HEALTH MANPOWER DEVELOPMENT
(including health manpower development activities in other programmes)

The overall objective of the Regional Medium-term programme on health manpower development as defined by the Seventh General Programme of Work is to promote and cooperate with countries in planning for training and deploying the number and types of health personnel that countries require and can afford and to ensure that such personnel are socially responsible and possess the appropriate technical, scientific and managerial competence. In pursuance of this general objective, two programme areas were developed, namely, strengthening of the national capabilities in the managerial process for health manpower development and the educational training of health personnel. In the first of these, strengthening the managerial processes for HMD, particular attention was paid to the analysis, review and formulation of national manpower policies and plans and to the development of effective managerial and information systems to assure optimum utilization of the available human resources for health. The second aimed at strengthening the education and training programmes and promoting effective educational processes and maintaining and improving the competence of health personnel, especially those involved in primary health care within the comprehensive national health systems.

5.1 MANAGERIAL PROCESS FOR HEALTH MANPOWER DEVELOPMENT

5.1.1 Integration of Health Services and Manpower Development

The ongoing efforts of the Organization to encourage the countries to establish effective health services manpower development (HSMD) mechanisms suited to their individual needs, which could ensure meaningful functional integration between the production of health personnel and the requirements of the health services, have led to the development of different types of intersectoral coordinating
mechanisms such as national health councils and health development committees in five countries of the Region. In support of these, a continuing information-based dialogue was fostered between users and producers for the formulation and implementation of national health manpower policies that could lead to more appropriate planning, production and management activities. However, the actual problems of coordination and the traditional division of responsibilities between these vital sectors still persist in many countries. Consequently, the training institutions often fail to take into account the manpower plans, and the functions of the health workers are not monitored adequately to provide a sound basis for making adjustments in the planning, training and utilization of health personnel.

A Committee for Health Manpower Planning consisting of eight Members of Parliament has been set up in BANGLADESH. This high-level committee will look into different aspects of health manpower, such as the policy for employment of new medical graduates, guidelines for future policies regarding medical education and admission into the MBBS course, and improvement in the medical curriculum and the health care delivery system.

In BURMA, a DANIDA-supported project for strengthening ministries of health included the development of a health manpower planning and information system. A consultant is being assigned in July 1987 for this purpose.

In the DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, based on planning for integration of health services and manpower development, WHO technical collaboration is extended through consultancy services for training health personnel in the country and through the fellowships programme for meeting the needs of an integrated referral system.

In INDONESIA, the Government/WHO Collaborating Committee has set up a Working Group on Health Manpower to advise the Government on all aspects of health manpower development. The Committee has begun to address itself to the vital manpower issues that have been identified in a systematic manner.

In MALDIVES, the DANIDA-supported project for strengthening ministries of health included assessing the manpower situation and requirements for the future and conducting a feasibility study of the decentralized management system for the health services. Two consultants were recruited for this project.
In SRI LANKA, the national health development networks, composed of the ministerial-level Health Development Council and the secretarial-level development committees, undertook a comprehensive study of the current situation in regard to the promotion and utilization of medical manpower, and the demand and supply of paramedical personnel. District-level intersectoral action for health development and the financing of health services with particular reference to manpower are being studied.

In THAILAND, further support was provided to the strengthening of the national mechanisms for coordination between the Ministry of Public Health and the University Bureau in order to achieve better manpower management as well as optimum utilization of the trained manpower. A coordination committee was established consisting of an executive committee comprising the directors-general of all departments of the Ministry of Public Health and representatives of the different universities with the Permanent Secretary of the Ministry of Public Health as the Chairman. Through this mechanism, integrated curricula were developed for different types of health personnel and priority areas identified for the trainers and the users.

An interregional consultation was convened in March 1987 in Bangkok to consider the establishment of a collaborative network to support nursing development towards HFA/PHC.

5.1.2 Health Manpower Planning

All Member Countries in the Region have institutional frameworks for health manpower planning. Six countries have formulated systematic health manpower plans within the national health plans with varying degrees of comprehensiveness. However, a number of these plans have not been linked very effectively with the health manpower policies resulting in inappropriateness of the plans that have been developed. Some fundamental dimensions which will need to be taken into consideration in the plans are: (1) attention to qualitative aspects rather than emphasis on macro-level projections only; (2) adequate cognizance of the economic dimension, (3) involvement of the political and professional sectors in the planning activities to ensure their support, and (4) strengthening the national capabilities in the health manpower planning process. It has also been recognized that health manpower policies and plans relevant to national HFA strategies and their implementation involve fundamental changes in the entire health manpower development process and the resistance to change still constitutes a major problem in most countries of the Region.
In BHUTAN, a consultant reviewed the manpower policies and practices and initiated preliminary activities for a national health manpower planning exercise to be conducted later in the year.

In BURMA, a consultant assisted national staff in the development of the manpower planning unit and the establishment of a health manpower information system within the unit. He reviewed the capabilities of schools of health sciences for coordinating their activities with those of other training schools and identified areas that need coordination mechanisms. The consultant also followed up the recommendations made by the previous workshop on manpower planning held in 1985.

A paper outlining the quantitative and qualitative aspects of the present health manpower situation in INDIA was prepared and served as an important background document for the 20th CIOMS Conference on "Manpower out of Balance: Conflicts and Prospects" held in Mexico.

In INDONESIA, WHO long-term staff assisted the Bureau of Planning and the Centre for Education of Health Manpower (Pusdiknakes) to determine the unit costs of education of paramedical health workers in the Ministry of Health with a view to assessing the investment required for producing the required manpower by the year 2000.

In NEPAL, a high-level manpower planning steering committee was established with the active cooperation and collaboration of several national institutions. The committee has developed a sound manpower development plan for human resources for health, based on several studies initiated and conducted earlier by the Institute of Medicine, Tribhuvan University, Kathmandu.

SRI LANKA prepared and presented a paper at the 20th CIOMS Conference on "Manpower out of Balance" in Mexico.

The requirements and supply of laboratory and radiographic manpower in Sri Lanka were analysed and, on the basis of this review, new training programmes have been started with the support of the universities. The future needs for medical manpower were also determined on the basis of realistic staffing patterns of the hospitals and the public health services. Support was given to two workshops to assess the needs of the dental health services in the country.
5.1.3 Health Manpower Information Systems

Eight countries in the Region are developing reliable national and/or district-level health manpower information systems to aid decision-making regarding policies, plans and their implementation and monitoring. Most of the countries have initiated varied activities in monitoring and assessing health workers' performance and to establish the necessary feedback mechanisms to ensure that the results are used for adjusting the manpower production and utilization practices. However, the systems and mechanisms for collecting, processing, storing, retrieving and feedback of information are still weak and the problems identified earlier in establishing comprehensive but practical health manpower information systems at all levels of the health manpower development process still persist. Also, the relationships of the manpower information system to the overall national health information system and its other components require further streamlining and reinforcing.

A nursing situation analysis was undertaken in BANGLADESH and the information will be incorporated into the long-term nursing development plans.

In BURMA, a consultant assisted in reviewing the existing health manpower information systems in order to streamline and coordinate the activities initiated by different agencies including DANIDA.

In the DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, during the period 1978-84 the number of medical doctors increased 1.2 times, thus improving the doctor : population ratio. Further, through language training under the WHO fellowships programme, health personnel have been trained in the English language for developing a regional and global collaboration in exchanging health manpower information.

In INDONESIA, consultancy services, subsidies for group educational activities and equipment were provided to the Centre for Education of Health Manpower (Pusdiknakes) for the development of the overall health manpower information system and pilot-testing of a computer-aided programme for data collection, analysis, storage and retrieval. Support is also being given to a pilot scheme to develop and field-test data-gathering instruments.
In NEPAL, WHO long-term staff assisted in the updating of the nursing manpower information data bank; a study has been launched to analyse the distribution and utilization of nursing manpower.

5.1.4 Health Manpower Utilization

The countries have realized that mal-utilization of health personnel tantamounts to a wastage of a scarce, expensive resource. This awareness has led to WHO directing its efforts towards improving the managerial processes of health manpower through the institution of a range of personnel management practices, including manpower supervision and studies of health workers' performance. Consultancy and country support was aimed at developing a conceptual framework that would help the countries identify the specific management needs of various categories of health workers and lead to a clearer identification of training needs, problems and possible solutions and the implementation of continuing education programmes linked to career development opportunities. Another aspect that has been recognized as requiring further improvement is the establishment and utilization of sets of regulations with regard to the standards of education and practice which could eliminate existing mismatches.

Although the countries are making serious attempts to improve the utilization of health personnel, major deficiencies of a fundamental nature still prevail. Often the working and living conditions, particularly of peripheral workers, are still unsatisfactory. Career development structures are ill-defined; incentives for performance and work in rural areas are absent or inadequate, and supervision and support are absent. Legal supportive mechanisms for education and service are not comprehensive enough. All of these lead to low levels of motivation and little job satisfaction, especially at district and primary health care levels, resulting in low productivity and inefficiency. Therefore, the Organization has laid particular emphasis on health manpower utilization as a matter of considerable urgency. In this regard, revision and review of job descriptions as an essential input for the training programmes to satisfy the changing needs, training of middle-level managers, assessment and analysis of the performance of the workers and the improvement of the capability of the national workers in all the above areas received priority attention during the year.

In BURMA, the project document for the UNDP-funded programme for strengthening nursing services and improving the technical and managerial skills of nursing manpower has been signed. Two administrative workshops for nurse tutors, public health nurses and matrons were conducted in order to strengthen patient care management.
A training workshop was conducted at the end of 1986 in cooperation with the Faculty of Public Health, University of Indonesia, to test out a training manual for health manpower management developed by WHO/HQ following two interregional consultations. The objective of the workshop was to review the training manual as to its usefulness and applicability to the political, administrative and social system in the country.

5.1.5 Continuing education

The urgency of establishing comprehensive systems of continuing education that respond promptly to the changes in programme needs as well as deficiencies in the competencies of the health workers has been recognized by all Member Countries but the progress towards achieving this aim has been slow. Yet most of the efforts at continuing education of the health workers tend to be rather unsystematic ad hoc activities often focusing on the transmission of technical information based on presumed programme needs, in group educational activities. The newer teaching and learning methodologies and communication techniques are not reflected in the design and execution of such training programmes.

In BANGLADESH, a continuing education programme was developed for nurse teachers, and courses in primary health care, paediatric nursing, intensive care nursing and community-oriented clinical teaching were conducted. A detailed course syllabus has been developed with inputs from the teachers of the 18 training centres.

In the DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, continuing education for different categories is provided by WHO consultants in health sciences and medical specialities.

In INDONESIA, in-service training in clinical instruction for nursing staff in hospitals and health centres used for clinical field practice has been carried out. The Faculty of Public Health developed new courses in social marketing, hospital management, and computer applications in health sciences, which are expected to develop into regular course units after the initial experimentation. Also, support was provided to the Pusdiknakes to develop distance learning modules for health workers posted in peripheral areas and, depending on the initial success, plans have been made for extending this programme.

A national workshop was held in MALDIVES to promote the development of a system of continuing education for all categories
of health workers as a follow-up of the earlier intercountry consultation on systematic approaches to continuing education.

A consultant assisted the doctors at the Central Hospital, Male, in conducting technical sessions on common problems in internal medicine using a problem-based approach.

5.2 HEALTH MANPOWER DEVELOPMENT RESEARCH

While research studies on different aspects of health manpower development have been undertaken in most countries, the major efforts of the Organization have been towards the achievement of the basic objectives of strengthening health manpower development research capabilities in Member Countries and to promote utilization of the research results.

Efforts have been directed towards the establishment of institutional mechanisms which could provide a forum where decision-makers, health services personnel and managers and research workers could identify and agree on priority research problems. It is expected that this would also result in a wider dissemination of research results, prompt follow-up actions for the application of research results by the service managers, and the maintenance of a continuing dialogue between research workers, decision-makers and health personnel.

The other area of concern relates to the promotion of a more systematic use of relevant information, as it has been observed that administrators do not always use information for decision-making even when it is available. Therefore the establishment of decision-linked health manpower research mechanisms such as working groups and intersectoral committees is being explored, initially in three countries, Indonesia, Sri Lanka and Thailand, where problems of immediate interest to managers of health personnel will be identified and studied. Also, the three studies initiated in the 'Problem-Oriented Research Information Seeking Behaviour Workshop' (PORIS) held earlier in India are being completed and the results are expected to make a definitive contribution to the solution of the problems identified.

In BANGLADESH, the baseline survey of 18 additional nurse training centres was completed and the results will be used for upgrading and monitoring the activities of these centres.

In BURMA, a WHO consultant assisted in formulating a proposal for carrying out a study of nursing activity for effective patient
care aimed at improving the utilization of nursing time. This has been submitted to the Government for approval.

In INDONESIA, studies have been developed on the assessment of primary health care nurses and the efforts to use the nursing process in nursing interventions. Studies have been completed on the performance of assistant nutritionists and health auxiliaries and the findings have been used to improve the curricula as well as the training of these workers. Work improvement studies on midwives at community health centres and paediatric nurses in Type 'C' hospitals were also completed.

5.3 MEDICAL EDUCATION

5.3.1 Undergraduate Medical Education

An intercountry consultation entitled "Reorientation of Medical Education: Trends, Issues and the Future", was held in the Regional Office in February 1987 to analyse the reasons for the slow progress of the earlier regional and national efforts in reorienting medical education systems towards community needs and to recommend concrete actions to accelerate and intensify the strategies. The participants, senior-level decision-makers from the higher education and health sectors, recommended that realistic targets for reorientation should be developed for individual countries and for the regions so that the progress towards implementing and achieving these could be monitored and evaluated. The Consultation also recommended that high-level national steering mechanisms with intersectoral representation be established or strengthened so that the curricula reforms and improvement of teaching and learning processes within medical schools could be accomplished by necessary parallel efforts in the health services system. Plans for the follow up of these actions at the country level have been drawn up.

In BANGLADESH, the Centre for Medical Education organized a series of workshops to review and revise the pre- and paraclinical curricula and to train the teachers in educational methodology and pedagogy.

In BURMA, a National Seminar on Medical Education was held in June and this addressed issues related to reorientation of medical education and curricula reform. Two consultants assisted the Department of Medical Education in this activity.
In INDIA, a symposium on "Medical Education and Primary Health Care Needs - Experiences on Successes and Failures", was held in March 1987 to develop a comprehensive plan of action for reorienting medical education in four major institutions. The reorientation of medical education (ROME) scheme has been critically reviewed by groups of principals and deans and representatives from different departments at a series of workshops organized by the National Teacher Training Centres in Pondicherry and Varanasi.

In INDONESIA, long-term staff and short-term consultants collaborated with the Consortium of Health Sciences in developing and pilot-testing the guidelines for field-based learning and student assessment. An experimental unit in integrated teaching and learning on the cardiovascular system is being implemented in two medical schools. The programme evaluation methodology to determine the effectiveness and efficiency of the core curriculum was developed after an initial assessment of the level of implementation and the problems being faced in all government medical schools.

In NEPAL, a consultant assisted the Educational Unit of the Institute of Medicine to develop problem-based learning approaches and integrated learning units in the pre- and paraclinical subjects.

A workshop to review the medical undergraduate Mental Health and Behavioural Sciences curriculum was held in SRI LANKA where representatives from all four faculties of medicine participated. A comprehensive review of the entire curriculum to align it to the current health care needs and priorities was recommended at this meeting.

THAILAND held a national conference on medical education and identified specific strategies to implement the changes desired in the context and process of medical education to enable doctors to meet the health needs of the next two decades.

All the countries received further support in the form of fellowships, subsidies for group educational activities, and supplies and equipment to strengthen the institutions concerned with undergraduate medical education, to upgrade the quality of the staff and the teaching and learning facilities.
5.3.2 Post-graduate Medical Education

Support to national-level institutions to formulate and develop post-graduate training programmes more directly relevant to national needs has been a major effort of the Organization. The Asia-Pacific Academic Consortium on Public Health, which brought together several public health training institutes in the Region, continued to receive support for its publications programme and to enable national participants from Indonesia, Nepal, Sri Lanka and Thailand to attend the Sixth and Seventh meetings, held in Jakarta and Hawaii in July 1986 and January 1987 respectively. Support was also provided for participants from Indonesia and Thailand to attend the Interregional Health-for-All Leadership Dialogue held in India.

In MALDIVES, one physician was recruited to help establish the Department of Medicine and a Cardiology Unit at the Central Hospital, Male; he also served as a consultant physician on internal medicine to train national doctors.

In SRI LANKA, the Post-graduate Institute of Medicine, Colombo, continued to recruit external examiners for its M.D. examinations with support from WHO. In addition, arrangements were made for several senior officials to visit India, UK, Thailand, Israel, Malaysia and Singapore to exchange views and experiences with their counterparts dealing with post-graduate medical education and to find placements for fellows, particularly for those undertaking training in MD Community Medicine.

5.4. NURSING EDUCATION AND SERVICES

5.4.1. Nursing Education

The development of nursing (education, services and research) has progressed to a great extent in most countries of the Region. The roles and functions of nursing midwifery personnel have undergone changes in most countries, to include a gradual shift to community health work in addition to institutional care of the sick. In several countries the basic preparation of nurses is gravitating towards the university stream. The principle that all nurse teachers and managers must be prepared in higher education programmes that provide both depth in nursing content and breadth in knowledge in other fields, has been accepted and enunciated in a position paper for a task force meeting of nurse leaders in the Region.

Reorientation of nursing education programmes in support of primary health care was carried out in Bangladesh, India, Indonesia,
Nepal and Thailand and the revised curricula are in various stages of implementation.

In BHUTAN, a national staff at M.Sc. level and three expatriate nurse tutors form the core of the teaching staff at the School of Nursing in Thimphu. A system for both written and *viva voce* examinations has been established. In spite of its limited resources, Bhutan readily agreed to enrol two candidates from Maldives in the basic nursing programme.

Two classes have graduated and the total programme has been evaluated by a consultant. The findings will be used for further strengthening the training programme.

In INDIA, guidelines for implementing the revised nursing curriculum in support of PHC were developed. A series of workshops for principals and tutors were conducted in order to familiarize them with the process and strategies for implementing the revised curriculum.

In INDONESIA, a guide book on the management of clinical/field practice experiences of Health Nurse (PK) students was prepared. Criteria and tools for assessing nursing students' performance have been developed and field-tested in the following areas: medical-surgical nursing, nursing management leadership, family-centred MCH, community mental health and paediatric nursing. Workshops were held for familiarizing teachers in the use of the assessment tools for evaluating student performance in the classroom and clinical areas.

A five-year plan for the development of a higher nursing education system was formulated and implemented with UNDP funding. International clinical nurse specialists are providing technical support until national personnel are prepared to assume the responsibility for teaching nursing courses.

The second group of students in both the generic baccalaureate and post-academy programmes at the University of Indonesia was admitted in August 1986. Pending appointment of full-time nurse teaching staff the teaching load is being carried out by consultants. Consideration is being given to utilizing graduates of the post-basic programme as teachers in different clinical areas.

In NEPAL, basic nursing education has expanded through two new training programmes in Biratnagar and Pokhara. Another programme is scheduled to open in Birgunj shortly.
Information and Education for Health

A pre-eminent role has been assigned to public information and education for health. Getting through to the people, using a variety of media mixes and strengthening linkages between the health services and health education as well as information units is the new thrust adopted in this strategy.

Nursing Education

Efforts are being made to further develop community-oriented and problem-based approaches to nursing education. Considering the important role played by the nursing profession in the provision of primary health care, necessary steps are being taken to reorient the basic nursing curriculum accordingly.

Nutrition

Through multisectoral efforts as well as through collaboration with other United Nations agencies, WHO supports a multi-pronged drive to alleviate the problem of malnutrition particularly among the vulnerable groups. Special attention is being paid to educate mothers on the nutritional value and role of easily available food and vegetables in, for example, preventing xerophthalmia.
MCH including Family Planning

High priority is given to the health of mothers and children in the Region. The accent is on ensuring safe deliveries as well as promoting the concept of proper spacing between children and on ensuring the healthy growth of the child.
The post-basic nursing programme continues to be implemented for the training of teachers for basic nurse and auxiliary nurse-midwife programmes, as well as for middle-level nursing managers in the Department of Health Services. Core courses are offered in the functional areas of administration, teaching, and research with options in the clinical fields of community nursing, midwifery, child health and adult nursing. Particular attention has been paid to community orientation and field practice. Entrance examinations were introduced in 1986.

In SRI LANKA, short-term fellowships were provided for further training in medical-surgical nursing, intensive care and paediatric nursing. PHC workshops were held for staff nurses and tutors on the clinical supervision of students. The revision of the post-basic curriculum is under way.

In THAILAND, technical input was provided to the Division of Nursing Colleges for the development of an evaluation plan and a set of evaluation tools.

The Faculty of Nursing, Khon Kaen University, is in the process of implementing Phase III of the problem-based teaching methodology. After the modules are evaluated, they will be made available to other nursing colleges in the Region for adaptation and use.

5.4.2. Nursing Services

In order to strengthen effective nursing/midwifery services further as an integral component of national HFA strategies, nurse leaders require resource materials. The Nurse Leader Primary Health Care Information Kit was designed as a practical approach for disseminating materials developed in the Organization by experts in the field and by persons actively involved in primary health care. This kit was well received and efforts are being made to meet the large number of requests.

Most countries recognize the need to utilize nursing/midwifery potential in a variety of non-institutional settings. Particular emphasis has been laid on the use of nursing/midwifery skills for providing direct health care in rural areas.

Expansion of posts for nursing/midwifery personnel at district/sub-centres has taken place in Bangladesh, Bhutan, India, Indonesia and Thailand.
In Indonesia, standards of nursing practice and guidelines for their use were formulated by national groups and are being tried out on an experimental basis.

National nursing associations and councils exist in most countries in this region. The great potential of these as pressure groups to effect needed changes in education and health care services in support of PHC has not been fully utilized. However, these groups are playing an active role in the dissemination of relevant information to their members and to the public.

Efforts to promote national research capability have generated interest and activities in some countries of the Region. Several research activities in PHC nursing practice are under way.

Indonesia and Thailand are the only countries in the Region that have supported the expansion of the functions of nurses. The curricula have been updated to include additional responsibilities for community work. Other countries such as Bangladesh and India are preparing nurses for expanded roles in PHC but graduates of these programmes are unable to function adequately because of the restrictions of existing regulations.

The training of traditional birth attendants (TBAs) has continued in this region. Most countries have developed teaching-learning materials in local languages for the training of TBAs. A task analysis of traditional birth attendants was completed as a basis for developing the training programme in Nepal. At least three studies on TBA training and practices were completed and the findings are used for the improvement of TBA training programmes and performance. A system of recording and registration of TBAs was developed in India, Indonesia, Nepal and Thailand.

5.5 TRAINING OF OTHER CATEGORIES OF HEALTH PERSONNEL

5.5.1 Training of Auxiliary and Paramedical Personnel

In Bangladesh, preservice training and refresher courses were conducted for the community health volunteers. Support and supervision for them were streamlined by better coordination with the regular field level health workers. The nongovernmental organizations, of which there are almost 130 active in PHC in Bangladesh, implement their programmes mainly with the assistance of the volunteer health workers.

The Ulemas (religious leaders), community leaders and the dais were also provided refresher training of a week's duration.
In BHUTAN, manuals for village health volunteer training were produced and almost 300 VHWs have been trained in 12 districts. This has improved the coverage and quality of basic health care in the country. One factor that concerns the PHC managers is the loss of contact with many previously trained VVHWs and this is being corrected. The supervision and support system is also being strengthened in this connection.

In BURMA, refresher training courses for community health workers (CHWs) were held. Health calendars for CHWs were produced and distributed. Manuals were produced for Ten Household Health Workers, CHWs and Basic Health Workers. Educational posters for the preparation of oral rehydration salts and diarrhoea charts were also produced. Training courses for Ten Household Workers were conducted in four PHC townships during October 1986 and March 1987.

A study to determine the current status, the level of performance and supervisory needs of the BHWs and CHWs is being conducted.

In INDIA, further expansions were made in the Village Health Guide scheme with additional recruitment and training of such health guides. A village health guidebook was published for the continuing education of the Village Health Guides. Support was provided for two officials of the Ministry of Health and Family Welfare to participate in the interregional conference on Community Health Workers held at Yaounde, Cameroon.

In INDONESIA, the village health volunteers (PROKESA) training programmes continued with initial training for the newly selected volunteers and refresher training for those active in service. Now most provinces have village health volunteers on the basis of one for twenty households, who are selected by the community. The volunteers are active in the delivery of the integrated family health package through the Posyandu where "in service training" is provided by the health team.

In NEPAL, 84 health post staff (auxiliary nurse midwives, assistant health workers) were trained in slide-making to detect malaria and in family planning. Besides, 118 community health workers were trained in promoting EPI and family planning and in reporting and recording. Fifteen village health workers were given refresher training in health education, maternity care recording and EPI promotion. Training for district health and population workers and for community members in health leadership was undertaken.
In THAILAND, as a part of the national 'quality of life' campaign, the Ministry of Public Health in collaboration with the ASEAN Training Centre for PHC and the National Economic and Social Development Board, developed training materials and conducted training activities nationwide to prepare government workers and village leaders to carry out the Basic Minimum Needs Surveys. This was an intensive multi-level intersectoral training programme.

A research project on self-management and technical cooperation among developing villages was conducted in five villages to assess in-depth qualitative achievements, including the performance of the village health volunteers.

Other activities included the training of 10th grade students using models to disseminate PHC knowledge related to disease prevention and control, mental health, and the prevention of blindness. Nongovernmental organizations were involved in developing some of these information units.

5.5.2 Training of Auxiliary and Paramedical Personnel

Recognizing that a major part of health care is provided directly to communities, families and individuals by health workers other than the professional groups, Member Countries are focusing increased attention on the auxiliary and paramedical workers at all levels of the health care system. With intensified activities in the promotion of PHC, attention has been drawn to the need for ensuring technical and logistic support required for the provision of sound referral systems from homes, communities, health centres and district health facilities, which, in general, are mostly manned by the health auxiliary and technician groups.

Refresher and in-service continuing education courses and workshops are ongoing in all Member Countries for these categories of health workers on various topics, to upgrade and promote competencies in the performance of their jobs. Control of communicable diseases such as malaria, leprosy, diarrhoea, tuberculosis, ARI, etc., continue to be the focus of training activities.

BANGLADESH was provided a long-term staff for paramedical training especially in the area of curriculum and course development. Training courses for technicians in electro-medical repair and maintenance for radiographers, laboratory and blood bank technicians have been held for 126 trainees, focused on small hospitals at upazila level and district hospitals.
In BHUTAN, training of paramedical staff (including technicians in the X-ray, laboratory, pharmacy, and dental areas as well as dental hygienists) is a priority programme in health manpower development.

In BURMA, a three-month training course for the 29th and 30th batches of Public Health Supervisors Grade II was conducted in Rangoon, where 116 participants and 109 participants respectively were trained.

Refresher training courses for health assistants, X-ray technicians I & II and laboratory technicians II were held. Paramedical training courses were also held. Four fellowships for the medical supply sector and for the repair and maintenance sectors have been provided.

In INDIA, support was provided for a meeting of the principals of the Health and Family Welfare Training Centres to review the performance of these centres and to discuss the guidelines/recommendations given by the Central Training Institute for short-term courses.

Two regional review meetings were held specially in regard to basic training of the Multipurpose Health Workers at Jabalpur and Bangalore. A regional workshop for the teachers of auxiliary nurse midwives and lady health visitors training schools and a national workshop for the teachers and public health nurses of ANM, LHV training schools were held.

Short courses for X-ray technicians in Uttar Pradesh, Madhya Pradesh, Himachal Pradesh, and Jammu and Kashmir were held. Two hundred courses for the training of paramedical workers in the promotion of oral rehydration therapy in different States were conducted.

In INDONESIA, the training of nutrition cadres by midwives was carried out for the purpose of stimulating mothers' awareness for self and family reliance in health care. A situation analysis on intersectoral collaboration of the Integrated Family Health Programme focuses on village, sub-district, district and provincial levels with a view to identify constraints, formulate mechanisms and identify skills required for health workers of various categories. Training courses for food inspectors, environmental sanitation workers and food handlers were carried out, including food hygiene and sanitation for catering employees.
In MALDIVES, the training of family health workers (island level) and the community health workers (atoll level) for leadership in health care was carried out. Twenty-one mobile training courses on “Child Spacing” were conducted in eighteen atolls. The participants trained were: 30 community health workers; 120 family health workers; 134 trained foolhumas; 129 untrained foolhumas; 171 island leaders, and 15 doctors and nurses.

The training programme emphasized appropriate information and communication skills in order to obtain an effective diffusion process. AHSTC continues to carry out basic and inservice training of family health workers (FHWs); foolhumas, assistant pharmacists and first aiders.

In NEPAL, the Field Education Support Unit is developing joint field practice areas for auxiliary nurse midwives, health assistants, community health nurses and medical students.

The publication, "Notes for the Practising Nurse Midwife" (SEARO Regional Health Papers No. 5) was adapted to the local situation and simplified for translation into Nepali.

Auxiliary Health Workers (AHWAs) are being trained at Vocational Training Schools set up within the Ministry of Education at Jumla (AHW) and Jiri (ANM); Training programmes in leprosy, TB control, EPI, prevention of blindness, malaria etc., continue with WHO providing support to most of the training activities. Seventy Community Health Workers (CHWs) were trained in nutrition and equipped with kits. MCH/FP training for community level workers is going on but supervision is weak. Training of laboratory staff at district and health post levels was carried out. Continued training of laboratory assistants, microscopists and health workers at zonal and district hospital laboratories using a three-month training module is ongoing. Training courses continue for AHWs in community-based rehabilitation; the WHO manual on Community Based Rehabilitation Services was translated. Training on TB control for field staff and for those incharge of health posts, on multi-drug therapy in leprosy control and of ophthalmology assistants in eye care and prevention of blindness were also carried out.

In SRI LANKA, workshops for PHC workers were held in community mental health, occupational health, community-based rehabilitation and in eye care. FHWs continue to provide much of the MCH services to communities.
In THAILAND, the main emphasis was to develop an appropriate curriculum for on-the-job training of tambon health personnel and for their career development using the research and development approach. The new curriculum would improve the performance of peripheral health personnel, crucial for primary health care development, while providing them with opportunities for promotion without having to leave their working place, i.e., the health centres. The proposed curriculum is still under review.

5.6 TEACHER TRAINING

The teacher training efforts of the Organization have been directed towards two main objectives: (i) to enhance the competence of the teachers and trainers of health personnel in curriculum development and revision so that the education and training programmes are relevant to the national HFA goals, and (ii) to promote the adoption of efficient and effective teaching and learning processes. These initiatives have gone a long way towards the institution of more community-oriented, (even community-based), task and competence-based, learner-centred programmes and teaching and learning experiences. Most of the countries have national teacher training centres which have provided opportunities to the staff of the health personnel education institutions to learn basic educational science and technology. The two Regional Teacher Training Centres in Bangkok, Thailand, and Peradeniya, Sri Lanka, continued to provide courses and experiences in educational science to fellows from other countries of the Region. The current status of developments in the Region indicates that know-how in the basics of the educational process is widely available in the Member Countries although the implementation of the defined changes continues to be slower than expected. This issue constitutes one of the areas that would receive greater attention in the coming year.

In BURMA, a national task force on problem-solving education and patient management problems (PMP) was formed by the Department of Medical Education in order to keep faculty members of the three Institutes of Medicine and one Institute of Dental Medicine abreast of new techniques in problem-oriented teaching/learning exercises. In line with these arrangements, a consultant assisted faculty members in conducting a national workshop on problem-oriented clinical education to develop problem-solving, multiple-choice questions (MCQ) and PMP for the above purpose. The consultant also collaborated in developing the plans of work in such areas as educational testing, teaching/learning techniques, educational media and faculty development for problem-oriented teaching.
In the DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, each of the eleven medical and pharmaceutical universities have their own teacher training courses for training faculty members of the existing universities and the twelve medical high schools. After graduation from medical universities, selected students enter one or two years' teacher training courses at the universities. After obtaining the Diploma in Educational Technology, they qualify as faculty members for the medical universities and schools. Some of the faculty members were awarded fellowships to promote their skills in the subjects they teach as well as in educational technology.

In INDIA, the three National Teacher Training Centres (NTTCs) at Varanasi, Pondicherry and Chandigarh, have, with WHO support, conducted several workshops, consultations and seminars in which there was wide participation by national faculty members.

In SRI LANKA, a consultant reviewed the teacher training programmes conducted at the NIHS, Kalutara, for the trainers of primary health care workers and developed a curriculum and a manual on teacher training suitable for teachers of PHC workers with the assistance of the NIHS faculty.

The Regional Teacher Training Centre at Peradeniya conducted regular introductory courses on educational science for the teachers of medical schools and other training institutions for health personnel in addition to providing specific programmes for regional fellowships.

5.7 HEALTH-LEARNING MATERIALS

There is an acute shortage in the Region of effective, student-centered teaching and learning materials, especially those appropriate for middle- and primary-level workers. This has been identified as a serious deficiency that hinders the expansion and improvement of pre-service and in-service education and training programmes. The linguistic and cultural variances have shown that even a regional-level production effort is often unsuitable for this purpose. Therefore, in response to the country-level interests, support has been provided to develop, test, produce and utilize teaching and learning materials effectively, and to strengthen the institutional capabilities towards self-reliance in this important area.

The health learning materials project of the Institute of Medicine, Nepal, which is part of an interregional activity
supported by AGFUND, made good progress with the improvement of its technical and editorial know-how and production capacity. The rapid expansion of this project has strained the existing office space and this is presently a serious handicap.

In BANGLADESH, a guidebook for community health nursing field practice experience was completed. The tool for the clinical evaluation of community health nursing is being revised and will be field tested.

In BHUTAN, the Communication Division, Thimphu, which plays an important role in developing and distributing educational materials on rural development including health, published "Health for Growth" for use in all primary schools.

In BURMA, the training section of the Department of Health has improved the production of health learning materials by evaluating the existing learning materials for several categories of health workers and conducting a series of workshops for trainers on the preparation and production of health learning materials.

In the DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, the Red Cross Hospital has established facilities for designing, development and production of health learning materials.

In INDONESIA, a consultant assisted the faculty of public health in developing its media centre to serve the public health education institutions in providing appropriate teaching and learning materials. Also, the Centre for Education of Health Manpower (Pusdiknakes) has received support in developing distance learning materials for middle- and primary-level health workers, particularly in the remote areas.

In MALDIVES, handbooks for nutritionists and family health workers were published by the Allied Health Services Training Centre. Several documents and visual aids related to health were also produced for television.

In SRI LANKA, the National Institute of Health Sciences received assistance by way of a consultant and subsidies to develop health learning materials suitable for its trainees.
English Language Self-Instructional Package (ELSIP)

Communication deficiency because of difficulties with the English language has been a growing concern in many of the Member Countries for over a decade and this has seriously affected, in particular, the implementation of the fellowships programme. The ineffectiveness of the remedial measures, such as special and intensive courses in English combined with the logistic problems inherent in such centralized courses, persuaded the Regional Office to develop an English Language Self-Instructional Package (ELSIP).

This package consists of graded material in five levels of language difficulty, reaching in the final level the competency required to pass an English language proficiency test such as the TOEFL.

A pilot study was initiated in three countries - Burma, Indonesia and Thailand - and the interim feedback has been positive. Improvements will be effected in the package on the basis of this feedback.

Requests were received from Bangladesh and Maldives, and Mongolia, Nepal and Sri Lanka have also expressed interest in procuring sets of ELSIP.

5.8 MANPOWER ACTIVITIES IN OTHER PROGRAMMES

5.8.1 Education and Training in Maternal and Child Health

Education and training activities in maternal and child health continued to be maintained in the countries of the Region.

In BANGLADESH, in collaboration with NORAD, training of medical officers and family welfare visitors on asepsis, operation theatre management, post-operative care and follow up, has been provided by a "Family Planning Clinical Supervision Team" consisting of WHO consultants and nationals. On-the-job training was also provided to medical officers in the techniques of male and female sterilization.

In BHUTAN, the National Institute of Family Health (NIFH), Gaylephug, funded by UNFPA in collaboration with WHO, continued to provide refresher training in MCH/FP, nutrition and EPI to a wide category of health workers, such as health assistants, auxiliary nurse midwives and basic health workers.
In BURMA, the training of auxiliary midwives continued to be supported. In-service training for lady health visitors (LHVs) and midwives (MWs) was also provided with a view to improving the quality of family health care in all townships. Manuals for LHVs and MWs have also been produced. Fellowships have been awarded in MCH and school health.

Assistance and training of nationals on various aspects of cytogenetics was provided in the DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA through consultant services. Fellowships have been awarded in pregnancy control, perinatal care, gynaecology and endocrinology and care of the newborn. In collaboration with UNFPA, fellowships have also been awarded in family planning statistical analysis and research.

In INDIA, WHO fellowships were provided with a view to strengthening senior level management in the organization and delivery of MCH services.

In INDONESIA, WHO fellowships were awarded and study tours arranged for medical and nursing personnel in the fields of maternal and child health, community health development and community health nursing.

In collaboration with UNFPA, as part of a child-spacing programme, refresher training programmes, refresher training courses in MCH and family planning were conducted in MALDIVES for medical and nursing personnel, community health workers, family health workers and foolhumas. Fellowships have also been awarded in the field of infertility surgery.

WHO consultants were assigned to MONGOLIA to train physicians in obstetrics and gynaecology, paediatric neonatopathology and paediatric ENT microsurgery. Fellowships have also been awarded for further specialization in obstetrics and paediatrics.

In NEPAL, support was provided for a post-graduate training course leading to a diploma in gynaecology and obstetrics.

In SRI LANKA, health staff at all levels were trained on the revised information system for MCH/FP with emphasis on the use of
information for monitoring and evaluation. In collaboration with UNFPA, public health nursing sisters were trained in the theory and techniques of IUCD insertion and in the use of long-acting injectable contraceptives.

5.8.2 Education and Training Activities in Environmental Health

An intercountry workshop on Acceleration of National Programmes on Sanitary Disposal of Human Excreta was held in New Delhi in October 1986 to review the pace of implementation of sanitary excreta disposal programmes in Member Countries and recommend action guidelines for accelerating their implementation. Seven countries from SEAR participated in the workshop. Another intercountry workshop on the UNDP-supported project on Women's Participation in Community Water Supply and Sanitation was held in Kathmandu in September 1986 with 21 participants to review the findings of the case studies being carried out in Indonesia, Nepal, Sri Lanka and Thailand.

With support from the International Programme on Chemical Safety, six participants from four countries of the Region attended a chemical safety and toxicology course in the U.K.

In BANGLADESH, a series of courses, seminars and workshops were conducted to train sector personnel in different categories, including engineers, upazila committee members and Madrassa teachers, voluntary workers and intersectoral officials. A Regional study tour/course and two post-graduate fellowships were being planned for training abroad. A WHO consultant and a national expert assisted in developing a proposal for setting up a training institute for water supply and sanitation personnel.

In BHUTAN, under the project on low-cost sanitation for schools, basic health units and dispensaries supported by UNDP, fellowships were awarded to two national engineers for post-graduate training at the All-India Institute of Hygiene and Public Health, Calcutta; short training courses were conducted for technicians and volunteers in latrine construction.

In BURMA, a fellowship was awarded for a training course in Thailand. Six nationals will be trained in the U.K. to study water supply and sanitation, hydrological, financial and accounting aspects, etc.
In the DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA, on-the-job training of national staff in air and water pollution control was carried out by WHO consultants. Three more fellowships were being processed for training abroad, one year each in air pollution monitoring, food safety and institutional aspects.

In INDIA, the curricula of training courses for sanitation workers were revised and arrangements were made for these courses to be conducted at the Safai Vidyalaya Sanitation Institute, Ahmedabad, Gujarat (6 courses, 120 participants), the Institute of Public Health and Preventive Medicine, Poonamallee, Madras (6 courses, 120 participants) and at the All-India Institute of Hygiene and Public Health, Calcutta (5 courses, 125 participants). District and block level technicians engaged in the installation and maintenance of handpumps (India mark II) were trained through special courses conducted in Uttar Pradesh and Gujarat. Eight engineers participated in a six-week study tour of community water supply and sanitation practices in the Republic of Korea, Philippines and Thailand. Arrangements were made for five engineers to observe sewage treatment practices in the U.K. for six weeks and another group of five engineers to undergo three-month training in the planning, implementation and management of water supply systems at high altitudes.

In INDONESIA, the UNDP-supported project on human resources development for rural water supply and sanitation has ended. Under this project, various in-service training courses were organized and fellowships awarded for training at the Health Controllers Academy and for the diploma course in public health. In addition, a number of fellowships were awarded under other projects. The UNDP project on Training in Pre-investment Planning for the engineers of CIPTA KARYA was started. A training course on basic toxicology and chemical safety was held with support from the International Programme on Chemical Safety. A sector official attended a two-week seminar on environmental impact assessment in Aberdeen, U.K.

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

In MONGOLIA, a seminar on spring-fed water supply and biolodac sewage treatment was conducted with the assistance of a WHO consultant. Two fellows received training abroad, one in the German Democratic Republic and the other in the USSR.
In NEPAL, four fellowships were awarded for an observation tour in environmental sanitation in India, Thailand and Indonesia; one fellowship was awarded in water supply and sanitation in Thailand, Malaysia, Singapore, Indonesia and the Philippines; three fellowships were supported for post-graduate studies in sanitary engineering in the Netherlands, and four fellows visited India, Bangladesh and Thailand for a study of water supply and sanitation schemes.

In SRI LANKA, on-the-job training of engineers and geologists of the NWSDB in groundwater investigations and tubewell drilling techniques continued. In addition, eight tubewell drillers received three-month training in India through WHO fellowships. Arrangements were made for two engineers to receive eleven-month post-graduate training in sanitary engineering in Delft, the Netherlands.

In THAILAND, training in water supply and sanitation at community level was carried out as part of the PHC training programme.

5.8.3 Manpower Training Activities in Diarrhoeal Diseases Control

During the period under review, courses, workshops and meetings on various aspects of diarrhoeal diseases control were organized and supported by WHO. An Interregional Workshop on Clinical Trials of Methods for Research was held in November 1986 at Delhi which was attended by participants from Bangladesh and India. Three intercountry courses on clinical management of diarrhoeal diseases were held at NICED, Calcutta, in August and October 1986 and June 1987. The main objectives of these courses was to train participants in the clinical management of acute diarrhoeal diseases with the latest treatment methodology. Another intercountry course on laboratory aspects of control of diarrhoeal diseases was held at NICED, Calcutta, in August 1986 for trained micro-biologists working in the public health laboratories. In all, 62 participants from Bangladesh, Bhutan, DPR Korea, India, Indonesia, Maldives, Mongolia, Nepal, Sri Lanka and Thailand were trained in these intercountry courses.

In BANGLADESH, a Workshop on Epidemiological Research Methods for Diarrhoal Diseases was held by WHO headquarters at ICDDR, B, Dhaka in November 1986. WHO supported national supervisory skills training courses in February and March 1987.
A special course on clinical management of diarrhoeal diseases was conducted for 13 participants from BHUTAN at NICED, Calcutta, in November 1986.

In BURMA, WHO headquarters conducted a Workshop on Epidemiological Methods in Diarrhoeal Diseases Research at the Department of Medical Research, Rangoon, in June 1987.

In INDIA, WHO supported national training courses in supervisory skills training by providing educational materials.

In INDONESIA, a comprehensive review of the National CDD Programme was conducted in November-December 1986. Funds were provided to support seven diarrhoea training units; clinical training for health workers from health centres and hospitals in 27 regencies; four supervisory skills training courses for 35 participants each; and six courses on laboratory training.

In NEPAL, a national supervisory skills training course was held in February 1987 in which 27 participants were trained.

5.9 FELLOWSHIPS

During the period from 1 July 1986 to 30 June 1987, 756 fellowships were awarded using various sources of funds: 619 from the Regular Budget, 99 from UNDP, 20 from UNFPA and 18 from other sources/projects funded by WHO headquarters. The fellowships awarded under the Regular Budget consisted of 583 against the 1986-1987 provision and 36 against the 1984-1985 budget.

5.9.1 Implementation

Under the regular budget for the 1986-1987 biennium, as of 30 June 1987, a sum of US $3,831,864 had been obligated for fellowships, constituting 37 per cent of the total fellowships budget. Out of 1,553 fellowships planned for the biennium 1986-1987, 709 fellowships (45.7 per cent) were awarded as of 30 June 1987. These included 90 fellowships awarded during 1 January to 30 June 1986.

UNDP provided US $2,529,502 for fellowships during 1986, which represented 32.6 per cent of the total UNDP budget for the Region. As at 31 December 1986, a sum of US $615,500 had been obligated, constituting 24.3 per cent of the fellowships budget. During 1986 the number of UNDP fellowships awarded was 180.
Under UNFPA funds, a total of US $273,744 was provided for fellowships during 1986 for the Region, representing 31.6 per cent of the UNFPA budget. As at 31 December 1986, a sum of US $116,200 had been obligated, constituting 42.4 per cent of the fellowships budget. The number of UNFPA fellowships awarded during 1986 was 23.

Table 1 shows the distribution of fellowships by region of study. Out of the fellowships awarded for study within South-East Asia, 139 were in-country fellowships.

**Table 1. Distribution of fellowships under the regular budget, by region of study (1 July 1986 to 30 June 1987)**

<table>
<thead>
<tr>
<th>Country</th>
<th>American</th>
<th>Eastern Mediterranean</th>
<th>European</th>
<th>South-East Asia</th>
<th>Western Pacific</th>
<th>More than one region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>1</td>
<td>-</td>
<td>3</td>
<td>37</td>
<td>-</td>
<td>2</td>
<td>43</td>
</tr>
<tr>
<td>Bhutan</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Burma</td>
<td>3</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>DPR Korea</td>
<td>-</td>
<td>-</td>
<td>46</td>
<td>2</td>
<td>6</td>
<td>-</td>
<td>54</td>
</tr>
<tr>
<td>India</td>
<td>15</td>
<td>-</td>
<td>18</td>
<td>37</td>
<td>2</td>
<td>38</td>
<td>110</td>
</tr>
<tr>
<td>Indonesia</td>
<td>12</td>
<td>-</td>
<td>7</td>
<td>115</td>
<td>9</td>
<td>40</td>
<td>183</td>
</tr>
<tr>
<td>Maldives</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Mongolia</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Nepal</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>83</td>
<td>3</td>
<td>3</td>
<td>91</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>3</td>
<td>-</td>
<td>9</td>
<td>35</td>
<td>6</td>
<td>33</td>
<td>86</td>
</tr>
<tr>
<td>Thailand</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total** | 39       | 2                     | 96       | 329             | 33             | 120                  | 619   |

**Percentage** | 6.3      | 0.3                   | 15.5     | 53.1            | 5.3            | 19.4                 | 100.0 |
The distribution of fellows by professional category is as follows: doctors 236, engineers 45, nurses 64 and others 274.

Table 2 shows the percentages of fellowships awarded to males and females, by age group and the duration of fellowships.

**TABLE 2. Distribution of fellowships, by sex, age and duration (1 July 1986 to 30 June 1987)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>447</td>
<td>172</td>
<td>619</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 25</td>
<td>10</td>
<td></td>
<td>1.6</td>
</tr>
<tr>
<td>26-35</td>
<td>193</td>
<td></td>
<td>31.2</td>
</tr>
<tr>
<td>36-45</td>
<td>219</td>
<td></td>
<td>35.4</td>
</tr>
<tr>
<td>46-55</td>
<td>166</td>
<td></td>
<td>26.8</td>
</tr>
<tr>
<td>Over 55</td>
<td>31</td>
<td></td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>619</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 1</td>
<td>147</td>
<td></td>
<td>23.7</td>
</tr>
<tr>
<td>1-3</td>
<td>250</td>
<td></td>
<td>40.4</td>
</tr>
<tr>
<td>3-6</td>
<td>41</td>
<td></td>
<td>6.6</td>
</tr>
<tr>
<td>6-12</td>
<td>156</td>
<td></td>
<td>25.2</td>
</tr>
<tr>
<td>Over 12</td>
<td>25</td>
<td></td>
<td>4.0</td>
</tr>
<tr>
<td>Total</td>
<td>619</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

As can be seen in Table 3, 140 (or 22.7 per cent) of the fellowships were awarded in the field of communicable diseases and laboratory services. One twenty-five (or 20.3 per cent) fellowships were awarded in the field of public health administration.
<table>
<thead>
<tr>
<th>Subject</th>
<th>BAN</th>
<th>BHU</th>
<th>BUR</th>
<th>DPRK</th>
<th>IND</th>
<th>INO</th>
<th>MAV</th>
<th>MOG</th>
<th>NEP</th>
<th>SRI</th>
<th>THA</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public health administration</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>64</td>
<td>1</td>
<td>4</td>
<td>15</td>
<td>20</td>
<td></td>
<td>125</td>
<td>20.3%</td>
</tr>
<tr>
<td>Environmental health</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>23</td>
<td>25</td>
<td>1</td>
<td>10</td>
<td></td>
<td>11</td>
<td></td>
<td>73</td>
<td>11.9%</td>
</tr>
<tr>
<td>Nursing</td>
<td>2</td>
<td>3</td>
<td></td>
<td>5</td>
<td>12</td>
<td>3</td>
<td></td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td>33</td>
<td>5.3%</td>
</tr>
<tr>
<td>Maternal and child health</td>
<td></td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td>22</td>
<td>3.6%</td>
</tr>
<tr>
<td>Communicable diseases and laboratory</td>
<td>15</td>
<td>1</td>
<td>1</td>
<td>39</td>
<td>44</td>
<td>3</td>
<td></td>
<td>25</td>
<td>9</td>
<td>3</td>
<td></td>
<td>140</td>
<td>22.7%</td>
</tr>
<tr>
<td>Clinical sciences</td>
<td>3</td>
<td>1</td>
<td>9</td>
<td>11</td>
<td>13</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>60</td>
<td>9.8%</td>
</tr>
<tr>
<td>Basic medical sciences and education</td>
<td>4</td>
<td>2</td>
<td></td>
<td>11</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>8</td>
<td></td>
<td>1</td>
<td>39</td>
<td>6.4%</td>
</tr>
<tr>
<td>Research methodology</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>10</td>
<td></td>
<td>19</td>
<td>13</td>
<td>28</td>
<td>1</td>
<td>2</td>
<td>27</td>
<td>22</td>
<td></td>
<td>123</td>
<td>19.9%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>10</td>
<td>14</td>
<td>54</td>
<td>110</td>
<td>183</td>
<td>13</td>
<td>9</td>
<td>91</td>
<td>86</td>
<td>6</td>
<td>619</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
5.9.2 Fellows from Other Regions

During the period under review, placements in the South-East Asia Region were also arranged for 132 fellows from other Regions: 47 from the Eastern Mediterranean Region, and 82 from the Western Pacific Region.

5.9.3 Evaluation

A total of 54 termination-of-studies reports were received during the period under review. So far, no utilization-of-studies reports have been submitted by the fellows.

An evaluation of the effectiveness of the WHO-supported fellowships programme vis-a-vis its impact on the health manpower development and health services delivery of the countries is being undertaken in Indonesia. An interim report has already been received. A similar study is being proposed in Nepal and India. This study will give an insight into the implementation of the new fellowships policy.

5.9.4 Constraints

The language requirements for placement in the United States of America and the United Kingdom remain as the major constraint in arranging placements in the UK and long-term placement in the USA. It is hoped that the development of the English Language Self-Instructional Package (ELSIP) can be useful in improving language capabilities of prospective fellows. The late receipt of applications and relevant documentation continued to be one of the major factors for delays in arranging placements and for the last-minute rush in issuing awards or reprogramming funds.

5.10 GROUP EDUCATIONAL ACTIVITIES

During the period under review, 32 meetings/group educational activities were organized, of which 28 were regional, and 4 interregional. In addition, there were 4 policy meetings. These group educational activities consisted mainly of regional meetings, workshops, consultative meetings, short training courses and conferences on coordination. The 28 intercountry activities were attended by a total of 385 participants from the countries of the Region. The breakdown, by country and type, is given in Tables 4 and 5.
TABLE 4. Countries represented and number of participants in intercountry meetings/activities

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of meetings</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>13</td>
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<tr>
<td>Bhutan</td>
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<tr>
<td>Burma</td>
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<tr>
<td>DPR Korea</td>
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<td>India</td>
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<td>Maldives</td>
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<td>9</td>
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<tr>
<td>Nepal</td>
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<td>Sri Lanka</td>
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<tr>
<td>Thailand</td>
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</table>

TABLE 5. Intercountry activities, by type and participants (1 July 1986 to 30 June 1987)

<table>
<thead>
<tr>
<th>Type of activity</th>
<th>Number</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional meetings</td>
<td>7</td>
<td>105</td>
</tr>
<tr>
<td>Workshops</td>
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<td>144</td>
</tr>
<tr>
<td>Consultative meetings</td>
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<td>88</td>
</tr>
<tr>
<td>Short training courses</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>Coordination meetings</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>

During the period under report, 3 advisory meetings were held, i.e., South-East Advisory Committee on Medical Research, Peer Review of Human Trial of Candidates and Meeting of Directors of Medical Research Councils and Analogous Bodies.

Group educational activities dealt with a wide variety of subjects: Disaster Preparedness and Health Management Activities, Dog Population Management, Surveillance and Control of Food-Borne Diseases, Recent Advances in Contraceptive Technology, Control of Dengue/Dengue Haemorrhagic Fever, Prevention and Control of AIDS, National Programmes on Sanitary Disposal of Human Excreta, Research in Prevention of Blindness Programmes, Clinical Management of Acute Diarrhoeal Diseases, etc.