation of these two important programmes in the Asia and the Pacific region; he looked for reciprocation from Dr. Obuch and his

organization and requested that he be kept informed of the programmes and the activities of the implementation of the Code of Conduct project in the Asia and the Pacific region, more so because of the possible termination next year of this project as stated by Dr. Obuch and the need to organize appropriate followup activities by RENPAP.

6.1.4 UNIDO staff member mentioned that in view of the termination of the Code of Conduct project next year it would be appropriate to incorporate followup programmes in the new phase of the RENPAP project under the overall programme approach being made by the UNDP.

6.2 WORLD HEALTH ORGANIZATION (WHO)

6.2.1 Dr. Plestina mentioned that his Division is mainly concerned with the chemicals safety and has primarily two tasks to handle. The first one is on Job Risk Assessment and Risk Evaluation of Chemicals and the second is on the sound management for reducing risk to an acceptable degree of hazard. He mentioned that risks and hazards are to be clearly understood as these are two absolutely separate entities. While the risk is for everybody on the earth and affects human beings equally, whether they belong to developed world or developing world, this kind of activity has to be generally undertaken on global basis. Regarding the developing countries, he mentioned that the main programme is focussed on pesticides and not on industrial chemicals, although many of the industrial chemicals pose greater problems than pesticides. One of the most important document used for evaluation is known as the Environmental Criteria Document and at present out of about 150 compounds, 40 are devoted to pesticides. Therefore, if a country is going to start production of a formulation based on import of active ingredient, it would be desirable to see whether the chemical being imported has been evaluated as this would help to deal with the problems of metabolism and toxicological effects. The second output is the toxicology safety evaluation of the pesticides found in food which is generally the activity covered by the FAO under the JMPR. He mentioned that so far about 250 pesticides have been evaluated and he offered the delegates several of these documents which would be very useful from the toxicological point of view. He also mentioned of a document recently brought out by the WHO on the classification of pesticides by hazards and said that this would be also very useful for the member countries in the field of pesticides production and usage. He also mentioned about the multi-training

programme having three levels - basic, intermediates and advance; the advance training being further sub-divided into one for the Managers, one for the Medical professionals and third for the Registrars. He said that the course is divided into sections each prepared by specific educational objectives. He mentioned that the format of the course is such that it can easily be modified in order to adapt to national needs and to different levels of audience. He also mentioned that IPCS provides training on basic chemicals safety for Government officials and public health advisers, primarily from the developing countries and such training define the principles of chemicals safety and their application to pesticide safety use as well as to other groups of chemicals.

6.2.2 The Regional Coordinator stated that the Network project has a very strong interface with the WHO activities particularly in the area of occupational health safety. He mentioned of the workshop organized by the Technical Coordinator Unit in Manila on Industrial Hygiene, Occupational Health Safety and their Environmental Concerns which was coordinated by Dr. Maramba, one of the leading experts in the region and that this workshop drew very heavily from the various guidelines and documents of the WHO. He proposed stronger coordination with the WHO in this particular sphere of occupational health safety as in the region, there is enormous room for enforcing improvements to provide safety to millions of workers who are directly involved in the production, handling and usage of pesticides. He also highlighted the need for improvements in the design of the plant buildings to accommodate the need for tropical conditions to ensure that the workers are not exposed to toxic fumes and dusts due to improper ventilation. The need for regular health check particularly in the pesticide plants dealing with organo-phosphorous compounds and the like was also lacking in most of the member countries of the region and needs urgent remedial attention.

6.3 ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC (ESCAP)

6.3.1 Mr. Peter Hegenbarth highlighted the recent activities of the Agricultural Requisite Scheme for Asia and the Pacific (ARSAP). He said that the activities of ARSAP are continuing for about 15 years and one of the major contribution is towards the creation of the RENPAP. The present activities of the ARSAP are quite diverse; some are new, some are rather traditional. ARSAP is

coordinating with the International Centre of Agricultural Research and Development (CIRAD), France since 1986 and the activities started with them have been in the development of Regional Agro Pesticides Index. The index has grown from a relatively limited size to new coverage of 34 countries in Asia and Pacific. It covers about 500 active ingredients and 10,000 products marketed in Asian countries. This activity is of importance because it is supposed to form the basis of the data base the RENPAP is going to develop. The ARSAP is now concentrating their work in the area of environment and very recently a project has been started funded by the European Economic Community which is called Data Base on Pesticides and the Environment. The major interest of this project is that it will add to the existing data base an additional component of information dealing with the environmental issues explaining the facts on the human health, animal health and the residues in agriculture. He said that in the past ARSAP has coordinated with the RENPAP particularly on the aspect of building the data base and activities are on to build the data base covering all aspects of pesticides in the region and the programmes is proceeding on the right track with an integrated approach. ARSAP is also interested in the development of pesticide data base in the countries of the Pacific region including the Pacific Island countries and has recently posted an Associate Expert in Fiji for pesticide data collection for updating the information for the Pacific portion of the pesticide data index base. He mentioned about the dissemination of information by ARSAP through their publication named "AGRO CHEMICALS NEWS" which is sent to most of the participating countries and he requested those countries not receiving this publication to inform him for putting them on the regular mailing list. He requested RENPAP also to make contribution to this publication. He mentioned that ARSAP is also involved in a number of TCDC activities, the latest one being a study tour of Laotian Plant Protection Officials to Thailand to learn more about the pesticide registration and control and many other countries are requesting for similar facilities being extended by the Government of Thailand. He also highlighted pesticide safety publication programme coordinated by ARSAP and translation of the illustrated pesticide safety guide into local languages. He mentioned that in the event of ARSAP's inability to keep up the present level of activities due to constraints of fund availability, RENPAP will be in a position to carry the activities at the present level.

6.3.2 Regional Coordinator and UNIDO staff member complimented the strong support extended by the ARSAP in executing the various activities of the RENPAP. He mentioned that ARSAP has actively participated in all the PMC meetings without exception and this shows strong commitment of ARSAP for strengthening the RENPAP in all its aspects.

6.4 UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)

6.4.1 UNIDO staff member said that in accordance with UNIDO's mandate to assist developing countries in their process of industrialization and improving the standards of existing industries, UNIDO is putting greater emphasis on quality, safety and environment protection especially of those industries which are dealing with hazardous chemicals. In the Asia Region in 1990 UNDP/UNIDO assisted in commissioning of a pesticide formulation plant in Myanmar and UNIDO provided extensive training to the staff on quality control, gave a thorough safety check of the plant and a number of recommendations were made and assistance was given to the project authorities to follow the recommendations and practice regular and preventive maintenance. UNIDO is in the process of installing a carbon absorption unit for treating waste water and providing an incinerator for disposing of toxic solid and liquid waste. The main emphasis is to reach 'Zero discharge' of toxic wastes from the plant.

6.4.2 In China, he said, that with assistance from UNDP and contribution by the United Kingdom and Northern Ireland to UNIDO's Industrial Development Fund, UNIDO established a toxicology centre and a bio-assay laboratory at Shenyang. During the inauguration of the Centre in 1990, UNIDO supported by UNDP and the Chinese Government organized an International Seminar on Recent Development in Pesticide Technology and their Application to Asia Region. The seminar was highly successful in that papers were presented on the state of the art Research and Development carried out by well known experts from reputable industries and research institutions from Asia, Japan, Europe and the United State of America. He said, UNIDO was hoping to publish the proceedings of the seminar this year. The toxicology centre and the bio-assay laboratories are already carrying out contract work for national and international clients.

6.4.3 He said that in the Republic of Korea UNIDO, supported by UNDP assisted in the establishment of a modern

toxicology laboratory which today is among the best equipped laboratories with well trained staff in Asia outside Japan. The laboratory is already carrying out contract work for many industries both in and outside Republic of Korea. It is aiming to get clearance for g.l.p. standard, according to European requirements to carry out biological evaluation of chemicals for different outlets.

- 6.4.4 He mentioned that while there are a number of guidelines at the user end of pesticides, there has been a lack in integrated guidelines at the production end covering operational, occupational and environment safety aspects. With financial support from Finland, he said, that the UNIDO has just completed a Global Expert Group Meeting in Brussels bringing experts from developed and developing countries and developed and adopted an Integrated International Safety Guidelines for Pesticide Formulation in Developing Countries. These guidelines when implemented would vastly improve safety in small and medium scale industries and would also have an impact in reducing accidents and quality control problems at the user end.
- 6.4.5 He stated that in 1990, UNIDO closely cooperated with the International Union of Pure and Applied Chemistry(IUPAC) and actively participated in their first conference on 'Safety in Chemical Production' held at Basel, Switzerland. Based on this meeting and the Brussels meeting mentioned before, UNIDO was hoping to establish a Global Network on Safety (Glonesa) in Chemical Production covering various industry sub-sections including pesticides.
- 6.4.6 UNIDO under the UN General Assembly Resolution, has an additional mandate to environmental aspects related to industrial production in developing countries. In this connection, UNIDO has set up an Environmental Coordination Unit (ECU) which will be responsible for promoting Ecologically Sustainable Industrial Development (ESID). In a recently held ESID Conference at Copenhagen, a number of recommendations for ESID were endorsed by the Government representatives and these will be discussed at the Earth Summit in Brazil this year.
- 6.4.7 He said that in India the 2nd phase of the Pesticide Development Programme started in 1989 and further strengthening of its capabilities especially to produce "the state of the art" formulations for the Indian market.

- 6.4.8 He informed the meeting that in Pakistan with support from DANIDA of the Government of Denmark, UNIDO is providing assistance to establish an Eco-Toxicology Centre which will be linked to RENPAP as one of its Technical Coordinator Units. He said that in the Islamic Republic of Iran, UNIDO assisted in providing opportunity studies for the development of pesticide industry based on which the Government selected some herbicides, fungicides and insecticides for manufacture in the Islamic Republic of Iran. In Tanzania, UNIDO assisted in getting the proper technology for copper oxychloride and now assisting them with the purchase of equipment for waste water treatment and disposal of toxic waste.
- 6.4.9 On the publication front, he said that UNIDO is in the process of publishing a new edition of Pesticide Formulation Technology and also the proceedings of the Shenyang Seminar arranged in 1990.
- 6.4.10 He said that as regards UNIDO's assistance to RENPAP the Regional Coordinator has already elaborated in his report and that UNIDO is very keen that other international organizations make use of RENPAP to carry out some of their activities in this region making use of the facilities of the Regional Coordinator Unit in Delhi and Technical Coordinator Units so that the Network becomes self-sustainable in the long run. He said that the French Government has already given very valuable support for harmonization of pesticide data collection linking up RENPAP and ESCAP/ARSAP with further link up with the mainframe available at Montpellier in France.
- 6.4.11 Complimenting the various activities of UNIDO, Dr. Baloch and Ms. Karim proposed that UNIDO also may consider programmes for assisting the member countries of the region in the choice of environment friendly active ingredients and the technologies to manufacture these pesticides and the effluent management and treatment systems. UNIDO staff member clarified that UNIDO and RENPAP are fully aware of this problem and a follow up programme has already been prepared which would enable to assist the member countries in the choice of "clean technologies" and introduction of more environmental friendly pesticide formulations.
- 7.0 REVIEW OF PROGRESS OF SETTING UP OF TECHNICAL COORDINATOR UNITS AND SELF-SUSTAINABILITY OF THE PROJECT
- 7.1 The status of the setting up of the Technical

Coordinator Units was reviewed and the meeting noted with satisfaction that as a follow up of the decision taken in the last PMC meeting in Islamabad, significant progress has been made for the setting up of the following Technical Coordinator Units:

7.1.1 TECHNICAL COORDINATOR UNIT ON IMPURITIES IN TECHNICAL GRADE MATERIALS.

Mr. Young Ho reported that the Technical Coordinator Unit for Impurities in Technical Grade Materials and Formulations has been set up and proposed that the workshop on the subject be organized in October, 1992. He presented the following budget contribution of Republic of Korea in respect of this Technical Coordinator Unit:

ITEMS	PROPOSED(US\$)
Personnel (Counterpart)	62,800
Facilities (Building)	86,700
Equipment (GC/MS, NMR, FT-IR, etc)	485,000
Workshop (Impurities)	25,000
<u>Miscellaneous (Expendable)</u>	<u>10,000</u>
Total	669,500

- 7.1.1(a) The meeting appreciated the contribution of the Republic of Korea and requested the other member countries to quantify their contribution for inclusion in the project document as this element would demonstrate the support of the member countries for leading RENPAP towards self-sustainability.
- 7.1.1(b) It was also agreed to organize the Workshop on Impurities in Technical Grade Materials in the first half of October, 1992 and proceed with necessary organizational arrangements in this regard.
- 7.1.1(c) Dr. Plestina mentioned that the topic selected for the Workshop is very appropriate and would like to complement the efforts of RENPAP. On a further query from Dr. Plestina, it was clarified that a comprehensive Aide Mémoire is normally circulated to member countries based on which nominations are received and that the participants are mainly the Govt. nominees. In the event of WHO/FAO deciding to nominate candidates, it

would be necessary to pay for their travel and DSA as the project budget is limited and can meet the expenses for 14 delegates from 14 member countries only. On a further query from Dr.Obuch about the type of impurities that could be determined, it was clarified that the member countries are advised to identify the candidate pesticides in which they are more concerned for the content of impurities causing environmental and other problems and would be advised to bring these for handling during the Workshop. It was decided that a suitable questionnaire may be circulated along with the Aide Mémoire to enable the participants to bring the samples of the candidate pesticides for determination of impurities and learning the techniques of determination in course of the proposed workshop. It was further agreed that a short-term consultant in the area of specification would be recruited for a fortnight for participating in the proposed workshop and efforts would be made to recruit the consultant from a country nearby to minimize the travel expenses.

7.1.2 TECHNICAL COORDINATOR UNIT ON RAW MATERIAL AND INTERMEDIATES PROSPECTING AND ANALYSIS

The offer of the Government of the Islamic Republic of Iran to host the Technical Coordinator Unit on Pesticides Raw Material and Intermediates Prospecting was accepted by Project Management Committee. As desired by Mr.Zokai, it was agreed that a letter would be issued by the Regional Coordinator confirming the acceptance of the offer of the Islamic Republic of Iran for hosting the Technical Coordinator Unit to enable him to take further follow up actions. It was decided to provide two man month consultants in the area of raw material and intermediates prospecting and analysis in order to strengthen the Technical Coordinator Unit. Mr.Zokai was requested to inform the contribution of the Government of the Islamic Republic of Iran including the setting up of the Technical Coordinator Unit for reporting purpose in the RENPAP documents. UNIDO staff member said that after assessing the requirements of the Technical Coordinator Unit, further support could be given in the next phase for the organization of the workshop in the concerned subject.

7.1.3 TECHNICAL COORDINATOR UNIT ON INDUSTRIAL SAFETY RELATED TO ENVIRONMENT.

Ms.Ambar Suryosunarko presented the status of the Technical Coordinator Unit on Industrial Safety Related to Environmental Protection and Effluent Control in Pesticide Industry. The successful organization of the

workshop on the subject in December, 1990 was appreciated by the PMC. Mrs. Suryosunarko explained that a National Pesticide Centre is being established to primarily concentrate activities in the area of effluent control and waste disposal with a Government input of Rp.2479 million and UNIDO contribution of US\$ 1.52 million and is awaiting approval of the Govt. of Indonesia. The members appreciated the steps taken by Mrs. Suryosunarko in setting up this centre which would lead a long way in assisting the member countries in the area of effluent treatment and waste disposal of the industry. Mrs. Suryosunarko offered a list of Indonesian experts who are available for serving as consultants to meet the requirements of the region in the specialized fields of work.

7.1.4 TECHNICAL COORDINATOR UNIT ON BIO-BOTANICAL PESTICIDES

Mr. Montri Rumakom briefed the meeting on the activities of the Technical Coordinator Unit on Bio-Botanical Pesticides. He said that as a national policy in Thailand, the use of bio-botanical pesticides is strongly recommended as a part of the IPM programme on the economically important crops such as rice, cotton, vegetables and fruit crops. A number of projects have been undertaken by the Department of Agriculture and the University with technical assistance from UK. The programme on neem is being further strengthened and a private company has already started manufacturing neem products for use as insecticides. Strong support of the Government in this area has helped to strengthen the Technical Coordinator Unit on Bio-Botanical Pesticides. He narrated the successful organization of the recently organized workshop on Bio-Botanical Pesticide Development by the Technical Coordinator Unit. He stated that so far approx. US\$ 50,000 has been spent for the organization of the activities of the Technical Coordinator Unit. He stated that the TCU could now undertake distribution of technical information on bio-botanical pesticides as well as offer individual training for a week or 10 days. The group training, he said, would need to be planned two years in advance in order to enable the Thai Government for making budgetary allocations to meet the accommodation, local travel and other expenses. The PMC appreciated the leadership of Mr. Rumakom in setting up of the TCU and successfully organizing the Workshop on Bio-Botanical Pesticide Development. It was noted that in course of the Workshop, ODA of UK, GTZ of Germany and CIRAD of France evinced interest to support strengthening of the TCU through financial assistance. It was agreed to prepare a project proposal for submission to the donor agencies for consideration without further loss of time.

7.1.5 TECHNICAL COORDINATOR UNIT ON ECO-TOXICOLOGY

The meeting was pleased to note the setting up of TCU on Eco-toxicology by Govt. of Pakistan under the project "Strengthening of Ecotoxicology Facility" as a country programme assisted by DANIDA through the UNIDO system. The PMC expected that the other Technical Coordinator Units would be able to attract funding of similar donor agencies as has been done by Pakistan. With regard to the organization of the Workshop on Eco-Toxicology, it was agreed that this would be held

in the early part of 1993 and efforts would be made to make the best use of funds available under the RENPAP project and the country project to make the Workshop successful.

7.1.6 TECHNICAL COORDINATOR UNIT ON APPLICATION TECHNOLOGY

Ms. Karim mentioned that the facilities for TCU on Application Technology are available with Malaysian Plant Protection Society in collaboration with Universities, Research Institutions and also the pesticide industry. This Centre had been organizing training for participants even from the countries other than Malaysia. The offer of Malaysia to host the Technical Coordinator Unit on Application Technology was accepted by the PMC and it was agreed that a letter confirming the acceptance would be sent to the National Coordinator, Malaysia for further follow up action in the matter. In order to upgrade the expertise in Malaysia, National Coordinator urged the consultancy and training facilities to be made available as has been done in the case of the other TCUs. This she said, would be necessary to prepare for the proposed Workshop on Application Technology.

7.1.7 TECHNICAL COORDINATOR UNIT ON PESTICIDE FORMULATION TECHNOLOGY AND QUALITY CONTROL

The Technical Coordinator Unit on Pesticide Formulation Technology and Quality Control was visited by the PMC members on the 8th April, 1992 to observe the various activities of the Technical Coordinator Unit and the services it has been rendering to the RENPAP member countries and the Indian pesticide industry. The Indian pesticide industry also participated during the visit of the PMC members. The PMC was informed that this centre which has been a country programme implemented by the Govt. of India with the assistance of the UNDP/UNIDO, has now been registered under the Societies Act as Institute of Pesticide Formulation Technology and the Indian pesticide industry is participating in the management and financing of the Institute. This specially has resulted in close involvement of the Indian pesticide industry and also added towards the self-sustainability of the Institute and its activities.

7.1.8 SETTING UP OF THE TECHNICAL COORDINATION UNITS VIS-A-VIS PROGRESS TOWARDS SELF-SUSTAINABILITY.

In view of the setting up of the Technical Coordinator Units with strong infrastructural support and financial contribution of the member countries, the PMC expressed its satisfaction over the progress being made to attain self-sustainability of RENPAP. The member countries agreed to make available their contribution for executing the various activities of the RENPAP project for inclusion in a format similar to that of Republic of Korea.

8.0 DISCUSSION ON FUTURE ACTIVITIES: MEETINGS, TRAINING PROGRAMMES, STUDY TOURS, FELLOWSHIP, CONSULTANCIES.

Detailed discussions were held based on the requirements of the member countries including the newly joined four member countries. The workplan adopted is placed at Annexure. III. In order to meet the requirements of the newly joined member countries, it was noted that it may not be possible to complete the programme within the existing time frame, therefore, it was decided to make necessary project revisions to accommodate time overrun of about six months. The National Coordinators were requested to immediately send job descriptions for the recruitment of the consultants and the nominations for training as

per workplan to the Regional Coordinating Office in order to facilitate expeditious processing.

- 9.0 **PROGRESS ON THE PESTICIDE DATA COLLECTION SYSTEM: PROGRAMME WITH THE SUPPORT OF THE GOVERNMENT OF FRANCE.**
- 9.1 **The PMC reviewed the progress of the data collection programme with the financial assistance of the Government of France and in collaboration with CIRAD.**
- 9.2 **The PMC noted the delay on the part of the CIRAD in fielding the experts and in the finalization of the economic data collection formats, the computer softwares programme and the training of personnel. UNIDO staff member informed that the experts from CIRAD were to visit 4 countries during the year 1991 to train the data collection offices and develop a software for computerizing the old data and follow up with the current data, but unfortunately this could not take place resulting in delay in the start of this programme. The PMC also noted the delay in the receipt of the nomination from the member countries for appointment as Senior/Junior Data Collection Experts on a consolidated remuneration of US\$ 2000/US\$ 1000 for their service covering the entire period of the project duration. PMC noted that while Senior Data Collection Experts have been appointed for Thailand and India, nominations have been received from Pakistan, the Islamic Republic of and Malaysia. The National Coordinators who have not yet sent the nomination agreed to send nomination along with the bio data of Data Collection Experts for appointment as Senior Data Collection Experts under the programme. In order to expedite the implementation of this activity, the following decisions were taken:**
- i) **The modified data collection formats as contained in the Agenda be adopted for collection of data subject to confirmation by CIRAD.**

- ii) CIRAD may be requested to expedite development of the computer software for the economic data collection by RENPAP.
- iii) The countries which have not yet sent the nomination for the appointment of Senior Data Collection Experts would send the same alongwith the bio data to expedite appointment.
- iv) The data collection experts may be given a time frame of six months to compile information in the prescribed format for the years 1989, 1990 and 1991 and submit it to the Regional Data Base Centre.
- v) In order to save time, the data collection work would start right away without waiting for the training to take place.
- vi) The countries which are finding difficulties in nominating Senior Data Collection Experts may be requested to obtain the data collection service from the concerned organization/Institute against payment of US\$ 2000 for the duration of the project.

10.0 SETTING UP OF THE REGIONAL PESTICIDE ANALYTICAL COUNCIL FOR ASIA AND THE PACIFIC (RENPAC)

10.1 The Project Management Committee felt the need for having an Analytical Council to meet the needs of the member countries of the Network and ratified the proposal of forming the Regional Pesticide Analytical Council for Asia and the Pacific (RENPAC). The aims, constitution and organization of the RENPAC as proposed in the Agenda was approved. The PMC noted that nominations to the RENPAC have been received from People's Republic of China, India, Philippines, Pakistan, Republic of Korea and Thailand. The countries which have not intimated their nominees to the Council agreed to do so in the near future.

10.2 In order to play an effective role and to complement the activities of the CIPAC, the PMC considered it appropriate to organize the RENPAC meeting coinciding with the CIPAC meeting for a period of two days prior to the starting date of the CIPAC meeting. The PMC decided that the member countries who have nominated to the RENPAC be invited to participate in the RENPAC and the CIPAC meeting being held in Bangkok in the last week of May, 1992. The PMC noted that the expenditure for the RENPAC activities would form part of the RENPAP budget.

11.0 PUBLICATION OF RENPAP GAZETTE

- 11.1 As a follow up of the decision taken in the PMC meeting in Islamabad, the publication of RENPAP Gazette was started on regular basis from October, 1990. The main purpose of this publication is to serve as a journal specializing in the areas of safety, environment protection, promotion of clean technologies, etc. in the pesticide industry and to generate funds from the sales proceeds of the journal and the advertisements published in it for meeting part of the financial needs of the project.
- 11.2 The PMC noted the tariff fixed for the RENPAP Gazette and for the publication of advertisements and further noted that the funds generated from the sales proceeds/collection of advertisements would be retained in the Office of the National Coordinator. The PMC noted that the first few issues had to be used as introductory /complimentary copies for generating regular subscription and some countries, viz. Republic of Korea, Indonesia and Pakistan have made good progress towards selling copies of the Gazette and collecting advertisements.
- 11.3 The PMC urged the member countries to contribute articles on the appropriate topics identified for the Gazette in the area of pesticides for publication in the Gazette on regular basis. The PMC also decided to invite articles from eminent scientists/technologists to improve upon the quality of the journal.
- 11.4 The PMC urged all National Coordinators to step up distribution of copies and collection of advertisements for publication in the RENPAP Gazette in its future issues. The PMC agreed that 50 copies of each issue of the Gazette may be sent to the National Coordinators as is being done at present.
- 11.5 The PMC decided that all the National Coordinators would be the members of the Editorial Committee and would act as referees in respect of articles received for publication in the RENPAP Gazette.

12.0 CONCLUSIONS AND RECOMMENDATIONS

12.1 Conclusions

The Project Management Committee Meeting and the Tripartite Review Meeting very much appreciated the impact of the project in the region and its activities especially during the last two phases which have clearly moved to new thrust areas such as environment protection, effluent treatment, workers health safety, choice of clean environment friendly technologies and user friendly products including bio-botanical pesticides. The meeting also expressed its satisfaction over the pace of the implementation of the planned activities. It also emphasized the fact that the increase in membership of the RENPAP is a clear indication of the support given by the countries and the benefits that are being derived from the project. The meeting also concluded that the thrust areas of the project are in consonance with the theme "Environment and Natural Resource Management" endorsed in the MAC-V meeting of the UNDP's inter-regional programme. The PMC meeting also placed on record the assistance provided by Associated Agencies FAO/WHO/ESCAP/WORLD BANK in planning and implementing the various activities of the project during various phases.

12.2.1

Having taken into consideration UNIDO Headquarters comments: "as a regional entity with excellent support from member country which is growing, the organization RENPAP should be considered on a long-term basis linking UNDP/UNIDO/Donor agencies/participating governments to carry its work to promote safety to the workers, public and the environment. The long-term links with UN organizations is important to give it the necessary status to influence industry to change its approach and the Government to provide the incentives and the necessary legislative measures to make pesticides user and environment friendly. The Inter-linkage with national focal points could be a model for other regions so that they could benefit from RENPAP. The next Project Management Committee meeting and TPR meeting to be held in April should be very crucial so as to decide long-term functions of RENPAP to support the region to adjust to the enormous changes taking place in pesticide technology to make it safer". Having discussed in detail the advantages derived from the project and noting the positive contribution made by the different Technical Coordinator Units (TCU's) to the success of the project, the PMC strongly recommends the continuation of the project with UNDP/UNIDO/donor agencies support with more technical and financial support from the Governments.

12.2.2

Having noted with satisfaction the strong linkage established between the RENPAP and various country projects and having appreciated the assistance provided by the Indian Government for the establishment of a permanent Secretariat, DANIDA

(Denmark) for supporting project on ecotoxicology in Pakistan, UNDP for considering a programme for China on inputs for agriculture and the Indian country programme on Pesticides extended to 2nd phase, the PMC strongly recommends Indonesia to expedite finalization of its country programme to further strengthen the links in the area of industrial safety and waste management.

- 12.2.3 While welcoming the four new member countries viz. the Islamic Republic of Iran, Malaysia, Myanmar and Viet Nam, the PMC recommends that their needs for training, consultancy and other group activities be met on priority basis and UNDP may be requested for additional proportionate financial support as recommended and agreed in the PMC China TPR 1988 meeting.
- 12.2.4 Due to late joining of these member countries and expected delay in placement of trainees and consultants, the current phase may lead to time overrun of about six months. The PMC, therefore, recommends suitable project revision.
- 12.2.5 Having expressed satisfaction over the establishment of six technical co-ordinator units in support of long-term sustainability of the project and having satisfactorily carried out many TCDC activities by providing regional experts, training and organizing workshops, making use of the facilities available within the region, the PMC strongly recommends that this thrust should be further carried forward in future activities including making use of RENPAP Gazette to generate funds and inviting articles from eminent scientists and technology specialists.
- 12.2.6 Having recognized greater concern in the region over excessive and misuse of pesticides and also taking into account the importance of integrated pest management and industries' role in promoting user and environmentally friendly pesticides and their formulations, the PMC urges member countries to promote newer and cleaner technologies as a part of safe development and management of pesticides.
- 12.2.7 Recognizing that the pesticide database development project funded by the Government of France has been delayed, the PMC recommends that decisive steps be taken to strengthen data collection system, recruitment of local data collection experts and increase cooperation with CIRAD and ESCAP.
- 12.2.8 Having discussed the project activities and outputs and taking into consideration the requirements of the new member countries, the PMC recommends that expeditious implementation of the revised workplan.
- 12.2.9 The PMC accepted the offer of the Government of Sri Lanka to hold the next meeting of the PMC.

LIST OF PARTICIPANTS OF THE TRIPARTITE REVIEW MEETING OF THE REGIONAL NETWORK ON PESTICIDES FOR ASIA AND THE PACIFIC HELD ON THE 6TH APRIL, 1992 IN THE UNDP CONFERENCE HALL, LODI ESTATE, NEW DELHI-110003, INDIA

UNDP

1. Mr. Erling Dessau, Resident Representative, UNDP, India
2. Mr. R D Makkar.
3. Mr. Vivek Rae
4. Mr. Sat Pal

INDIA (Host country)

1. Dr. M.S. Gill, Secretary, Deptt. of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India
2. Mr. V.K. Majotra, Joint Secretary, Deptt. of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India
3. Mr. Ajbir Singh, Deputy Secretary, Deptt. of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India

UNIDO

1. Mr. M. Islam, Country Director, India
2. B Sugavanam, Sr.Industrial Dev.Officer, Vienna

ESCAP

Mr. Peter Hegenbarth, Bangkok

FAO

Mr. Kopisch Obuch, Senior Officer, Plant Production & Protection Div. Rome

WHO

Mr. R.Plestina, Geneva.

PEOPLE'S REPUBLIC OF CHINA

Ms. Li Bin.

INDONESIA

1. Ms. Amber Suryosunarko.
2. Mr. Hari Slamet.

IRAN

Mr. Bijen Zokai

MALAYSIA

Ms. Zam Abd.Karim.

PAKISTAN

Dr.Umar Khan Baloch

SOUTH KOREA

Mr. Young Ho Jeong.

SRI LANKA

Dr. M H J P Fernando.

THAILAND

Mr. Montri Rumakom.

VIETNAM

Mr. HA Minh Trung.

RENAP

1. Dr. S P Dhua, Regional Coordinator.
2. Dr. Kawal Dhari, Member-Secretary,
Institute of Pesticide Formulation Technology.
3. Mr. D R Sharma, Asstt.Regional Coordinator.

LIST OF PARTICIPANTS OF THE PROJECT MANAGEMENT COMMITTEE MEETING OF THE REGIONAL NETWORK ON PESTICIDES FOR ASIA AND THE PACIFIC HELD ON THE 6TH APRIL, 1992 IN THE UNDP CONFERENCE HALL, LODI ESTATE, NEW DELHI-110003, INDIA

UNDP

Mr. R D Makkar.

UNIDO

B Sugavanam, Sr.Industrial Dev.Officer, Vienna

ESCAP

Mr. Peter Hegenbarth, Bangkok

FAO

Mr. Kopisch Obuch, Senior Officer, Plant Production & Protection Div. Rome

WHO

Mr. R.Plestina, Geneva.

PEOPLE'S REPUBLIC OF CHINA

Ms. Li Bin.

INDIA

Mr. V.K. Majotra

INDONESIA

1. Ms. Amber Suryosunarko.
2. Mr. Hari Slamet.

IRAN

Mr. Bijen Zokai

MALAYSIA

Ms. Zam Abd.Karim.

PAKISTAN

Dr.Umar Khan Baloch

PHILIPPINES

Mr. Nicholas Deen (on 8-4-92)

SOUTH KOREA

Mr. Young Ho Jeong.

SRI LANKA

Dr. M H J P Fernando.

THAILAND

Mr. Montri Rumakom.

VIETNAM

Mr. HA Minh Trung.

RENAPAP

1. Dr. S P Dhua, Regional Coordinator.
2. Dr. Kawal Dhari, Member-Secretary,
Institute of Pesticide Formulation Technology.
3. Mr. D R Sharma, Asstt.Regional Coordinator.

AGENDA

Annexure - II

Monday 6th April, 1992

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|---------------|---|
| 09.30 - 10.30 | Inaugural Session and Tripartite Review Meeting |
| 11.00 - 11.15 | Adoption of the Agenda, Designations of Officers and Appointment of Reporteurs |
| 11.15 - 13.00 | Country reports by National Coordinators:
Afghanistan, Bangladesh, P.R. China, Indonesia, Iran, Malaysia, Myanmar |
| 14.30 - 16.00 | Country reports by National Coordinators :
Pakistan, Philippines, South Korea, Thailand, Sri Lanka, and Vietnam and Report by Regional Coordinator |
| 16.15 - 17.30 | Reports from the UN Agencies |

Tuesday 7th April, 1992

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|---------------|--|
| 09.30 - 11.00 | Progress of implementation of Project activities of Technical Coordinator Units in India, South Korea, Thailand, Philippines, Indonesia, Pakistan and Technical Coordinator Unit facilities to be set up in Malaysia on Application Technology and in Iran on Analysis of Raw Materials. |
| 11.30 - 13.00 | Report on the progress of data collection system : programme with the support of the Govt. of France |
| 14.30 - 16.00 | Discussion on future activities : meetings, training programmes, study tours, fellowships, consultancies |

16.15 - 17.30

Steps taken for attaining self sustainability of the Project cash and kind contributions by the member countries; RENPAP Gazette, Publication of Technical Articles, Advertisements, Sales proceeds, Utilisation etc.

Wednesday 8th April, 1992

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|---------------|---|
| 08.45 - 11.30 | Visit to IPFT and exhibition organised by members of the Indian Pesticide Industry |
| 12.00 - 13.00 | Consultation/ Communications between National Coordinators/ Regional Coordinator and support from UN Agencies |
| 14.00 - 15.00 | Proposed revisions, Workplan |
| 15.00 - 16.00 | Recommendations |
| 16.15 - 17.00 | Adoption of the Report |
| 17.00 - 17.30 | Closing Remarks |

REGIONAL NETWORK ON PESTICIDE FOR ASIA AND THE PACIFIC (RAS/88/031)

UPDATED PROJECT WORKPLAN

CONSULTANCY					TRAINING/STUDY TOUR							
INDIVIDUAL					INDIVIDUAL				GROUPS			
Subject	Duration	Year	Country to provide Consultant		Subject	Duration	Year Date	Venue Proposed	All Countries Subject	Duration	Date days & Venue	
COUNTRY	1	2	3	4	5	6	7	8	9	10	11	12
1. AFGHANISTAN	Handling/Packaging Consultant	1m/m (Completed)	91	India	Packaging handling & storage of pesticides	1m/m (Completed)	1991	India				
	Instrumentation	To be reminded for early clearance			Instrumentation analysis	1m/m (Completed)	1991	India				
2. BANGLADESH	Handling Packaging storage	1m/m (Completed)	1990	India	Biological screening	1m/m	In process; (Univ. of Philippines to intimate reduction in training fees)	(Philippines, Pakistan)				
	Environmental Toxicology	(Completed)	(Czechoslovakia)		Environmental toxicology	1m/m	1991 Completed					
3. CHINA	Instrumentation	Formal request awaited 1 m/m			Instrumentation analysis	1m/m	1991 (Completed)	India				
	Preparation of standard sample.	1m/m (In process, China to confirm acceptance of Expert)	1990		Assessment of data for microbial pesticides	1m/m (Formal nomination awaited)	1992	USA				
					Product Mee Too Registration	10 days	1992	EPA USA				

1	2	3	4	5	6	7	8	9	10	11	12
4. INDIA	Effluent treatment	1m/m	1991	(Completed)	Development of bio-botanical	10 days (Completed)	1991	Thailand	R&D in formulation technology of newer formulation & quality control	10	April 90 (Completed)
					Effluent treatment & waste disposal industrial safety	8 days (Completed)	1990	Indonesia			
5. INDONESIA	Pesticides residue analysis with special reference to metabolite and degradation technology	1m/m	1991	In process Job Description sent to UNIDO for Recruitment Action	Treatment & disposal of waste from pesticides industry	1m/m (Completed)	1990	UK/USA	Industrial Safety & Protection of environment/ effluent control	6	Dec. 90 (Completed)
	Effluent control and waste management	1m/m (Completed)	1990		Selection of carriers/ adjuvants in formulation	1m/m	1992	India (In process)			

1	2	3	4	5	6	7	8	9	10	11	12
6. SOUTH KOREA	Pesticide specification	1m/m (Completed)	1991	Japan	R&D on controlled release formulation	1m/m (Completed)	1991	UK/US	Impurities in technical material & disposal of deteriorated material	7	Oct 92
	R&D for controlled release pesticide	1m/m (Completed)	1990	Germany	Development of Microbial formulation	1m/m (Completed)	1991	Japan			
	Pesticide Specification	2 weeks	1992								
7. PAKISTAN	Analytical Chemistry (Eco-Toxicology)	2 m/m	1992		Eco-toxicology Study Tour	1m/m (Completed)	90	Japan	Ecotoxicology Workshop		April 1993
					Analytical Chemistry (Ecotoxicology)	2m/m	1992	Europe/USA			
8. PHILLIPINES	Environmental protection	1m/m	1991 (Completed)	US-EPA	Human Safety/ Environmental protection	1m/m (Completed)	1991	USA	Industrial Hygiene & Occupational Health Safety & their Environmental concerns		April 1991 (Completed)
									Pesticides regulatory control policies & procedures, Indonesia Pakistan & Iran,		1992 (In process)

1	2	3	4	5	6	7	8	9	10	11	12
9 SRILANKA	Occupational Health Hazards	1m/m	1992	Job description awaited	Disposal of out dated pesticides	1m/m (Formal nomination awaited)		UK	Project Management Committee Meeting	3 days	1993
	Insecticide efficacy	1m/m (Completed)	1990	India	Packaging, handling and storage of pesticides	1m/m (Formal nomination awaited)		India			
	Training of Private Pest Control (industrial) Operators	2 Weeks	1992		Pesticide Regulatory Procedures - Philippines (Air Fares will be paid by the Govt.)						
10. THAILAND	Bio-pesticide Development	1m/m	1991 (Completed)	USA	Botanical pesticides development and usage	1m/m	1991 (Completed)	GERMANY	Development of bio-botanical pesticides	10 days	Dec. 91 (Completed)
	Botanical Pesticides development	1m/m	1991 (Completed)	Germany	Bio-pesticide development	1m/m	1991 (Completed)	USA			
11. IRAN	Raw Material prospecting and analysis	2 m/m	1992		Residue Analysis	2 m/m	1992	Thailand			
12. MALAYSIA	Application Technology	1m/m	1992	UK	Application Technology	1 m/m	1992/93		Application Technology	6 days	1993
	Pest Control Certification of Operators	1 m/m	1992		Environmental fate monitoring of pesticides	1 m/m	1992/03				
13. VIETNAM					-Microbial pesticide development (a) Virus (b) Fungus/Bacteria (c) Residue Analysis	1 m.m 1 m.m 1 m.m					

UNIDO COMMENTS ON THE REPORT

The project which aims to bring co-operation among countries in the same region to deal with the most important field of agrochemicals, has shown the way for an effective regional collaboration. Now that the agrochemical field is entering a challenging scene where it is important that scientifically proven solutions are upheld and not given way to emotional approach to pesticides. The project has given a valuable contribution to the safe development and management of pesticides and has brought the Governments and industries together to analyze various problems and find solutions to get the maximum benefit out of pesticides without any detrimental effect to environment.

While achievements of the project are commendable the project should further assist national focal points to strengthen their capacity to improve safety in production and use of pesticides and promote safer pesticides, their formulations including bio-pesticides and support integrated pest management. This would need strong support for the RENPAP Secretariat and the Technical Co-ordinator Units from the Governments, the industries and the international organizations.

The linkages between the national projects and the regional project proved to be a very strong point in support of the network and the Project Management Committee Members strongly came in favour of continuation of the network which still needed support from international organizations to build up this regional capability to assist the national institutions.

The project has a good impact in the region and as a reflection other regions such as Africa and the Arab regions are requesting UNDP/UNIDO to set up similar network. The project is going to concentrate more and more into industrial safety, occupational health and environmental safety and encourage safer pesticide formulation and application technologies and also the ecotoxicological aspects of pesticides. In other words the project would promote following the fate of pesticides from 'cradle to grave' which is one of the prime objectives of UNCED Meeting Agenda 21 with respect to toxic and hazardous chemicals.