

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR THE WESTERN PACIFIC



SUMMARY OF 1995 ACTIVITIES
OF THE
WORLD HEALTH ORGANIZATION COLLABORATING CENTRES
IN THE WESTERN PACIFIC REGION

Manila, Philippines
February 1998

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

(EHC)



SUMMARY OF 1995 ACTIVITIES

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Manila, Philippines

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(EHC)

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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 1995 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 1995, EHC implemented 58 field collaborative activities in 15 countries and areas of the Region, and convened six regional group educational activities.

To facilitate the development of a comprehensive health plan to provide for the integration of health issues in decision-making for socioeconomic development, EHC continued to promote activities of the Healthy Urban Environment Project in Member States. EHC also continued to promote activities identified in the WHO Regional Strategy on Health and Environment adopted by the WHO Regional Committee for the Western Pacific at its 44th Session held in 1993, particularly on health impact assessments and control of toxic chemicals and hazardous wastes.

In the food safety area, EHC focused on integrating government food safety and nutrition policies and action plans as well as on the strengthening of health authorities' efforts to prevent food contamination through the application of Hazard Analysis Critical Control Point (HACCP) principles.

2.1 Air quality management

As a follow-up to the five-day workshop on motor vehicle emission control convened in Kuala Lumpur in September 1994 by EHC, a questionnaire was sent to all participants. It was found that the participants have been able to apply the knowledge gained at the workshop to their work. All of the topics covered by the course were considered to be "very relevant" by some of the participants. Some useful suggestions were made on other topics, most of which could easily be incorporated in the programme of any future workshop. It is clear that the workshop has stimulated the participants into taking follow-up actions, and WHO is seen to have a role to play in that.

The training course material from the motor vehicle emission control workshop has been substantially rewritten, in the form of a course module consisting of eight half-day lectures. The topics included are: Motor Vehicles Emission Control in the Western Pacific Region, Gasoline Vehicle Emission Control Technologies, Diesel Vehicles Emission Control Technologies, Gasoline and Diesel Fuel Quality, Alternative Fuels, Economic Instruments, Transportation Controls and Traffic Management, and Implementation Issues and Institutional Requirements.

In July, EHC collaborated with the Environmental Management Bureau of the Department of Environment and Natural Resources, Philippines, to finalize an air quality management master plan for the Philippines. The master plan contains 35 "actions", the goal of which is to achieve a healthy air environment throughout the Philippines by the year 2000 and beyond. A timetable for the implementation of the ten major air quality management measures is included in the master plan. With motor vehicles a major source of air pollution, especially in Metro Manila, there is a need for further improvements in fuel quality, changes to fuel pricing policies to encourage the use of cleaner fuels, and a series of initiatives to implement emission control systems for new vehicles and replacement engines. Another air quality issue in the Philippines is the prevention of air pollution from industrial development projects. This is best achieved through a strengthened air pollution control licensing system. Legislative changes, preferably in the form of a Clean Air Act, would be highly desirable, but more importantly there is a need for the provision of more adequate resources in air quality management. The carrying out of appropriate epidemiological studies of the health effects of air pollution, and training on aspects of air quality monitoring (especially quality assurance) are two possible areas for future collaboration.

In June, EHC conducted a national training course on air pollution control and water pollution control in Haiphong, Viet Nam. Topics covered on air pollution control were: Types and Sources of Air Pollution, Estimating Emission Quantities, Estimating Atmospheric Concentrations, Control of Particulate Matter Emissions, and Control of Gaseous Emissions. Although the course was successfully conducted, it was recommended that for similar courses in the future there be, as an introductory session for each topic, a presentation of the national situation and problem areas in that field by an appropriate counterpart.

In October, EHC conducted a national training course in Haikou, China on the assessment and management of urban air and water quality and solid waste, as part of the Healthy Urban China initiative. Topics covered on aspects of air quality management were: Types and Sources of Air Pollution, Estimating Emission Quantities, Control of Particulate Matter Emissions, and Control of Gaseous Emissions. Although the course did not achieve the hoped-for intensive training of personnel involved in the management of air and water quality and solid waste, as most of the participants were from the public health sector, it did provide useful information on urban environmental health assessment and management methods which the participants can hopefully use in their cities and districts.

In November, a national training course on air pollution monitoring and management was held in Beijing, China in collaboration with EHC and WHO Headquarters. It was carried out in connection with the UNEP/WHO Global Environmental Monitoring System (GEMS)/Air programme. There is an urgent need for awareness building in China of the redirection and revitalization of the GEMS/Air programme, at both the national level and in the participating cities.

Work on the health effects of air pollution in Shenyang and Benxi, China continued in 1995. In July-September, a consultant worked with the Liaoning Public Health and Anti-Epidemic Station on these projects. The data previously collected were analyzed and new projects using recently developed methodologies were developed. Following the work of the consultant, an agreement for performance of work was issued, in September, to carry out a longitudinal study of the effects of fine particulates on mortality and children's pulmonary function in Shenyang, China. The work is to be completed by 30 April 1996.

A course module on air pollution control consisting of seven half-day lectures has been prepared. Topics covered include: Types and Sources of Air Pollution, Estimating Emission Quantities, Estimating Atmospheric Concentrations, Atmospheric Dispersion, Control of Particulate Matter Emissions, Control of Gaseous Emissions, and Control of Motor Vehicle Emissions.

A document was prepared collating the air quality standards adopted in the Western Pacific Region, specifically for the countries Australia, China, Hong Kong, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, Singapore and Viet Nam. Apart from a few, rather extreme exceptions, there is a degree of uniformity in the air quality standards used.

Another technical document was prepared on recommended air quality guidelines for the Western Pacific Region. Types of air pollutants and averaging times for concentrations are specifically addressed.

2.2 Chemical safety

Throughout the first half of 1995, EHC collaborated intermittently with the Institute for Medical Research, Malaysia, located in Kuala Lumpur to provide technical and planning support for establishing an analytical toxicology laboratory to support activities proposed for a newly created environmental health unit. The planning process included a survey of national needs for analytical toxicology services. The activity culminated in a three-day workshop which focused on both laboratory operations and the need for laboratory services and which was attended by laboratory researchers, technicians and medical staff. The activity specifically highlighted the importance of a national programme to standardize laboratory methodology and data reporting.

In June, EHC cooperated with the National Institute of Occupational and Environmental Health, Viet Nam, and the National Institute for Environmental Health Sciences, United States of America, in the conduct of a workshop on pesticide epidemiology. The workshop brought together researchers from the two countries and also from the international community. Workshop participants shared details about their work and noted areas with the potential for future collaboration. The activity pointed out the numerous difficulties in collecting internationally-comparable data from pesticide epidemiology studies.

In August, EHC collaborated with the Ministry of Health, Kingdom of Tonga in a review of their chemical safety and health legislation and pesticide use and safety programme. EHC provided a staff member to visit the country, cooperate with a national counterpart in assessing the situation and analyzing results. Notably, there is little evidence, other than anecdotal, to suggest that the use of pesticides poses a significant threat to human health. One outcome of the activity were recommendations that, inasmuch as the country depends heavily upon wells for drinking water, the Government should strengthen its well-head protection programme. In a recommendation more generally related to chemical safety, it was suggested that the Government gather more information about hazardous chemical usage before drafting regulations to implement its recent legislation. A need for a workshop on chemical safety was also noted.

In August and December, lectures were presented to chemistry students at the University of Malaya in Kuala Lumpur. The lectures focused on the effects that common industrial chemicals have upon the human skin and respiratory systems, 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.

In November, EHC collaborated with the National Institute of Occupational and Environmental Health, Viet Nam, in the conduct of three pesticide-safety training sessions. The first was a train-the-trainer course. Representatives from public health, agriculture and labour (occupational health) sectors received instruction on how and what to teach the pesticide user about pesticide safety. Materials were provided in the local language. In a second phase, or the train-the-trainer course, workshop participants conducted training courses, based on the training they had received, for pesticide users. In an advanced pesticide-safety training course, participants (laboratory workers and researchers) received training in techniques for the field collection of blood samples and measurement of blood cholinesterase activity levels contained therein. In a second advanced course, medical practitioners and emergency room personnel received training in the diagnosis and treatment of the organophosphate pesticide-poisoned patient.

In early December, EHC convened a Regional Workshop on the Health Aspects of Chemical Emergencies. Sixteen participants representing the medical and emergency response sectors in nine countries attended. Participants undertook to review the contingency planning process for chemical emergencies, review the health aspects of chemical emergencies and to identify ways to better integrate health planning into contingency planning for chemical emergencies.

Participants presented reports which highlighted country-specific issues related to chemical emergencies including an overview of the economic activities which might be associated with chemical emergencies, the emergency response and medical sectors and their response to chemical emergencies and perceived problems.

The workshop addressed chemical accidents on a global scale and chemical safety activities in the Region. Preparedness at the local level was discussed. Participants considered information needs, organization and planning, the role of the health sector and training and education. Discussions following these sessions focused on the status and needs of the medical sector in responding to chemical emergencies. Participants also took part in an exercise which simulated a response to a chemical emergency.

2.3 Disaster management

A series of national workshops on disaster/emergency management were conducted in the 1994-1995 biennium. Following two national workshops in the Philippines and Viet Nam in 1994, workshops were conducted in five countries in 1995, including Cambodia, China, Fiji, Papua New Guinea and Samoa.

In Cambodia, Fiji and Papua New Guinea, the workshops covered topics such as overview of disasters and national disaster management programmes in the countries, current health sector disaster management activities, local emergency preparedness and response programmes, organization of health sector disaster management, provision of environmental health measures and reports on disaster responses in provinces. The workshops also involved group work to prepare the health sector's action plans for disaster preparedness and response.

The focus of the workshop in China was on emergency medicine. Activities of emergency medical centres in selected cities were presented. A disaster management plan of the Ministry of Health, focusing on emergency medical response, was also presented to the participants.

The workshop in Samoa concentrated on mass casualty situation and simulation exercise involving mass casualty. It provided the participants with practical hands-on experience and opportunity to learn what roles the different groups of people should play in cases of emergency. The recommendations made by the participants were incorporated into a project proposal for possible funding by external donor agencies.

2.4 Environmental and health impact assessment

As follow-up activities to the EHC workshop on environmental health impact assessment (EHIA) conducted in 1993, a series of national workshops were implemented in the 1994-1995 biennium. The countries in which such workshops were held in 1995 were Cambodia, China, Lao People's Democratic Republic, Papua New Guinea, Philippines and Solomon Islands.

In Cambodia, Lao People's Democratic Republic and Solomon Islands, where environmental impact assessment (EIA) systems had not been fully developed, the concepts and process of EIA were first introduced. In China, Papua New Guinea and the Philippines, where EIA systems were well established, the workshops started with the introduction, process and techniques of EHIA, followed by several case-study exercises in groups on EHIA of development activities. These workshops involved participants from both health and environmental sectors, and discussed issues of cooperation between these sectors in implementing EHIA.

In addition to conducting the national workshops, EHC supported the Philippine Department of Health to develop national plans and programmes for EHIA, and collaborated with the Government of Solomon Islands in assessing health and environmental impacts of logging operations. EHC also collaborated with the Ministry of Health, Malaysia and the University of the Philippines in developing case studies on EHIA of some projects which can be used in training programmes.

These and other case studies developed under the EHC programme on EHIA were presented at a workshop in Singapore, jointly organized by EHC, WHO Headquarters and the Institute of Environmental Epidemiology, Ministry of the Environment, Singapore and funded by UNEP and the British Commonwealth Secretariat. As a result of this workshop, a training package on EHIA will be produced, and field-tested in selected countries in 1996.

2.5 Food safety

A mission was undertaken in association with a sub-regional FAO/UNICEF/WHO workshop, held in Fiji, on national food and nutrition policies for the Pacific islands, in order to better integrate Pacific island Member States' food safety and nutrition programmes, following the International Conference on Nutrition (ICN) held in Rome in 1992.

In cooperation with national governments of the Cook Islands, Malaysia and the Solomon Islands, EHC was involved in the revision and development of each country's national legislation addressing food safety. These activities resulted in the drafting of a Pure Food Act and food hygiene regulations in the Solomon Islands, drafting of food regulations in the Cook Islands and a review of food import and export regulations in Malaysia. Also at the request of the Solomon Islands' health authorities and Honiara Town Council, food safety by-laws for the capital of the Solomon Islands were drafted and presented to the Council Executive for adoption.

In Viet Nam, there was a growing recognition of the need for an integrated national food safety effort. Consequently, the Ministry of Health of Viet Nam requested EHC to conduct a workshop on food safety management. The workshop involved participants from a number of relevant authorities and provided the springboard for initiating greater cooperation amongst government sectors involved in food control activities and for further discussion on the development of an integrated effort to improve food safety.

EHC focused on the strengthening of health authorities' efforts to prevent contamination of food through the application of Hazard Analysis Critical Control Point (HACCP) principles. Consequently, it participated in a WHO Consultation and Workshop on HACCP, held in Geneva and organized and implemented, for participants from 16 Member States, a "Workshop on the use of HACCP in food safety". The objectives of this workshop were to review the current status of the application of HACCP principles to food safety in the Region, to identify available resource materials and to promote a harmonized approach to HACCP development in the Region.

Applied studies of food industries, food service establishments and street food safety employing the HACCP approach were facilitated in a number of Member States. In Lao People's Democratic Republic, a working group involving industry and health authorities was established to plan and carry out a preliminary HACCP study of selected food industries and street-vended food. This activity and the subsequent involvement of this working group as facilitators in a workshop for health authorities and industry, on the application of the HACCP concept in food safety, enabled the Lao People's Democratic Republic Food and Drug Department to establish a group of trainers with the capability of expanding understanding of how HACCP may be applied to improve food safety in that country. In the Federated States of Micronesia, a study involving industry and health authorities working cooperatively was initiated, using an HACCP approach, to improve the safety of selected seafood for export and domestic consumption. Staff of EHC also reviewed, in collaboration with national health authorities, food safety and the application of HACCP in the export seafood industry of the Solomon Islands. As a consequence of this activity, the Government was able to provide clear guidance on requirements for industry to participate in a proposed export certification scheme. A HACCP based study of food service establishments and food industry premises in urban Honiara was also planned and initiated with EHC involved in the training of local authorities.

Street-vended food was addressed at an FAO technical meeting on street food and WHO funded applied studies in Cambodia, China and Viet Nam. In each of these Member States, EHC missions were undertaken to collaborate in training national counterparts in the HACCP concept and its application, to cooperate in the planning of the applied studies and to review the findings of the studies. In conjunction with these studies, workshops were held in the application of HACCP in the safety of street-vended food. The workshops provided the participants practical experience of modern food surveillance techniques based upon HACCP principles, enabled a review of HACCP applied to street-vended food in the respective countries and provided the opportunity for discussion of considerations in applying HACCP to efforts to assure the safety of street-vended food. In China, a draft plan of action for improving food safety based upon HACCP was prepared. Similarly, a workshop focusing on HACCP was held in the Federated States of Micronesia for agriculture, nutrition and health authorities as well as industry personnel.

EHC continued to promote the development of national contaminant monitoring programmes and participation of Member States in the WHO sponsored GEMS Food Contamination Monitoring Programme. To enhance these activities, EHC is cooperating in the development of a nation-wide aflatoxin monitoring programme in Viet Nam. This programme will develop as a consequence of an EHC-funded study on control and reduction of aflatoxin in food which also includes an educational training programme to consumers, producers, importers and exporters. EHC collaborated further in enhancing the skills of food chemists through two workshops on analytical methods. Strengthening of analytical capabilities was also achieved as a result of advisory services provided in association with HACCP studies in the Federated States of Micronesia, Lao People's Democratic Republic and the Solomon Islands.

In its efforts to better focus the resources available to improving food safety in the Region, EHC has focused on integrating government food safety and nutrition policies and action plans, in line with the recommendations of the ICN as well as refocusing inspection and education activities to address the factors commonly contributing to foodborne disease through application of HACCP principles.

2.6 Occupational health

In July, EHC cooperated with the Government of Brunei Darussalam in an evaluation and assessment of their occupational health programme. The country is in the process of developing a broader industrial base and felt it important to consider worker safety as a part of that process. EHC provided the services of a staff member to collaborate in the review. The review found that many of the pieces of an occupational health and safety programme already exist but that some strengthening could be considered. The review also noted that most workplaces visited exhibited one or more conditions typically considered unsafe to workers - noise, dust, fumes being the most common offenders. A significant outcome from the review was the commitment by the Ministry of Health to strengthen its Occupational Health Unit.

2.7 Urban health and environment

Following the 1992 Regional Committee endorsement of the Healthy Urban Environment project and the 1993 biregional meeting on urban health development, country and city-specific activities were carried out in the 1994-1995 biennium.

The formulation of local health (and environment) action plans initiated in seven urban districts/cities/provinces in 1994 was completed in April 1995. The areas for which such plans were formulated were Dongcheng District, Beijing and Jiading District, Shanghai in China, Johor Bahru and Kuching in Malaysia, and Haiphong City, Dong Hoi Town of Quang Binh Province and Ba Ria-Vung Tau Province in Viet Nam. Projects and activities in these plans have since been implemented, and WHO has been supporting selected priority activities, including the improvement of solid waste management, epidemiological survey of urban dwellers, urban health promotion activities and development of videos on urban health issues. Two new urban areas in China (i.e. Yuzhong District, Chongqing City, and Haikou City) initiated the formulation of their local action plans in September 1995.

Using the results of these local planning studies, national workshops were conducted in China, Malaysia and Viet Nam. These workshops generated the interest of participants from other cities/provinces in the concepts and approaches taken in the local action planning processes, namely intersectoral coordination and supportive environment for health.

EHC actively cooperated with other international agencies in their urban management programmes through joint activities. EHC, in collaboration with the UNDP/UNHCS/World Bank Urban Management Programme Regional Office for Asia and the Pacific, organized a regional workshop on urban health and environmental management in Johor Bahru, Malaysia in May 1995. A joint ESCAP/WHO regional seminar on environmentally sound and healthy cities was planned at EHC in May and implemented in Bangkok in October 1995. EHC staff participated in the UNDP/Asia Pacific-2000 sponsored national consultation on urban environmental issues in Malaysia and in the World Bank MEIP/URBAIR (Manila Environmental Improvement Project/Urban Air) activities in Manila.

In Viet Nam, based on the outcome of the local planning studies, the formulation of a national strategy for integrating health and environment in planning for sustainable development was initiated. For this activity, EHC provided the services of two consultants to develop a conceptual framework for the strategy, and the funds for the local contractor to complete the strategy. These consultants also prepared a long-term plan for human resources development in environmental health in Viet Nam.

Under this project on the integration of health and environment in planning for sustainable development in Viet Nam, EHC collaborated in conducting a training course on urban air and water quality management in Haiphong. A similar workshop on urban air and water quality and solid waste management was conducted in Haikou, China, and three EHC staff members served as resource persons.

2.8 Waste management

2.8.1 Hazardous waste management

In October, EHC convened a Regional Workshop on Hazardous Waste Management in the Pacific island countries. Nineteen participants, representatives and observers reviewed the status of, discussed appropriate and affordable technologies and assessed alternative approaches to hazardous waste management in the Pacific island countries. Among the waste streams emphasized are lubricating oil, hospital, timber-treating, household, agricultural and lead-acid battery wastes. Disposal technology focused on incinerating and landfilling with most discussion involving what could be done with existing facilities. An interesting note was that participants felt that appropriate and affordable technologies existed for most of the wastes generated by the Pacific island countries; but, that the technologies were not being used for lack of sufficient concern over the potential threat to the environment and public health posed by unsafe hazardous waste disposal practices. Most participants additionally felt that a clearing house function for information and shared experiences was sorely needed by the Pacific island countries.

EHC collaborated with the Government of American Samoa through its Power Authority and Environmental Protection Agency in a consultation on hazardous wastes and environmental protection. The activity focused on management of hospital wastes, operation of the local sanitary landfill and contaminated marine sediments near a local shipyard. The consultation concluded that an integrated system for managing hospital wastes has been designed and effectively implemented; that existing reports tentatively implicate shipyard operations as the source of contamination in marine sediments; and that spent sandblast grit posed relatively little threat to human health or the environment if incorporated into concrete and disposed of at the local sanitary landfill.

In Western Samoa, EHC collaborated in selecting a chemical safety/hazardous waste issue of concern upon which to base a workshop which combined a classroom learning experience with a practical work exercise. Working with a workshop steering committee comprised of representatives from the Ministry of Lands, Survey and Environment, Ministry of Agriculture, Ministry of Health and the private sector, EHC visited a variety of problem chemical safety/hazardous waste sites. As the most suitable problem for a practical exercise to accompany a chemical safety/hazardous waste workshop, the committee selected cleanup/disposal of the several abandoned drums of timber treating wastes.

2.8.2 Hospital waste management

EHC collaborated with the Government of the Lao People's Democratic Republic in a review of their hospital waste management practices and the conduct of two workshops designed to acquaint participants with typical current hospital waste management practices and to focus their attention on what of these practices might be implementable in their facilities. The workshops also acquainted participants with the spectrum of hospital waste management practices currently being practised in their country. Workshop participants suggested a variety of ways by which their waste management practices might be significantly improved at minimal expense.

2.8.3 Municipal solid waste management

EHC collaborated with the Government of Papua New Guinea, Solomon Islands and Tonga in assessing municipal solid waste management practices in their capitals, namely Port Moresby, Honiara and Nuku'alofa, respectively. In Nuku'alofa, Tonga, an EHC consultant developed a plan to upgrade the existing open dump site to a controlled landfill and manage the landfill thereafter. Using the findings and recommendations of these and previous activities in solid waste management, EHC has initiated the preparation of practical guides for solid waste management in Pacific island countries. EHC will also support the upgrading of the present dump site to a controlled landfill and make it a demonstration landfill project for other Pacific island countries with similar dump site problems.

2.9 Water supply and sanitation/water quality management

In August 1995, EHC convened a one-week workshop on management of urban water and sanitation systems. The workshop was attended by 25 participants from 18 countries and areas in the Western Pacific Region. The objectives of the workshop were to review the latest management information tools in relation to urban water supply and sanitation systems; discuss solutions to specific management problems, particularly those related to operation and maintenance including unaccounted-for water, leak detection methodologies, metering, mapping and preventive maintenance; identify more appropriate ways for external support agencies to collaborate with governments in improving operation and maintenance; and develop guidelines for a model action plan to improve the management of water and sanitation facilities. Various conclusions were made as a result of the presentations and group discussions. Operation and maintenance aspects of management were regarded as the greatest constraints for sector development and should be given priority by governments and external support agencies. Other aspects which were emphasized included training activities, cost recovery systems and political commitment.

In the Federated States of Micronesia, EHC collaborated in the evaluation of the performance of existing wastewater treatment plants owned by public and private sectors. Deficiencies in design, operation, and maintenance of the existing wastewater treatment facilities were identified and measures to rectify the deficiencies were recommended. Appropriate wastewater treatment technologies for use in the country were proposed and on-the-job training for treatment plant operators was provided.

The Government of the Lao People's Democratic Republic is keen to promote biogas technology. Consequently, EHC provided a consultant to introduce appropriate biogas technology to that country. The most suitable biogas facilities were selected and detailed design for the selected facilities were provided. Biogas projects would be very feasible for the country and would help solve sanitation problems and reduce the outbreak of cholera and other diseases.

2.10 General environmental health activities

A consultant was provided to the Cook Islands to consult with key officials on matters relating to health related legislation. The existing health laws were outdated and recommendations were made for upgrading and enactment of new legislation. A draft Public Health Act was prepared.

Environmental health services delivery in Cambodia is still in its infancy and requires intensive planning at national and local levels, institutional and human resources development and the injection of development funds. A consultant from EHC collaborated with the Government to formulate a broad framework for improved provision of environmental health services delivery and prepared an agenda for action.

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 Human Settlements (UNCHS), 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.

In May, EHC collaborated with the UNDP/UNCHS/World Bank Urban Management Programme to organize a regional workshop on urban health and environmental management for participants from the Asia-Pacific region; and convened a planning meeting for the ESCAP/WHO regional seminar on environmentally sound and healthy cities. EHC staff participated in the UNDP/Asia Pacific - 2000 sponsored national consultation on urban environmental issues in Malaysia and in the World Bank MEIP/URBAIR activities in Manila.

4. INFORMATION SERVICES, REPORTS AND DOCUMENTS

EHC plays an important 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 between EHC and a network of agencies and individuals involved in environmental health.

Most of the reports on activities implemented in 1995 (as listed in Annex 2) are available on request from EHC.

ANNEX 1

EHC STAFF DURING 1995

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

Mr A. Hazzard

Food Safety Specialist

Administrative staff

Ms L.Y. Chan

Administrative Officer

Programme support staff

Ms Y.M. Tan

Special Assistant

Secretaries

Ms Normah Mahmud

Ms Tan Mun Ri

Ms Melley Pieris

Drivers/Messengers

Mr Shahrudin Asmuni

Mr Masim Satarum

ACTIVITIES AND FIELD VISITS - 1995

Activity	Carried out by	Date
AMERICAN SAMOA		
1. Consultation on hazardous waste	W. Harrington	31 Aug - 1 Sep
BRUNEI DARUSSALAM		
1. Evaluation and assessment of national occupational health programme	W. Harrington	4-20 July
CAMBODIA		
1. National workshop on environmental health impact assessment, Phnom Penh	H. Ogawa	20-26 Aug
2. National workshop on health support for disaster management, Phnom Penh	H. Ogawa	27 Aug - 1 Sep
3. Assessment of environmental health services	M.S. Pillay	12 Nov - 7 Dec
4. Food safety services	A. Hazzard	17-22 Dec
CHINA		
1. Workshop on environmental health impact assessment, Beijing	H. Ogawa	6-18 Mar
2. Healthy Urban China - Review of progress of local studies, Beijing and Shanghai	H. Ogawa	20-23 Mar
3. National workshop on health support for emergency management, Beijing	H. Ogawa	23-28 Apr
4. Healthy Urban China - National workshop on urban health plans, Beijing and Shanghai	H. Ogawa	29 Apr - 6 May

Activity	Carried out by	Date
5. Health effects of air pollution in Shenyang and Benxi	Xiping Xu	31 Jul - 2 Sep
6. Healthy Urban China - Phase 2, Chongqing, Haikou and Shanghai	H. Ogawa	15-28 Oct
7. National training course on assessment and management of urban air and water quality and solid waste, Haikou	P. Guo H. Ogawa K. Rolfe	23-27 Oct
8. Food safety services, Urumqi	A. Hazzard	17-25 Nov
9. National training course on air pollution monitoring and management, Beijing	K. Rolfe	17-26 Nov

COOK ISLANDS

1. Environmental health legislation	F.L. Curtin	12 Mar - 12 Apr
2. Food regulations	A. Hazzard	15-23 Mar

FIJI

1. National workshop on health support for disaster management, Suva	H. Ogawa B. Fisher	4-8 Apr
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LAO PEOPLE'S DEMOCRATIC REPUBLIC

1. Workshop on environmental health impact assessment, Vientiane	H. Ogawa	8-15 Jan
2. Biogas technology	Ling Bo	2 Jul - 1 Aug
3. Consultation and workshop on hospital waste management	W. Harrington	7-23 Sep
4. Food safety services	A. Hazzard	9-27 Oct

Activity	Carried out by	Date
MALAYSIA		
1. Healthy Urban Malaysia - Review of progress of local studies, Kuching and Johor Bahru	H. Ogawa	17-20 Feb
2. Attendance at the World Water Day seminar (organized by the Ministry of Public Works, Malaysia)	P. Guo	22 Mar
3. National seminar on Healthy Urban Malaysia, Kuala Lumpur	H. Ogawa	31 Jul - 1 Aug
4. Assessment of the need for analytical toxicology services	Mustafa Selim	14 Jul - 5 Aug
5. Attendance at the national consultation on developing local strategies on urban environmental management, Kuala Lumpur	H. Ogawa	30 Sep
6. Attendance at the international seminar on urban challenges to the environment in Malaysia, Kuala Lumpur	H. Ogawa	2 Oct
7. Analytical toxicology consultancy (intermittently)	W. Harrington	1 Aug 94 - 1 Aug 95
MICRONESIA, FEDERATED STATES OF		
1. Evaluation of wastewater treatment plants, States of Kosrae, Pohnpei, Chuuk and Yap	P. Guo	6-27 May
2. Food safety services, Pohnpei	A. Hazzard	27 Aug - 5 Sep
PAPUA NEW GUINEA		
1. National workshop on health support for disaster management, Port Moresby	H. Ogawa, S. Iddings	21-26 May
2. National workshop on environmental health impact assessment, Port Moresby	H. Ogawa J. Spickett	20 May - 4 Jun
3. Assessment of municipal solid waste management	K. Sakurai, Tan Hoo	5-15 Oct

Activity	Carried out by	Date
PHILIPPINES		
1. Collaboration on the preparation of an air quality management master plan	K. Rolfe	16-29 Jul
2. Dietary intake studies	Chen Junshi	4-20 Sep
3. Workshop on environmental health impact assessment, Manila & Davao	H. Ogawa J. Spickett	2-13 Nov
SAMOA, WESTERN		
1. Consultation on hazardous waste and preparation for workshop	W. Harrington	26-30 Aug
SOLOMON ISLANDS		
1. Workshop on environmental health impact assessment, Honiara	H. Ogawa	9-14 Apr
2. Food legislation	A. Hazzard	2-9 Apr
3. Food safety services	A. Hazzard	8-13 Sep
4. Assessment of municipal solid waste management	K. Sakurai, Tan Hoo	15-21 Oct
5. Health impact assessment of logging	A. Kiyu Usop	28 Sep - 24 Oct
TONGA		
1. Consultation on chemical safety and health legislation	W. Harrington	10-26 Aug
2. Advice on improvement of landfill management and upgrading an open dump site to a controlled landfill, Nuku'alofa	C.B. Saw	13-21 Oct
3. Assessment of municipal solid waste management, Nuku'alofa	K. Sakurai Tan Hoo	22-25 Oct

Activity	Carried out by	Date
VIET NAM		
1. Intergration of health and environment in sustainable development - Review of progress of local studies	H. Ogawa	15-21 Jan
2. Course on laboratory analysis of food	D.J. Williams	1-28 Mar
3. National workshop on local planing for health and environment, Hanoi	H. Ogawa, R. Abrams	11-17 Jun
4. National strategy for integrating health and environment into plans for sustainable development, Hanoi, Haiphong and Quang Ninh	B. Powis, J. Ireland	11 Jun - 6 Jul
5. Human resource development for environmental health, Hanoi, Haiphong and Quang Ninh	B. Powis, J. Ireland	11 Jun - 6 Jul
6. Training course on air and water pollution control, Haiphong	P. Guo, K. Rolfe	26-30 Jun
7. Workshop on food safety management, Hanoi	A. Hazzard	3-8 Jul
8. Workshop on pesticide epidemiology, Hanoi	W. Harrington	25-30 Jun
9. Course on analytical methods for chemical contaminants of food, Hanoi	D.J. Williams	8-21 Nov
10. Food safety services	A. Hazzard	27 Nov - 2 Dec
11. National training course on the safe use of pesticides, Hanoi	W. Harrington	8-25 Nov
12. National framework for environmental health	B. Powis, J. Ireland	21 Nov - 21 Dec

Activity	Carried out by	Date
REGIONAL GROUP EDUCATIONAL ACTIVITIES		
1. Workshop on urban health and environmental management, Johor Bahru, Malaysia (organized in collaboration with Urban Management Programme Regional Office for Asia and the Pacific and Institut Sultan Iskandar of the University of Technology, Malaysia)	H. Ogawa, C. Schubert, and other WHO & UMP staff	11-13 May
2. Workshop on the use of Hazzard Analysis Critical Control Point (HACCP) systems in food safety, Kuala Lumpur, Malaysia	A. Hazzard D. Mahoney	12-16 Jun
3. Workshop on management of urban water supply and sanitation systems, Kuala Lumpur, Malaysia	P. Guo, J.A. Hueb, A. Basaran, R. Abrams, S. Iddings	21-25 Aug
4. Workshop on hazardous waste management in Pacific island countries, Suva, Fiji	W. Harrington, I. Wallis	2-6 Oct
5. Workshop on health aspects of chemical emergencies, Kuala Lumpur, Malaysia	W. Harrington, J. Haines, C.R. Young	4-8 Dec
6. WHO/Commonwealth Secretariat Workshop on environmental health impact assessment, Singapore (organized in collaboration with Institute of Environmental Epidemiology, Ministry of the Environment, Singapore, UNEP, WHO Headquarters and the Commonwealth Secretariat)	M. Birley, H. Bichan, K.T. Goh, H. Ogawa, R. Sloof	19-21 Dec

Activity	Carried out by	Date
OTHER ACTIVITIES		
1. Attendance at the interregional meeting on environmental health, Amman, Jordan	H. Ogawa	8-12 Oct
2. Attendance at the FAO Technical meeting on street foods, Calcutta, India	A. Hazzard	6-9 Nov

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