

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR THE WESTERN PACIFIC



**SUMMARY OF 1994 ACTIVITIES
OF THE
WORLD HEALTH ORGANIZATION COLLABORATING CENTRES
IN THE WESTERN PACIFIC REGION**

**Manila, Philippines
December 1996**

**WORLD HEALTH ORGANIZATION
WESTERN PACIFIC REGIONAL
ENVIRONMENTAL HEALTH CENTRE**

(EHC)



SUMMARY OF 1994 ACTIVITIES

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1. INTRODUCTION

Established in 1979, the WHO Western Pacific Regional Environmental Health Centre (EHC) is the technical arm of the WHO Regional Office for the Western Pacific, responsible for promoting and facilitating effective collaboration among Member States and supporting the development of self-reliant institutions and capabilities in the field of environmental health. Formerly known as the WHO Western Pacific Regional Centre for the Promotion of Environmental Planning and Applied Studies (PEPAS) and renamed in 1992, the Centre implements activities in various environmental health programme areas. The staff resources of the Centre during 1994 are listed in Annex 1.

EHC collaborates with Member States in conducting national and regional training activities to develop human resources in environmental health, and provides services to promote the development of national environmental health policies and programmes. It also serves as an environmental health information service centre to respond to requests for information, and to facilitate the sharing and exchange of information among government officials, research scientists and environmental professionals in the Region.

2. HIGHLIGHTS OF ACTIVITIES UNDERTAKEN

In 1994, EHC implemented 35 collaborative activities including group educational activities and field missions.

During the year, a significant amount of EHC's resources was spent to promote the integration of health and environment into national plans for sustainable development and the development of national action plans to implement Agenda 21.

In line with the priority activities identified in the WHO Regional Strategy on Health and Environment (adopted at the WHO Regional Committee for the Western Pacific at its 44th session held in September 1993), EHC successfully implemented activities dealing with health impact assessments, control of toxic chemicals and hazardous wastes, motor vehicle emission control and urban health development.

The Healthy Urban Environment project which has been initiated in selected cities in China, Malaysia and Viet Nam would facilitate the development of a comprehensive health plan to provide for the integration of health issues in decision making for socioeconomic development.

There were 13 group educational activities at national level and two at regional level, through which 660 participants were trained in various aspects of environmental health. The evaluation of these training activities revealed that participants had learned new skills or concepts which they could apply in their work.

The field missions which were implemented in 13 countries benefited Member States in the strengthening of their national environmental health programmes.

A list of the activities implemented is given in Annex 2.

2.1 Air quality management

EHC convened a five-day workshop on motor vehicle emissions control in September in Kuala Lumpur. It was attended by 17 participants from health, environmental and transport agencies in the Region. The participants reviewed recent technological developments in reducing emissions from motor vehicles; compared motor vehicle air pollution control programmes in various countries in terms of their relative effectiveness; identified alternative approaches to prevent urban air pollution from motor vehicles; and developed approaches for advocacy by the health sector in motor vehicle emission control programmes. The report of the meeting is not just a record of what occurred, but is also intended to be a reference text in its own right for the Western Pacific Region.

In December, EHC collaborated with Fiji on aspects of air quality management. Although the air quality of Fiji is generally pristine, there are localized problems caused by diesel vehicles and some industrial processes. Legislation to create an air pollution control inspectorate within the Ministry of Health was drafted. Other preventive measures recommended included fuel specifications, a reduction in the lead content of petrol, exhaust emissions testing of motor vehicles, and establishing linkages between air pollution control and town planning processes.

A course on environmental health held in Phnom Penh, Cambodia in November included lectures on air quality management. Topics covered were types and sources of air pollution, air emission inventories and controls, and management of air pollution.

A project on the integration of health and environment issues in the development and implementation of plans for sustainable development in Viet Nam has an air quality management component. At the awareness seminar in Vung Tau, the results of air quality monitoring in Vung Tau, Ba Rai, Long Hai and My Xuan were presented. For the Ba Rai-Vung Tau local study, questionnaires on the air quality situation at about 30 premises were completed.

2.2 Chemical safety

The EHC staff responsible for chemical safety participated in the International Conference on Chemical Safety which was convened by the executive heads of the United Nations Environment Programme, International Labour Organization and World Health Organization, in Stockholm, Sweden from 25 to 29 April. The conference, which was attended by representatives from governments, intergovernmental organizations, and non-governmental organizations, discussed terms of reference and administrative and financial matters for an Intergovernmental Forum on Chemical Safety and then considered how the forum might implement the programme areas of Agenda 21, Chapter 19. An important outcome from this meeting was EHC's involvement in building and establishing a global information network for chemical safety information (GINC).

Spills and leakages of stored pesticides, herbicides and fungicides in the Federated States of Micronesia, posed a potential threat to human health and the environment. The Government, through its Departments of the Environment in the States of Yap and Chuuk, requested cooperation from EHC to carry out national workshops on techniques for cleaning up spills of pesticides or other chemicals. Workshops were held from 23 to 25 August in Yap and from 29 to 31 August in Chuuk. The workshops were attended by members of the Departments of Agriculture and Environment - the two agencies responsible for use and disposal of agricultural chemicals. Classroom training sessions were complemented by a practical exercise where the students donned protective clothing and repackaged leaking or spilled pesticides. EHC provided the services of a staff member as well as protective gear. Workshop recommendations included comments about additional training, the need for monitoring import and use of pesticides and the need for on-island disposal facilities. One of the most important outcomes of the workshop was the chance to build participant confidence in their ability to handle typical small chemicals spills on their islands.

In October, EHC cooperated with the Government of Papua New Guinea through its Ministry of Health in assessing air emissions from the volcanic eruption near Rabaul. A staff member from EHC visited the site; took samples of volcanic ash for laboratory analysis; and talked with members of the Disaster Committee, representatives of the provincial health sector, and volcanologists. It was concluded that volcanic emissions were not likely to contain significant concentrations of toxic gases, but that the airborne dust might well significantly impact the public health adversely. Those most likely to be affected were

the very old, the very young, and those with existing respiratory problems. A recommendation was made that the public should be encouraged to protect themselves from dust exposure by staying indoors and by wearing dust masks when outdoors or when sweeping or cleaning the volcanic ash deposited in the settled areas.

In December, a lecture was presented to third-year students in a course on industrial chemistry at the University of Malaya in Kuala Lumpur. The lecture focused on the health effects of common industrial chemicals and provided an introduction to occupational health. Because these students will soon be working in and managing Malaysia's industries, raising their awareness at this point in their careers, is an effective way of enhancing the country's overall chemical safety.

The EHC staff responsible for chemical safety participated in the Preparatory Meeting for a Global Information Network on Chemicals, which was convened by the Japan National Institute of Health Sciences, the United Nations Environment Programme, the International Labour Organization and the World Health Organization, in Tokyo, Japan from 6 to 8 December. The meeting which was attended by representatives from governmental, intergovernmental and non-governmental organizations provided a forum for an exchange of ideas regarding a global network for disseminating chemical safety information. The participants also discussed a proposal for a pilot network which would be established in perhaps five Asian countries during 1995-1996. The GINC project represents a major IPCS response to Agenda 21 and the call "to promote intensified exchange of information on chemical safety, use and emission among all involved parties".

2.3 Disaster management

EHC collaborated with Viet Nam and the Philippines in conducting a national workshop on the health sector's disaster management. These are the first two of a series of seven national workshops on the subject planned for 1994-1995. The Viet Nam workshop was held in Quang Binh Province from 10 to 11 May. The workshop discussed local and international experiences and roles of the health sector in disaster preparedness and response, and was attended by 120 participants from provincial health services and relevant national agencies and institutions.

The Philippine workshop was held in Subic, Zambales from 6 to 7 October with 36 participants from various offices of the Department of Health (DOH)

who were involved in the development and implementation of the STOP D.E.A.T.H. (Disaster, Epidemic, and Trauma for Health) Program, a new programme introduced by DOH to strengthen its role in emergency preparedness and response. The workshop discussed the state of development and implementation of the STOP D.E.A.T.H. Program and carried out a series of group discussions, through which the participants prepared goals, strategies and programme activities of the STOP D.E.A.T.H. Program.

2.4 Environmental and health impact assessment

Following the EHC workshop on environmental health impact assessment (EHIA) in November 1993, three national workshops were conducted on this and related subjects in 1994.

EHC collaborated in a training course on environmental impact assessment (EIA) which was conducted from 10 to 15 January in Hue, Viet Nam and organized by the Viet Nam Institute of Tropical Technology and Environmental Protection and the Hue Provincial Government. The course, attended by 49 participants, mainly from the environmental protection departments of 23 provinces, provided 12 presentations, three simple impact assessment exercises and three general discussion sessions. At the time of developing an EIA programme in the country, this course was regarded as a useful exercise for strengthening human resources required to implement the EIA programme.

In the Philippines, EHC collaborated with the newly established Environmental Health Impact Assessment (EHIA) Division, Environmental Health Service (EHS), Department of Health (DOH) in carrying out a workshop on EHIA. The workshop was conducted in two parts: (a) orientation, 25-27 May, Manila; and (b) training, 30 May-3 June, Laguna. The first part (i.e. orientation) attended by 40 participants from EHS and the Environmental Management Bureau (EMB), addressed the issues of coordination between the two agencies in developing and implementing EHIA programmes. The second part of the workshop (i.e. training) was attended by 37 participants from EHS, EMB, Regional Offices of DOH and other relevant national agencies/corporations, and covered the concept, process and techniques of EHIA. The workshop produced a good basis for future cooperation in EHIA between EHS and EMB, and the first group of trained officials who could contribute to further development and implementation of EHIA programmes in the country.

EHC cooperated with the Ministry of Health and the National Institute of Public Administration, Malaysia in conducting a workshop on environmental health risk assessment and management from 10 to 14 October in Kuala Lumpur. It was attended by 23 participants from the Ministry of Health, the State health departments, local authorities and other relevant national government agencies, and covered topics ranging from health risks associated with economic development to risk communication and community involvement through lectures and case-study exercises. The workshop provided an opportunity for the health officials to discuss and understand their roles in the country's environmental impact assessment (EIA) system.

2.5 Food safety

Diarrhoeal diseases and gastroenteritis are among the leading causes of morbidity in Cambodia, particularly among children up to the age of five. Food is an important vehicle for the transmission of microorganisms responsible for these illnesses. In cooperation with the Ministry of Health of Cambodia, EHC presented the first national training course in food safety. The strategic objective of this course was to enhance the skills and knowledge of health officials performing food safety surveillance activities in Cambodia. Forty-seven participants from sixteen provinces and the Centre National d'Hygiene et d'Epidemiologie (CNHE) attended the one-week course held in Phnom Penh in March. During the course, participants were introduced to topics which included the causes of food contamination, prevention of food contamination, safe food handling, and the use of the Hazard Analysis Critical Control Point (HACCP) technique for ensuring food safety.

Countries without effective food control systems can neither assure their population that food supplies are safe and wholesome, nor satisfactorily sustain their export trade. Experience has demonstrated that strong effective food laws generate healthy attitudes in the food trade and encourage the development of a strong social responsibility towards the well-being of consumers. The Ministry of Health, Malaysia is well aware of this and has requested EHC cooperation in drafting a set of food export regulations. An outline of legislation for government certification systems based on quality assurance systems was used as a model. The outline was developed at the First Codex Committee on Import and Export Food Inspection and Certification Systems meeting held in 1992. The outline takes into consideration the General Agreement on Trade and Tariffs (GATT), particularly the Agreement on the Application of Sanitary and Phytosanitary Measures.

In Lao People's Democratic Republic, EHC cooperated with the Ministry of Health to assess the administrative, legislative, and monitoring aspects of food safety; to identify activities which would improve food safety; and to conduct a national training course in food safety. The objectives of this course were to improve the knowledge of food inspectors on food safety issues and to develop an understanding of the role of food inspection in food safety. The administrative structure for food control was found to be soundly based, with EHC suggesting a refocusing of operational activities. These included regular inspections of food processing establishments, increased surveillance of imported foods, and continued training for food control staff. The food safety training course was successfully implemented. It attracted 53 participants, including personnel from the food industry. There was considerable discussion on food preservation, prevention of food contamination, and the use of the HACCP system for assuring food safety.

Food and beverages sold in the streets are an affordable source of nutrients for people in many countries. While instances have been reported of the contamination of street-vended foods with pathogenic microorganisms, there has been no convincing evidence that street-vended foods are more implicated in the transmission of diseases than are foods obtained elsewhere. To promote the safety of street-vended foods, EHC collaborated with the Institute for Food Hygiene and Examination of the Municipality of Beijing to conduct a one-week workshop on street food safety in Beijing in August. The workshop was attended by food inspectors from Beijing Municipality, Ministry of Health, and the Bureau of Industrial Commercial Administration. The workshop focused on the formulation and application of the protocol for street food safety control using the HACCP system. The Institute for Food Hygiene and Examination has already started street food vendors pilot projects with the cooperation of international agencies. Under these projects, surveys of street foods applying the HACCP system were conducted. The results of the survey were presented and discussed during the workshop. Also presented were proposed regulations for specific kinds of street food products.

2.6 Occupational health

In June, EHC collaborated with the Viet Nam Ministry of Health in conducting a national workshop on techniques for monitoring occupational and environmental health. Participants received instruction in sample collection and laboratory analysis and then undertook laboratory exercises to practise the techniques. The workshop provided necessary training and highlighted the need for training in additional and related areas. *

In September 1994, EHC cooperated with the Ministry of Health, Cook Islands in strengthening the nation's occupational programme for occupational health. A staff member from EHC visited workplaces in Rarotonga and interviewed workers to identify areas with the potential for significant occupational health concerns. Findings suggest that mechanical mishaps, noise, dust, chemicals, pesticides, and blood-borne pathogens could be troublesome. As a part of the same activity, the role of the Ministry of Health in the nation's occupational health and safety programme was reviewed and defined more clearly. To provide more uniform occupational health standards, a workplace inspection checklist was provided for use by the public health inspectors. Finally, the lack of a reporting system for occupational health injuries/illnesses was addressed and a reporting system devised with the recommendation that it be implemented. An important lesson learned from this activity was the need for involvement of both departments of labour and health in an occupational health and safety programme.

Increasing business activity throughout the Solomon Islands heightened concerns regarding whether the lack of an active occupational health and safety programme might pose a threat to the country's workers. The Government of the Solomon Islands through its Ministry of Health and Medical Services, requested cooperation from EHC in conducting a national workshop on occupational health for public health inspectors. The workshop was held from 26 to 28 September 1994 in Honiara. It was attended by public health inspectors from the Ministry of Health and Medical Services, as a part of their continuing education programme. The workshop included lectures on basic occupational health topics, group discussions, group exercise, and field trips to a timber mill and a palm oil extraction facility. EHC provided the services of a staff member as a resource person for the workshop. Workshop participants expressed a need for additional training in occupational health and safety legislation and for a better understanding of the role of the Ministry of Health and Medical Services in the country's occupational health and safety programme. One of the most important lessons which participants learned from the workshop is the extent to which the Ministry of Health needs to be involved in the nation's occupational health programme.

2.7 Urban health development

A new WHO initiative in urban health development has recently started in China and Malaysia. The approach taken involves the formulation and implementation of local action plans for healthy urban environment in selected

cities, the dissemination of experiences gained in these planning studies to other cities and the eventual development of a national network to promote the "Healthy Cities" concepts. In China, the national focal point agency is the Ministry of Health. The Dongcheng District, Beijing and Jiading District, Shanghai have been selected as the study areas. In Malaysia, the national focal point is the Ministry of Health. Kuching, Sarawak State and Johor Bahru, Johor State, have been chosen for the local studies. An EHC staff member visited the Malaysian cities in July and August and the Chinese cities in September to initiate the local studies for the formulation of local action plans for healthy urban environment. The local studies will be completed in April 1995.

A new project, which would aim at the integration of health and environment issues in the planning for sustainable development, was initiated in Viet Nam. A WHO mission, consisting of staff from Headquarters, Regional office, EHC and the country office, was undertaken in April/May to initiate this project. The mission prepared a project proposal which was subsequently endorsed by the Government. The approach taken is to formulate and implement local action plans for resolving priority environmental health problems in three provincial cities (i.e. Haiphong City, Dong Hoi in Quang Binh Province and Vung Tau in Ba Ria-Vung Tau Province) as demonstration studies. A national strategy for the integration of environmental health in sustainable development is to be developed based on the findings of the demonstration studies. In October/November, a training course for groups of personnel involved in the local studies, called the local study teams, was carried out to discuss issues and techniques for the formulation of the local action plans mentioned above. Following the course, an awareness seminar to introduce the local study and ascertain the political support was organized in each city, and the local study was initiated in cooperation with WHO staff from EHC and the country office. The local studies will be completed in April 1995 with reports containing the local action plans for resolving priority health and environmental problems.

2.8 Waste management

In mid-1993, the Municipality of Phnom Penh, Cambodia in cooperation with national government agencies, organized and implemented a clean-up campaign of the city, to which EHC provided some financial and technical support. As a follow-up activity, EHC collaborated with the Municipality and the Ministry of Health to assess solid waste management practices in Phnom Penh and identify measures to improve the solid waste management system

in January 1994. The EHC mission produced a number of recommendations which require immediate and future actions. These included the improvement in the efficiency of the solid waste collection service and provision of appropriate storage containers, and the upgrading of the present open dump to a more sanitary landfill.

In Cook Islands and Western Samoa, EHC provided advisory services on solid waste management in March, April and June. EHC missions to Cook Islands and Western Samoa were the follow-up activities to the 1992 missions on solid waste management and activities in their capital towns. Some improvement in solid waste management over the last two years was noted during the mission, but further improvement is required, particularly in the management of new landfill sites, use of appropriate refuse containers and management of hospital waste.

In the Federated States of Micronesia, EHC collaborated with the States of Yap and Chuuk in assessing solid waste management practices, locating a new landfill site and preparing a plan of action for improvement. In Yap, the field assessment of several potential sites for future landfill was carried out, and two sites were selected for future use. Of the two, a site with larger capacity was chosen. A preliminary design of the site was also provided. In Chuuk, the EHC mission carried out field assessments of potential new landfill sites and selected two sites for future consideration. However, as no alternative site was immediately available for disposal of solid waste, the existing open dump site would continue to be used. A scheme was proposed for the upgrading of site management and the rehabilitation and maintenance of the access road. In addition, the mission prepared a draft plan which delineated specific short- and long-term programmes and activities to improve solid waste management.

EHC convened a workshop on clinical waste management on 28 November-2 December. The workshop was attended by 18 participants from 15 countries in the Western Pacific Region and Indonesia. The workshop provided a useful forum for the participants to exchange information on policies, approaches and problems of managing clinical waste in their countries, reviewed guidelines, procedures and techniques of clinical waste management developed in some developing countries and examine their transferability and usefulness to other developing countries. A field trip was carried out to observe a clinical waste management programme established at a hospital in Port Dickson, Malaysia. The participants also reviewed the national action plan for clinical waste management and associated training programmes

developed in some developing countries and prepared work plans for strengthening country-specific clinical waste management programmes, including the training of personnel.

2.9 Water quality management

Following the free trade policy introduced by the Government in 1988, foreign investment in Lao People's Democratic Republic has increased significantly. With the expansion of industrial activities, and the fact that most industrial establishments are not equipped with pollution control facilities, industrial water pollution problems have become a growing concern and the Government is faced with increasing pressure to control and regulate pollution from industrial sources. No water pollution control standards exist to control and regulate the wastewater discharged from the industrial sector. In January, EHC cooperated with the Government to identify water pollution problems caused by industries, advise on measures to control, monitor and reduce industrial wastes and develop national standards for industrial water pollution control. Two sets of industrial effluent standards were developed by EHC for adoption by the Government to control and regulate the wastewaters discharged by the industrial sector. The Government, based on the recommendations made by EHC, will promulgate national legislation to control the discharge of wastewater from various industrial establishments.

A Regional Study and Workshop on the Environmental Assessment and Management of Aquaculture Development was held in Bangkok, Thailand from 20 to 27 February. It was organized by the Network of Aquaculture Centres in Asia-Pacific in cooperation with the Food and Agriculture Organization. The workshop identified the methods for managing the environmental impact of aquaculture development and recommended to farmers, governments and international organizations the steps to be taken to minimize the impact on the environment. A staff member from EHC participated in the workshop and in his presentation on "Health impacts of aquaculture development", the importance of health impacts of aquaculture development projects was stressed.

In December, EHC collaborated with the Government of the Solomon Islands to assess the water pollution problems at a cannery which produces about a million cases of canned tuna fish per year. Suggestions for improvement to the wastewater treatment facilities and water quality monitoring activities were made. As a result, the cannery has promptly put the treatment facilities into operation.

2.10 General environmental health activities

The Ministry of Health and the Ministry of Science, Technology and Environment, Malaysia jointly convened a four-day "First National Conference on Environmental Health Research: State of the Art in Malaysia Today" in April. EHC staff served in the Main Committee, Scientific Sub-Committee and the Publications Sub-Committee. In addition, they chaired three sessions (environmental health evaluation, water and waste, and health and safety), and acted as facilitators for three other sessions (solid and hazardous waste, air pollution, and health and safety). The conference was intended to identify key areas of environmental health research needs and bring together the environmental health research community in the country for consultation. It also served as a forum to develop proposals for the next five-year development plan in the country (i.e. the Seventh Malaysia Plan covering 1996-2000). The conference concluded that there was a need to establish an Environmental Health Research Centre as an interministerial agency of the Ministry of Health and the Ministry of Science, Technology and Environment. The research needs and roles, and the framework of the proposed Environmental Health Research Centre were successfully defined during the conference.

An EHC staff member accompanied four member of the Sub-Committee of the WHO Regional Committee on Programmes and Technical Cooperation on visits to Solomon Islands, Singapore and the Philippines in May/June to review and analyze WHO's cooperation with these countries in the field of health and sustainable development- environmental health. This was the topic selected for review by the Sub-Committee in 1994. The report of the Sub-Committee was endorsed by the Regional Committee at its 45th session in Kuala Lumpur in September. It warned of continuing health problems linked to the deterioration of the environment unless governments take up issues of health and sustainable development at the highest political level, and promote relevant action. It noted that a key factor in the effectiveness of environmental health policies is a strong commitment on the part of the national governments. *The management of complex environmental health issues requires a comprehensive approach, with appropriate enforced legislation, the provision of adequate financial and other resources, as well as public participation and education.*

The Government of the People's Republic of China organized a three-day conference in Beijing in July to review the Priority Programme of some 62 projects (requiring around US\$4 billion in funding) for China's Agenda 21. It was described as the biggest event on environment and development since

the United Nation's Conference in Rio de Janeiro in 1992. It was attended by 160 foreign participants (including an EHC staff member) and more than 200 Chinese officials responsible for aspects of environment and development. At the conference, commitments for funding for about two-thirds of the Priority Programmes had been received from the donor institutions.

EHC participated in the UNDP/UNEP symposium on core data needs for environmental assessment and sustainable development, held in Bangkok in November. The symposium identified eight most important core data sets namely land use/land cover, demographics, economic activity, prevalence of disease, environmental quality, topography, hydrology, and meteorology.

EHC collaborated with the Cambodian Ministry of Health in conducting a national training course on environmental health, held in Phnom Penh on 7-12 November. It was attended by 24 participants. The course covered the topics of air quality management, water quality management, food safety, water supply and sanitation, chemical safety and occupational health, solid waste management, environmental impact assessment and environmental health impact assessment. The participants showed keen interest in the course.

3. COLLABORATION WITH INTERNATIONAL AND BILATERAL AGENCIES

EHC continued to interact with international and bilateral agencies involved in environment-related activities such as Asian Development Bank (ADB), Economic and Social Commission for Asia and the Pacific (ESCAP), South Pacific Regional Environment Programme (SPREP), United Nations Centre for Regional Development (UNCRD), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP) and the World Bank. Communication was maintained to keep each other informed of activities of mutual interest and to explore possibilities for future cooperation.

During the year, EHC staff participated in meetings involving the Asian Mass Communication Research and Information Centre, Food and Agriculture Organization, International Labour Organization, UNDP and UNEP. EHC implemented the regional workshop on clinical waste management with funds from the Special Programme on Technology Transfer of the Government of Japan. A text on methodologies for environmental health impact assessment was prepared with funds from the WHO Global Environmental Epidemiology Network which is supported by the Swedish International Development Authority (SIDA).

4. INFORMATION SERVICES, REPORTS AND DOCUMENTS

EHC plays an import role in providing information services in environmental health. The Centre attended to about 200 requests for information on various environmental health topics during the year. Information exchange activities continued through the networks on environmental impact assessment/ environmental health impact assessment (EIA/EHIANET), food safety (FOS INFONET) and solid waste management (SWMNET).

Most of the reports on activities implemented in 1994 (as listed in Annex 2) are available on request from EHC. Other documents issued in 1994 which are available on request, are listed in Annex 3.

ANNEX 1

EHC STAFF DURING 1994

Dr P. Guo	Director
Technical staff	
Mr K. Rolfe	Air Quality Management Specialist
Dr W. Harrington	Chemical Safety Specialist
Dr H. Ogawa	Environmental Systems Engineer
Vacant	Food Safety Specialist
Mr B. Fisher (until 28 Jan 1994)	Sanitary Engineer
Administrative staff	
Ms L.Y. Chan	Administrative Officer
Programme support staff	
Ms Y.M. Tan	Special Assistant
Secretaries	
Ms Normah Mahmod	
Ms M.R. Tan	
Ms M. Pieris	
Drivers/Messengers	
Mr Shahrudin Asmuni	
Mr Masim Satarum	

ANNEX 2**ACTIVITIES AND FIELD VISITS - 1994**

Activity	Carried out by	Date
CAMBODIA		
1. Assessment of solid waste management in Phnom Penh, Ministry of Health	H. Ogawa	16-28 Jan
2. National training course in food safety, National Centre for Hygiene and Epidemiology	D. Mahoney	23 Mar - 6 Apr
3. Training course in environmental health, National Centre for Hygiene and Epidemiology	R. Abrams P. Guo W. Harrington H. Ogawa K. Rolfe	7-12 Nov
CHINA		
1. Environmental health programme development	P. Guo	27 Mar - 2 Apr
2. Participation in the High-level Round Table Conference on China's Agenda 21; and collaboration on air quality management activities, Liaoning Provincial Public Health and Anti-epidemic Station, Shenyang, Benxi Municipal Public Health and Anti-epidemic Station	K. Rolfe	30 Jun - 10 Jul
3. Workshop on street-vended foods and HACCP system, Beijing Institute for Food Hygiene Inspection and Examination	S. Michanie	20 Aug - 3 Sep
4. Healthy urban China - Phase 1, Ministry of Health	H. Ogawa	7-15 Sep

Activity	Carried out by	Date
COOK ISLANDS		
1. Health, housing and urban planning; piggery and chicken waste treatment; and solid waste management in Rarotonga, Ministry of Health	H. Ogawa	5-20 Mar
2. Occupational safety and health services, Ministry of Health	W. Harrington	3-21 Sep
FIJI		
1. Collaboration on air quality management, Ministry of Health and Social Welfare	K. Rolfe	3-17 Dec
LAO PEOPLE'S DEMOCRATIC REPUBLIC		
1. Industrial water pollution control, Ministry of Health	P. Guo	9-29 Jan
2. Review of food safety programme, Ministry of Health	D. Mahoney	24 Jul - 23 Aug
MALAYSIA		
1. Attendance at the first national conference on environmental health research: State of the art in Malaysia today, Ministry of Health, Ministry of Science, Technology and Environment	P. Guo, W. Harrington, H. Ogawa, K. Rolfe	18-21 Apr
2. Healthy urban Malaysia - Initiation visit to Johor Bahru and Sarawak, City Council of Johor Bahru, Kuching North City Hall, Kuching South Municipal Council	H. Ogawa	11 Jul & 11 Aug
3. Food export/import regulation	S. Michanie	22 Jul - 19 Aug

Activity	Carried out by	Date
4. Attendance at the international seminar on recycling: An integrated approach, National Institute of Public Administration	H. Ogawa	3 Oct
5. Workshop on environmental health risk assessment and management, National Institute of Public Administration	H. Ogawa	10-14 Oct
MARSHALL ISLANDS, REPUBLIC OF THE		
1. Environmental health programme review and development	P. Guo	7-9 Dec
MICRONESIA, FEDERATED STATES OF		
1. Solid waste landfill in Yap, Yap State Government	H. Ogawa	30 Mar - 6 Apr
2. Solid waste management in Weno, Chuuk, Chuuk State Government	H. Ogawa	5-11 Jun
3. Workshops on spill cleanup and pesticide repacking, Department of Agriculture, Department of Environmental Protection, Yap and Chuuk	W. Harrington	22 Aug - 3 Sep
4. Environmental health programme review and development	P. Guo	5-7 Dec
PAPUA NEW GUINEA		
1. Assessment of air emissions from volcanic eruptions, Ministry of Health	W. Harrington	1-8 Oct
PHILIPPINES		
1. National workshop on environmental health impact assessment, Department of Health	H. Ogawa	24 May - 4 Jun

Activity	Carried out by	Date
SAMOA		
1. Solid waste management, Department of Lands and Environment, Department of Health	H. Ogawa	20-26 Mar
SOLOMON ISLANDS		
1. Workshop on occupational health for public health inspectors, Ministry of Health and Medical Services, Ministry of Agriculture and Fisheries, Ministry of Labour	W. Harrington	25 Sep - 1 Oct
2. Environmental health programme review and development	P. Guo	13-18 Dec
VIET NAM		
1. Training course on environmental impact assessment, Viet Nam Institute for Tropical Technology and Environmental Protection	H. Ogawa	7-16 Jan
2. National workshop on health support for disaster management, Ministry of Health	H. Ogawa	4-14 May
3. Integration of health and environment issues in the development and implementation of plans for sustainable development, Ministry of Health, Ministry of Science, Technology and Environment, State Planning Committee	R. Abrams, I. Ahman, H. Ogawa, & S. Tamplin	24 Apr - 7 May
4. Workshop on occupational health and environment monitoring techniques, National Institute of Occupational and Environmental Health	W. Harrington	12-22 Jun
5. Training course on assessment and management of urban health and environment, Ministry of Health	R. Abrams, G. Goldstein, H. Ogawa	23-29 Oct

Activity	Carried out by	Date
6. Integration of health and environment in sustainable development - Awareness seminar and initiation of local studies, Ministry of Health, Ministry of Science, Technology and Environment, Viet Nam Institute of Tropical Technology and Environmental Protection	R. Abrams, P. Guo, W. Harrington, H. Ogawa, & K. Rolfe	30 Oct - 9 Nov

REGIONAL ACTIVITIES

1. Regional workshop on motor vehicle emission control, Kuala Lumpur	K. Rolfe S. Tamplin, & M. Walsh	26-30 Sep
2. Regional workshop on clinical waste management, Kuala Lumpur	H. Ogawa E. Giroult C.B. Saw	28 Nov - 2 Dec
3. Coordination of the UNEP/WHO Global Environmental Monitoring System (GEMS) air quality monitoring project	EHC staff	continually
4. Coordination of the GEMS water quality monitoring project	EHC staff	continually
5. Coordination of the GEMS food contamination monitoring project	EHC staff	continually
6. Coordination of the GEMS human exposure assessment locations (HEAL) project	EHC staff	continually
7. Environmental information service programme	EHC staff	continually

Activity	Carried out by	Date
OTHER ACTIVITIES		
1. Attendance at the Regional study and workshop on the environmental assessment and management of aquaculture development, Bangkok, Thailand	P. Guo	20-27 Feb
2. Attendance at the International conference on chemical safety, Stockholm, Sweden	W. Harrington	23-30 Apr
3. Attendance at the Seminar on urbanization, sustainable development and the media, Singapore	W. Harrington	7-9 Apr
4. Attendance at the International symposium on core data needs for environmental assessment and sustainable development strategies, Bangkok, Thailand	K. Rolfe	14-18 Nov
5. Participation in the Preparatory meeting for the global information network on chemicals and in a Chemical Safety Forum, Tokyo, Japan	W. Harrington	5-10 Dec

ANNEX 3

LIST OF DOCUMENTS ISSUED IN 1994

1. PAPERS PRESENTED AT WHO WORKSHOP ON MOTOR VEHICLE EMISSION CONTROL:

- Gasoline-vehicle emission control technologies
- Diesel-vehicle emission control technologies
- Gasoline fuel quality
- Diesel fuel quality
- Alternative fuels
- Transportation controls and traffic management
- Economic instruments
- *Implementation issues and institutional requirements*

2. PAPERS PRESENTED AT WHO WORKSHOP ON CLINICAL WASTE MANAGEMENT:

- Regional overview of clinical waste management
- Introduction to guidelines for health care waste management in developing countries: Elements of clinical waste management
- Introduction to the Malaysian guidelines for clinical waste management
- Categorization
- Segregation, handling and storage
- Incineration and other disposal options
- Waste management plan for a hospital
- National and regional planning
- National action plan in Malaysia
- Training of waste management personnel: Malaysian case