### WORLD HEALTH ORGANIZATION



### ORGANISATION MONDIALE DE LA SANTE

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#### DEVELOPMENT OF HEALTH RESEARCH

This document summarizes the major activities of the regional research policy and strategy coordination programme from July 1997 to June 1999. It also outlines relevant activities of the special programmes conducted in the Region by WHO Headquarters, as well as describing research conducted in connection with the regional priorities. The recommendations made by the Western Pacific Advisory Committee on Health Research (WPACHR) in June 1998 are annexed for endorsement by Member States.

#### 1. INTRODUCTION

WHO's involvement in health research stems from Article 2(n) of its Constitution, which calls on the Organization "to promote and conduct research in the field of health". WHO's support for research ensures substantial participation by regions and countries. WHO's policy has been to support efforts of Member States to strengthen national research capabilities, particularly in developing countries. It has also endeavoured to promote effective and efficient systems for health research management, including information support for research. The emphasis has been on applied or operational research rather than on basic or fundamental research.

WHO's support for research generally has two interrelated purposes: to support research that is relevant and applicable, and to strengthen the research capacity of the countries themselves. These two purposes are particularly evident in the work of the global programmes such as the Special Programme of Research, Development and Research Training in Human Reproduction and the Special Programme for Research and Training in Tropical Diseases.

#### 2. MAJOR ACTIVITIES

#### 2.1 National health research management mechanisms

Sixteen countries have focal points to coordinate and manage research activities: Australia, Brunei Darussalam, China, Fiji, Japan, the Lao People's Democratic Republic; Malaysia, Mongolia, New Zealand, Papua New Guinea, the Philippines, the Republic of Korea, Samoa, Singapore, Solomon Islands and Viet Nam. Activities of focal points include maintaining contact with WHO and helping to formulate national research policies.

#### 2.2 Strengthening of national research capabilities

WHO continues to support the development of a broad framework of research methodology for use in biomedical or health systems research in the Region. A workshop on research design and methodology held in Phnom Penh, Cambodia in May 1998 was the twentieth national workshop in this

field held in the Region since 1981. The manual, *Health research methodology: a guide for training in research methods*, is currently being revised and updated.

Since July 1997, 28 contracts for research projects have been supported by the Regional Office (Annex 1). Research training grants to study traditional medicine were awarded to two researchers from Cambodia and two from the Lao People's Democratic Republic.

The principal investigators of WHO-supported research in the Region have been encouraged to disseminate their findings widely, at meetings, seminars and lectures, and through publication in refereed journals. The Regional Office also intends to make the results of WHO-supported projects in the Region over the past five years available through the website.

#### 2.3 Collaborating centres

Following a request by the Fiftieth World Health Assembly, <sup>1</sup> a global re-evaluation of WHO's network of collaborating centres is currently being carried out. An interregional meeting on WHO collaborating centres was held in May 1999 and its recommendations will be submitted to the Executive Board in January 2000.

In the Western Pacific Region, the network of WHO collaborating centres is a useful mechanism for carrying out activities in support of the Organization's programmes at all levels. As at 9 April 1999, the number of collaborating centres in the Region totalled 220 (Annex 2). The majority are located in China (69), Japan (51) and Australia (43). The programmes with the most centres include "other communicable diseases" (25), technology for health care (18) and the Special Programme of Research, Development and Research Training in Human Reproduction (15).

In China, the sixth national meeting of the directors of all WHO collaborating centres took place in September 1997. The agenda included the role of collaborating centres and WHO's requirements; WHO collaborating centres at global and regional levels; how to improve cooperation between the centres and WHO in terms of programme implementation and information exchange; and guidance on writing annual reports and work plans.

Resolution WHA50.2.

The heads of collaborating centres in Malaysia met for the fifth time in December 1997, and the activities undertaken during the year were reviewed. The heads of all the centres in the Republic of Korea met for the second time in December 1997 to discuss their roles and experiences.

The Regional Office has published summaries of the 1995 and 1996 activities of the WHO collaborating centres in the Western Pacific Region. These were the third and the fourth in a series of annual documents which outline the principal activities of the centres as described in their annual reports.

#### 2.4 Strategic plan for health research

The Strategic plan for health research in the Western Pacific Region 1997–2001 was approved by the Regional Committee for the Western Pacific in September 1997.<sup>2</sup> A Committee on Strategic Plan Implementation (CSPI) was established in 1996 to oversee implementation of the Strategic plan in the Region.

The CSPI met in June 1998 and its conclusions were as follows:

- The terms of reference of the CSPI were too detailed to be feasible, given its present structure and resources. They should be reviewed by the Western Pacific Advisory Committee on Health Research (WPACHR).
- Translation of the Strategic plan for health research in the Western Pacific Region 1997–2001 into other languages would make it more accessible to research workers in the Region;
- Although a review of research projects supported by the Regional Office showed that they
  conformed with the priorities in the *Strategic plan*, more emphasis should be given to
  studies with a health policy development component. A detailed analysis of the research
  programme in the 1990s should be commissioned.
- Research priorities of Member States should be examined again in association with the next review of the *Strategic plan*. Countries without formal ethical guidelines for health research should be urged to establish these without delay.

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<sup>&</sup>lt;sup>2</sup> Resolution WPR/RC48.R7.

 WHO collaborating centres are a key resource in relation to the implementation of the Strategic plan. Increased efforts are needed to utilize them more effectively.

#### 2.5 WHO Regional Centre for Research and Training in Tropical Diseases and Nutrition

The WHO Regional Centre for Research and Training in Tropical Diseases and Nutrition, located at the Institute for Medical Research in Kuala Lumpur, Malaysia, continues to undertake numerous research projects; perform many specialized diagnostic tests; train large numbers of individuals from both within and outside Malaysia; and provide many consultative and advisory services. Over the past three years, the research capacity of the Division of Behavioural Research has been strengthened.

During its most recent session in 1998, the WPACHR recommended that an evaluation of the work programmes of the Centre, similar to that undertaken in 1992, should be carried out. The evaluation was carried out in December 1998 and the Centre was commended for engaging in many research and training activities in spite of national economic problems. It was noted that considerable efforts had been made to carry out the many recommendations of an evaluation of the Centre that was carried out in 1992. The short- and medium-term objectives were currently being pursued, despite more constraints in terms of funding, staffing and coordination of research activities. New recommendations were made based on the achievements and constraints in programme implementation during the previous six years.

#### 3. ACTIVITIES CARRIED OUT BY THE GLOBAL PROGRAMMES

# 3.1 Special Programme of Research, Development and Research Training in Human Reproduction

The activities of this special programme may be categorized as (1) research into human reproduction (HRP); and (2) strengthening of national research capacities in reproductive health.

During 1997 and 1998, 57 grants were provided. Total funding was US\$ 727 187. Of these, 53 (93%) were for research projects. The topics included intrauterine devices; the unmet needs of, and barriers to provision for, sexual and reproductive health services for sexually-active, unmarried,

young adults; and the reproductive health status and needs of young female migratory workers in urban China.

The remaining funds were allocated to strengthening research capabilities in reproductive health, including family planning. Institutions were provided with research training and supplies and equipment.

#### 3.2 Special Programme for Research and Training in Tropical Diseases

Malaria, schistosomiasis, filariasis and leprosy continue to be public health problems in the Region. Leishmaniasis is of concern only in certain areas in China, while trypanosomiasis and Chagas disease do not occur in the Region.

During 1997 and 1998, 244 projects were supported by this special programme. Total funding was US\$ 3.54 million. Research projects received 16.1% of the total amount; product research and development 36.9%; and institution strengthening and training activities 47%.

The Malaria Control Service of the Philippines continues to produce and distribute globally the WHO microtest kits to measure the sensitivity of malaria parasites to antimalarial drugs. Low-cost portable incubators, which can be used where a constant temperature is required, are also available.

### 4. RESEARCH ACTIVITIES WITHIN WHO'S PROGRAMME OF TECHNICAL COOPERATION

This section describes selected research activities that took place within WHO's programme of technical cooperation in 1998–1999.

#### 4.1 Environmental health

The environment and health in areas included in the Federal Land Development Scheme were evaluated in Selangor, Malaysia. Raw water samples were collected at 22 sites along the Semenyih River which were affected by contamination from agricultural, industrial, animal husbandry and human sewage. Among other things, the samples were analysed for pesticides, herbicides, metals and microorganisms. Preliminary findings showed that *Cryptosporidium* oocysts were found in some samples

and these sites exceeded the recommended limit of 0.4–1.2 oocysts per litre. RNA and DNA bacteriophages and coliphages were also found in some water samples.

A study was undertaken in Shanghai, China, to estimate the impact of motor vehicle emissions on the health of vulnerable population groups. Vehicular emissions are the main source of city air pollution in Shanghai. For about half of 1998, the NO<sub>X</sub> concentration in air exceeded Class II of the National Air Quality Standard, indicating that the air was polluted. Vehicular emissions had adverse effects on high-risk population groups, such as taxi drivers, bus drivers and conductors, and engine repairers. Compared to the national average, these groups had a higher risk of respiratory symptoms (e.g. angina, pharyngeal paraesthesia, cough and phlegm); higher prevalence rates of chronic respiratory diseases (e.g. chronic rhinitis and chronic pharyngitis); significantly higher serum IgA and IgG levels; higher CO concentrations in exhaled air (implying a high level of blood COHb); and more damage to their lungs.

A study was begun to establish the correlation between environmental lead pollution and the blood lead level in the children of Ulaanbaatar, Mongolia. The assessment will take into account the relatively high soil lead measurements.

Another study that began recently is designed to determine whether there is any association between concentrations of air pollutants and the health of the population within a district in northern China. Air pollutants will be monitored and residents will be subjected to medical examinations, including blood and pulmonary function tests, to determine whether they have developed any symptoms possibly caused by exposure to these pollutants.

#### 4.2 Health promotion

"Lifestyles and perceptions of health and risk in adolescent girls: a four-site study" was undertaken in Deakin University, Victoria, Australia. The research involved eight 12- to 13-year-old girls in each of four countries: Australia, China, Fiji and Malaysia. The health risks investigated were alcohol and drugs, nutrition, sexuality, smoking and stress. The participants were from a variety of class, ethnic and geographical backgrounds. The findings suggested that reliance upon the evidence of a single research method may provide a distorted picture of young people's knowledge and understanding of health risks (e.g. participants professed ignorance in sexual matters in the face-to-face group, but on the Internet their communications showed significant knowledge on the subject). The research results suggested useful strategies for future health promotion activities.

#### 4.3 Noncommunicable diseases

A randomized, controlled trial involving 340 000 women, aged 35 to 64 years, is being carried out in Manila, the Philippines. The objectives are to determine whether annual physical examinations by trained health workers in combination with self-examination of the breasts can reduce mortality from breast cancer by 20%–30% over a five- to ten-year period by reducing the incidence of advanced breast cancer. The participants are currently being followed up.

A study on genetic and environmental causes of atherosclerosis, thrombosis and their related diseases is being undertaken by the National Cardiovascular Centre, Osaka, Japan. Atherosclerosis of the carotid artery is being evaluated by echography; risk factors for cardiovascular diseases (CVD) are being determined through laboratory testing and questionnaires; major CVD events and deaths are being followed up; and gene analysis and pathological studies are being carried out. It is hoped that the findings will lead to the prevention of fatal organ damage and verification of new risk factors.

A study on the development of a community model for diabetes care focused on: (1) policy support and management for community diabetes care; (2) diabetes prevention, management and education using community health services; and (3) promoting healthy lifestyles and interventions to decrease risk factors in the community. This study is being carried out in two communities in Shanghai, China.

#### 4.4 Nutrition

A study was undertaken in Ho Chi Minh City, Viet Nam, to determine the extent to which the Prime Minister's June 1994 decision on trading and promotion of breast-milk substitutes in health services setting had been implemented. Breast-milk substitutes have been promoted continuously on television and newspapers and have become more available and affordable. The study revealed that 46% of the babies in Ho Chi Minh City had been given formula before four months of age. The failure to implement the International Code of Marketing of Breast-milk Substitutes and its domestic equivalent was due to both the negative attitudes of health staff towards the codes and to the lack of mechanisms to put policy into practice due to the limited budgets and shortages of enforcing staff.

A study to determine the feeding patterns of newborn infants in Ho Chi Minh City, Viet Nam, revealed that none of the 121 infants that were discharged from the hospital in February 1998 was breast-fed exclusively. Five mothers who were interviewed believed in breast-feeding but had

difficulties in maintaining it. Neonatal staff had no training on breast-feeding so three training courses on breast-feeding were held for all neonatal staff to increase their knowledge, attitude and practice of breast-feeding. The study will monitor whether these courses have an impact on staff and the exclusive breast-feeding rate of the discharged infants.

A project on weekly iron/folate supplementation continued in selected areas in the Philippines and Viet Nam. The objective was to assess the effectiveness of the combined strategy of community-based social mobilization and weekly iron/folate supplementation in improving the knowledge, attitude and practice and the iron status of women of reproductive age in the project areas.

#### 4.5 Other communicable diseases

A study entitled "The efficacy of a three-day course of treatment of amoxicillin for cases of pneumonia versus a five-day course of treatment - a comparative study" began in early 1999 at the WHO Collaborating Centre for Epidemiology and Control of Acute Respiratory Infections in Beijing, China.

## 5. CONCLUSIONS AND RECOMMENDATIONS OF THE WESTERN PACIFIC ADVISORY COMMITTEE ON HEALTH RESEARCH

The main recommendations of the Western Pacific Advisory Committee on Health Research (WPACHR) at its seventeenth session were as follows.

Although the document *Strategic plan for health research in the Western Pacific Region,* 1997–2001 has been widely distributed, many researchers were not yet aware of it. The WPACHR therefore suggested that wider dissemination would be achieved by translating the *Strategic plan* into national languages of the Region. In response to this recommendation, the *Strategic plan* is being translated into Chinese, Japanese, Korean and Mongolian. More translations will follow.

WHO's current policy of awarding research grants only if the proposed topic is an area of priority within the *Strategic plan* should continue. In addition, the WPACHR recommended that studies should be commissioned by WHO for selected topics in priority areas.

The following points should be considered by WHO when it is deciding on research to be supported: projects should be multidisciplinary, multicentre and/or multinational in nature; they should encourage knowledge-based decision-making for health policy development; and they should emphasize the application of research findings.

Technical officers responsible for WPRO programmes should be encouraged to take advantage of the collaborating centres to enhance priority research areas in the *Strategic plan*. The networking of the centres, e.g. through electronic means, should also be promoted.

Two important areas which should be reflected in future priorities for research in the Region are communicable diseases and quality of life issues, including palliative care, for the incurable and chronically disabled.

Maternal mortality ratios (MMRs) vary greatly throughout the Region, and many countries have poor data. Detailed epidemiological surveys of maternal deaths should be undertaken in countries with the highest rates to discover why MMRs are so high and to determine the best strategies for lowering the ratios.

Studies should also be commissioned on the epidemiology, prevention and optimal management of diseases causing outbreaks. In this regard, it should be noted that WHO has in the past collaborated closely with other agencies, such as the Centers for Disease Control and Prevention, Atlanta, United States of America, to provide a rapid response to disease outbreaks.

Social, economic, demographic and environmental health impact studies should be carried out. Innovative research is urgently required to reduce the impact of smoking among young people.

The WPACHR's recommendations are in line with WHO's policy on supporting research in the Western Pacific Region. Its specific recommendations are being acted on by the relevant technical units.

#### ANNEX 1

# Research areas supported by the Regional Office for the Western Pacific during the period July 1997 to June 1999

Research area	Australia	Cambodia	China	Japan	Malaysia	Mongolia	Viet Nam	Total
Control of tropical diseases			2		2		2	6
Environmental health			4		1	1		6
Health information			1					1
Health promotion	1							1
Malaria					1			1
Mental health			1					1
Noncommunicable diseases						1		1
Nutrition					1		3	4
Other communicable diseases			1	2		1		4
Sexually transmitted infections			1					1
Substance abuse including alcohol and tobacco		1						1
Women's health	1							1
TOTAL	2	1	10	2	5	3	5	28

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Summary of WHO collaborating centres in the Western Pacific Region (as at 9 April 1999)

Nam	9	ß	ω	7	10	-	ဧ	14	3	9	2	က	2	8
Singapore	1		-										_	1
Republic of Korea		_		1				7						
Philippines					_			1						1
Papua New Guinea									1					
New Zealand			<del>-</del>		<b>-</b>								~	
Mongolia														
Malaysia	2							2						
Japan		2	3	3	2		-	1					1	2
Hong Kong, China														1
China	<b>-</b>	_		3	က	1	<b>-</b>	2	1	9	_	2	_	2
Australia	2	-	က		က		_	3	1		<b>L</b>	-	-	_
Programme	Action programme on essential drugs	Ageing and health	Assessments of environmental health hazards	Cancer control and palliative care	Cardiovascular diseases	Child health	Control of noncommunicable diseases	Control of tropical diseases	Diarrhoeal and acute respiratory disease control	District health systems	Emergency and humanitarian action	Epidemiology, statistics, trend assessment and country health information	Food safety	Health promotion

Summary of WHO collaborating centres in the Western Pacific Region (as at 9 April 1999) continued

Total	4	-	-	2	7	9	11	4	25	ო	-	2	9	2	-
Viet Nam							1								
Singapore				-			2		-					_	
Republic of Korea	2					2	1		4						
Philippines		1				-							1		
Papua New Guinea															
New Zealand								_							
Mongolia									-						
Malaysia	-								-						
Japan				-	4	2	4		7	-	1		-	2	-
Hong Kong, China													-		
China					9		2	2	3	~		2	2	2	
Australia	-		-		1	-	1	1	8	-			-		
Programme	Health systems research and development	Leprosy	Malaria	Management and support to information systems	Mental health	National health systems and policies	Occupational health	Oral health	Other communicable diseases	Prevention of blindness and deafness	Promotion of chemical safety	Publishing, language and library services	Rehabilitation	Reproductive health	Research policy and strategy coordination

Summary of WHO collaborating centres in the Western Pacific Region (as at 9 April 1999) continued

Total	15	2	18	12	4	1	-	220
Viet Nam				-				2
Singapore	~		က					13
Republic of Korea	-		1	2	1			18
Philippines	2							8
Papua New Guinea								1
New Zealand		1	~					9
Mongolia								1
Malaysia								9
Japan		2	9	2	_	1		51
Hong Kong, China								2
China	8	<b>~</b>	4	7	_			69
Australia	င	1	3		1		1	43
Programme	Special Programme of Research, Development and Research Training in Human Reproduction	Substance abuse including alcohol and tobacco	Technology for health care	Traditional medicine	Tuberculosis	Water supply and sanitation in human settlements	Women's health	TOTAL

# CONCLUSIONS AND RECOMMENDATIONS OF THE WESTERN PACIFIC ADVISORY COMMITTEE ON RESEARCH AT ITS SEVENTEENTH SESSION IN JUNE 1998

The members of the Western Pacific Advisory Committee on Health Research made the following observations and recommendations at the conclusion of their meeting:

- 3.1 Policy
- 3.1.1 Strategic plan for health research in the Western Pacific Region

**Noted** that the document *Strategic Plan for Health Research in the Western Pacific Region,* 1997–2001 had been widely distributed but that many researchers were unaware of the plan, which was not yet reflected in national policies or funding priorities for health research.

**Noted** also that the terms of reference for the Committee on Strategic Plan Implementation were unrealistic, given the limited resources available.

#### Recommended that:

- (1) The *Strategic plan* document should be translated into several national languages.
- (2) Member States should be asked to improve utilization of the plan, for example by ensuring that health professionals and administrators have access to copies.
- (3) The award of research grants by the Western Pacific Regional Office (WPRO) should continue to be conditional on the research topic being an area of priority within the *Strategic plan*.
- (4) Support for the *Strategic plan* should be reflected in national health research policies and plans, together with allocation of appropriate resources.

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- (5) WPRO should help identify further sources of funding to strengthen research and training in the Region, including networking with partner agencies.
- (6) Research should be commissioned by WPRO for selected topics in priority areas.
- (7) A review programme should be developed for effective monitoring of progress towards implementation of the plan and the original terms of reference of the Committee on Strategic Plan Implementation should be revised by deletion of the first three terms of reference and replacement of these by: "to monitor progress of research supported by WPRO, including commissioned research".

#### 3.1.2 Secretariat

**Noted** that the resources of the Research Promotion and Development unit at the WPRO Secretariat were insufficient to allow a significant increase in research support activities, despite the pressing need. Some of the available resources should be retained for use in the commissioning of high priority research as specified in later recommendations.

**Noted** also that research applicants should be required to specify the component of the *Strategic* plan which their research was intended to address.

#### Recommended that:

(1) The form used by WPRO for research grant applications should be modified to include reference to the priority areas being addressed by the research and its conformity with the *Strategic plan*.

#### 3.1.3 Draft Regional Policy for the 21st Century

**Noted** that the projected fall in the incidence of communicable diseases within the Region by the year 2015 was unlikely to be correct and **noted** also that increasing age distribution and patterns of chronic disease would require greater attention to quality of life for the disabled.

#### Recommended that:

- (1) The continuing importance of communicable diseases into the next century should be reflected in future priorities for research in the Region.
- (2) More emphasis and priority in training should be given to quality of life issues, including palliative care, for the incurable and chronically disabled.

#### 3.1.4 WHO collaborating centres

**Noted** that the collaborating centres represented a key resource in the process of implementing priority research in the *Strategic plan*. **Noted** also that the networking of collaborating centres needed additional emphasis.

#### Recommended that:

- (1) Collaborating centres should be encouraged to interact via electronic communication.
- (2) National health research councils and analogous bodies should be asked to act as focal points for coordination of collaborating centres within the country wherever feasible.
- (3) Collaborating centres should be asked to consider the priorities of the *Strategic plan* for health research in their work programmes.
- (4) Technical officers responsible for WPRO programmes should take additional measures to use collaborating centres to enhance priority research areas in the *Strategic plan* for health research.
- (5) WHO Representatives and Country Liaison Officers should facilitate the networking of collaborating centres in their country of assignment.

#### 3.1.5 Ethical review guidelines

#### Recommended that:

(1) Member States without ethical guidelines for health research at national level should be asked to ensure that these are adopted.

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(2) National health research councils and analogous bodies should be asked to consider the topics of ownership of research data and biological materials, timely publication of research results in the scientific literature, freedom to publish, and ethical review and monitoring at national level.

#### 3.2 Research programmes

#### 3.2.1 General

#### Recommended that:

- (1) Preference should be given by WPRO to the support of research which is multidisciplinary, multicentre and/or multinational in design. Research which encourages knowledge-based decision-making for health policy development should also be encouraged.
- (2) For the evaluation of programmes, validated processes of health care should be used as more timely and useful indicators than clinical outcomes.
- (3) Research to improve the health care of children should be given priority.
- (4) Priority should be given to research which emphasizes the application of valid research findings.

#### 3.2.2 Global Advisory Committee on Health Research

**Noted** the recent activities of Global Advisory Committee on Health Research, including a new research policy framework and new approaches to the measurement of health at a global level, a novel method to depict country health profiles, the use of intelligent research networks, the global cost of health technology and some evolving problems of critical significance to global health.

#### 3.2.3 WHO Special Programmes

**Noted** the recent activities in the Western Pacific Region of the WHO Special Programmes on Research, Development and Research Training in Human Reproduction and for Research and Training in Tropical Diseases.

#### 3.2.4 Maternal Mortality

**Noted** that maternal mortality ratios varied greatly throughout the Region, being still very high in some developing countries.

Noted also that the quality and completeness of data remained poor in many countries.

**Recognized** that many different causal pathways contributed to maternal mortality and many different preventive strategies may be possible, which may differ between countries.

#### Recommended that:

- (1) A detailed epidemiological survey of maternal deaths should be commissioned in those countries of the Region with the highest maternal mortality ratios to elucidate the most important preventable causal pathways and to devise the best strategies in each country.
- 3.2.5 Emerging and re-emerging diseases

**Noted** the recent outbreak of sudden child deaths in Malaysia and the lack of information on etiology.

**Noted** also the need for rapid response by WHO and partner agencies in the event of new outbreaks of infectious disease in the Region.

#### Recommended that:

- (1) Research should be commissioned on sudden deaths among young children which have occurred in association with a number of outbreaks of hand, foot and mouth disease within the Region, with the purpose of elucidating the epidemiology, prevention and optimal management of the disease.
- (2) WHO should facilitate networking with other agencies, e.g. the Centers for Disease Control and Prevention (CDC), Atlanta, United States of America, in the management of new disease outbreaks, including the appropriate training of health workers.

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#### 3.2.6 Healthy Cities-Healthy Islands

**Noted** that major developments affecting populations could have an adverse impact on health and that health impact studies were necessary in all such cases.

**Noted** also the prediction of a steep rise in tobacco consumption in developing countries, especially by young people.

**Noted** that healthy city/healthy island programmes were often multisectoral in design and their evaluation needed careful planning, as in the case of other health programmes.

#### Recommended that:

- (1) Steps should be taken to ensure that social, economic, demographic and environmental health impact studies, including nutritional aspects, precede any major developments affecting populations.
- (2) Innovative public health research to reduce the impact of smoking, particularly among young people, should be actively promoted.
- (3) An evaluation component should be incorporated into all new health programmes.

#### 3.2.7 WHO Regional Centre for Research and Training in Tropical Diseases and Nutrition

**Noted** that the Regional Centre continued to be a key resource for both research and training in the Region.

#### Recommended that:

- (1) Additional resources should be provided to enable the Regional Centre for Research and Training in Tropical Diseases and Nutrition to fulfil its research and training potential.
- (2) WPRO should arrange a further evaluation of the work programme of the Regional Centre.

#### 3.2.8 Meeting of the Ministers of Health for the Pacific Island Countries

**Noted** that the above meeting had been held in Rarotonga in August 1997 to review progress on the concept of Healthy Islands since the Yanuca Island Declaration on Health in the Pacific in the 21st Century.

**Noted** also that agreement had been reached (the Rarotonga Agreement) to continue development of human resources for health, to cooperate in the bulk purchasing of pharmaceuticals and other health supplies and to integrate traditional healing practices into health systems.

#### Recommended that:

(1) Continued emphasis should be given to the development of human resources for health, including the training of mid-level practitioners in countries where appropriate.