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Regional Consultation on Development of Traditional Medicine in South-East Asia Region

Report of a Regional Consultative Meeting

New Delhi, 14 – 17 September 1999



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1. INTRODUCTION

The Ministers of Health of the South-East Asia Region during their meeting in September 1998 had strongly emphasized that the rich heritage of traditional medicine in the countries of the Region was a resource which should be used more effectively in implementing primary health care. There is a need to share information among countries about the use of medicinal plants, their safety and efficacy, and how to exploit a vast and increasing potential for export of such plants from the Region. There is also a need to strengthen national centres of expertise in traditional medicine and to designate more WHO collaborating centres in order to strengthen regional and intercountry cooperation.

A Regional Consultation on Development of Traditional Medicine in the South-East Asia Region was held in the WHO South East Asia Regional Office (SEARO), New Delhi, from 14 to 17 September 1999. The objectives of the meeting were as follows:

General Objective:

To promote the development and strengthening of national traditional medicine programmes and district health systems in the countries of the South-East Asia Region.

Specific Objectives:

- (1) To discuss national policy and strategy for the development and use of traditional medicine.
- (2) To strengthen traditional medicine (TRM) programmes and identify their possible role in the district health system (DHS)/primary health care (PHC).
- (3) To strengthen the involvement of WHO collaborating centres and national centres of expertise on TRM and PHC in improving DHS.

- (4) To identify areas and topics for operational research that would help in achieving the above specific objectives.

The Consultation was attended by representatives from all Member Countries in the Region. A full list of participants, resource persons and observers is given in Annex 1. The programme of the consultation is given in Annex 2.

Dr Uton Muchtar Rafei, Regional Director, WHO South-East Asia Region, inaugurated the meeting. Welcoming the participants, he said that there is a rich resource of traditional medicines and practice in the countries of South-East Asia. This is supported by extensive biodiversity in medicinal plants used in traditional medicine. In addition, there are a large number of traditional medicine practitioners who are available for health care and yet traditional medicine does not have primacy of place in the health care systems of the countries in the Region.

Referring to the Meeting of the Ministers of Health held in New Delhi in September 1998, he said that the Ministers had strongly emphasized that these resources should be used more effectively in the delivery of primary health care. They had stated that there was a need to include traditional medicines, subject to their demonstration of quality, safety and efficacy, in national health programmes. The Regional Director hoped that the meeting would take up this challenge and provide innovative approaches that would help draw maximum benefit from these traditional systems.

The Regional Director said it should be kept in mind during the deliberations, that within the broad area of traditional medicine, there are many differences. There are several different systems of traditional medicine like Ayurveda, Unani, Chinese, Myanmar, Thai, Tibetan and others. These include traditional practices such as massage, acupuncture and acupressure. Then there is folklore medicine practised by herbalists.

The wide acceptance of traditional medicines in the countries of the Region is a very positive factor for the use of these medicines. However, this factor could also encourage the use of unproven medicinal plants and traditional practices. Also, as several medicinal plants become scarce due to eco-destruction, there are cases of substitution of effective plants by non-

effective ones. It is extremely important to standardize plant products being used in traditional medicine. It is also important to study the socio-cultural influences in the use of traditional medicines.

The world over, there has recently been heightened interest in traditional medicine. This has brought about both expectations of economic benefit and dangers of exploitation. It is increasingly important for scientists and administrators to understand the implications of the intellectual property rights regulations on the use of plants. There is certainly a need to take steps to protect these remedies that have been used for generations in our countries. The challenge is to find the correct balance between economic gain from the world-wide demand for herbal remedies, and at the same time, protection of the Region's biodiversity.

The Regional Director said that he looked forward to the outcome of the deliberations and that he hoped that the meeting would help in the optimal utilization of the rich heritage present in this region for the improved delivery of primary health care (see Annex 3 for full text of address).

Statements by representatives of the IDRC and UNESCO at the opening session are given in Annexes 4 and 5 respectively. The background papers for the meeting are listed in Annex 6.

2. WHO POLICY AND ACTIVITIES IN THE FIELD OF TRADITIONAL MEDICINE

Dr Xiaorui Zhang, Acting Team Coordinator, Traditional Medicine, WHO Headquarters, gave a presentation on 'WHO Policy And Activities In The Field Of Traditional Medicine'. With regard to trends in the use of traditional medicine, she mentioned that large numbers of population in many developing countries still rely on traditional medicine and its practitioners for their primary health care needs, as it is accessible and affordable. During the last decade, traditional medicine as alternative/complementary medicine has been used increasingly in industrialized countries. WHO encourages and supports Member States in integrating traditional medicine into their national health care systems, particularly in primary health care. WHO's major objectives in the field of traditional medicine are: to support Member States

in developing their own traditional medicine and in integrating it into their national health care systems; to promote the appropriate use of traditional medicine by providing technical guidelines, standards and methodologies, and to facilitate exchange of relevant information among Member States. She introduced the guidelines for formulating policies on traditional medicine which had been issued by a consultation on AIDS and traditional medicine on prospects for involving traditional medicine health practitioners and AIDS in 1990. The guidelines covered the following major areas: legislation and regulation; education and training; research and development; ethical issues; and allocation of financial and other resources. Dr Xiaorui Zhang also presented in detail WHO's policy and activities as well as approaches on each aspect. She concluded by saying that this regional consultation would help share country experiences in such aspects as national policy and regulation, use of traditional medicine at primary health care level, research on safety and efficacy in the use of herbal medicines, as well as cooperation between countries and WHO collaborating centres. There is no doubt that the consultation and discussion will further facilitate integrating traditional medicine into national health care systems and that primary health care would be further improved.

3. SELECTION OF A CORE LIST OF ESSENTIAL TRADITIONAL REMEDIES

Dr Pennapa Subcharoen presented her paper on the use of traditional medicine at the primary health care level. She stated that there were signs that modern medicines were becoming less popular for use at the primary health care level. The expenditure on drugs was constantly rising. There was a misconceived idea about the definition of health. Health should be defined as a 'State of well-being'. In chronic diseases like diabetes mellitus and hypertension, the treatment could include administering medicinal plants in different forms of preparation such as a vegetable, or a juice, as herbal teas or as a herbal drug. This would be the type of integration possible. The holistic approach analyses the cause of imbalance in the system which leads to ill health. The imbalance could have been caused by factors such as age, climate and the elements. Holistic health endeavours to restore the balance.

Dr Pennapa suggested that in the traditional system of medicine, there are many methods and practices described for maintaining good health. These include use of specific foods and juices, Nuad Thai (Thai massage), herbal medicine and meditation. A careful selection, based on the criteria evolved, should be made of plants which could be used for common diseases at the primary health care level. These selected herbs would then need to be cultivated locally and tested for toxicity before use.

4. INTEGRATION OF TRADITIONAL MEDICINE INTO HEALTH CARE SYSTEM

Dr Nuntavan Bunyapraphatsara, Faculty of Pharmacy, Mahidol University, Thailand, in her presentation said that traditional medicine has been integrated into the health care system in the developing countries on account of inadequate resources, including human resources and budget. Health resources tend to be concentrated in the urban areas, which account for only a small part of the population. The inadequate resources in the rural areas force the people to rely on traditional medicine. It is estimated that about 80% of the world's population rely on traditional medicine. The economic crisis in South-East Asia prompted governments to seriously consider traditional medicine as an alternative medicine, especially in the primary health care system.

Traditional medicine has advantages over modern medicine in that it is simple and culturally accepted by the communities. A close relationship between practitioners and patients is developed during treatment in traditional medicine. On the contrary, the physicians of the modern system of medicine spend only a few minutes for diagnosis and their functioning has been replaced by technology, nurses and other paraprofessional personnel.

To achieve the harmonization of the two systems, each country should consider the following requirements: strong and continuous policy, establishment of a database relating to traditional medicine including medicinal plants, establishment of guidelines for the assessment of herbal medicine, community identification, training programmes and research. The approaches depend on the status of traditional medicine in each country. In a country where traditional medicine is continuously practised, exchanging

experience and cooperation between traditional practitioners and physicians may be sufficient to achieve the integration. In countries where western medicine is predominant, the scientific approach should be integrated into traditional medicine.

5. THE ROLE OF TRADITIONAL MEDICINE IN PRIMARY HEALTH CARE IN CHINA

Dr Zhang Qi of the State Administration of Traditional Chinese Medicine (TCM), People's Republic of China, made a presentation on 'The Role of Traditional Medicine in Primary Health Care in China'. His presentation covered the country's policy, the current situation as regards traditional medicine and the goals which were expected to be achieved.

The government, he said, gave equal importance to both the traditional system of medicine and the modern western system. The policy supported simultaneous development of both traditional medicine and traditional pharmacy. It also supported the existing policy of integration of both systems of medicine. The Government also wanted the advances in modern science and technology to be utilized for the development and promotion of TCM.

One of the national policies on public health was to 'unite Traditional Chinese Medicine and western medicine' for public health.

Describing the current situation in China regarding the use of TCM in the rural areas, Dr Zhang Qi said that stress was laid on the training of personnel to improve the quality of care. Also, every effort was made to actively spread the use of Chinese Traditional Medicine. The academic level of traditional medicine was also being raised. In the three-tier medical and health care system, the principle followed was to encourage the concept of 'one system, multiple use'. The practice of traditional medicine was being modified according to local conditions and particularly with a view to integrating it with the modern system of medicine in the rural areas. Efforts were being made to enhance the leadership in traditional medicine and also increase the resources for this system of medicine. In all these ways the work on different aspects of traditional medicine is being taken forward in the country.

Goals have been set for the year 2000 and the year 2005. By the year 2000 the system of TCM would be set up as needed and there would be improvement in the quality of work at the hospitals run under the Chinese System of Traditional Medicine. There would be an increase in TCM activities at the health stations at the city level and systematic training programmes would be introduced for village doctors to meet the demand for services in the traditional system of medicine for primary health care in the rural areas.

By the year 2005 there would be considerably improved services under the Traditional Chinese System of Medicine in the rural areas. The health station would possess the ability to prevent and treat diseases with the system of Chinese Traditional Medicine. The majority of the village doctors would have general basic knowledge in traditional medicine and TCM would be playing a more important role at the primary health care level in the rural areas.

6. STANDARDIZATION AND QUALITY CONTROL OF HERBAL MEDICINES

Professor S.S. Handa presented his paper on 'Standardization and Quality Control of Herbal Medicines'. He stated that the single most important factor which stood in the way of wider acceptance of herbal drugs was the non-availability or inadequacy of standards for checking their quality by chemical or bioassay methods. WHO in a number of resolutions had emphasized the need to ensure quality control of herbal drugs by applying suitable standards including modern techniques. The Organization had recently published quality control methods for medicinal plant material as well as the first volume of monographs on 28 selected medicinal plants.

Prof. Handa then described the major causes of inconsistency in medicinal plant material due to non-adoption of appropriate post-harvest technology, including collection, harvesting, drying, garbling, packing and storage. In order, therefore, to standardize the raw material, 13 points such as authentication, foreign matter, organoleptic evaluation, macro and microscopic examination, volatile content, ash value, extractive value, pesticide residue, heavy metals, microbial load, radioactive contaminants, and fingerprint chromatographic profile were discussed. Good manufacturing

practices, process technology and validation of manufacturing processes, he stated, were essential requirements for herbal drug production. Research and development needs in the field of agrotechnology, post-harvest technology, process technology, chromatographic finger-printing, phytoformulations, dosage forms, stability studies, bioassays and safety evaluation would, he indicated, assist in maintaining sustainable development of quality herbal drugs for primary health care needs.

Bottlenecks in the standardization of herbal drugs, he pointed out, were many. These included dependence on wild sources leading to variation in quality, adulteration and substitution of the active plant material by inactive material by suppliers, difficulty in identification of the actually effective plant due to different names for the same plant, and the total absence of laboratories which could carry out the testing of plant material for quality. There were other constraints: non-availability of standards for herbal drugs, lack of resources for carrying out standardization, absence of adequate regulation, and the lack of trained manpower to carry out standardization procedures.

Prof. Handa concluded by listing the activities which need to be undertaken by the countries. These included setting up standards for herbal medicines, exchanging herbal material for reference purposes, promoting the cultivation of medicinal plants and training scientists in the field of standardization. A system of sharing information between countries on standardization of plants needs to be established.

7. CONSERVATION OF MEDICINAL PLANTS USED IN TRADITIONAL MEDICINES AT THE PRIMARY HEALTH CARE LEVEL

Dr P.N.V. Kurup made a presentation on 'Conservation of Medicinal Plants'. He said that medicinal plants were the mainstay of the traditional systems of medicine (TSM) which played an important role in meeting the health care needs of the majority of the world's population. They also form a major source for bio-prospection. Their habitats were under tremendous pressure due to accelerated development work and increased extraction to meet the

ever-growing demand. To ensure their sustained availability for the above purpose it was essential to undertake suitable conservative measures. Efforts should be made at national and international levels to evolve a comprehensive conservation strategy taking into consideration all matters related to the growth and utilization of medicinal plants.

Preparation of a database on all aspects of medicinal plants was the first necessity for evolving suitable conservation strategies. From the acquired data, plants have to be grouped into different categories like those available in abundance and those that are scarce. The plants which are scarce and which are endangered should be taken up for conservation.

Both insitu and exsitu methods of conservation should be employed. Under insitu conservation, the best method would be to allow natural regeneration of the species in their habitat by creating biosphere reserves and protected areas. Establishment of gene sanctuaries, encouragement to reserving a part of forests as 'sacred groves' and establishment of herbal gardens in each of the agro-climatic zones of a particular region are the insitu measures that should be considered.

Dr Kurup indicated that it was necessary to establish seed and germ plasm repositories of endangered species. Genetic and biotechnological techniques should be employed to upgrade and select suitable genotypes. Establishment of clonal orchards would be necessary for undertaking the plantation of medicinal plants. Cultivation of medicinal plants of high economic and medicinal importance and those considered as endangered should be undertaken by evolving suitable cultivation packages.

Establishment of a multi-tiered network of cooperative societies taking the village as the basic unit could be an ideal solution for the conservation work in the South and South-East Asian Region. These units could be made into a federation at the district and state level. This network would serve the twin purposes of undertaking conservation of medicinal plants at the grassroots level and ensuring a sustained supply of medicinal plants required for primary health care needs locally at a cheaper rate.

8. DEVELOPMENT OF TRAINING PROGRAMMES IN TRADITIONAL MEDICINE

Dr O. Akerele presented a paper on 'Development of Training Programmes For Traditional Medicine'. This, he said, was meant to serve as background material for consideration by the group. He reviewed the role of traditional medicine in different countries within and outside the Region.

Based on this experience, he listed key questions and issues which needed to be discussed and answered before a meaningful programme in traditional medicine could be designed. Such a programme would also define the role of the traditional health practitioner in the health services sector. Some of these questions related to the mechanism for bringing in traditional medicine practitioners within the formal health service, creation of an infrastructure for traditional medicine, ways to elicit support for traditional medicine from the health professionals, and review of existing legislation concerning traditional medicine. Some of the issues were (a) the development of a drug policy which included the use of traditional medicine, (b) establishment of a research programme, and (c) devising ways and means of mobilizing resources for a programme in traditional medicine.

9. CLINICAL EVALUATION OF TRADITIONAL MEDICINES

Professor Ranjit Roy Chaudhury presented his paper on 'Clinical Evaluation of Herbal Remedies'. He said that traditional remedies and herbal medicines need to be evaluated by sound clinical pharmacological methods to determine their efficacy and safety. Only after such evaluation will they be accepted, if found effective, for use by practitioners of modern medicine. This would enable such remedies to be used more widely, particularly at the primary health care level.

However, very often the scientific approach involving controlled, comparative, randomized and double blind clinical trial did not, without modification, lend itself for evaluation of herbal medicines. The challenge would be to use the scientific clinical trial methodology without diluting the concepts and practice of traditional medicine.

Prof. Roy Chaudhury pointed out several pitfalls in carrying out clinical evaluation of herbal medicines. Use of the wrong plant, loss in activity during storage, and carrying out the trials in an inappropriate sample were some of the associated problems which could occur. To avoid these and to carry out the evaluation keeping the concepts of traditional medicine in mind, a complementary method for such evaluation has been developed. In this system no tests for efficacy were carried out on animals if the plant had already been used in humans. Clinical trials were conducted after a relatively shorter toxicology study and after regulatory and ethical approval.

Clinical evaluation of traditional systems of medicine and medicinal plants, he indicated, could be carried out either at a hospital run under the modern system of medicine or at a traditional medicine hospital. In the former instance the specialist in modern medicine would be the chief investigator while the expert in traditional medicine would be the chief/investigator of the evaluation at the traditional medicine hospital.

Good clinical trials could only be carried out by a multidisciplinary team. Such a team should consist of experts in the traditional and modern systems of medicine as well as experts in pharmacognosy, medicinal chemistry, pharmacology, toxicology and clinical pharmacology.

10. THE REGULATION OF TRADITIONAL MEDICINE

The paper on 'The Regulation of Traditional Medicine' by Dr D.C. Jayasuriya was presented, in his unavoidable absence, by Dr Kin Shein. In his paper, the author delineated three areas which need to be addressed when discussing the regulation of traditional medicine. These were (a) the regulation of traditional medicinal products, (b) regulation of traditional medical practitioners, and (c) the regulation of the health care system. A review of the literature indicated that legislative enactments had been few and countries differed on the approaches adopted with regard to regulation, manufacture, import, export, dispensing, trade and use of traditional medicine. There was, in fact, no consensus as to how best medicinal plants should be regulated. In addition, only a few countries had assigned the resources needed to monitor the legal provisions even when these exist. The author further indicated that

legislative provisions relating to traditional medicine fell into three categories. These were:

- (1) Identical requirements applicable to all medicinal products should be prepared.
- (2) Some regulatory requirements were applicable to all products, with the exception that certain types of evidence and proof would not be required for traditional medicine.
- (3) Traditional medicines would be exempt from all regulatory requirements.

The author finally discussed some regulatory problems such as use of plants in health foods and cosmetic preparations and the misleading advertisements which were made for products used in traditional medicine.

11. MEDICINAL PLANTS AND INTELLECTUAL PROPERTY RIGHTS

Dr MD Nair, Consultant to Pharmaceutical Industry presented a paper on Medicinal Plants and their Protection under Property Laws. He said the use of medicinal plants in therapy has been known for centuries in all parts of the world. Such use among various communities had even led to the discovery and development of a large number of drugs still used as therapeutic agents. He said that the traditional systems of medicine of many developing countries use medical plants as such, or as formulations of whole plants or their extracts.

According to him developing countries are the repositories of large resources of medicinal plants. In the past, these resources have been freely exploited by converting them into products of commercial value mostly by multinational corporations without paying any compensation for the knowledge base which was transferred along with the material. He said that at the Convention on Biodiversity held in Rio-de-Janeiro in 1992, members accepted the principle that bio-resources are the sole property of sovereign states and that they have the freedom to use them as tradeable commodities. However, he said most countries in the developing world have not so far legislated to implement the resolutions passed at the Convention. He said it is

also necessary to invoke bilateral and multilateral agreements on the basis of accepted norms for the transfer of indigenous germ plasms used for research and development or for commercial production.

12. MEDICINAL PLANTS AND EXPORT POTENTIAL

Dr K.M. Parikh presented a paper on 'Medicinal Plants and Export Potential'. He noted the growth of the global herbal industry in recent times and outlined five important factors in the development of medicinal plants with export potential. These were: (1) identification, mapping, and availability in nature, possibility of cultivation; (2) indications for use of plants and their traditional use - extent of use in the country; (3) prioritization of possible plants for export on the basis of expected use, demand and availability; (4) decision about export of plants, plant extracts or further value-added products; and (5) research and development for the use and export of plants. He then discussed the approach for the long-term preservation of plants, and the continuous supply of good quality and standardized plants. The importance of exporting medicinal plants for the country was also stressed.

Dr Parikh highlighted the major differences between wild plants used for herbal medicines and plants which were cultivated. Availability of the plant material can be controlled when there is cultivation; in addition, there were no problems in the identification of such plants and the quality of plants was reliable. The post-harvesting handling was good for cultivated plants and the possibility of adulteration much less. It should also be kept in mind that the availability of plants from wild sources was decreasing and the environment in which these were growing was undergoing change. Since industry needed a sustainable and standardized supply of plant material, it was important to ensure cultivation of the plants needed.

13. COMMUNITY-ORIENTED APPROACHES TO PROMOTE TRADITIONAL MEDICINES

Dr Nilnetr Virasombat presented a paper on 'Community-oriented approaches to promote traditional medicines'. Soongnern Hospital, a 60-bed community hospital, is a pilot area in Thailand that promotes Thai traditional

medicine (TTM). The activities of the hospital were divided into periods of five years depending on their nature. The first period, 1982-1987, dealt with herbal medicine and primary health care. This was funded by GTZ of Germany. During the second period, 1988-1993, Ayurvedic activities were carried out by Ayuravet (applied Thai traditional practitioner) and training was provided to interested people and health personnel. They also helped to develop the integration of Thai traditional medicine (TTM) into the current health service system in Soongnern Hospital in Nakhon Ratchasima Province. The project was funded by WHO. The third period, 1994-1999, dealt with other activities of TTM such as herbal steam bath, herbal medicine production, and promotion of the activities of folk healers.

14. OPERATIONAL RESEARCH IN THE USE OF TRADITIONAL SYSTEMS OF MEDICINE AT THE PRIMARY HEALTH CARE LEVEL

Dr G.V. Satyavati, former Director-General, ICMR, India, presented a paper on 'Operational Research in the Use of Traditional Medicine at the Primary Health Care Level'. She said that in the past two decades, 'traditional medicine' has been recognized as a potent and viable supplement to health care, especially in the developing countries. The focus, however, has been mainly on curative medicine, with the use of plant-based traditional remedies for health care, with little attention to preventive aspects.

Holistic systems of medicine like *Ayurveda* and, to a large extent, *Yoga*, have a strong component of preventive medicine, which call for global attention. With well designed operational research and after suitable modifications, it is possible to apply the sound principles of *Swasthavritta* (*Ayurvedic* preventive medicine) with its *Dinacharya* (Daily Regimen) and *Ritucharya* (seasonal regimen) and *Rasayana* Therapy for promoting longevity with improved quality of life at the level of the individual as well as the community, for primary health care.

She emphasized that the principles of nutrition and diet, according to individual '*prakriti*' (constitution), personal hygiene, physical exercise, mental discipline and the prescribed code of conduct, are not only sound but also

practical and highly relevant in the present context of continuing and new stress-induced challenges to human life, affecting health adversely.

15. POSSIBLE ROLE OF WHO COLLABORATING CENTRES AND NATIONAL CENTRES OF EXPERTISE AT PRIMARY HEALTH CARE LEVEL IN PROMOTING DISTRICT HEALTH SYSTEMS

Dr S.D. Gupta presented a paper on the 'Possible Role of WHO Collaborating Centres and National Centres of Expertise in Primary Health Care in Promoting District Health Systems'. Highlighting the need for strengthening district health systems for effective primary health care, he analysed the weaknesses and problems in these systems and suggested a comprehensive outline for the role of WHO collaborating centres/national centres with their expertise in strengthening district health systems. This outline contained the following:

- (a) Carrying out research and developing capability for health systems research.
- (b) Developing and strengthening management systems and processes.
- (c) Building up the necessary skills and competence for the effective management and delivery of primary health care.
- (d) Developing and coordinating intercountry collaborative projects.

In addition, the centres would establish a resource and documentation centre, organize intercountry and in-country training courses and support WHO in its activities towards realizing the goal of health for all.

16. GROUP WORK

16.1 Report of Group I: Traditional Medicine

Group I considered that *a national policy on TRM is important* in the development and use of TRM.

The overall objective of the policy is to preserve traditional medicine - the national heritage and wisdom of the country - besides developing it to become an integral part of the present national health care and primary health care systems, leading to self-reliance within the health care delivery system both at the national and community levels.

The specific objectives of a national policy on TRM would be *inter alia*:

- To support and promote the role of TRM in the national health system.
- To upgrade the standard of TRM.
- To support TRM by developing a comprehensive system, research, health information system, human resource development, administrative services integrated into the national health care system, production of medicinal herbs and TRM, dissemination of information, and promotion of the utilization of TRM.
- To support organizations and agencies that deal with TRM, both in the public and private sectors.

In the context of this policy, the following could be promoted:

- Equitable status between TRM and allopathic medicines.
- Equitable status between traditional and allopathic doctors.
- Modernization of TRM systems and pharmacies.
- Cooperation between western and TRM doctors as well as learning from each other.
- Recognition of TRM as a suitable alternative by modern medical practitioners and hospitals.
- Use of herbal medicine, including self-medication with TRM.
- Health care at all levels, especially at primary and secondary levels using TRM.
- Development of TRM in parallel or in an integrated fashion with modern medicine.

- Health promotion or prevention of illness by using TRM, e.g. by the use of immunomodulators, adaptogens, etc.

Guidelines for further development of national TRM programmes

Traditional medicine consists of approaches, practices and products which have been indigenously used in the country supplemented by alternative and complementary systems used traditionally in other countries.

The following are the guidelines for the further development of national TRM programmes within the context of the district health system.

- Definition of terms; (e.g. traditional medicine, alternative medicine, complementary medicine, folk medicine, holistic approach, traditional practices, products and treatment, massage, etc.) need to be carried out so as to have a clearer understanding of systems or issues in the area of traditional medicine.
- Quality assurance of TRM should be carried out through legislation and regulation, standardization and quality control.
- Identify conditions that can be treated by using TRM such as chronic ailments, prevention of maladies, e.g. through use of immunomodulators.
- Promote economic development through the use of local TRM products and export of medicinal plants and their products.
- Create awareness of the role of TRM and useful products and practices.
- Ensure the safety and efficacy of TRM remedies and practices through appropriate legislation/regulation.
- Ensure continuous availability of medicinal plants.
- Develop strategies for conservation, sustained cultivation and use of modern methods such as tissue culture and micro-propagation.
- Establish consumer protection laws and regulations.
- Exchange information on medicinal plants and their therapeutic use(s) among countries.

- Protect national assets in medicinal plants against exploitation.
- Protect national bio-diversity in medicinal plants.
- Carry out research into reasons for some medicinal plants having optimal therapeutic value when grown in certain areas and climatic conditions.
- Develop a holistic approach to health protection and promotion.

Possible role of TRM in the DHS/PHC:

- Optimize the role of TRM and TRM practitioners through training for their deployment in DHS/PHC.
- Disseminate information on TRM to health workers and the general public.
- Select list of TRM products that are safe for use in DHS/PHC.
- Identify clinical conditions for which traditional remedies are to be used or where they are more appropriate.
- Share the objective of health promotion with modern medicine through prevention, treatment and rehabilitation.

General Plan of Action in TRM to strengthen DHS:

- Develop/strengthen/revamp national policy in TRM.
- Establish pharmacies in TRM.
- Analyse current status of TRM and TRM practitioners.
- Improve mass awareness of traditional remedies and practices.
- Promote useful TRM practices.
- Regulate advertising for professional people and general public.
- Develop infrastructure and human resources in TRM.
- Strengthen education and training using high-level curriculum.

- Develop herbarium, cultivation and conservation of medicinal plants.
- Develop policy for appropriate use of TRM in conditions such as prevention of disease, treatment of chronic ailments, promotion of health, rehabilitation, etc.
- Develop policy to preserve TRM remedies and practices.
- Train human resources (doctors, health workers) in TRM to improve utilization of TRM at DHS/PHC level.
- Set priority for use of TRM in PHC.
- Develop infrastructure for education and research in TRM.
- Carry out research into sociological factors that influence the use of TRM.

16.2 **Report of Group II: WHO Collaborating Centres and National Centres of expertise in TRM and PHC in improving DHS**

Guidelines to enhance involvement of WHO Collaborating Centres and National Centres of Expertise in TRM in strengthening DHS:

The Centres could be involved in the following areas or activities:

- Training of traditional health practitioners to be an integral part of the primary health care team operating at the district level.
- Creation of traditional medicine infrastructure for the regulation of traditional remedies and practices.
- Sensitization of modern or allopathic health workers regarding the place and importance of traditional medicines in their cultures.
- Revision of legislations relating to the use of traditional remedies and practices with a view to repealing restrictive legislations and enacting enabling ones.
- Defining of areas for external support in traditional medicine in primary health care.

- Development of national TRM policy, including traditional remedies used in the treatment of common symptoms.
- Formulation of up-to-date research and development policy on the role of traditional medicine in primary health care.
- Formulation of clear financing mechanism for traditional medicine in PHC as appropriate.

General Plan of Action to strengthen involvement of WHO Collaborating Centres and National Centres of Expertise in TRM in strengthening DHS:

- Development or strengthening of training programmes for traditional health practitioners in order to involve them in PHC/DHS.
- Development or strengthening of regulatory control for traditional remedies and practices.
- Increasing awareness of the importance of TRM in health services.
- Development of project document or plan of action to enable provision of external support for the involvement of TRM in PHC/DHS.
- Development/strengthening of national policy in TRM, including defining the role of TRM in PHC/DHS.
- Development of financing mechanism for TRM in PHC/DHS if appropriate.

16.3 Report of Group III: Operational Research in TRM/PHC and related areas

Operational research needs to be carried out to develop national guidelines:

- for the proper use of TRM in PHC,
- for the involvement of TRM in PHC,
- for the training of practitioners of TRM in PHC, and
- for the training of health workers in TRM.

Areas and topics for operational research in TRM to strengthen DHS:

- Updating the list of medicinal plants used in TRM.
- Development of standards of selected plants leading to the preparation of national monographs.
- Approach to integrate selected TRM in the PHC system.
- To study KAP (knowledge, aptitude and perception) of community.
- To develop methodologies/protocols for clinical trials of traditional medicine. Preparation of data base on TRM for the protection of property rights (PR)/IPR of TRM, concepts and plants.
- Inventorization, economic mapping, conservation, cultivation, post-harvest technology and storage of medicinal plants.
- Research leading to rational use of traditional remedies, formulations/ traditional practices which have been in clinical use for long.
- Research on selected aspects of preventive medicine of traditional systems of medicine, e.g. diet, nutrition, lifestyle and meditation.
- Research on concepts of health promotion (anti-stress, adaptogen, anti-aging, immuno-modular and antioxidant, etc.).
- Development of methods for quality control of poly-herbal products.
- Research on process technology and formulations.
- Development of human resource for TRM research.
- Organization and management for traditional medicine.

General Plan of Action in TRM to strengthen DHS:

- Countries to support operational research on TRM for its proper application.
- To enable item 1 to be implemented, countries should establish a mechanism for traditional medicine at national level by providing full support in terms of organization, management, funding and human resources.

- Countries to strengthen DHS by carrying out research on the involvement of traditional medicine in health care.
- WHO to promote close and frequent interaction, including sharing of research results in the area of traditional medicine among the countries in the Region, other regions and WHO HQs.

17. RECOMMENDATIONS

17.1 Traditional Medicine

Recommendation for countries:

- Governments should promote the development of TRM.
- TRM should be made available to DHS and PHC.
- Countries should develop a national policy on TRM.
- Countries should develop/strengthen organizational structure in TRM.
- Countries should train their human resources in TRM for DHS/PHC.

Recommendations for WHO:

WHO should:

- assist governments in the development and upgrading of TRM.
- Assist governments in the identification, cultivation and conservation of medicinal plants.
- promote intercountry collaboration in the standardization, quality control and use of TRM.
- assist countries in the collection of information on existing practices and products based on the TRM system of medicine in Member Countries.
- Based on the information collected, WHO should, in collaboration with the Member Countries, develop guidelines for the selection of

medicinal plants, standardization and quality control, procurement of raw materials, development of appropriate formulations and distribution to DHS and PHC centres.

- support research projects on scientific validation of quality, safety and efficacy of TRM for appropriate ailments/diseases.

17.2 WHO Collaborating Centres and National Centres of Expertise in TRM and PHC in improving DHS

Recommendations for countries:

- Countries should identify and strengthen centres of expertise in traditional medicine and primary health care.
- Countries should undertake research on the impact of traditional medicine at the primary health care level. The results of such research efforts should be disseminated widely.
- National centres of expertise should undertake operational research, where appropriate, on alternative financing mechanisms, such as introducing user charges, community financing of primary health care, and the involvement of the private sector and nongovernmental organizations.
- WHO should collate and distribute the reports of its collaborating centres to all Member States.
- Traditional medicine remedies and practices should be integrated into health service activities at district level.
- Those working in traditional medicine and primary health care centres should also be nominated to attend WHO-sponsored meetings on the subject.

Recommendations for WHO:

WHO should:

- organize periodic meetings of the directors of collaborating centres and national centres of expertise designated by the countries.

- continue and intensify support for collaborating centres in the areas of research, training and dissemination of information.
- assist Members States by formulating guidelines for integrating traditional medicine into PHC, including the involvement of the private sector and nongovernmental organizations.

17.3 Operational research in TRM, PHC and related areas

Recommendations for countries:

- should provide full support in terms of organization, management, funding and human resources, etc. for operational research in TRM and PHC.
- should determine to what extent traditional remedies can fulfil the health care needs at PHC/DHS.
- should carry out studies to determine the extent to which TRM practitioners at PHC/DHS are providing effective health care.
- should determine the extent of utilization of TRM practitioners and traditional remedies at PHC/DHS.

Recommendation for WHO:

- WHO should promote close and more frequent interaction in the exchange of information on operational research in TRM and PHC among the countries in this region, other WHO regions and WHO headquarters.

Annex 1

LIST OF PARTICIPANTS

BANGLADESH

Dr Jahanara Begum
Director
Homoeopathy & Indigenous Medicine
Office of the Director-General of Health
Services
Mohakhali, Dhaka

Dr Nargis Rahman
Asst. Director, CMRL and
Dy. Programme Manager (Logistics)
Essential Services Project
Office of the Director-General of Health
Services
Mohakhali, Dhaka

BHUTAN

Drungtsho (Dr) Pema Dorji
Director
Institute of Traditional Medicine

Dr Gosar Pemba
District Medical Officer
Chirang Hospital

DPR KOREA

Prof. Dr Choe Thae Sop
General Hospital of Koryo Medicine
WHO Collaborating Centre for Research &
Standardization in Traditional Medicine

Dr So Ryong Ju
General Hospital of Koryo Medicine
WHO Collaborating Centre for Research &
Standardization in Traditional Medicine

INDIA

Ms Shailaja Chandra
Secretary
Dept. of Indian Systems of Medicine &
Homoeopathy
Ministry of Health & Family Welfare,
Government of India
New Delhi

Dr P.N.V. Kurup
Vice Chancellor
Gujarat Ayurved University
Jamnagar 361008, Gujarat

Dr Prem Kishore
Director
Central Council for Research in Ayurveda &
Siddha
Janakpuri, New Delhi

INDONESIA

Drs Ketut Ritiasa
Director, Traditional Medicine
Directorate-General of Drug & Food Control
Ministry of Health

Dr I.G.P. Wiadnyana
Director, Community Participation
Directorate-General Community Health
Ministry of Health

Drs H.A. Rivai Muhibat
Head, Sub-directorate
Traditional Medicine Standardization
Directorate-General of Drug & Food Control
Ministry of Health

Dr Lestari Handayani
Directorate-General for Drug & Food Control
Ministry of Health

MALDIVES

Mr Mawa Mohamed Manik
G Kashmeeruge
Traditional Medical Practitioner
Institute of Health Sciences

MYANMAR

Prof. Dr. U Kyaw Myint Tun
Director-General
Department of Traditional Medicine

Dr U Htay Lwin
Director (Public Health)
Department of Health

NEPAL

Dr Damodar Prasad Chalise
Director - Department of Ayurveda
Ministry of Health
Dillibazar, Kathmandu

Dr Brij Narayan Chaudhary
Director - Planning & Foreign Aid Division
Department of Health Services
Ministry of Health, Teku

SRI LANKA

Dr (Mrs) Lakshmi Senaratne
Ag. Asst. Director
Bandaranaike Memorial Ayurveda Research
Institute
Nawinna

Dr W.H. Nanda Wijerathna
Medical Officer
Ayurvedic Teaching Hospital
Borella

THAILAND

Dr Pennapa Subcharoen
Director
National Institute of Thai Traditional Medicine
Ministry of Public Health,
Government of Thailand
Nonthaburi

Dr Patjuban Hemhongsra
Director
Office of Primary Health Care
Ministry of Public Health
Nonthaburi

Dr Omboon Luanratana,
Head of Pharmacognosy Department
Faculty of Pharmacy
Mahidol University

RESOURCE PERSONS

Dr Nuntawan Bunyapraphatsara
Faculty of Pharmacy
Mahidol University
Bangkok

Dr S.D. Gupta
Director
Indian Institute of Health Management Research
Jaipur

Prof. S.S.Handa
Director
Regional Research Laboratory
(Council of Scientific & Industrial Research)
JammuTawi

Dr M.D. Nair
Consultant to Pharmaceutical Industry
Chennai

Dr K.M. Parikh
Managing Director
The Zandu Pharmaceutical Works Ltd.
Mumbai

Dr Zhang Qi
Chief of First Section of the
Department of Medical Service and Policy
State Administration of Traditional Chinese
Medicine
Beijing,
People's Republic of China

Dr (Mrs) G.V. Satyavati
Former Director General
Indian Council of Medical Research
Bangalore

Dr Nilnetr Virasombat
Director - Soongnern Hospital
Thailand

OBSERVERS

IDRC

Dr Madhav B. Karki
Regional Program Coordinator
International Development Research Centre
New Delhi

Ms Elizabeth Fajber
Regional Program Officer
International Development Research Centre
New Delhi

UNESCO

Ms Sudha Mehndiratta
National Officer in Ecological Sciences
United Nations Educational, Scientific and
Cultural Organization
New Delhi

SECRETARIAT

HQ

Dr Xiaorui Zhang
Team Co-ordinator
Traditional Medicine
WHO/HQ

SEARO

Dr Palitha Abeykoon
Director
Dept. of Health Technology and
Pharmaceuticals

Dr U Than Sein
Director
Dept. of Evidence & Information for Policy

Dr Rita Thapa
Director
Dept. of Health Systems & Community Health

Dr Helmut Sell
Ag. Director
Dept. of Social Change & Non-Communicable
Diseases

Dr Kin Shein
Regional Adviser
Essential Drugs & Other Medicines

Dr U Myint Htwe
Regional Adviser
Medical Research

Mr M.A. Meliala
Scientist
Medical Research

Dr N. Kumara Rai
Short-term Consultant - Community Health
Services

Dr Adik Wibowo
Short-term Consultant - Primary Health Care

Dr S.P. Bhattarai
Short-term Consultant - National Health
Planning

Prof. Ranjit Roy Chaudhury
WHO Temporary Adviser, SEARO

Dr Olayiwola Akerele
WHO Temporary Adviser, SEARO

Mr D.C. Pathak
Senior Administrative Secretary

Ms S. Stephens
Senior Administrative Secretary

Annex 2

PROGRAMME

14 September 1999, Tuesday

0830 – 0900 hrs.	Registration
0900 – 0945 hrs.	Inauguration: Regional Director's message Statements by Organizations Introduction of Participants Nomination of Chairperson, Co-Chairperson and Rapporteur Announcements
1015 – 1030 hrs.	Objectives of the Consultation - <i>Dr Kin Shein, Regional Adviser - EDM</i>
1030 – 1115 hrs.	WHO Policy And Activities In The Field Of Traditional Medicine - <i>Dr Xiaorui Zhang, WHO/HQ</i> Discussion
1115 – 1200 hrs.	Selection Of A Core List Of Essential Traditional Remedies - <i>Dr Pennapa Subcharoen, Director, National Institute of Thai Traditional Medicine, Govt. of Thailand</i>
1300 – 1345 hrs.	Integration Of Traditional Medicine Into Health Care System - <i>Dr Nuntawan Bunyaphatsara, Faculty of Pharmacy, Mahidol University, Thailand</i>

- 1345 – 1430 hrs. Role Of Traditional Medicine In Primary Health Care In China
- *Dr Zhang Qi, Chief of First Section of the Dept. of Medical Service & Policy, State Administration of Traditional Chinese Medicine, Beijing, China*
- Discussion
- 1500 – 1600 hrs. Standardization And Quality Control Of Herbal Medicines
- *Prof. S.S. Handa, Director, Regional Research Laboratory, Jammu Tawi, India*
- Discussion
- 1600 – 1630 hrs. General open discussion on present status and future direction of country programmes on TRM and DHS/PHC

15 September 1999, Wednesday

- 0830 – 0915 hrs. Conservation Of Medicinal Plants Used In Traditional Medicines At The Primary Health Care Level
- *Dr P.N.V. Kurup, Vice Chancellor, Gujarat Ayurved University, Jamnagar, India*
- Discussion
- 0915 – 1000 hrs. Development Of Training Programme For Traditional Medicine
- *Dr Olayiwola Akerele, WHO - Temporary Adviser*
- Discussion
- 1030 – 1115 hrs. Clinical Evaluation Of Traditional Medicines
- *Prof. Ranjit Roy Chaudhury, WHO - Temporary Adviser*
- Discussion

- 1115 – 1200 hrs. The Regulation Of Traditional Medicine
- *Dr D.C. Jayasuriya, Institute of Comparative
Health Policy & Law, Nawala, Sri Lanka*
- Discussion
- 1300 – 1345 hrs. Medicinal Plants And Intellectual Property Rights
- *Dr M.D. Nair, Consultant to Pharmaceutical
Industry, Chennai, India*
- Discussion
- 1345 – 1430 hrs. Medicinal Plants and Export Potential
- *Dr K.M. Parikh, Managing Director,
Zandu Pharmaceuticals Works Ltd.,
Mumbai, India*
- Discussion
- 1500 – 1545 hrs. Community-oriented Approaches To Promote
Traditional Medicines
- *Dr Nilnetr Virasombat, Director,
Soongnern Hospital, Thailand*
- Discussion
- 1545 – 1630 hrs. General open discussion on national policy and
strategy for development and use of TRM.
- 16 September 1999, Thursday**
- 0830 – 0915 hrs. Operational Research In The Use Of Traditional
Systems Of Medicine At The Primary Health Care
Level
- *Dr G.V. Satyavati, former Director-General,
Indian Council of Medical Research, Bangalore,
India*
- Discussion

0915 –1000 hrs.	Possible Role Of WHO Collaborating Centres And National Centres Of Expertise In Primary Health Care In Promoting District Health Systems <i>- Dr Shiv Dutt Gupta, Director, Indian Institute of Health Management Research, Jaipur, India</i> Discussion
1030 – 1045 hrs.	Introduction to group discussions Group I : Traditional Medicine Group II : WHO Collaborating Centres and national centres of expertise in TRM and PHC Group III : Operational Research
1045 – 1200 hrs.	Group work
1300 – 1430 hrs.	Group work
1500 – 1630 hrs.	Group work
17 September 1999, Friday	
0830 – 1000 hrs.	Group work
1030 – 1200 hrs.	Presentation of group reports
1300 – 1400 hrs.	Recommendations Adoption of Report
1400 – 1430 hrs.	Closing Session

Annex 3

REGIONAL DIRECTOR'S OPENING ADDRESS

Distinguished Participants,
Dear Colleagues,
Ladies and Gentlemen,

I am very happy to welcome all of you to this Consultation on Development of Traditional Medicine in the South-East Asia Region.

There is a rich resource of traditional medicines and practices in the countries of South-East Asia. This is supported by extensive biodiversity in medicinal plants used in traditional medicine. In addition, we have a large number of traditional medicine practitioners who are available for health care. And yet traditional medicine does not have primacy of place in our health care systems.

At the Meeting of the Ministers of Health held in New Delhi in September 1998, the Ministers strongly emphasized that these resources should be used more effectively in the delivery of primary health care. They stated that there was a need to include traditional medicines, subject to their demonstration of quality, safety and efficacy, in national health programmes. I hope that this meeting will take this challenge and provide innovative approaches which will help draw maximum benefit from these traditional systems.

At this meeting we have invited both the experts in different areas of traditional medicine as well as practitioners of primary health care. I hope the interaction between the two groups will lead to the framing of realistic recommendations. We also have with us the national authorities in traditional medicine and primary health care in the Region as they will be playing a major role in implementing the recommendations emanating from this consultation.

During your deliberations it should be borne in mind that within the broad area of traditional medicine, there are many differences. There are several different systems of traditional medicine like Ayurveda, Unani,

Chinese, Myanmar, Thai, Tibetan and others. These include traditional practices such as massage, acupuncture and acupressure. Then we have folklore medicine practised by the herbalist.

There are some systems where practitioners undertake a five-year training course while there are also systems where knowledge has been passed down from generation to generation. Much of this knowledge is in danger of being lost, unless action is taken to make written records now. The human family can benefit enormously from this knowledge and the South-East Asia Region can play an important role.

Some issues need your attention. The wide acceptance of traditional medicines by our people is a very positive factor for the use of these medicines. However, this factor could also encourage the use of unproven medicinal plants and traditional practices. Also, as several medicinal plants become scarce due to eco-destruction, there are cases of substitution of effective plants by non-effective ones. It is extremely important to standardize plant products being used in traditional medicine. It is also important to study the socio-cultural influences in the use of traditional medicines.

World over, there has recently been an enhanced interest in traditional medicine. This has brought both expectations of economic benefit and dangers of exploitation. It is increasingly important for our scientists and administrators to understand the implications of the intellectual property rights regulations on the use of plants. We certainly need to take steps to protect these remedies used for generations in our countries. The challenge is to find the correct balance between economic gain from the worldwide demand for herbal remedies and, at the same time, protect our biodiversity.

Finally, you need to discuss the regulations governing the use of herbal medicines and any changes needed in the regulatory process to ensure quality and standardization of our traditional remedies.

There is indeed a challenging agenda before you. I look forward to the outcome of your deliberations and I hope that this meeting will help in the optimal utilization of the rich heritage present in our Region for the improved delivery of primary health care. I wish you all every success in your task ahead and a pleasant and enjoyable stay in New Delhi.

Thank you.

Annex 4

**STATEMENT BY DR MADHAV KARKI,
REGIONAL PROGRAM COORDINATOR, MEDICINAL AND
AROMATIC PLANTS PROGRAMME IN ASIA (MAPPA),
INTERNATIONAL DEVELOPMENT RESEARCH CENTRE,
NEW DELHI**

Respected Regional Director,
distinguished participants,
ladies and gentlemen,

First of all, on behalf of IDRC, Canada, may I take this opportunity to thank WHO for inviting me and my colleague Liz Fajber to this important regional consultation on development of traditional medicine in the South-East Asia Region.

International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada to help communities in the developing world find solutions to social, economic and environmental problems through research.

IDRC supports research on medicinal plants globally and regionally. In South Asia, the research activities have been ongoing since 1992. Our current programme is divided into two components: a) Small Grant Research; and b) Information Networking. The former is managed by the programme called Medicinal and Aromatic Plants Program in Asia or MAPPA. The latter is facilitated through our programme called Global Information Network on Medicinal Plants.

Until very recently traditional medicines had been neglected by development and government agencies with the consequence that traditional systems of knowledge have begun to break down and disappear. We feel that there is a tremendous need to revitalize these culturally rich and relatively safe

medicinal systems. The Safe and Effective Health Care portfolio of MAPPA aims to implement small research projects that can put the medicinal wealth found in nature into the hands of poor and marginalized people who may be needing it the most. Ethnomedico-botanical surveys, validation of traditional drugs for safety and toxicity and integration of Traditional Medicine System (TMS) into the primary health care programme of the countries in the Region are among the long-term goals of our programme. One of the objectives of MAPPA is to support research projects which can improve access to and use of medicinal plants as a means of safe and effective primary health care. Some of the focused areas of our research are; training of local healers and women practitioners in improving the production and use of safe and effective plant-based medicine; supporting efforts to develop good manufacturing practices of drugs based on traditional knowledge systems; and networking and communication among the local health service providers.

There are wide ranges of actors including government organizations, non-governmental organizations, commercial business organizations, national research institutions, industry and trade concerns; health practitioners and other diversity of interests in traditional medicine systems. However, to date there has been no regional and global activity linking all of these interests for information sharing and partnership building. In response to this need, IDRC is currently preparing the groundwork to launch a global medicinal plants network. The goal of the network is to improve information provision, sharing and exchange at local, regional and global levels in order to facilitate and enhance partnerships and communication among individuals and institutions at all levels.

We are very pleased to participate in this meeting. I and my colleague Ms Fajber look forward to learning about the activities of other organizations from the distinguished participants of the consultation. We would be also happy to share information on our activities in the Region.

We wish the consultation a grand success.

Thank you.

Annex 5

STATEMENT BY MS SUDHA MEHNDIRATTA, NATIONAL OFFICER IN ECOLOGICAL SCIENCES, UNESCO, NEW DELHI

Medicinal Plants in the context of Traditional Ecological Knowledge

Ethnobiology, in general, and medicinal plants, in particular, have been at the cutting edge of UNESCO's science and ecology programmes for several decades. One such example is a research review, in the 1960s, on the medicinal plants in the arid zones published by UNESCO in the Arid Zone Research Series.

UNESCO, jointly with WWF and the Royal Botanic Gardens, Kew, initiated in 1992, the People and Plants initiative, to promote and support community-based ethnobotanical work in humid tropics, in order to contribute to the sustainable and equitable use of plant resources. The People and Plants initiative is building support for ethnobotanists from developing countries who work with local people on issues related to conservation of both plant resources and indigenous ecological knowledge. Rather than promoting the discovery and marketing of new products, the emphasis is on reinforcing subsistence use and small-scale commercialization of plants that contribute to the well-being of rural communities. Field activities concentrate on biosphere reserves, World Heritage sites and other protected areas where the organizations have been active in the past.

UNESCO-New Delhi has investigated for over three years, medicinal plants in the context of traditional ecological knowledge and rehabilitation, both in the Himalayas and the Western Ghats. Through a UNESCO/MacArthur Foundation project, investigations have been undertaken by the G.B. Pant Institute for Himalayan Environment and Development, on the agronomic practices and uses of medicinal and

aromatic plants in the buffer zone villages in the Nanda Devi Biosphere Reserve in Central Himalaya.

While dealing with rehabilitation issues related to the rural landscape, UNESCO has looked at the interconnections existing between private resources, common resources and public resources, and the manner in which they are managed was considered to be crucial for designing appropriate rehabilitation strategies for rural ecosystems of South and Central Asia. These three components of the rural system harbour a whole variety of biological resources, including medicinal plants which are critical for the livelihood of the rural societies. In the Nanda Devi Biosphere Reserve, for example, traditionally used medicinal plants such as *Allium humile* and *Angelica glauca* are now being cultivated in private and common lands. This is part of a broader ecosystem rehabilitation strategy. A UNESCO project, funded by the MacArthur Foundation and coordinated by the Jawaharlal Nehru University, on traditional knowledge systems in resource management in Arunachal Pradesh, is in the pipeline.

UNESCO, jointly with the Jawaharlal Nehru University, New Delhi, recently completed a one-year research study on the sacred groves and their role in the conservation and management of biological diversity in India. Many traditional societies all over the world maintain protected refugia of the natural ecosystem in a given region as 'sacred groves'. The sacred groves and sacred landscapes which are well documented, being repositories of biodiversity, contain many species of economic importance. Medicinal plants of tribal pharmacopoeia form an important component of all these situations – many of them are sacred species. A reductionistic view of the sacred grove concept will lead to the concept of the 'sacred species' which is well known, for example, sacred basil, neem, etc.

Involving local people to conserve traditional ecological knowledge, creating awareness, preparing an action plan for protection and augmentation of natural resources, for collective benefit sharing and indeed for effective management of these systems are the different steps for an effective conservation strategy. UNESCO will be launching next year, with funds from Germany, a four-year project on Culture-Based Environmental Conservation for Sustainable Development in selected Asian, African and Latin American

countries, which will help in analysing traditional resource management strategies of sacred sites from an integrated cultural and scientific perspective.

UNESCO and the International Centre for Integrated Mountain Development in Nepal had, in recent years, launched a three-year programme to develop the field of ethnobotany applied to indigenous management and conservation of plant resources through capacity building and supporting research and action-oriented field projects. Of all agroforestry systems, home gardens, termed as kitchen gardens or forest gardens, are complex and highly diversified systems from the point of view of resource management for sustainable agriculture. The studies done on traditional societies of north-eastern India, and published by UNESCO, show that the farmers obtain many of their requirements including medicinal plants from this system all the year round.

In response to the need for information on medicinal plants, UNESCO launched the Asian Pacific Information Network on Medicinal and Aromatic Plants, a decentralized information-sharing network of 14 countries in Asia and Pacific. With 14 member countries and over 14,000 entries on its database, APINMAP has recently hooked up with the International Development Research Centre of Canada with whom it is working to produce a marketable product – a CD ROM on health developments in Asia, which will help to promote traditional medicine around the world.

I would like to conclude by saying that there is a close linkage between the traditional ecological knowledge and the ancient concepts of health care in many of the traditional cultures. Indigenous people often use terms such as the 'Web of Life' to describe the connectedness of all elements of nature, including human beings. Similarly, in health and healing, a fundamental concept found in many of the ancient systems, particularly Indian and Chinese systems, is that of balance – the balance between mind and body, between different dimensions of individual bodily functioning and need, between individual/community and environment, and the universe. UNESCO through its programmes tries to reemphasize the quest for meaning and the spiritual dimension of life which is getting lost in our pursuit of materialism.

Annex 6

LIST OF BACKGROUND PAPERS

S.No.	Title
1.	WHO Policy and Activities in the field of Traditional Medicine
2.	Selection of a Core List of Essential Traditional Remedies
3.	Integration of Traditional Medicine into Health Care System
4.	The Role of Traditional Medicine in Primary Health Care in China
5.	Standardization and Quality Control of Herbal Medicines
6.	Conservation of Medicinal Plants used in Traditional Medicines at the Primary Health Care Level
7.	Development of Training Programme for Traditional Medicine
8.	Clinical Evaluation of Traditional Medicines
9.	The Regulation of Traditional Medicine
10.	Medicinal Plants and Intellectual Property Rights
11.	Medicinal Plants and Export Potential
12.	Community-oriented Approaches to Promote Traditional Medicines
13.	Operational Research in the Use of Traditional Systems of Medicine at the Primary Health Care Level
14.	Possible Role of WHO Collaborating Centres and National Centres of Expertise in Primary Health Care in Promoting District Health Systems