PROMOTION OF ENVIRONMENTAL HEALTH

The primary focus of the WHO Programme on Environmental Health continued to be on collaboration with the Member Countries in the field of community water supply and sanitation. The control of environmental health hazards, chemical safety and risk management were accepted as issues of immediate concern in some countries of the Region in view of their increased industrial activities and consequent environmental pollution.

11.1 COMMUNITY WATER SUPPLY AND SANITATION

At the global level, Regional Office staff participated in an interregional meeting in Geneva of Directors and Regional Advisers in environmental health to review the progress in the development of national EH programmes for the control of environmental health hazards including pollution and chemical safety aspects and to agree upon principles and strategies for accelerating technical activities in these areas. The EH programme was reviewed, the Global MTP for the Eighth General Programme of Work period finalized and technical and managerial aspects were discussed in this meeting.

An intercountry workshop on the acceleration of national programmes on sanitary disposal of human excreta was held in New Delhi and attended by participants from Bangladesh, Burma, India, Indonesia, Maldives, Nepal, Sri Lanka and Thailand as well as representatives of international organizations. The workshop developed specific recommendations on immediate and long-term measures for accelerating the provision of facilities for the sanitary disposal of human excreta.

As a follow-up of the Asia Regional External Support Consultation at Manila in 1985, a GTZ-assisted Decade Consultative Meeting for Resource Mobilization was organized in Nepal with WHO support under the WHO Interregional Cooperation Programme. The Consultation, which was attended by representatives of national planning commissions, social services, national coordination
councils, national sector agencies and 13 international and bilateral agencies, discussed resource mobilization, profiles of priority projects, sector performance and needs. Views were exchanged on the programming capacity of external aid, coordination, and corrective action. Arrangements with the Governments of Maldives and Indonesia have reached an advanced stage for similar meetings to be held in the two countries in 1987 to review the progress made, identify problems and issues in the achievement of Decade targets, review the role of donor agencies in overcoming them, and to discuss specific project proposals for attracting investment.

A mid-term review of progress of the International Drinking Water Supply and Sanitation Decade programmes as of 1985-end was completed by updating sector digests for each country of the Region (except DPR Korea and Mongolia). These were made available to WHO headquarters to enable them to produce a global overview of the sector situation as of the end of that year. The regional programme profile was prepared and a programme review was also held in the Regional Office.

Under the UNDP-assisted intercountry Decade Advisory Services Project, the rural water supply and sanitation sector programme was evaluated in Indonesia in collaboration with UNICEF. Under the same project the specific guidelines for community water supply and sanitation developed for Thailand were translated into the local language.

A tripartite review of the Decade Advisory Services Project was held in New Delhi and the draft terminal report prepared by WHO as executing agency. The meeting supported transfer of the project activities to the country level and making full use of the promotional materials and other outputs prepared under the project to meet the Decade goals. Consequently, national experts were engaged to review the current procedures for project implementation in the countries and suggest ways of aligning these procedures with those outlined in the document entitled 'Achieving Success in Community Water Supply and Sanitation Project' which had been finalized earlier. The national experts consulted the country officials involved in planning and implementation of water supply and sanitation project and (i) outlined the procedures being used by them, (ii) identified the responsibilities of various agencies, including those of planners, engineers and community representatives, and (iii) described operational elements of future programme support networks. The national experts compared these procedures with the general guidelines for project implementation developed under the Decade Advisory Services Project. Thereafter the experts made suggestions for phased changes in current procedures in order to bring them in line with the general guidelines, keeping in view the
existing legislation and government policies. The suggestions of the national experts were discussed at national workshops in Indonesia, Maldives, Nepal, Sri Lanka and Thailand and immediate actions that need to be taken to bring about the required alignment were identified.

WHO collaboration with Indonesia, Nepal, Sri Lanka and Thailand, for the promotion of women's participation in the Decade activities continued under a UNDP-funded project. Baseline case studies were carried out to document information, approaches, and methodologies which could be helpful in promoting the involvement of women in this developmental effort and the benefits that may be derived from such involvement. An intercountry workshop was held in Kathmandu which was attended by representatives from these countries. Case studies prepared were reviewed and the interventions planned and implemented to achieve closer involvement of women in the Decade were discussed. The workshop provided a forum for the exchange of information and experiences among the persons concerned for a better understanding of the issues involved in the design of intervention activities being implemented in Indonesia, Nepal, Sri Lanka and Thailand during 1987.

WHO continued to collaborate with the countries in environmental health research so as to find solutions to priority national problems to achieve national Water Supply and Sanitation Decade goals. Out of 20 research studies being supported from RPD funds, 6 were completed during the year. Further efforts for promoting environmental health research at country level were being made through national workshops in Bangladesh and Burma.

In BANGLADESH, the main thrust of WHO's collaborative programme in water supply and sanitation was on institutional strengthening, manpower development and improvement of management capability in programme development, planning, designing and implementation. Assistance was also provided in improving the operation and maintenance of completed systems through community participation. The WHO sanitary engineer (Team Leader) continued working with a national group consisting of a sanitary engineer, four field sanitation officers and a chemist in regard to different aspects of the country's environmental health programmes. They assisted the Government in conducting a series of orientation courses and seminars to train sector personnel of different categories, including senior engineers, technicians, upazila committee members, Madarsa teachers and intersectoral officials. An orientation workshop for sanitation workers and leaders of voluntary organizations and in-service training for field sanitation officers were also held. A four-day national workshop on drinking water quality
surveillance and control in small communities was held in which representatives from various multisectoral departments and institutions participated. A workshop on improved design techniques using a microcomputer was held in collaboration with the World Bank in which twenty middle/senior-level engineers participated. A WHO consultant and a national expert assisted in developing a proposal for setting up a national training institute for water supply and sanitation personnel.

Information on the achievement of the water supply and sanitation sector in the Decade up to the end of 1985 was collected and an evaluation of Phase-II of the sanitation programme in 15 upazilas was completed.

The research study on groundwater pollution from pit latrines supported by WHO and UNICEF was completed. Another research study on potable water supply in areas with a high iron content was also completed. The findings of these studies would enable the implementing agencies in evaluating the implementation strategy for the latrine and water supply programmes for such areas.

The Government has decentralized the implementation and management of water supply and sanitation to the upazila and community levels. It is planned to assign a management specialist to help in developing proposals to realign the organizational structure of the Directorate of Public Health Engineering (DPHE), revising the scope of its work and in developing an action plan for implementation. A specialist in management information systems is also being assigned to identify information needs for the water supply and sanitation sector, design the MIS and recommend suitable strategies for implementation.

A microcomputer, software, chemicals for laboratories and necessary reference books are being procured to support the implementation of the programme.

In BHUTAN, the UNDP-funded project for the provision of low-cost sanitation in schools, basic health units and dispensaries and private houses, continued to be implemented. A WHO consultant assisted in an extensive survey to assess the progress and the quality of latrine construction, utilization of the completed units, and the involvement of the communities. The tripartite review of the project has recommended extension of the project beyond May 1987, and greater emphasis on training in sanitation and latrine construction for public institutions. The revised project is being drafted by the Government with UNDP/WHO support. Two national engineers were provided WHO fellowships for post-graduate training.
in sanitary engineering at the All-India Institute of Hygiene and Public Health, Calcutta.

In BURMA, the rural water supply and latrine construction activities have shown considerable improvement with the effective involvement of community workers and People's Councils.

The WHO national sanitary engineer continued to provide assistance in identifying and formulating projects for the provision of safe water supply and sanitation and wastes disposal. Under the UNDP-funded project for the development of urban water supply and sanitation, the sub-contractor completed feasibility studies for three towns (Myingyan, Sagaing and Minbu) and pre-feasibility studies for another two towns (Bassein and Akyab). A WHO consultant assisted in reviewing these studies and developed project data sheets for a proposal to provide water supply and sanitation for five towns, viz., Myingyan, Sagaing, Akyab, Minbu and Lashio.

On-the-job training in the preparation of feasibility studies and the design of water supply and sanitation systems was given to two engineers, and in groundwater development to one hydrogeologist. Fellowships were awarded to two sanitary engineers for training in water supply and sanitation, to a hydrogeologist for training in groundwater development and to an engineer in the financial aspects of sanitation programmes. Necessary equipment, including spares for the photocopier and audio-visual equipment, were supplied in support of the programme.

In INDIA, a comparative water tariff and institutional study was completed through a contractual services agreement. The study was presented and discussed at a national seminar on water and sewerage tariffs which resulted in realistic recommendations for water tariff structure.

Follow-up action was taken on the recommendations of last year's national workshop on the development of a management information system. An inter-state task force prepared information formats and drew up training requirements at various levels. Arrangements were made to provide the services of a national institution to help in producing the necessary computer software as well as conducting an intercountry seminar and workshop for senior and middle-level officials to share experiences on computerization of the management information system.

A national workshop on solid waste management was conducted with the technical support of a WHO consultant; the workshop
formulated specific approaches for the development of solid waste management in major cities.

The curricula of the special courses for the training of sanitation workers at Safai Vidyalaya Sanitation Institute (Ahmedabad) and the Institute of Public Health and Preventive Medicine (Poonamallee, Madras) were modified to suit the country's needs better. Arrangements were made to start similar training at Singur under the All-India Institute of Hygiene and Public Health, Calcutta.

In INDONESIA, the emphasis of WHO's collaboration in the Environmental Health Programme continues to be on institutional strengthening, manpower development, water quality surveillance, improvement of the level of service and coverage, groundwater development, development of research capability, monitoring of Decade and evaluation studies, and support for resource mobilization. The UNDP-assisted NTT Rural Water Supply project was completed. Under this project, institutional strengthening through training in manpower development and community participation in planning, designing, operation and maintenance was demonstrated. A package of 23 pipe water supply projects for NTT and 5 for Tim Tim Province was developed for implementation through UNICEF and Government sources and training in groundwater development, including drilling, was completed.

The UNDP-assisted project on manpower development for rural water supply and sanitation ended during the year. The project made a valuable contribution to the training of trainers of sanitarian schools and health controller academies besides various other personnel engaged in implementing rural water supply and sanitation programmes. Two consultants - a hydrogeologist and a specialist in drilling - were provided to give training in hydrogeological surveys, well drilling, repair and maintenance of well drilling equipment and for groundwater development.

A new UNDP-assisted rural water supply and sanitation project was started for Bengkulu and Lampung provinces of Sumatra Island, based on greater community participation, self-reliance at provincial and lower levels, intersectoral coordination in planning, implementation, operation and maintenance, and health education at various stages of implementation of the project. This project is expected to strengthen local government institutions using innovative methods of "bottom up and top down" planning and management procedures.

A new UNDP-assisted project has been started for training in pre-investment planning for community water supply and sanitation in
order to develop a core of trainers in the Department of Public Works ("Cipta Karya") and some engineers of national consulting firms. The training courses in solid waste management, human excreta and waste disposal and storm-water drainage and various other aspects of pre-investment planning and design were in progress.

A WHO/UNEP project on the control of drinking water quality in rural areas, in Gumumkidne area, Yogyakarta Province, was being implemented. The statistical analysis and evaluation of the data collected was completed. The WHO guidelines for drinking water quality in small communities were translated into Bahasa Indonesia for wider use.

In MALDIVES, the WHO sanitary engineer continued (till April 1987) to collaborate in the implementation of the Male water supply and sanitation project funded by several external agencies, in addition to other sector activities.

The services of a short-term consultant were provided for assisting in the development of a resource mobilization profile for the water supply and sanitation sector.

At the invitation of the Ministry of Health, WHO technical advice was provided in finding a social and technically viable solution to the sanitation problem prevailing in the country.

A WHO fellowship was awarded to a national engineer to study water supply and sanitation practices in Thailand, Malaysia, Singapore and Indonesia.

In MONGOLIA, WHO's collaborative programme was implemented under the project "Strengthening of Environmental Services". A WHO consultant assisted the Government in designing and constructing a low-cost water supply system with the spring as the source. He also demonstrated the use of a compact bio-disc sewage treatment plant for the treatment of sewage under severely cold climatic conditions. A seminar on spring-fed water supply and small sewerage systems was also conducted. It is planned to assign another consultant to assist in the construction of spring-fed water supply systems and the introduction of small-scale wastewater treatment plants. Fellowships were being awarded for training abroad in the organization and management of Sanitary Services. WHO is also providing laboratory and diagnostic equipment together with chemicals to support the activities.

In NEPAL, considerable efforts were made for finalizing the draft project document on "Training of Manpower for the Drinking
Care of the Elderly

Health care of the elderly is being increasingly integrated with primary health care in the Region. Simultaneously, efforts are being made to stress the important role of traditional family systems which provide adequate care to those in need.

Water and Sanitation

In keeping with the targets established under the International Drinking Water Supply and Sanitation Decade, WHO is collaborating with Member Countries in their efforts to accelerate the process of programme implementation.
Expanded Programme on Immunization

With commitment at the highest levels, EPI activities are progressing well in the Region. Coverage has been significantly increased and steps taken to reduce the drop-out rate as well as to reduce mortality and morbidity of EPI target diseases.

Diarrhoeal Diseases Control

The efficacy of oral rehydration therapy is well proven in the control of diarrhoeal diseases. Ensuring availability of ORS packets, training and educating mothers to correctly prepare and administer the solution at home and making them aware of the signs of dehydration that require its use are key strategies in this programme.
Water and Sanitation Programme, Phase II*. Meanwhile, activities under Phase I of the project were nearing completion. A tripartite review of the project (Phase I) was held which endorsed the in-country training activities to be undertaken during the remaining period of the project.

A short-term consultant was recruited to assist the Department of Local Development in the provision of water supply and sanitation to small rural communities. Another consultant assisted the Government in drafting job descriptions for all categories of technical staff employed by national water supply and sanitation agencies.

With a view to streamlining the technical manpower development, national personnel were awarded fellowships as follows: (a) An observation tour in environmental sanitation in India, Thailand and Indonesia; (b) training in water supply and sanitation in Thailand, Malaysia, Singapore, Indonesia and the Philippines; (c) postgraduate studies in sanitary engineering in The Netherlands, aid (d) study tour on water supply and sanitation schemes in Bangladesh, India and Thailand.

In SRI LANKA, WHO collaborated in the collection and updating of information for the monitoring of Decade progress; in conducting a national workshop for the development of guidelines for planning and implementing community water supply schemes as well as in following-up the recommendations of the workshop; for the development of human resources, community education and participation, operation and maintenance of existing water supply and sanitation installations and water quality surveillance; in the development of a strategic plan and an institutional development plan for the National Water Supply and Drainage Board (NWSDB) and in groundwater investigations as well as in updating the groundwater data bank. Technical assistance was also provided for the provision of low-cost sanitation using the village community-level approach and in setting up of a community support and sanitation unit in the NWSDB. Action was initiated for introducing management information system (MIS) in planning and management.

Technical support continued to be provided in the mapping of groundwater containing high fluorides and in studying the water balance of Hulanda-Oya basin.

Two short-term consultants were assigned to the Universities of Moratuwa and Peradeniya to help in the development of their postgraduate and graduate teaching programmes, particularly on wastewater treatment and water quality management, and in the equipping and strengthening of public health engineering laboratories.
A WHO hydrogeologist collaborated in carrying out groundwater investigations in 12 towns for augmentation of water supply.

In THAILAND, the Ministry of Public Health continued to promote water supply and sanitation as a part of its PHC package of activities. The national drinking water supply and sanitation programme placed emphasis on the development of self-reliance in the development, implementation and management of community water supply and sanitation activities at village level through the use of low-cost technology, setting up of an organization at the village level, community participation, resource mobilization, training of local village workers in operation and maintenance and funds management, etc. One of the strategies to provide safe drinking water in rural areas was the extensive provision of rainwater tanks and jars to families.

Under an UNDP-assisted project, WHO continued to provide consultancy support to the office of the Eastern Seaboard Development Programme in the design of water supply and development of water resources. In-service training was also provided in the planning, design, implementation and monitoring of water supply projects for the personnel of that office and other cooperating agencies.

A case study on the country situation concerning water supply and sanitation in relation to PHC was completed. The study reviewed the actual performance at the country level and made recommendations for strengthening intersectoral cooperation. A research study on health protection measures for intermittent water supply schemes was also completed.

11.2 ENVIRONMENTAL HEALTH IN RURAL AND URBAN DEVELOPMENT

The emphasis of this sub-programme was on environmental improvement in rural and urban development and housing as well as the necessary advocacy and information support. In view of the importance of this sub-programme to achieve HFA goals, relevant materials were distributed so as to encourage countries to identify and develop activities of priority in this area.

A WHO-supported workshop on environmental health and housing in rural and urban development policies was held in Madras, India, in which environmental health issues in respect of housing, human settlements and environment were reviewed and recommendations made for developing strategies/approaches to meet national needs.
Three case studies dealing with health and housing were undertaken in the countries of the Region with support from WHO and UNICEF: two in India on Vyasarpadi Tank Slum Improvement Programme in Madras and on Health and Housing in Visakhapatnam City, and one in Sri Lanka on Technical Factors of Physical Environment in the Kirillapone Housing and Community Development Programme.

In Burma, activities under this programme were being planned for improving the environmental health aspects of urban and peri-urban development. In Nepal, a comparative study of indoor air quality in rural housing to assess exposure to pollutants from the use of traditional and smokeless types of cooking stoves was in progress. In India, a similar study was in progress at Chandigarh.

11.3 CONTROL OF ENVIRONMENTAL HEALTH HAZARDS

During the year under review, the Regional Office strengthened its efforts, scope and pace of technical cooperation with Member States in respect of chemical safety and the control of environmental health hazards in the Region. It was actively involved in the implementation of activities and programmes supported by WHO/UNEP/ILO/International Programme on Chemical Safety (IPCS).

WHO support included the assignment of consultants, provision of fellowships, organization of courses/workshops for the training of national personnel in control of air, water and land pollution, and the control of environmental health hazards.

As a follow up of the main recommendations of the workshop on chemical safety held in the Regional Office in May 1984, the preparatory phase of an intercountry project on "Control of Environmental Pollutants and Toxic Chemicals" was approved by UNDP for funding. The project, which covers activities in five countries (Burma, India, Indonesia, Sri Lanka and Thailand), provides support for the development of chemical safety information system and poison centres, etc.

Under the WHO Global Environmental Monitoring System (GEMS), regional GEMS activities in water were continuing in five countries (Bangladesh, India, Indonesia, Sri Lanka and Thailand) and for GEMS-air activities were continuing in three countries (India, Indonesia and Thailand).

With the support of WHO headquarters and IPCS, six fellowships/study grants were awarded to participants from India, Indonesia, Sri Lanka and Thailand to attend a course on toxicology and chemical safety in London.
Extensive use of Radio-nuclides in industry, agriculture and medicine has resulted in serious radio-active contamination of the environment. The 39th session of the Regional Committee discussed this subject and expressed concern particularly regarding radiation contamination and fall-out following the Chernobyl accident. The 40th World Health Assembly was also presented information on the accidents resulting from peaceful use of atomic energy. There is a widespread concern on the effects of radiation on health. A Working Group has therefore been constituted in the Regional Office to collect, analyse, collate and disseminate information on various aspects of radiation contamination. A WHO staff member briefed WRs on the effects of nuclear explosions including nuclear accidents on health and health services and the need to prepare national contingency plans to meet such exigencies. WHO provided countries of this region information on intervention levels in regard to radiation contamination of foods, particularly milk and milk products. WHO also provided a consultant to advise Nepal on the technical aspects of monitoring food contamination. The working group in SEARO has now prepared a plan of work for regional activities in this field.

In the DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, the implementation of the UNDP-funded project on "Control of Environmental Health Hazards" commenced during the year. Three WHO consultants visited Pyongyang and assisted in the implementation of the activities.

Nine engineers and scientists from INDIA's central and state pollution boards attended a special 8-week course on environmental pollution control at the IIEH, Delft, the Netherlands, during January-March 1987. A WHO consultant assisted in conducting a national workshop on the design of marine outfalls, including profiling the coastal sea-bed and measurement of current characteristics, etc., at Madras.

WHO support was also provided in the organization of a national workshop on the strengthening of the water quality monitoring programme vis-a-vis the GEMS-water project. The meeting formulated specific proposals for the development of further activities in this field.

A consultant was assigned to assist the Central Board for the Prevention and Control of Water Pollution in the recovery of carbon-disulphate in the man-made fibre industry and in the handling/disposal of hazardous wastes. National experts were engaged to assist the Board and the Department of Environment in the monitoring and application of national standards in fertilizer industries,
implementation of water and air pollution control measures in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. The experts also assisted in tackling the engineering problems related to river water pollution in Delhi and Uttar Pradesh and pollution problems related to the Ganga River.

As a part of the WHO headquarter's GEMS monitoring programme, assistance was extended to India under the human exposure assessment location programme (HEAL). This programme aims at comprehensive exposure monitoring for a number of environmental pollutants of global concern in respect of the health of the population at risk. In consultation with the Government of India, Chembur/Bombay was selected for the studies and the National Institute of Occupational Health was selected as the implementing agency for the purpose.

In INDONESIA, the WHO/UNEP/ILO/International Programme on Chemical Safety provided the services of a consultant and resources for conducting a training course on chemical safety at Jakarta from 2-8 November 1986. The consultant developed the course content and delivered lectures on relevant topics. He also prepared a skeleton outline of a training manual on chemical safety and the control of environmental health hazards.

In THAILAND, a course on "Basic Toxicology and Chemical Safety" was conducted for two weeks from 28 July 1986 with WHO support. In this course, three international consultants and national lecturers provided orientation-cum-technical training to about 40 national participants. The course discussed and reviewed the chemical safety programme in Thailand, particularly the aspects related to legislation, regulation, health protection, establishment of poison centres, etc.

11.4 FOOD SAFETY

Although WHO has been promoting the development of food safety programmes in several countries of this region, much remains to be done. Food safety requires a multisectoral approach and an effective collaboration among different ministries concerned with food safety programmes at national level such as ministries of agriculture, commerce and health. The major effort of WHO has been to improve some of the technical components of the programme and to try to integrate this programme with primary health care for a more effective impact at the community level.

WHO promoted the monitoring of chemical contamination of food with pesticides and other chemical contaminants in India, Indonesia
and Thailand. In association with the WHO Collaborating Centre on Food-borne Diseases in West Berlin, a training programme on food safety was organized. Directors of food safety laboratories from the countries of this region were trained in advanced techniques in laboratory methodology and food safety measures.

In BANGLADESH, a national meeting for the training of food handlers was held in order to improve food safety measures. A WHO staff member assisted the Government in the planning of a national seminar to review the existing food safety programme and evolve strategies for its development.

In BURMA, a UNDP project has been developed for strengthening the infrastructure for food safety and to implement effectively food safety legislation. The activities are expected to start later this year.

In INDIA, WHO continued to support the food safety programme, particularly by strengthening the capability to adopt advanced methodology for checking food contamination. A survey of pesticide residues in food commodities was conducted with WHO support.

In INDONESIA, WHO supported a workshop on food contamination monitoring and a training course on food sanitation in tourist areas; assistance was also provided to the Government in evolving food safety measures in these areas. A training manual for food inspectors has been prepared and employees of catering establishments and food hygiene personnel were trained at national workshops. The Director of Food Control participated in a Codex meeting convened to consider problems of pesticides contamination. Assistance was provided for the formulation of a proposal for promoting food safety through community education and participation.

In SRI LANKA, WHO supported a workshop for public health inspectors and also helped train national personnel in food safety administration.