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**REGIONAL NETWORK ON SAFE PESTICIDE PRODUCTION AND
INFORMATION FOR ASIA AND THE PACIFIC (RENPAF)**

Technical Report: Tripartite Review Meeting and Project Management Committee Meeting*
Kathmandu, Nepal from 16-17 February 1999

Prepared for the Government of the Member States of the Regional Network (Afghanistan, Bangladesh, People's Republic of China, India, Indonesia, Islamic Republic of Iran, Myanmar, Malaysia, Nepal, Pakistan, Philippines, Republic of Korea, Sri Lanka, Thailand and Vietnam) by the United Nations Industrial Development Organization acting as executing agency for the United Nations Development Programme

Based on the work of Dr. (Mrs) R.B. Pradhan - Chairperson
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1.0 INTRODUCTION

- 1.1 The TPR and the PMC meeting of the Regional Network on Safe Pesticide Production and Information for Asia and the Pacific (RENPAP) was held on the 16th and 17th of February 1999 in Kathmandu, Nepal
- 1.2 The meetings were intended to review the progress of the activities of the RENPAP, consider the draft project document on "Regional Network on Pesticides for Asia and the Pacific : Cleaner Production and Environmentally Sound Management of Pesticides, Promoting Safety, Health and Environmental Protection for Risk Reduction" and the UNDP Trust Fund agreement for the setting up of the proposed UNDP/UNIDO Trust Fund for the RENPAP in order to establish RENPAP on a sustainable basis with an autonomous management structure.
- 1.3 The senior representatives each from Bangladesh, People's Republic of China, India, Indonesia, Republic of Korea, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Thailand and Vietnam and representatives from UNDP and UNIDO participated in the meeting. The list of participants is placed at **Annexure I** of the report.

1.4 The proceedings of the Project Management Committee and the Tripartite Review Meeting are summarized below:

2.0 INAUGURAL SESSION

2.1 The meeting was formally inaugurated by Mr. Hari Shankar Tripathi, Member National Planning Commission, His Majesty's Government, Nepal.

2.2 Dr. (Mrs.) R.B. Pradhan, Director General, Department of Agriculture, Government of Nepal extended welcome to the representatives of the 12 out of 15 member countries of the Regional Network on Safe Pesticide Production and Information for Asia and the Pacific (RENAPAP) and said that this was a unique opportunity for her country to expose the tiny Himalayan Kingdom to other member countries of the network, which has vast geographical diversity and thus has diversified farming system. She said that the timing of hosting of this meeting is very important as Nepal is now at the cross-roads of transforming the subsistence agriculture to commercial agriculture without jeopardizing the environment. She said that in many other member countries of the network this transformation has already taken place, and the use of modern production inputs such as chemical fertilizers and

pesticides has already reached certain threshold level causing threats even to sustainability of the productivity, whereas in Nepal, the use of such chemical inputs has not reached that level, but threats to agricultural environment have already begun to be realised. She mentioned that Nepal is to develop strategies and programmes to face this dilemma and in this context she emphasised organisation of this meeting is very important particularly from the point of view of sharing knowledge and experience related to pesticide use with the fellow member countries and also learning from the success stories of these countries. She mentioned that the Department of Agriculture has a relatively large network of plant protection institution organised at central, regional, district and grassroots level and the plant protection programme has to encompass Pesticide Management and Plant Quarantine to complement the IPM programme. She said that Nepal would be intensively drawing upon the vast experience of RENPAP for developing appropriate strategies and workplan aimed at comprehensive pesticide management. She felt that so far Nepal had been actively participating in the trainings, workshops and meetings of RENPAP and proposed to contribute more to the growth of the RENPAP programme in view

of the department of Agriculture having initiated stronger programme on raising awareness on safe use of pesticides through IPM and targeted communication and dissemination activities. She suggested that in order to effectively enforce pesticide regulation, support from the fellow member countries which have established analytical facilities, in the short term, is essential while, in the long term, Nepal would need to have its own laboratories. She also mentioned that many species and types of bio-agents are present in her country and it would be appropriate that proper initiatives are taken to explore these vast resources with the technical assistance of RENPAP.

- 2.3 In his inaugural address Mr. Tripathi mentioned that the HMG Nepal is privileged to host this important RENPAP meeting participated by the distinguished officials of the 15 member countries and representatives of UNDP, UNIDO and the Government of India. He said that agriculture occupies the lead position in the Nepalese economy contributing 42 percent to national GDP and more than 80% of the employment. He said that his Government has given top priority to the agriculture sector and that in the currently on-going Ninth Plan which is greatly drawn to meet the target growth rates set in the

long term Agriculture Perspective Plan. In view of this policy of the Government, he said, the promotion of eco-friendly technologies seem very critical to sustain the agricultural production system.

2.3.1 He mentioned that the use of agricultural inputs, particularly fertilizers and pesticides is very low in Nepal as compared to many other countries of RENPAP and that wherever they are used, they are used irrationally and injudiciously, posing possible threat to the existing agro-ecosystems. He said that this has even caused the resurgence of pest outbreaks and that the present outbreaks of Brown Plant Hoppers in rice and army-worm in maize can be cited as examples. He, therefore, felt that there is an urgent need to develop suitable strategies and programme to cope with the situation which in turn should contribute to environmental protection.

2.3.2 He felt that there is a great need to take the farmers and pesticide traders in full confidence to promote safe use of pesticides to make IPM programme successful and in this context RENPAP can contribute much. He emphasized that utilising the best experience of RENPAP, Nepal can shift its priorities

and policies and if necessary chalk out feasible strategies and workplan to promote pesticide production and information in the region. He went on to extend the natural advantage of Nepal imparted by its unique agro-ecological diversity to the member countries of the RENPAP to harness its potentiality in promoting use of natural products, such as herbal pesticides and indigenous bio-agents for eco-friendly pest management.

- 2.3.3 He also highlighted the need of extensive support of the member countries of the RENPAP, particularly of the two bordering countries China and India in the promotion of safe use of pesticides in Nepal. As a representative of the government's policy making body, he fully endorsed the proposal made by Ms. Pradhan, for taking a lead role among the member countries in the promotion of safe use of pesticides at the farmers level through mass awareness. He felt that this is very important as unless farmers are empowered to make appropriate decisions regarding pest management on their own, the objectives cannot be fulfilled. If the farmers become educated, he emphasised, regarding safe use of pesticides, they will not demand hazardous pesticides as is the situation now and not encourage the pesticide traders to import such pesticides. He said that this

meeting attaches due consideration and importance to this aspect of the strategy. He said that all the scientific institutions of the region need to join hands to share their experience for promoting safe production and use of pesticides. Concluding his address he said that the National Planning Commission, which is responsible for making policy decisions and developing national plans for development on behalf of the Government, would like to assure full support to the promotion of such network programme like RENPAP operating under the UN agencies.

- 2.4 Mr. Neils Maagaard, Deputy Resident Representative, UNDP, India thanked His Majesty's Government of Nepal for hosting the meeting and for making the excellent arrangements. He said that the presence of Mr. Chatterjee, Secretary, Department of Chemicals and Petrochemicals, Government of India, despite his very pressing schedule necessitated by the forthcoming inter-parliamentary budget session, indicates the continued importance the Government of India attaches to the RENPAP activities. He said that the creation of the RENPAP network in the earlier 80s with the support from the UN system is a unique model to look into various aspects of food production and use of pesticides in the region and

that the RENPAP programme has grown all these years from strength to strength and has provided services for capacity building of the participating countries and exchange of technical know how in the critical areas including - User and Environment Friendly Pesticide Formulation Technology; Bio-botanical Pesticide Development; Pesticide Application Technology; Eco-toxicology; Industrial Hygiene and Occupational Health Safety; Quality Control of Technical Grade Materials; Industrial Safety, Environment Protection and Effluent Treatment and Disposal and Development and Use of Computer Software for Pesticide Market Data, Input, Storage, Retrieval and Dissemination, etc.

- 2.4.1 He informed that the RENPAP programme would now be under a new operational mode soon and to this end it will need both human and financial resources from all the development partners i.e. private sector corporations, governments and donor agencies to be sustainable. He felt that as a step towards this direction the technical capabilities of RENPAP should be made known to the countries which today are not members of the network and also to the private sector at large. He, therefore, encouraged the RENPAP Secretariat to develop an information dissemination strategy. In this context he informed

the meeting that the Regional Secretariat in 1998 has already brought out a folder highlighting the services it could offer to the member countries and that with the exponential growth of information technology the RENPAP activities should be extended into web site and home page technologies and in this direction he said that UNDP India is offering its expertise to make this possible at the earliest.

2.4.2 He said that the final phase of the UNDP assistance to support the RENPAP activities was to come to an end in October 1998 but UNDP having contributed a part of its resources over the years for establishment and management of RENPAP, the interest of the UNDP for its sustainability is very strong. With this end in view, he said, that UNDP had brought to the attention of the participating countries the need for an alternative operational mechanism to be in place at the end of the current phase. He said that he was happy to know that the member governments have responded positively by supporting the creation of the Trust Fund and to commit resources.

2.4.3 He noted that unfortunately due to the economic crisis faced by a number of governments in the region, much progress could not be made to reach its

goal during the year 1998. However, he was happy to mention that until now the private sector has been more of a recipient rather than a contributor and that he was pleased to announce that the first cash contributions to RENPAP towards the new operational arrangements has come from the Indian private sector even before the establishment of the fund. He said that in May 1998 M/s. United Phosphorus Limited, an Indian private sector company has contributed Rs. 1 million for the future activities of RENPAP and that this contribution has encouraged the UNDP and the member governments to believe that the RENPAP has the potential to be on its own financial footing very soon.

- 2.4.4 He mentioned that UNDP is a global organisation and the RENPAP activities addresses important areas like environmental protection through promotion of alternatives to chemical pesticides and ensure protection of the health of the workers and the farming community. He, therefore, urged that in pursuance of TCDC, the RENPAP activities can expand globally through creation of similar networks in the African and Latin American regions. In this context he mentioned that the Government of India is providing assistance to the African countries through the South-South Cooperation and perhaps the

Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers may consider channeling its assistance for capacity building and exchange of technical know how in this field through the RENPAP network.

2.4.5 Concluding his remarks he said that he did not know whether he was indeed posing a challenge to the senior representatives of the member governments but he felt that if this be so, then it is because of the success of RENPAP for which a long standing strategy along with a vision statement for the RENPAP could help move forward successfully on an independent basis. In this context the UNDP office in India he said, would always be ready to provide its expertise and services to the member governments in establishing the new management system for the RENPAP and that his office would be pursuing with the UNDP headquarters for a favorable consideration of the recommendations to be made at the end of this meeting.

2.5 Dr. Csizer, Director SES/PEM, UNIDO Vienna welcomed the participants on behalf of the Director General of UNIDO. He thanked His Majesty's Government of Nepal for hosting the PMC/TPR meeting of RENPAP. He said that he, as Project Manager, has been

constantly monitoring the various activities of RENPAP at the headquarters level and felt that this is a very vibrant and dynamic network covering 15 member countries in the Asia and Pacific region. He said that under the able guidance of the Regional Coordinator of the programme, RENPAP has achieved many milestones in promoting the objectives of the programme. He said that RENPAP has become a model in the UN system for promoting a management system which is aimed at scientific and sound management of hazardous chemicals (pesticides) covering various programmes as identified in chapter 19 of Agenda 21 of the UNCED. For promoting cooperation among developing nations, RENPAP model is taking a lead to be emulated in the African, Arab and Latin American region, he mentioned. In view of the importance of the programme, he urged the member countries to extend all the necessary support for establishing RENPAP on a permanent footing supported under an independent management structure backed by a Trust Fund as was finalised during the last TPR meeting.

2.6 In his key note address Mr. Chatterjee, Secretary, Dept of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Government of India extended a warm welcome to the senior government officials of the member countries of RENPAP. While

agreeing with the view of the earlier speakers, he emphasised that while the pesticides have played a very vital role in increasing food production through effective control of pests, diseases and weeds, there is increasing evidence now to show that these agrochemical production, consumption and trade has contributed to health hazards and environmental problems on account of pollution generated during production, handling, storage, transportation and by unsound disposal measures and misuse in the field. He said that the unscientific use of pesticides has led to the resurgence of new pests, development of resistance, contamination of soil, water and air, destruction of predators and other non-target organisms including wild life. He pointed out that the use of pesticides in the member countries of the Asia Pacific region has shown a distinct increasing trend and today all the countries are faced with the dilemma of redefining the role the agrochemicals should play in the life of human beings and also in the preservation of the environment. He opined that these chemicals available to mankind through long years of innovative research and development should not be discarded or ignored due to misuse especially by the end users and also the industries themselves. In this context, he highlighted the activities of the RENPAP programme which has

succeeded in creating perceptible impact towards the regeneration of the environment, providing safety to the farmers and the workers of the production centres and at the same time enhancing food security. In this context he referred to the findings of the UNDP evaluation mission about the success of RENPAP in bringing together the 15 member countries to effectively address these problems with the active participation of eight Technical Coordinator Units pursuing:

- 2.6.1 elimination of hazardous and environmentally polluting crop protection chemicals and replacing these with user and environment friendly products through the TCU on User and Environment Friendly Pesticide Formulation in India;
- 2.6.2 development and promotion of bio-botanical pesticides as an effective means to reduce the chances of environmental pollution as these are basically natural products and are bio-degradable through TCUs established in P.R. China and Thailand;
- 2.6.3 promotion of improved application technology for effective control of the target pests, weeds, fungi, etc. and avoidance of environmental pollution through TCU on Pesticide Application Technology

established in Malaysia;

2.6.4 promotion of the awareness for preserving the environment through the protection of fauna and for the development of ecological risk assessment for protecting the environment through TCU on Ecotoxicology in Pakistan;

2.6.5 providing information on Industrial Hygiene and Occupational Health Safety for ensuring protection of the workers health in the chemical production facilities through TCU on Industrial Hygiene and Occupational Health Safety in the Philippines;

2.6.6 strengthening infrastructural facilities and expertise for environmental monitoring to reduce the presence of residues of crop protection chemicals in the eco-system through TCU on Monitoring of Pesticide Residues in Air, Water and Soil in Republic of Korea;

2.6.7 adoption of comprehensive programme for disposal of discarded obsolete pesticides and hazardous wastes through TCU on Industrial Safety, Environmental Protection and Effluent Treatment and Disposal in Indonesia; and

2.6.8 establishment of a database network for information exchange pertaining to risk reduction in the production and use of crop protection chemicals through TCU on Development and Use of Computer Software for Pesticide Market, Data and Input, Storage, Retrieval and Dissemination established in India and Thailand.

2.6.9 He said that he was particularly happy to note the excellent response evinced by the member countries of the Network to support these activities and in this context he fully agreed with the Evaluation Mission that the RENPAP has indeed been successful in mobilising resources from the member countries to promote the critical areas of activities concerning the preservation of the environment, providing safety to the farming community and increasing the agricultural productivity in order to alleviate poverty and progress steadily towards food security.

2.6.10 He noted that the various activities of RENPAP are properly addressing four programme areas out of the six identified in Chapter 19 of Agenda 21 of United Nations Conference on Environment and Development held in Rio pertaining to environmentally sound management on toxic chemicals particularly aimed at the establishment of risk reduction programmes,

strengthening of national capabilities for management of chemicals, information exchange on toxic chemicals and chemical risks and expanding and accelerating international assessment of chemical risks.

2.6.11 He also brought to the fore the various interventions which RENPAP has made as a result of which a number of country programmes have originated and that this could be considered as an excellent example in which significant benefits have accrued to both the country programmes as well as the regional programme particularly in India and the People's Republic of China.

2.6.12 He mentioned of the two new country programmes namely "Technical Support for Development and Production of Neem Products as Environment Friendly Pesticides" and "Establishment of National Network for Environmental Safety, Plant / Process Safety and Occupational Health Safety with emphasis on small and medium scale chemical industries" jointly launched with the UNDP, would again be implemented with strong association of the RENPAP programme and the benefits shared not only by the Indian industry and farmers but also by all the member countries of the network.

2.6.13 Referring to the decision of the last TPR/PMC meeting to set up the UNDP/ UNIDO Trust Fund he confirmed India's commitment to continue to host the Regional Secretariat of RENPAP and honouring the pledge of the Government of India to contribute for the creation of the Trust Fund needed for strengthening and continuation of the RENPAP activities.

2.6.14 Referring to the findings of the Evaluation Mission, he said, that the major beneficiaries of the programme effectively continues to be:

- * the farming community at large is being provided with user friendly and environmentally safe products,
- * the operators and workers in the crop protection chemicals production and handling units who are being increasingly protected from exposure to toxic chemicals,
- * the Government institutions which are being provided with appropriate standards for monitoring pollutants in the ecosystem, and
- * the public at large being ensured with the safe and pollution free environment with increased food availability free from toxic contaminants.

2.6.15 Taking note of the success of the RENPAP in

achieving its objectives in the Asia Pacific region, he said, one is encouraged to feel that such networks should be established for the African, Arab and the South American countries, most of which are developing nations, dependant on agriculture and facing the same issues on pesticides which RENPAP has addressed.

2.6.16 He said that if such a network comes into existence, then a suitable coordinating body could be established which would form a new and exemplary model of international cooperation. Taking note of the serious impact created by the RENPAP through its various activities and the spontaneous support extended by the member countries of the network for its continuation, he urged UNDP to arrange for the matching grants promised by the UNDP headquarters during the last TPR meeting. In view of the relevance of these activities of the RENPAP in the coming years in the interest of promoting chemical safety and environmentally sound management of toxic chemicals, the continued assistance of the UNDP and other UN agencies is indispensable. Taking into consideration of the significant benefits that the RENPAP countries are deriving from the various activities of RENPAP, he urged the member governments hosting the TCUs to pledge their

contributions to consolidate the RENPAP operations.

2.7 The Regional Coordinator thanked His Majesty's Government of Nepal for hosting this important meeting and Mrs. Pradhan and her able group of officers for their untiring efforts to make the meeting successful. He thanked Mr. Tripathi, Member, National Planning Commission, Nepal for sparing his valuable time to address the distinguished participants from the RENPAP member countries. He thanked Mr. Chatterjee, Secretary, Ministry of Chemicals & Fertilizers, Government of India for his path-breaking Key Note address aimed at placing the RENPAP on a sound and permanent footing. He thanked Mr. Maagaard for his guidance in the crucial area of setting up and operationalising the new phase of the project under Trust Fund arrangements. He thanked Dr. Csizer for his invaluable support towards the preparation of the project document and for spontaneous constructive guidance from the UNIDO Headquarters. The Regional Coordinator particularly thanked the member countries of the Network for their generosity in supporting the important activities through the Technical Coordinator Units and for deputing their senior officers to this very important meeting which is aimed at deciding upon the future of the RENPAP.

PROJECT MANAGEMENT COMMITTEE MEETING**3.0 ADOPTION OF THE AGENDA**

3.1 The agenda as adopted is placed at **Annexure II**.

4.0 DESIGNATION OF OFFICERS

4.1 The meeting elected Dr. (Mrs.) R.B.Pradhan as Chairperson, Prof. Hong Chuanyi as Co-Chairman, Dr. Sathorn Sirisingh and Mrs. Shamsiah Muhammad as Rapporteurs of the meeting.

5.0 STATEMENT OF THE NATIONAL COORDINATORS

The National Coordinators / designated officers presented the country reports and these are summarised below:

5.1 BANGLADESH

5.1.1 The country paper was presented by Mr. Matilal Banik, nominee of the Government of Bangladesh. He said that agriculture is the economic backbone of the country. Agricultural production accounts for about one third of the gross domestic production and approximately 80% of the country's 120 million people depend upon agriculture for subsistence.

5.1.2 He mentioned that pesticides play the most important

role in the plant protection activity in his country. The pesticide being used are mainly imported in the form of finished products. There is no manufacture of technical grade pesticides in the country and pesticide demand is met through import only. However, he said that there are eight companies operating formulation plants in different regions of the country and producing mainly granular pesticides using brick chips and sand cores as carriers. Locally formulated liquid products from imported technical grade pesticides and adjuvants include diazinon, dimecron, nogos (dichlorvos), fyfanon (malathion), nuvacron (monocrotophos), sumithion etc.

5.1.3 He mentioned that a total of 257 brands of pesticides (commercial) with 86 active ingredients have been registered in the country for use in agricultural sector.

5.1.4 He highlighted that his government is fully aware of abuse of pesticides and improper implementation of Pesticide Act & Rules. International integrated safety guidelines for pesticides (Brussels Guidelines) are being followed by the formulators and Plant Protection Wing of the Department of

Agricultural Extension monitors the activities.

5.1.5 He said that IPM programme is increasingly gaining acceptance in the plant protection strategy of the Government. Farmers & Extension personnel are being trained through organising various training programmes in IPM and the farmers trained under this programme are able to reduce pesticide use to some extent.

5.1.6 He stated that Bangladesh has actively participated in all the activities / training workshops organised by RENPAP and has greatly benefitted through exchange of experience and technology among the participating member countries.

5.1.7 As a follow up action of the various workshops/ training programme attended by the expert nominees from Bangladesh, he said, the following activities have been initiated / completed by Bangladesh:

1. Information Collection : Raw data collection in respect of Commercial Products, Active ingredients, Crops, Companies and Pest has been completed.
2. Application Technology : Planned training and workshops are being conducted for extension workers, farmers, women group and pesticide

dealers to ensure safer and more effective application of pesticides in the field.

3. Residue Monitoring : Efforts are being made for monitoring pesticide residue in food, soil, air and water in collaboration with food and radiation biology department of Bangladesh Atomic Energy Commission.
4. Industrial Hygiene : Regular cholinesterase test of workers of the formulation units is being monitored by the Plant Protection Wing.
5. Waste Management : A systematic approach is being made in this direction and facilities for handling and disposal of hazardous and toxic waste in pesticide formulation and Repacking Unit are being set up.
6. Bio-pesticides : In the Integrated Pest Management Programme introduction of bio-pesticides is being promoted.

Future activities

5.1.8 He emphasised the need for more participation of Bangladesh nominees in group training/ workshops being organised by the RENPAP. He requested for in-depth training of their experts in the field of Application Technology, Botanical pesticides and Bio-pesticides.

5.1.9 The PMC appreciated the keen interest of Bangladesh displayed through participation in the various

activities of RENPAP and agreed to provide all the support needed in future for participation in the various programmes organised by the RENPAP.

5.2 CHINA

5.2.1 Prof Hong Chuanyi, President, Nanshen Chemical R&D Corporation and the National Programme Director of the UNDP Country Programme in China CPR/91/121 Sustainable Soil Fertility & Pest Control Programme and National Coordinator, RENPAP presented the country report. He said that agriculture occupies an important place in the national economy of the country. Along with fertilizers, pesticides are among the key inputs needed in increasing agricultural production.

5.2.2 He said that approximately 30% of the crops produced annually are infected with various kinds of insect pests, diseases and weeds.

5.2.3 Presenting the pesticide scenario in China, he mentioned that China continued to be one of the largest pesticide producers in the Asia-Pacific region. During the year 1998, China manufactured 232 types of pesticide active ingredients in about 1000 factories spread throughout the country with a total output of 382,000 tons (a.i.). Out of this,

insecticides were 268,000 tons constituting approx. 70% of the total production, followed by herbicide 15% (56,000 tons) fungicides 11% (41,000 tons) and other 4% (17,000 tons), he said.

5.2.4 He mentioned that though demand of main intermediates required in pesticide production are met locally, certain raw material are in short supply. China continues to import intermediates worth US \$ 80 million annually.

5.2.5 He said that methamidophos, bisultap, dichlorvos, methyl parathion, trichlorphon, omethoate, are amongst the major insecticides produced and consumed in the country. Carbendazim, mancozeb, jingangmycin, thiophanate-methyl are prominent among fungicides whereas glyphosate, acetachlor, butachlor and 2,4-D-butyric are the major herbicides.

5.2.6 With regard to pesticide formulations, he stated that China produces 891 pesticide formulations with an annual output of 1.5 million ton amounting to US \$ one billion. Of the 891 formulations, insecticides are 236, fungicides 108, herbicides 93 and mixed formulations 454.

5.2.7 As far as formulation types are concerned he said

that emulsifiable concentrates (EC) top the list with 23% share followed by SC(21%), WP (17%), DP (16%), GR (8%), SC(5%), and others (6%).

5.2.8 With the annual output of 382,000 tons a.i. China exports 87,000 tons of pesticides worth US \$ 180 million. However, to meet specific requirements, he added that China imported 36,000 MT of pesticides amounting to US \$ 170 million. He listed the main pesticides imported in the country and these were Carbofuran, lambda-cyhalothrin, thiophenate-methyl, rovrail, chlorothalonil, butachlor, alachlor, paraquat and puma. He also presented the list of major pesticides exported to various countries which were dichlorvos, dimethoate, methylparathion, methamidophos, carbaryl, acetachlor etc.

5.2.9 He also projected the pesticide production by the year 2000 and stated that China would produce around 370,000 - 380,000 MT of pesticide (tech.grade) and with more advances taking in the field of formulation through UNDP country programme more and more of safer formulations like SC, GR, EW etc would be developed and used.

5.2.10 He said that China participated in all activities of

the RENPAP and as the National Coordinator he himself has attended and participated actively in the last TPR/PMC meetings of the RENPAP held in New Delhi, India.

5.2.11 He said that China successfully completed the organisation of the workshop on Production, Evaluation, Safety and Use of Bio-pesticides (*Bacillus thuringiensis*) during October 26 - November 3, 1998 at the Bt Research & Development Centre, Hubai Academy of Agricultural Sciences, Wuhan, P.R. China, which is the Technical Coordinator Unit of RENPAP on Bio-pesticides. The workshop was attended by expert nominees from the member countries of the network. The workshop was well received by all the participants, he mentioned. All the participants were exposed to both lectures (theory) and practicals ("hands on" training) during the course of workshops and were trained on the various aspects of bio-pesticides production, evaluation, safety and use.

5.2.12 He also mentioned that China has been benefitted to a great extent with the experience and knowledge gained through participation in the various workshops organised by RENPAP.

5.2.13 He commended the role of Dr. Dhua as PMTA and Dr. Sugavanam, UNIDO Country Director, China for their untiring support in the implementation of the country programme - Sustainable Pest Control & Soil Fertility Programme CPR/91/120.

5.2.14 He also confirmed the contribution of US \$ 20,000 - 25,000 annually for a period of 4 years of the Government of China beginning year 2000 to the UNDP/UNIDO Trust Fund of the RENPAP. He mentioned that his Government is contemplating a second phase of the programme to cover the South West and North West parts of China to promote user and environment friendly pesticides formulations usage. He offered the facilities created in the country programme of China to the member countries of the Network for promoting user and environment friendly pesticides formulation technologies.

Future Activities

5.2.15 Prof. Hong Chuanyi requested for in-depth training of their expert nominees in the field of User and Environment Friendly Pesticide Formulation and Quality Control in India, Monitoring of Pollutants in Air, Soil and Water in Republic of Korea, Occupational Health Safety and Industrial Hygiene in the Philippines. He also requested for their

participation in various workshops as finalised for the year 1999.

5.2.16 He also offered to host the next TPR/PMC meeting of the RENPAP in P.R. China during Feb. 2000.

5.2.17 The PMC deeply appreciated the role of Prof. Hong in successfully implementing the country programme and the RENPAP activities particularly the Workshop on Bt based pesticides and the Technical Coordinator Unit in Wuhan, China.

5.2.18 The PMC also deeply appreciated the contribution made by the Government of P.R.China of US\$ 110,000 and continued Trust Fund support of US\$ 20,000-US\$ 25,000 annually for four years beginning year 2000 which indeed would lead a long way to establish the RENPAP and its activities on a sound footing for the benefit of the member countries.

5.2.19 The meeting also appreciated the generous offer of the Government of the P.R.China to host the next TPR/PMC meeting in Nantong during February, 2000.

5.3 INDIA

5.3.1 The country paper from India was presented by the National Coordinator Mr. Shantanu Consul, who is

Joint Secretary to the Government of India in the Ministry of Chemicals and Fertilizers.

- 5.3.2 He said that India occupies an important position in the world agricultural production and agriculture is the single most important component of the Indian economy with a Gross Domestic Product (GDP) of over US \$ 64,503 million which is almost 30% of the national GDP.
- 5.3.3 He highlighted the important role being played by the pesticides in increased production of agricultural produce. The consumption of pesticides (a.i.) has shown a phenomenal increase during the last 4 decades. He explained how judicious and appropriate use of pesticides can increase agricultural production beside the increased fertilizer use.
- 5.3.4 He emphasised the need for changeover from traditionally used formulation like dust, emulsifiable concentrate, wettable powder, granules. He said that these are neither user friendly nor environment friendly on account of their low specificity to the targets and the presence of organic non-degradable solvents such as kerosene,

xylene, aeromax etc.

5.3.5 He said that the Government of India has set up the Institute of Pesticide Formulation Technology (IPFT) with the assistance of UNDP and the Institute has been able to develop the newer varieties of user and environment friendly water based pesticide formulations which are being passed on to the industry. This institute is serving RENPAP as its Technical Coordinator Unit on the Pesticide Formulation and Quality Control.

5.3.6 Appreciating the important role of the IPFT and the need for its further strengthening the Government of India has recently allocated a new state-of-the-art laboratory block along with a new hostel building for effectively conducting the training programmes, he offered to host the next RENPAP Workshop on the Development and Production of User and Environment Friendly Pesticides Formulation Technology in November, 1999.

5.3.6 He also mentioned that Government of India has recently finalised two projects with the assistance of UNDP, one aiming at improvement in the overall safety in chemical industry, which, inter alia, includes environmental safety, plant/ process safety

and occupational health safety with emphasis on small and medium scale enterprises. Through this project, he said, it is proposed to set up a National network for capacity building and to bring all chemical industries under one umbrella, which would promote both bottom-up and top-down approach that would make self-regulation by the industry the basis of ensuring compliance with the Government regulations. Another important project that has been launched is to develop and promote production, processing and use of neem based products which would aid waste land development, generated rural employment and provide the farmers with eco-friendly bio-degradable pesticides. The Water-shed Development Programme model will be followed for the implementation of this project which would also promote village level industries. This programme, he said, would not only provide eco-friendly neem based pesticides but also neem cake for increasing efficiency of urea-nitrogen, which would be environment friendly and would not leave undesirable and non-biodegradable residues. Moreover, this would involve more people in the rural areas and generate employment on a large scale in the villages and farms so that migration from the rural areas to urban conglomerates is checked. He said that for the first time, 2 NGOs have been involved in the

implementation of this project.

- 5.3.7 He mentioned that both these projects have been developed and would be implemented jointly with the RENPAP and in this regard, he said that the Government was looking forward for technical inputs of the Technical Coordinator Unit on neem based botanical pesticides functioning in Thailand.
- 5.3.8 He said that India continues to participate in the various activities organised by the RENPAP. During Oct. 1998, the National Coordinator himself led an Indian delegation to participate in the workshop on Production, Evaluation, Safety and Use of Bio-pesticides (*Bacillus thuringiensis*) organised by the Bt Research & Development Centre, Wuhan, P.R. China. This programme provided a unique opportunity to have both the theoretical as well as the practical aspects involved in the production of Bt, he said. As a follow up of this, he said, India is in the process of finalising a collaborative arrangement with Bt Research & Development Centre for developing and promoting Bt based pesticides in India with the involvement of Hindustan Insecticides Ltd., a Public Sector Enterprise and the Council of Scientific and Industrial Research.

5.3.9 He said that the Government of India appreciates the important role that RENPAP is playing in the Asia Pacific region to promote the overall safety in the production, handling and use of crop protection chemicals and felt that the various activities conducted in the Technical Coordinator Units would need to be widely published through establishing a web site in the internet as well as through publication of a newsletter. This would help in sharing the experience in many important areas and would help to avoid making mistakes and also reduce the learning. He also suggested that with the implementation of the various international conventions, domestic industries are getting under increased pressure and sought the assistance of the different TCUs of the RENPAP for assistance.

5.3.10 He said that the Government of India has all along been supporting the RENPAP and its activities primarily because of the fact that its various activities have a clear focus on the promotion of safety to the environment and safety to the farmers. RENPAP has steadily consolidated its position through the very active support extended to it all along and it would now be necessary for the RENPAP to become a self-sustainable organisation and in this context he urged all the member countries of

the network to extend the much needed support to enable RENPAP achieve its objectives. He said that the member countries are convinced that in this effort help of UNDP and other international bodies would be forthcoming and a way could be found to extend the RENPAP approach to other continents.

Future Activities

- 5.3.11 The National Coordinator offered to host regional workshop on User and Environment Friendly IPM compatible formulation and quality control at IPFT in Delhi during Nov. 1999 and also to provide in depth training to 5 expert nominees from Iran, Indonesia, Korea, Thailand and China.
- 5.3.12 He requested the meeting to provide in-depth training in the field of eco-toxicology, monitoring pollutants in air, soil and water, occupational health safety and industrial hygiene, botanical pesticides and bio-pesticides.
- 5.3.13 The PMC deeply appreciated the very strong support being extended all along by the Government of India for the continuation and strengthening of the RENPAP activities. The PMC particularly appreciated the liberal financing extended by the Government of India through hosting its Regional Secretariat,

providing excellent Technical Coordinator Unit facilities for the organisation of the various training programmes and for confirming Government of India's contribution to the UNDP/UNIDO Trust Fund.

5.4 INDONESIA

5.4.1 Ms. Wulan of the Government of Indonesia presented the country paper. She said that Indonesia has all along been actively participating in various activities organised by RENPAP including that of TPR/PMC meetings held in New Delhi, China, Vietnam and New Delhi.

5.4.2 She said that the Technical Coordinator Unit of RENPAP on Industrial Safety, Environment Protection and Effluent Treatment & Disposal, hosted by the Government of Indonesia has successfully conducted regional workshop on the preservation of environment through proper control of effluents and disposal of wastes from pesticide production units in Jakarta during 15-19 July 1996. The second regional workshop on the subject, scheduled during 1998 could not take place due to economic crisis her country has been experiencing.

5.4.3 She stated that Indonesia has greatly benefitted through participation of their expert nominees in

various workshops/ training programmes organised by RENPAP at its various TCU on different aspects which includes :

1. Workshop on Development and User of Environment Friendly Pesticide Formulation and Quality Control, 1995, New Delhi
2. Workshop on Production and Quality Control of Bio-pesticides (Bt) 1995, China
3. Workshop on Pesticide Residue Monitoring in Soil , Air and Water, Suweon, Republic of Korea, May 13-18,1996.
4. Workshop on Preservation of Environment through proper control of Effluents and Disposal of Wastes from the Pesticide Production Units, Indonesia, July 15-19,1996.
5. Workshop on Safe Application of Pesticide Application Technology, Malaysia, September 23-28,1996.
6. Workshop on Development and Production of User and Environment Friendly Pesticide Formulation and Quality Control, India April 21-26,1997.
7. Training Workshop on Pesticide Formulation Analysis, Republic of Korea, October 6-31,1997.

5.4.4 She stated that the data collection work had been updated with the assistance of Mrs.Chutima

Ratansatien, Data Collection Expert, who visited Indonesia for that purpose. Also the National Data Collection Expert trained in the Bangkok Workshop is in a position to attend to all activities pertaining to data collection work in Indonesia.

- 5.4.5 She requested the PMC meeting for indepth training in the field of Pesticide Formulation & Quality Control, Botanical pesticides and development and production of Bt based biopesticides.
- 5.4.6 She said that the Technical Coordinator Unit in Indonesia would be able to host the next workshop only after the economic crisis is over and the dates could be finalised during the next TPR meeting.
- 5.4.7 The PMC appreciated the active role the Government of Indonesia played in the organisation and participation in the various activities of the RENPAP and that it look forward eagerly for Indonesia's coming out of the economic crisis to restart its contributions to the various activities of the RENPAP.

5.5 **IRAN**

5.5.1 National Coordinator could not attend the meeting. However, his paper was taken as presented in the meeting.

5.5.2 Iran reported in the previous meeting that there has been a drastic reduction in the use of pesticides through a National Pesticide Application programme, and that the pesticide consumption in the country has reduced further to around 15000 tons. Out of which insecticides constituted around 50% (7000 tons) and herbicides approximately 3000 tons.

5.5.3 About 25% of the annual pesticide requirement is met through import of formulated products which have to meet FAO specification for quality assurance. Rest of the 25% of formulated pesticides are manufactured locally through improved technical grade materials from various sources. Local production of formulated products showed an increasing trend during the last three years and the actual production was 2600, 5500 and 12000 MT during the years 1996, 1997 and 1998 respectively.

5.5.4 Iran also produces technical grade materials including butachlor, malathion, mancozeb, zineb, maneb and copper oxychloride.

- 5.5.5 Eight pesticide formulation plants in the country are producing mostly EC, WP, SL and GR formulations.
- 5.5.6 Pesticide usage are reviewed annually and if any of these are found to affect the fauna and the environment, these are put under restriction / prohibition by the Pesticide Supervision Committee. Pesticides like aldrin, DDT (+ mixture), dichlorvos, dinoseb, captafol etc. have been banned in the country.
- 5.5.7 Iran has participated in all the workshops and meetings of the RENPAP and has been greatly benefitted through their participation. Expert nominees from Iran participated in the following workshop / training programmes.
1. Workshop on Safe Application of Pesticides : Pesticide Application Technology, Malaysia, 1996.
 2. Training workshop on Analysis of Pesticide Formulation Report, Korea, 1997.
 3. Workshop on Production of User & Environment Friendly Pesticide Formulation & Quality Control, India, 1997.

Future Activities

5.5.8 Iran requested for in-depth training in the field of pesticide formulation and quality control, botanical pesticides and application technology.

5.6 REPUBLIC OF KOREA

5.6.1 The country paper was presented by the National Coordinator, Dr. Byung Youl Oh.

5.6.2 He mentioned that the production and consumption of pesticides in Korea has shown a steady declining trend and that it has gone down from 27,000 MT in 1991 to 21,000 MT during 1998. However, the number of formulations registered have increased and at present there are 785 formulations have been registered in the country.

5.6.3 He said that the TCU on Residue Monitoring in Soil, Air and water, being hosted by Republic of Korea, is fully equipped with trained manpower and state-of-the-art facilities including GCMSD, HPLC, GLC, IR, UV, spectrophotometer, etc. to carry out any work related to pollutant/ residue monitoring of pesticides in the soil, air and water. He highlighted the present activities of the TCU and mentioned that simple and precise method on multiple residue analysis in/on agricultural produce are being developed using the latest state-of-the-art

equipment like GC/ECD, GC/NPD. He presented a list of pesticides which could be detectable upto ng by adopting capillary GC analysis. He said that through the established multiple pesticide residue technique, a range of pesticides could be analysed concurrently in a more economical way and in a shorter period of time.

- 5.6.4 Phytotoxic response of non-selected herbicide residues to vegetable crops is another area where the TCU is actively engaged. Results of these studies would establish safe levels of pesticides acceptable in the crops for consumption.

Future activities

- 5.6.5 Dr. Oh committed government contribution of US \$ 1.1 Million (in kind) through the Technical Coordinator Unit as per the following details :

Cost incurred towards equipping laboratory with state of the art equipment, chemicals, glasswares etc.

- 5.6.6 He also mentioned that it would be possible to make contribution to the Trust Fund towards the end of this year when they would be in a position to assess the budgetary situation and certainly next year.

- 5.6.7 Dr. Oh offered to host the next Workshop on Monitoring Pollutants in Air, Soil & Water during October, 1999 with a Govt. budgetary support of US\$ 3500 and also to provide in-depth training to participants from India, Thailand, Nepal, China and Vietnam.
- 5.6.8 He requested the PMC meeting for extending in-depth training in the field of formulation and quality control and Bt based bio-pesticides.
- 5.6.9 The PMC deeply appreciated the strong support being steadily extended by the Rep. of Korea for implementing the various activities of RENPAP. The PMC particularly appreciated the in-kind contribution of US \$ 1.1 million through the TCU which would go a long way in providing quality training to the participants of the member countries of the network. The PMC decided to device a format records of in-kind contribution being made by the member countries hosting the TCUs for the sake of uniformity in reporting.
- 5.6.10 The PMC also appreciated the assurance given by Dr. Oh to provide US \$ 3500 for the next workshop in October 1999 and also for providing contribution to the UNDP/UNIDO Trust Fund for the RENPAP.

5.7 **MALAYSIA**

5.7.1 Ms. Shamsiah Muhammad, National Coordinator presented the country paper. She said that since 1990 when Malaysia joined the RENPAP network, they have been actively participating in the various activities organised by RENPAP.

5.7.2 She said that under the Data Collection sub-programme of RENPAP, Malaysia collected and submitted economic data on 32 selected active ingredients for 1989, 1990 and 1991 to Regional Database Centre in Bangkok. Index data on manufacturers, active ingredients, commercial products and pests had been submitted to the Central Coordinating Unit in Delhi.

5.7.3 She said that due to the economic slow down in the country it was not possible to participate in the programmes of the RENPAP organised during 1998 but she expected full participation during 1999.

5.7.4 She informed the meeting that for the creation of the Trust Fund she has moved a proposal for Malaysian's share of contribution of US \$ 20,000 and that she is awaiting the final decision.

5.7.5 She stated that Malaysia is planning to host yet

another Regional Workshop in Pesticide Application Technology for RENPAP at its TCU in cooperation with University Putra Malaysian, the Malaysian Plant Protection Society, MARDI & Dept. of Agriculture and she offered to organise this workshop during May 2000.

Future Activities

5.7.6 She requested the PMC for considering the acceptance of the trainees from Malaysia for participation in the workshops and indepth training during the year 1999 as follows:

- a) training for an officer in the scheme to control and train pest control operators;
- b) training for an officer in the techniques in worker exposure studies including methods, assessment, criteria/ procedures, biological and air sampling and analysis;
- c) training in the use of computer modeling for the prediction of operator exposure; and
- d) analysis of pesticide residues in food (organised by the Joint FAO/IAEA Training and Reference Centre).

5.7.7 The PMC appreciated the offer of the Government of Malaysia to host the 3rd Regional Workshop on Application Technology during May 2000 and the

active role being played by the National Coordinator to assist setting up the Trust Fund through the contribution of the member countries particularly Malaysia.

5.8 **MYANMAR**

5.8.1 Mr. Hlaing Min of the Government of Myanmar presented the country paper. He said that Myanmar is basically an agricultural base country. With modernization in agriculture the cropping system has changed from the conventional method of single cropping system to triple cropping. He stated that Pesticides and Fertilizers are important inputs to increase the agricultural production being used in his country.

5.8.2 To meet the ever increasing demand of agrochemicals, the government and the private sector industry have been importing and marketing agrochemicals under the provision of Pesticide Law 1990, he said. The Pesticide Registration Board has approved 380 products in the country and that the Pesticide Analytical Laboratory of Myanmar Plant Protection Division monitors the quality of these registered products. The consumption of pesticides has increased from 346 MT in 1992-93 to around 1097 MT

in the year 1996-97. Cropwise consumption is the highest in paddy viz. 40% followed by cotton 30%, pea, bean and groundnut 20% and 10% on others.

- 5.8.3 He said that his country has facilities to formulate emulsifiable concentrates only which have been established with the assistance of UNIDO/UNDP.
- 5.8.4 He stated that though his country imports pesticides in small packings for direct marketing to the farmers, a small amount is also imported in large containers which is repacked in the country for use in the field.
- 5.8.5 With regard to the bio-botanical pesticides production and usage in the country, he said that Neem is one of the safest bio-pesticide widely produced and used in Myanmar for the control of pests in vegetables, chickpea and peanut. Myanmar Agriculture Service has established two Neem based pesticide production plants and are currently producing 1% Azadirachtin SC formulation of neem based product. The use of neem pesticide is targeted for the control of lepidopterous pests. The bio-activity of the product is well accepted by the farmers particularly the vegetable growers. The annual production of neem pesticides in Myanmar are

presented below which clearly shows an increasing trend.

Year	Production (lt)
1994-95	6189
1995-96	11745
1996-97	15931
1997-98	11647
1998-99 (Prov.)	16000
1999-2000 (Plan)	24000

- 5.8.6 Although several brands of *Bacillus thuringiensis* are registered in Myanmar, the use of Bt for plant protection is still limited to experimental stage. He said that the Plant Protection Division is yet unable to conduct quality analysis of the B.t. due to lack of proper laboratory facilities.
- 5.8.7 He mentioned that Pesticide Index Data has been completed and updating with newly registered products is being done on regular basis.
- 5.8.8 He said that Myanmar has participated in all the workshops and meetings of the RENPAP and has been greatly benefitted through their participation. Besides the PMC meeting, 14 expert nominees from Myanmar has been trained through participation in the different workshops / training programmes organised by RENPAP.

Future Activities

5.8.9 He requested for training in the field of pesticide formulation and quality control and on waste management.

5.8.10 The PMC appreciated the active participation of the Government of Myanmar in all the activities of the RENPAP and agreed to extend full support in future as well.

5.9 NEPAL

5.9.1 Mr. B.P. Upadhyay of the Government of Nepal presented the country paper. He said that agriculture dominates the economy of Nepal engaging more than 80% of its total population and contributing 42% to the national GDP. The crop losses due to pests is approximately 55% and the strategy of combating such outbreaks with pesticide application advocated the propagation of pesticides use in Nepal.

5.9.2 He said that the consumption of pesticides (commercial formulations) per unit area is estimated to be 142 gm/ha (IUCN 1995). The use is higher in areas with intensive commercial farming of vegetables, fruits, cotton, tea and rice. The present trend shows that pesticide application is alarmingly increasing. He said that 40 to 50% of the

total pesticide use is in rice, 14 to 20% in pulses, 13 to 15% in fibre crops and 10 to 20% in the vegetables. The use of pesticides is increasing by 10-20% every year.

5.9.3 He stated that the pesticide requirement of Nepal is met through import and about 98% of it is imported from India, Japan and other countries. During 1998, he said, a quantity equivalent to 55,865 kg of a.i. in the form of different formulations was consumed in the country.

5.9.4 He said that under the Pesticide Act 1991 and Pesticide Rules 1993, a Pesticide Board with 16 members has been constituted and this is chaired by Secretary (Agriculture), which undertakes the following major activities:

- a. advise HMGN in the formulation of national policy
- b. maintain coordination between private and government sector in production and distribution of pesticides
- c. to encourage the private sector for the promotion of safe and eco-friendly pesticides production
- d. to regulate and control the quality of the imported as well as formulated products

- e. to establish standard parameters for pesticide quality

5.9.5 So far, he said, 123 pesticide products have been registered in the country.

5.9.6 He said that Nepal participated and benefitted greatly from all the activities of the RENPAP where expert nominees from Nepal were sent for training through participation in different workshops/training programmes organised by RENPAP at its TCUs.

Future Activities

5.9.7 He suggested that the following new area be included in the RENPAP programme:

- a. sharing pesticide residue analysis facilities by the member countries
- b. exchange of related information among member countries
- c. encourage exchange visits of scientists among member countries
- d. publishing a newsletter
- e. organising trainings to pesticide formulators and producers
- f. RENPAP acting as a Pesticide Watch Group for the Region.

5.9.8 Nepal also requested assistance for setting up of satellite centres for Botanical and Biopesticides in Nepal and offered to host these centres.

5.9.9 The PMC complemented Dr. (Ms.) Pradhan for the strong support she had been extending for the strengthening of the RENPAP activities and for hosting the PMC meeting so well. The PMC also took note of the various suggestions made in the presentation of the National Coordinator particularly for setting up of satellite centres viz. botanical and bio-botanical centres in Nepal.

5.10 **PAKISTAN**

5.10.1 The country paper was presented by the National Coordinator, Dr. Yousaf Hyat Khan. He said that agriculture is the main stay of Pakistan and that around 70% of the country's population (130 million) makes its living through agriculture. He said that pesticide use is increasing steadily with the passage of time to increase crop production which is consequently contributing towards national economy. The annual consumption of pesticide, he said, is around 7000 MT (a.i.) with insecticide taking the lion share (75%) and the major consumption of pesticide is in cotton.

5.10.2 He mentioned that the Ecotoxicology Research Institute, established as the result of RENPAP activities, has been executed by the UNIDO through DANIDA funding.

5.10.3 Through DANIDA funding the Ecotoxicology centre has established good facilities to work in the area of pesticide residues in the food chain and the environment. This Centre has started serving as the Center of Excellence for RENPAP activities and hosted the first workshop on eco-toxicology during March 1993 which was inaugurated by the President of Pakistan and attended by 13 nominees from the member countries of the RENPAP.

5.10.4 He briefly explained to the meeting of various activities of this centre including the areas of pesticide residues analysis, pesticide microbiology and terrestrial ecology division of the centre.

The main objective of this centre is to monitor pesticide residue in food chain, to study pesticide effects on beneficial soil microorganism and non-target pests and biological monitoring of chemical exposure.

5.10.5 He mentioned that various trainings, both national

and international, have been arranged through UNIDO / RENPAP for scientific staff of the centre. Scientists have been sent on study tours for exposure in the field of agrochemical microbiology and Integrated Pest Management (IPM).

5.10.6 He said that Pakistan participated in various activities organised by the RENPAP and benefitted from all these activities.

5.10.7 He informed the PMC that the Director General of Pakistan Agricultural Research Centre has made a recommendation to the Government for providing funds for the proposed UNDP/UNIDO Trust Fund for the strengthening and continuation of the RENPAP activities. He also informed the PMC that Pakistan would make a cash contribution of US \$ 5,000 for the organisation of the next eco-toxicology workshop in December 1999. He also agreed to bear the cost of boarding, lodging and incidental expenses of the participants of the proposed workshop on Eco-toxicology during December 1999.

Future Activities

5.10.8 The National Coordinator requested the meeting for providing in-depth training in the field of

Occupational Health Safety and Industrial Hygiene, Bt based bio-pesticides and Application Technology to the expert nominees of Pakistan.

5.10.9 He offered to host the next workshop on Ecotoxicology during Dec. 1999 and also agreed to provide in-depth training to participants from India, Republic of Korea and Nepal.

5.10.10 The PMC appreciated the lead role taken by Dr. Khan to promote RENPAP activities through the TCU as well as for taking up the issue of contribution for the creation of the UNDP/UNIDO Trust Fund. The PMC also appreciated the offer of Government of Pakistan to bear the cost of board, lodging and incidental cost for the Pakistan to the proposed workshop.

5.11 **PHILIPPINES**

5.11.1 Dr. Dario C. Sabularse, Deputy Administrator, Fertiliser and Pesticide Authority (FPA) of the Government of the Philippines presented the country report. He said that Fertilizer & Pesticide Authority (FPA) as the designated national authority of RENPAP, has pursued various activities aligned to the goals of the network.

5.11.2 He mentioned that the Philippines participated in various regional meetings and sent participants to the trainings conducted by the RENPAP at its TCUs. He said that this has allowed a healthy exchange and sharing of expertise through the concept of TCDC in the member countries.

5.11.3 He specifically mentioned that recommendations of various workshops organised by RENPAP are being strictly followed at the national level in the Philippines. He stated that as a result of participation in Safer Formulation Development Technology in New Delhi, FPA, as a matter of policy, stopped accepting for registration pesticide formulations belonging to category I and fast tracked application for registration of less hazardous pesticides. Now the trend in the Philippines is to shift towards less hazardous ones.

5.11.4 The Philippines also represented in the Workshop on Production, Evaluation, Safety and use of Biopesticides in Wuhan, China, during October, 1998 and benefitted to a great extent. The total market share of Bt based pesticides is around 9%, he said. Towards the encouragement for registration and consequent adoption and use of more bio-pesticides or bio-rational pesticides, the country has now

spelled out the "Policy Guidelines on Bio-rational pesticides" in the Philippines.

5.11.5 He highlighted the importance of application technology in the country and mentioned that recommendations made during the safe application technology workshop are being implemented and followed up in the Philippines. As a result of this, Plant Health Clinics (PHC) have been recently established in the country.

5.11.6 He also mentioned that the conclusion/recommendations arrived at the Workshop on Preservation of environment through proper control of effluents and disposal of Wastes from the pesticide production units held in Indonesia had been seriously considered by the Government and revised guidelines have been prepared accordingly.

Future activities

5.11.7 He stated that Government has agreed to host the Workshop on Industrial Hygiene and Occupational Health Safety during April, 1999 for the expert nominees of the member countries of the Network.

5.11.8 He requested for indepth training in the field of Botanical pesticides and Bt based biopesticides.

5.11.9 The PMC appreciated the efforts of the Government of Philippines to pursue the basic activities of the RENPAP and the various steps taken by the Philippines towards following up the various recommendations at the National level. The meeting also appreciated the offer of the Government of Philippines to host the Workshop on the subject during April, 1999.

5.12 **THAILAND**

5.12.1 The country paper was presented by the National Coordinator, Dr. Sathorn Sirisingh. He highlighted the activities of the RENPAP programme carried out by Thailand since the last PMC meeting. He mentioned that the expert nominee of Thailand who attended the Bt workshop in China had gained considerable knowledge from the Workshop which included lectures, efficacy trials, Bt production and safety aspects.

5.12.2 He said that commercial use of Bt based pesticides started through import of the material and now, the Deptt. of Agriculture has set up a Bt pilot plant in Chiangmai and replacing the highly toxic chemical (Pesticides) used on vegetables especially with Bt based products. So far 33 Bt strains have been isolated and tested for their effectiveness against

various insect pests.

5.12.3 He stated that recognising the problem on the overuse of pesticides, the Government of Thailand's new policy as explained in the National Economic and Social Development Plan encourages the reduction of pesticides and support research in appropriate new technologies and natural methods of pest control in the following manners:

- a). Campaign for prevention and elimination of pests and insects by encouraging agricultural workers to monitor their own circumstances, and control pests and insects via natural methods in order to reduce the use of chemical products. Emphasize know-how and importance of prevention of pests and insects before cultivation, together with prevention of outbreaks of epidemics among livestock, as opposed to the use of curative measures after contracting the diseases.

- b). Carry out public campaigns to promote correct use of chemical products among agricultural workers and to educate them on the dangers and hazards from incorrect use of chemical and

medical products. Use of plants and organic elements for prevention and elimination of pests and insects in plants and animal should be promoted.

- c). Accelerate research work in the prevention and elimination of pests and insects by using plants extracts and other organic elements to replace the use of chemical products together with their eventual development and promotion of commercial private sector production for use on a wider scale".

5.12.4 Botanical pesticides have long been used in the country, he said and a pilot plant has been set up for the production of neem based botanical pesticides. This could produce upto 12,000 lt. of ready to use formulation in a year with an aza content upto 0.6%. Ongoing research aimed at improving the existing formulations has been taken up for increasing and stabilising the aza content of the pesticides.

5.12.5 He said that the importance that the government attaches to sustainable production of natural insecticides in Thailand could be seen by the

upgrading of the ATSD's "Pesticides from Natural Products" subdivision to a full office in February, 1998. The formation of the new "Office of Research and development of Botanical pesticides" would help foster the development of an industry capable of producing substantial health and economic benefits to Thai people in the next millennium.

5.12.6 With regard to data collection activities, he mentioned that both index and economic database are being updated on annual basis.

5.12.7 Despite the financial problems Dr. Sathorn Sirisingh stated that he has been able to provide funds in the national budget for participation of nominees in the various workshops and training programmes being organised by the RENPAP. He agreed to treat this budgetary allocation for the purpose of utilising it as government contribution to the Trust Fund.

Future activities

5.12.8 He requested the meeting for indepth training in the field of Pesticide Formulation and Quality control, monitoring pollutants in soil, air and water and Bt based bio-pesticides.

5.12.9 Dr.Sirisingh offered to host a Regional Workshop on botanical pesticides in Bangkok during June, 1999 and to provide indepth training to expert nominees from Srilanka, Nepal, Iran, Bangladesh, Vietnam, Indonesia and Philippines.

5.12.10 The PMC appreciated the efforts of the Royal Government of Thailand in promoting reduction in use of chemical pesticides and encouraging safer pesticides with bio-botanical pesticides. The meeting also acknowledged the generous offer of the Government of Thailand to host Workshop on Botanical Pesticides during June, 1999 and to provide budgetary contribution for the proposed UNDP/ UNIDO Trust Fund.

5.13 **VIETNAM**

5.13.1 The country paper from Vietnam was presented by the National Coordinator, Dr.(Prof.) Ha Minh Trung.

5.13.2 He stated that Vietnam has recorded significant achievements in agricultural production during 1998 inspite of negative impact of financial crisis in the region as well as heavy calamities. Food production has been as high as 31.8 million tones and rice exports reached a new level. He also

mentioned that his country has become the third largest coffee exporter in the world after Brazil and Columbia.

5.13.3 He emphasised that the use of pesticides is steadily increasing for plant protection activities inspite of the launching IPM in the country. The increase in the pesticides consumption during the last one year was around 16 times. However, this resulted in pollution and toxicity problems. To study this a project entitled "Study of Impact of Pesticides used on public health and their control" has been launched and as a result, various activities are being carried out viz. training to the farmers on effective and safe use of pesticides at the country wide level, medical examination of the workers involved in production and application of the pesticides, etc.

5.13.4 He stated a number of proposals have been put before the Government for safe use of pesticides and which include :

- a) Extending the National Programme of Studies on impact of pesticides in larger scale with strong international support,
- b) Survey on status of pesticides formulations

factories and pesticides production,

- c) Establishment of Pesticide Residue Laboratory to monitor the impact of the Pesticide use on products, soil, water and air,
- d) Establishment of international cooperation in production of biopesticides,
- e) Training to the staff on monitoring pesticides residues and toxicology.

5.13.5 He said that the nominees of Vietnam have participated in all workshop and training programmes organised by the RENPAP and they have indeed benefitted from these workshops as a result of which they have been able to strengthen their various related programmes in the country.

5.13.6 He said that the expert nominee from Vietnam attended Bt Workshop in Wuhan, China during October, 1998 and as a followup, a proposal is being worked out to have a joint venture with Wuhan Centre on Biopesticides for production of Bt pesticides in the country.

Future activities

5.13.7 Prof. Trung requested the PMC meeting for indepth training in the field of monitoring pollutants in air, soil and water, botanical pesticides, Bt based

bio-pesticides and in the field of application technology.

5.13.8 The PMC appreciated the effective role played by the National Coordinator in pursuing the various activities of the RENPAP and organising followup workshops in the country for the promotion of safe use of pesticides and agreed to provide all the necessary support to Vietnam in this regard.

6.0 PESTICIDE DATA COLLECTION PROGRAMME : "Development and Use of Computer Software for Pesticides Market Data, Input, Storage, Retrieval and Dissemination"

6.1 Dr. Ramdev presented the progress of activities under this sub-programme. He said that this database is unique in the Asia Pacific region as it covers the vital aspects of pesticides of pesticide production, import, export and usage and is an invaluable tool for the member countries to phase out persistent highly toxic pesticides and replacing these with more user and environment friendly alternatives through following the developing trend in the leading countries.

6.2 He said that with the assistance of the Government of France, it has been possible to provide hardware, software as well as training to the Data

Collection Experts of the 15 member countries who have played a very vital role in the creation and maintenance of the database so far.

- 6.3 In view of the importance of the programme, the meeting decided to make fresh efforts to obtain further financial support from donor agencies mainly to upgrade the hardware and software to meet the emerging technological requirements. Accordingly, the Regional Coordinator was advised to approach the Government of France for considering further funding to strengthen the data collection project.

7.0 TRIPARTITE REVIEW MEETING

- 7.1 Mr. Dipak Chatterjee, Secretary, Ministry of Chemicals & Fertilizers, Government of India chaired the TPR meeting. Presenting the Project Performance Evaluation Report (PPER) the Regional Coordinator highlighted the achievements, particularly the spin off effects of the RENPAP giving rise to a number of country programmes in the P.R. China, India and Pakistan. He mentioned that during the reporting year, two programmes namely CPR/91/120 - Sustainable Pest Control and Soil Fertility and DP/IND/89/128 - Strengthening of Pesticide Development Centre Phase II, after achieving all the set targets, have been successfully completed with the full satisfaction of

the respective member countries, UNDP/UNIDO and other associated agencies under the leadership of the RENPAP. He identified the decentralised system of implementation of the key activities through the eight TCUs hosted by eight member countries of the Network as one of the major factors contributing to the success of the programme which has inculcated the much needed feeling of ownership of the programme in the member countries and enabled them to contribute both in kind and in cash for the successful implementation of the targeted activities. In the process, these TCUs have been upgraded and strengthened through mastering additional funding and that these are all serving as the focal points of specialised operation of the Network and catering not only to the interest of the hosting country but also that of the participating member countries of the Network through extending training, consultancy, trouble shooting etc.

- 7.2 He also mentioned that RENPAP has been an ardent follower of the TCDC concept and had been recruiting majority of the experts from within the region needed for various workshops / training programmes etc. He said that the primary focus of RENPAP has been that of human resources development needed for

the protection of human health and regeneration of the environment as well as the transfer of environmentally sound technology which ultimately contribute to productive employment and sustainable economic growth to eliminate poverty. He said that as recommended in the last TPR meeting, he has circulated a draft Trust Fund Agreement as well as a project document for the consideration of this TPR for finalising the Trust Fund operational modalities.

- 7.3 Mr. Maagaard expressing satisfaction on the progress made during the last one year particularly with regard to the setting up of the Trust Fund through obtaining contributions from the private sector pesticide industry and the Governments of the People's Republic of China and India. He announced that the UNDP, having accepted the recommendations of the last TPR meeting, has formally agreed to extend the project upto December, 1999 within the existing fund allocation and urged the member countries to take all necessary steps for making their committed contribution to the Trust Fund so that the new phase of the project could start full-fledged functioning from January, 2000 under the Trust Fund arrangement. To accelerate establishment of the Trust Fund Mr. Maagaard extended assistance

of his good offices towards securing funds from the STS component and provide advise in connection with the possibilities to secure non-core funds from the local UNDP offices in the member countries. He also extended his assistance for accepting the Trust Fund contribution in the UNDP offices of the member countries in local currencies for conversion into US Dollar, as well as for holding the money locally for enabling the individual member countries to assess how their contribution is being utilised for the project.

7.4 Confirming the very useful role played by RENPAP in the Asia Pacific Region through promoting integrated safety in the production and usage of pesticides, the representatives of the member governments strongly emphasised the importance of the continuation of UNDP assistance not only for its financial contribution but also because it provides a global opportunity for interaction and networking and in this context urged UNDP to keep its earlier commitment to provide matching funds upto the year 2001. In the meantime, the TPR desired that RENPAP/ UNIDO continue with their efforts to identify bilateral / multilateral sources of fund to strengthen the Trust Fund.

7.5 The TPR noted with concern the economic crisis being

faced by some of the important member countries and the adverse impact that it has made towards their contribution for setting up of the Trust Fund. The expectation of the meeting was that these countries would soon come out of the crisis and start making contribution to the Trust Fund.

7.6 The TPR noted that the RENPAP model would be appropriate for replication globally and that efforts need to be made to set up such networks for the African, Arab and the South American countries, most of which are developing nations, dependant on agriculture and facing the same issues on pesticides which RENPAP has addressed. The meeting opined that if such a Network comes into existence, then a suitable coordinating body could be established which would form a new and exemplary model of international cooperation.

7.7 The TPR discussed in detail the countrywise requirement of group as well as indepth training and finalised the workplan in consultation with the National Coordinators of the countries hosting the TCUs. It was further decided that in order to maintain an uniformly high standard of participation the National Coordinators would strictly follow the qualification and experience requirements stipulated

in the relevant aide-memoires for nominating candidates for the trainings / workshops.

7.8 Consideration of the programme document entitled "Regional Network on Pesticides for Asia and the Pacific : Cleaner Production and Environmentally Sound Management of Pesticides, Promoting Safety, Health and Environmental Protection for Risk Reduction" and the model UNDP Programme Trust Fund Agreement between UNDP and Government or other donors (vide Basic Documents Manual, Chapter II, Document Nos. II-10/11/12 of UNDP) for creation and operation of the Trust Fund (Annexure III)

7.8.1 Initiating the discussion, Mr. Consul suggested that the programme document may include provision for accepting multi-lateral / bilateral funding for its continued operation. The TPR thereafter considered ways and means of reducing the expenditure and in this context the countries hosting the TCUs suggested that they would be willing to bear the cost of boarding, lodging and other expenses in connection with the organisation of the workshops and training programmes which could reduce the incidence of the DSA expenses of the project; this proposal was well received. The TPR also suggested that the project document may also include a strategy for income generation particularly through the sale of its publications including those on data collection programme.

7.8.2 Ms. Pradhan proposed setting up of satellite centres for the development of botanical pesticides and bio-

for the development of botanical pesticides and bio-pesticides in Nepal and the TPR agreed that these two centres could be hooked on to the Technical Coordinator Units on botanical pesticides in Thailand and bio-pesticides in the P.R. China.

- 7.8.3 Dr. Csizer suggested that it would be necessary to ensure that the activities included in the project document are in line with the UNIDO service modules and he extended his assistance in this regard for incorporating appropriate changes in the document. He also mentioned that there are regular ways to record the in kind / in cash contribution from the member countries and this should be followed in the project which would ultimately enhance the ownership feeling in the member countries as well.
- 7.8.4 The TPR felt that a comprehensive strategy should be developed by the RENPAP Secretariat for the purpose of dissemination of RENPAP capabilities to a wider audience through setting up of a web-site / Homepage and undertaking regular publication of news letter with the assistance of UNDP, India.
- 7.8.5 The TPR endorsed the management structure as well as the financial arrangements proposed in the project document. The TPR agreed that while a major share of the contribution from the member country will be

used to strengthen its own activities and to support the RENPAP Secretariat in Delhi, some funds would have to be allocated to assist other member countries particularly the Least Developed Countries (LDCs). The TPR also suggested that the allocations under the head "equipments" may be increased and consequential reductions could be effected under the head "Consultants".

7.8.6 The TPR felt the need for finalising a document containing a vision for RENPAP 2020 and authorised the Regional Coordinator to undertake the task of preparation of the document in consultation with the UNDP, New Delhi and the UNIDO Headquarters.

7.8.7 The need for upgrading and updating the pesticide database was strongly endorsed by the TPR. It was decided to seek necessary assistance from donor agencies, particularly the Government of France for upgrading the software as well as the hardware to meet the emerging requirements.

7.8.8 The TPR appreciated the strong support being extended by the Government of India for hosting the RENPAP secretariat and its confirmed commitment of contribution to the Trust Fund. The TPR also appreciated the commitment of the Government of the Peoples Republic of China to provide US \$ 20,000 -

US \$ 25,000 annually for a period of four years beginning from the year 2000 in addition to US \$ 110,000 already provided to the Trust Fund. The TPR also noted with satisfaction that the Governments of the Republic of Korea, Pakistan, Malaysia and Thailand have taken steps to make their contribution to the Trust Fund and that they would be conveying their final decisions in the near future.

7.8.9 The TPR particularly appreciated the contribution of Rupees one million by M/s. United Phosphorus Ltd., an Indian private sector company which underscores the confidence that RENPAP enjoys among the private sector as well. The TPR further noted that while the private sector had always been strong financial assistance from similar projects it is noted a noteworthy issue where the private sector has come out with its own contribution for supporting this important project.

7.8.10 The TPR thereafter endorsed the draft project document and the model Trust Fund Agreement as contained in Basic Document Manual of UNDP Chapter II, Document Nos. II-10/11/12 (Annexure III) attached thereto subject to the creation of provision for multilateral / bilateral funding to support the networking activities, inclusion of strategies for income generation, aligning the

activities with the new UNIDO service modules, inclusion of setting up of two satellite centres for botanical and bio-botanical pesticides in Nepal and revision of budget and authorised the Regional Coordinator to finalise the document in consultation with the UNDP, New Delhi and UNIDO headquarters for submission to the member governments for signature.

- 7.8.11 Summarising the discussion of the TPR meeting Mr. Maagaard appreciated the commitments made by the member governments for the setting up of the UNDP Trust Fund for pursuing the RENPAP activities beyond the current phase of the project. He extended assistance of his good offices to finalise the project document to include the various suggestions made during the meeting in consultation with UNIDO for its ultimate signature by the member governments. He noted the unanimous urge of the member countries to uphold the commitment made by the UNDP Headquarters during the last TPR meeting to continue provide matching contributions to the UNDP/UNIDO Trust Fund, the agreement of which has now been finalised with assured contributions from the member countries. He urged the Regional Coordinator, RENPAP to take necessary follow-up steps to finalise the project document and the Trust Fund Agreement and follow-up for ultimate approval

of the member governments and obtain their contributions to operationalise the Trust Fund.

8.0 RECOMMENDATIONS

8.1 The TPR meeting approved the PPER for the project period from November 1997 to December 1998.

8.2 The TPR reiterates the concern expressed in the meeting in New Delhi on 17-19 November 1997 that UNDP resource-base has declined due to reduced contributions from member countries. The member Governments strongly value UNDP assistance not because of its resources but also because of the global opportunity it provides for interaction and networking. The member Governments strongly urge UNDP to support quality programmes like RENPAP. The RENPAP activities conform to various international agreements and global conferences particularly relating to the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, June 1992 and the Montreal Protocol.

8.3 The TPR meeting notes with concern the economic crisis faced by some of the participating member countries during 1998 and hopes that it would be a temporary phase. The member countries, as agreed at the last TPR meeting, would honour their commitments

in a foreseeable future.

- 8.4 The TPR meeting reiterates its resolve to establish an independent autonomous body to carry on the activities of RENPAP beyond the current phase of UNDP assistance.
- 8.5 The TPR meeting appreciates the UNDP Headquarters concurrence to extend the duration of the project upto December 1999, without additional financial allocation.
- 8.6 The meeting thoroughly discussed the draft project document and suggested amendments such as (1) incorporation of provision for multilateral / bilateral funding to support the Network activities; (2) include strategies for income generation; (3) revision of the budget; (4) activities should be in line with the new UNIDO service modules; (5) provision for the Government of Nepal to set up satellite centres for botanical and biopesticides; (6) a vision for RENPAP 2020 and authorised the Regional Coordinator to finalise the document in consultation with UNDP New Delhi and UNIDO Headquarters, for submission to member governments for signature. All arrangements relating to finalisation of the Trust Fund Agreement and the

project document should be finalised on a priority basis preferably by 30 June 1999.

Subject to the above the TPR meeting endorses, in principle, the draft Model Trust Fund Agreement and the draft project document attached thereto. The TPR meeting agrees that the National Coordinators will pursue with their Governments for early signature of the documents upon receipt from UNDP. The TPR meeting directs the RENPAP Secretariat to work closely with the UNDP New Delhi for early finalisation of the documents and submission to the member Governments for signature.

8.7 The TPR meeting resolves that the Trust Fund should be administered by UNDP. The TPR meeting requests UNDP New Delhi to take all administrative and financial actions relating to the operation of the Trust Fund in consultation with the RENPAP Secretariat.

8.8 The TPR appreciates the gesture of the Government of India to underwrite the operational cost at the present level of the RENPAP Secretariat in addition to its contribution to the Trust Fund. The TPR also appreciates the contribution made by the Government of PR China of US \$ 110,000 and continued trust fund

support of US \$ 20,000 - US \$ 25,000 annually for four years beginning year 2000.

The Government of Republic of Korea has also indicated that there are good possibilities to contribute to the Trust Fund towards the end of this year as well as next years. The Government of Pakistan has also given similar indication. The National Coordinators of Malaysia and Thailand informed the meeting their Governments are considering their contribution to the Trust Fund and a decision is expected in the near future.

8.9 The TPR meeting appreciates the contribution of Rs. one million made by United Phosphorous Limited, an Indian private sector company, towards the Trust Fund. Though the contribution in financial terms is small, it underscores the value and confidence RENPAP enjoys among the private sector. The TPR recommends that all the National Coordinators persuade their private sector enterprises receiving services of the RENPAP to extend contribution along the above lines.

8.10 The TPR meeting appreciates the initiatives of the UNDP, New Delhi and the RENPAP Secretariat for developing a strategy for dissemination of RENPAP

capabilities to a wider audience. This is essential in terms of obtaining both human and financial resources for establishing RENPAP on a firmer footing. The meeting urges the RENPAP Secretariat to include the creation of a website / home page in its work-plan for the year 1999-2000.

8.11 The TPR meeting urges the RENPAP Secretariat to carry out a full-fledged study on the tangible benefits accrued to the member governments from RENPAP and document it before the next meeting.

8.12 The meeting realised the importance and need of maintaining an up to date data base. Resources should be secured for upgrading the hardware, software, training of personnel in the member countries, etc. The TPR meeting decided that the RENPAP Secretariat should decide on the documents to be priced and sold.

8.13 The meeting appreciated the gesture of UNDP, New Delhi, to help RENPAP in securing funds from STS and provide advice in connection with possibilities to secure non-core funds from local UNDP offices in the member countries.

8.14 The TPR strongly endorses the need for replication

of RENPAP like activities globally. The meeting therefore urges the UNDP/UNIDO to take necessary steps for creation of similar networks in the African, Arab and the Latin American regions.

- 8.15 The TPR meeting decided that henceforth the consultants required for various training programmes, workshops, etc should come from within the region. In case suitable expertise is not available within the region consultants from outside may be recruited.
- 8.16 The TPR meeting requested the RENPAP Secretariat to develop a uniform format to quantify the in-kind contribution of the member countries.
- 8.17 The TPR meeting noted the offer of some of the countries hosting the Technical Coordinating Units to underwrite the boarding, lodging, transportation, including organisational costs of the workshop. The DSA component will be regulated according to UNDP rules and regulations.
- 8.18 The TPR meeting appreciated the gesture of UNDP to transfer Trust Fund allocations received in local currency through the local UNDP office network.

- 8.19 The TPR meeting agreed that while a major share of the contribution from a member country will be used to further strengthen its own activities and to support the RENPAP Secretariat in Delhi, some funds will be channelled to assist other member countries, specially LDCs.
- 8.20 The TPR meeting approved the work-plan for the year 1999 and 2000 (placed at **Annexure IV**). It further decided that the aide memoire for these workshops should clearly define the scope in comprehensive detail of the individual workshops and set minimum qualifications and experience for the nominees of these workshops.
- 8.21 Prof. Hong Chuanyi offered to host the next TPR/PMC meeting in China in February 2000 and the TPR agreed to accept his proposal.

Annexure I**LIST OF PARTICIPANTS TPR/PMC MEETING, 16-17 FEBRUARY, 1999,
KATHMANDU, NEPAL****Nepal (Host Country)**

Mr. Harishankar Tripathi,
Member National Planning Commission,
HMG of Nepal - Chief Guest

Dr. M.N. Shrestha,
Special Secretary,
Ministry of Agriculture,
HMG of Nepal

Dr. (Ms.) R.B. Pradhan,
Director General,
Deptt. of Agriculture,
HMG of Nepal.

Special Guest of Honour

Mr. Dipak Chatterjee,
Secretary to Government of India,
Ministry of Chemicals & Fertilizers,
Shastri Bhavan, New Delhi

UNDP

Mr. Neils Maagaard,
Deputy Resident Representative,
UNDP, New Delhi

Mr. B. Radhakrishnan,
Programme Officer,
UNDP, New Delhi

UNIDO

Mr. Zoltan Csizer,
Director, SES/PEM
UNIDO, Vienna

Mr. Arjun Upadhay,
UNIDO National Director in Nepal,
UN House,
Pulchok, Kathmandu,
Nepal

Dr. S.P. Dhua,
Regional Coordinator, RENPAP,
UNIDO/UNDP, New Delhi

Resource Person

Dr. Y.P. Ramdev,
Assistant Regional Coordinator (RENPAP)
& Data Collection Expert,
UNDP/UNIDO,
New Delhi, India

Country Delegates

Mr. Matilal Banik,
Additional Director,
Deptt. of Agricultural Extension,
Rangpur, Dhaka,
Bangladesh

Prof. Hong Chuanyi,
President,
National Chemical R&D Corporation,
21 Wa. Huan Xi Road,
Nantong, Jiangsu,
P.R. China

Mr. Shantanu Consul,
Joint Secretary,
Ministry of Chemicals & Fertilizers,
Shastri Bhavan,
New Delhi, India

Ms. Dewi Ratna Wulan,
Pandok Bede Housing I/12,
Pondok Bete 17414,
Indonesia

Dr. Byung Youl Oh,
Director of Pesticide Safety Div.
NIAST, Suwon,
Rep. of Korea

Ms. Shamsiah Muhammad,
Assist Director,
Pest Control Division,
Dept. of Agriculture,
Government of Malaysia

Mr. Hlaing Min,
Plant Protection Division,
Myanmar

Dr. (Ms.) R.B. Pradhan,
Director General,
Dept. of Agriculture,
Harihar Bhawan,
Kathmandu, Nepal

Dr. Yousaf Hayat Khan,
 Director,
 Eco-Toxicology Research Institute,
 NARC/PARC, Islamabad,
 Pakistan

Dr. Dario C. Sabularse,
 EPA, NIA Complex,
 EDSA, Queon City,
 Manila,
 Philippines

Dr. Sathorn Sirisingh,
 Dept. of Agriculture,
 Jatuchak,
 Bangkok 10900,
 Thailand

Prof. Ha Minh Trung,
 National Institute of Plant Protection
 Chem Tuliem, Hanoi,
 Vietnam

Delegates (Observers) from Nepal

Mr. B.P. Upadhyay,
 Chief Plant Protection Officer,
 Plant Protection Division,

Mr. Ganesh Kumar. K.C.,
 Chief Industrial Entomologist,
 Industrial Entomology Division,

Mr. B.R. Palikhe,
 Pesticide Registration Officer,
 Plant Protection Division,

Mr. S.K. Adhikari,
 Agri. Economist,
 Planning Division,

Mr. Ishwor Rijal,
 DADO, Suyangja, (DAO),

Ms. Uramila Joshi,
 Food Research Officer,
 Central Food Research Laboratory,

Mr. B.K. Gyanwali,
 Senior (Entomologist) Scientist,
 DOA

**TRIPARTITE REVIEW AND
THE PROJECT MANAGEMENT COMMITTEE MEETING OF THE
REGIONAL NETWORK ON SAFE PESTICIDE PRODUCTION AND
INFORMATION FOR THE ASIA AND THE PACIFIC (RENAP)
RAS/93/061**

February 16-17, 1999
Venue : Hotel Blue Star
Thapathali, Kathmandu, Nepal

AGENDA

16 February 1999 (Tuesday)

Chief Guest : Mr. Hari Shankar Tripathi, Hon. Member
National Planning Commission

Special Guest of Honour : Mr. Dipak Chatterjee, Secretary, Ministry of Chemicals &
Fertilizers, Govt. of India

Chairperson : Dr. M.N. Shrestha, Special Secretary, Ministry of Agriculture

0830 - 0900 hrs Registration

0900 - 1015 hrs **Inaugural Session**

Welcome Address - Dr.(Mrs.) R.B. Pradhan, Director General
Dept. of Agriculture, His Majesty's Government, Nepal

Official Inaugural of the Meeting &
Inaugural Address : Honourable Chief Guest

Address Mr. Niels Maagaard, Dy Resident Representative (P), UNDP, Delhi

Address Dr. Zoltan Csizer, Director, ISED/CHEM UNIDO

Key Note Address Mr. Dipak Chatterjee, Secretary, Govt. of India,
Ministry of Chemicals and Fertilizers

Vote of Thanks Dr. S.P. Dhua, Regional Coordinator (RENAP)

Chairperson's Remarks : Dr. M.N. Shrestha, Special Secretary, Min. of Agriculture

1000 - 1030 hrs Tea/Coffee

1030 - 1045 Adoption of the Agenda

1045 - 1300 hrs Presentation of country and Technical Coordinator Unit reports by National
Coordinators

- * Bangladesh,
- * P.R. China,
- * India,
- * Indonesia,
- * Rep of Korea,
- * Malaysia,

1300 - 1400 hrs	Lunch
1400 - 1515 hrs	Continuation of report presentation by National Coordinators * Myanmar, * Nepal, * Pakistan, * Philippines, * Sri Lanka,
1515 - 1530 hrs	Tea/ Coffee break
1530 - 1610 hrs	Continuation of report presentation by National Coordinators * Thailand, * Vietnam
1610 - 1640 hrs	Data Collection Programme
1640 - 1715 hrs	Report from agencies.

17 February 1999 (Wednesday)

0900 - 1100 hrs	Commitment from the member countries towards effective implementation of the activities * Training programmes * Study tours / Fellowship training * Consultant requirements * Participation in meetings * Consultations / communications between National Coordinator / Regional Coordinator * Finalisation of the Workplan and project revision
1100-1300 hrs	Tripartite Review Meeting Presentation of the PPER & Programme Document for next Phase of RENPAP programme Trust Fund - Creation and Operation Discussion / Recommendations
1300 - 1600 hrs	Lunch
1600 - 1730 hrs	Recommendations - Adoption of the Report
1730 hrs	Closing

Annexure III

AS PER UNDP BASIC DOCUMENT MANUAL CHAPTER II, DOCUMENT NO.
II-10/11/12

MODEL UNDP (PROGRAMME) TRUST FUND AGREEMENT

**AGREEMENT BETWEEN THE UNITED NATIONS DEVELOPMENT PROGRAMME
AND GOVERNMENTS OF AFGHANISTAN, BANGLADESH, PEOPLE'S
REPUBLIC OF CHINA, INDIA, INDONESIA, IRAN, REPUBLIC OF
KOREA, MALAYSIA, MYANMAR, NEPAL, PAKISTAN, PHILIPPINES, SRI
LANKA, THAILAND AND VIETNAM**

WHEREAS the **United Nations Development Programme** (hereinafter referred to as "the **UNDP**") and the Governments of Afghanistan, Bangladesh, People's Republic of China, India, Indonesia, Iran, Republic of Korea, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam have agreed to co-operate in the implementation of a project in Afghanistan, Bangladesh, People's Republic of China, India, Indonesia, Iran, Republic of Korea, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam (hereinafter referred to as "the Project") which Project is summarized in Attachment A to this Agreement and is more fully described in a Project Document Regional Network on Pesticides for Asia and the Pacific : Cleaner Production and Environmentally Sound Management of Pesticides, Promoting Safety, Health and Environmental Protection for Risk Reduction.

WHEREAS the People's Republic of China, India, Indonesia, Iran, Republic of Korea, Malaysia, Philippines and Thailand (hereinafter referred to as "the Donor") has informed the UNDP of its willingness to contribute funds (hereinafter referred to as "the contribution") to the UNDP for the Project on the basis of the aforementioned Project Document;

WHEREAS it is understood that the trust fund shall be utilised to finance the project entitled "Regional Network on Pesticides for Asia and the Pacific : Cleaner Production and Environmentally Sound Management of Pesticides, Promoting Safety, Health and Environmental Protection for Risk Reduction" which the UNDP, with the concurrence of the Donor and the concurrence of the recipient Governments concerned, deems appropriate.

WHEREAS the UNDP is prepared, through a trust fund established by its Administrator under its financial regulations and rules, to receive and administer the contribution;

WHEREAS the Governments of Afghanistan, Bangladesh, People's Republic of China, India, Indonesia, Iran, Republic of Korea, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam have been duly informed of the contribution of the Donor to the Project and of the establishment of this trust fund;

WHEREAS the UNDP designates United Nations Industrial Development Organisation (UNIDO) as the Executing Agency for implementation of the Project (hereinafter referred to as "the Executing Agency");

NOW THEREFORE, the UNDP and the Donor hereby agree as follows:

Article I

1. The UNDP shall establish a trust fund under the financial regulations and rules of the UNDP for the receipt and administration of the contribution.

2. The Donor shall, in the manner referred to in paragraph 3 of this Article, place at the disposal of the UNDP the contribution in the amount of United States dollars -----.

3. The Donor shall, in accordance with the schedule of payments set out below, deposit the contribution in (title and number of bank account) at the (name and address of bank of deposit) :

	Date payment due	Amount (US\$)
(a)		
(b)		
(c)		
(d)		

The above schedule of payments takes into account the requirement that contributions shall be paid in advance of the implementation of planned activities. It may be amended to be consistent with the progress of project delivery.

4. All financial accounts and statements shall be expressed in United States dollars.

5. The UNDP may agree to accept contribution - payments in a currency other than United States dollars provided such currency is fully convertible or readily usable by UNDP and subject to the provisions of paragraph 6, below. Any change in the currency of contribution-payments shall be made only in agreement with the UNDP.

6. The value of a contribution - payment, if made in other than United States dollars, shall be determined by applying the United Nations operational rate of exchange in effect on the date of payment. Should there be a change in the United Nations operational rate of exchange prior to the full utilization by the UNDP of the contribution - payment, the value of the balance of funds still held at that time will be adjusted accordingly. If, in such a case, a loss in the value of the balance of funds is recorded, the UNDP shall inform the Donor with a view to determining whether any further financing could be provided by the Donor. Should such further financing not be available, the assistance to be provided pursuant to this Agreement may be reduced,

suspended or terminated by the UNDP.

Article II

1. The UNDP shall within a reasonable period of time after signature of this agreement and in consultation with the Donor and the receipt Governments identify projects to be financed from the trust fund.

2. The trust fund shall be utilised by the UNDP for the purpose of meeting the costs of the Project as set out in the Project Document, as well as the costs of support services relating thereto as specified in the following paragraph.

3. The trust fund shall be charged with an amount equivalent to _____ per cent of all project expenditures made from the trust fund, which amount shall, in accordance with UNDP regulations, rules and directives, be utilised by the UNDP in reimbursement for support services provided by the Executing Agency and any other support services required.

4. Any interest income derived from contributions to the trust fund shall be credited to the trust fund in accordance with UNDP procedures.

Article III

1. The trust fund shall be administered by the UNDP in

accordance with UNDP regulations, rules and directives, applying its normal procedures for the execution of its projects.

2. Project management and expenditures shall be governed by the regulations, rules and directives of the UNDP and, where applicable, the regulations, rules and directives of the Executing Agency.

Article IV

1. The implementation of the responsibilities of the UNDP and of the Executing Agency pursuant to this Agreement and the project document shall be dependent on receipt by the UNDP of the contribution in accordance with the schedule of payments set out in Article I, paragraph 3, above.

2. The aggregate of the amounts budgeted for the Project, together with the estimated costs of reimbursement of related support services, shall not exceed the total resources available under this Agreement.

3. If unforeseen increases in expenditures or commitments are expected or realized (whether due to inflationary factors, fluctuation in exchange rates or unforeseen contingencies) the UNDP shall submit to the Donor on a timely basis a supplementary estimate showing the further financing that will be necessary. The Donor shall use its best endeavours to obtain the additional funds required.

4. If the contribution - payments referred to in Article I, paragraph 3, above, are not received in accordance with the payment schedule, or if the additional financing required in accordance with paragraph 3, above, is not forthcoming from the Donor or other sources, the assistance to be provided pursuant to this Agreement may be reduced, suspended or terminated by the UNDP.

Article V

Ownership of equipment, supplies and other property financed from the contribution shall vest in the UNDP. Matters relating to the transfer of ownership by the UNDP shall be determined in accordance with the relevant policies and procedures of the UNDP.

Article VI

The contribution shall be subject exclusively to the internal and external auditing procedures provided for in the financial regulations, rules and directives of the UNDP.

Article VII

The UNDP shall provide the Donor on request with the following reports prepared in accordance with UNDP accounting and reporting procedures:

- (a) periodic progress reports;
- (b) an annual report which will provide information on

income and expenditure during the previous year;

(c) a final report within six months after the date of completion or termination of each project.

Article VIII

The UNDP shall notify the Donor when all activities relating to the purposes for which the trust fund was established have been completed.

Article IX

1. Notwithstanding the completion of the Project financed from the trust fund, the UNDP shall continue to hold unutilized contribution - payments until all commitments and liabilities incurred in implementation of the Project have been satisfied and project activities brought to an orderly conclusion.

2. If the unutilized contribution - payments prove insufficient to meet such commitments and liabilities, the UNDP shall notify the Donor and consult with the Donor on the manner in which such commitments and liabilities may be satisfied.

3. Any contribution - payments that remain unexpended after such commitments and liabilities have been satisfied shall be disposed of by the UNDP in consultation with the Donor.

Article X

1. After consultations have taken place between the Donor, the UNDP and the recipient Government, and provided that the contribution-payments already received are sufficient to meet all commitments and liabilities incurred in the implementation of the Project, this Agreement may be terminated by the UNDP or by the Donor. The Agreement shall cease to be in force thirty days after either of the Parties may have given notice in writing to the other Party of its decision to terminate the Agreement.

2. If the unutilized contribution - payments are insufficient to meet such commitments and liabilities, the UNDP shall notify the Donor and consult with the Donor on the manner in which such commitments and liabilities may be satisfied.

3. Notwithstanding termination of this Agreement, the UNDP shall continue to hold unutilised contribution - payments until all commitments and liabilities incurred in implementation of the Project have been satisfied and project activities brought to an orderly conclusion.

4. Any contribution - payments that remain unexpected after such commitments and liabilities have been satisfied shall be disposed of by the UNDP in consultation with the Donor.

Article XI

This Agreement shall enter into force upon signature and deposit by the Donor of the first contribution - payment to be made in accordance with the schedule of payments set out in Article I, paragraph 3 of this Agreement.

IN WITNESS WHEREOF, the undersigned, being duly authorised thereto, have signed the present Agreement in the English language in two copies.

For the Donor

For the United Nations
Development Programme

China
Name :
Title
Date:

Name:
Title
Date

India
Name:
Title:
Date:

Name:
Title:
Date:

Name:
Title:
Date:

Name:
Title:
Date:

WORK PLAN FOR RENPAP PROJECT

**Regional Network on Pesticide for Asia and the Pacific : Cleaner Production and Environmentally Sound Management of Pesticides, Promoting Safety, Health and Environmental Protection for Risk Reduction
1999 - 2000**

Group Training (All Countries)			Individual Consultancy (In support of Group Training)		Group Meeting		Individual Training / Study Tour	
Subject	Provision	Venu	Subject	Provision	Subject	Venue/ Year	Requesting Country	Times/ Number
Application Technology	May 2000	Malaysia			CIPAC	1999	Iran China Vietnam Nepal Bangladesh Pakistan	May 2000
Workshop on User and Environment Friendly IPM Compatible Pesticide Formulation and Quality Control	2nd Week Nov. 1999 Nov. 2000	India			PMC Meeting PMC Meeting	Nepal Feb 99 China 2000	Iran Indonesia Korea Thailand China	Nov. 1999
Workshop on Eco Toxicology	Ist week Dec. 1999 Dec. 2000	Pakistan					India Korea Nepal	Dec. 1999
Workshop on Upgrading of Laboratory Facilities for monitoring pollutant in air, soil and water	2nd Week Oct. 1999 Oct. 2000	Rep of Korea					India Thailand Nepal China Vietnam	Oct. 1999
Workshop on Occupational Safety and Industrial Hygiene	2nd Week April 1999 April 2000	Philippines					India China Nepal Pakistan	2000

Group Training (All Countries)			Individual Consultancy (In support of Group Training)		Group Meeting		Individual Training / Study Tour	
Subject	Provision	Venu	Subject	Provision	Subject	Venue/ Year	Requesting Country	Times/ Number
Workshop on Safe Disposal of Pesticide Waste and Safe Management of Effluents	-	-						
Botanical Pesticides	June 1999 June 2000	Thailand					Sri Lanka Nepal India Iran Bangladesh Vietnam Indonesia Philippines	June 1999
Biopesticides	Oct. 2000	China					Philippines Indonesia Vietnam Korea Bangladesh India Nepal Thailand Pakistan	Oct. 2000