

Promotion of Indigenous system of medicine in Meghalaya.

Medicinal and Aromatic plants (MAPs) are an essential part of traditional health care systems. Their gathering and cultivation provide a critical source of income for many rural communities, especially landless poor and marginalized farmers. MAPs are also inextricably linked to the region's natural biodiversity. Unfortunately, MAPs are increasingly threatened by various environmental, socioeconomic and institutional problems. At the same time, traditional and indigenous knowledge about these plants is weakening and, in some cases, vanishing altogether. While attempts have been made (both at local and national levels) to address these issues, they have suffered from inadequate funding, a lack of government prioritization, and insufficient information sharing and coordination among stakeholders.

Medicinal and aromatic plants (MAPs), including trees, shrubs, grasses and vines, are a central resource for these traditional health systems, as well as for pharmaceutical (or allopathic) medicines. Medicinal plants are an accessible, affordable and culturally appropriate source of primary health care for more than 80% of Asia's population (WHO). Marginalized, rural and indigenous people, who cannot afford or access formal health care systems, are especially dependent on these culturally familiar, technically simple, financially affordable and generally effective traditional medicines. In fact it is well known that even in developed countries, the use of traditional medicines is quite prevalent. Also, modern pharmacopoeia still contains at least 25% drugs derived from plants (Farnsworth 1988) and many others which are synthetic analogues built on prototype compounds isolated from plants. Demand for medicinal plants is increasing in both developing and developed countries due to growing recognition of natural products being non-narcotic, having no side-effects, easily available at affordable prices and sometime the only source of health care available to the poor. As such, there is widespread interest in promoting traditional health systems to meet primary health care needs. This is especially true in Meghalaya, as prices of modern medicines spiral and governments find it increasingly difficult to meet the cost of pharmaceutical-based health care. Throughout the state, there is strong and sustained public support for the protection and promotion of the cultural and spiritual values of traditional medicines.

As medicinal plants/ traditional medicine/ indigenous system of medicine in the State provides ample opportunities for addressing livelihood, there is a need to channelize this sector into a sustainable enterprise not only for rural development but also for addressing the issues

related to bio-diversity and cultural conservation. Medicinal plants are important resource for sustainable development, particularly as sources of safe, effective, and accessible health care that integrates traditional and community knowledge, innovations, and practices with modern scientific approaches to health research. Given the fact that there are multiple benefits of MPs including: a) improved access to primary healthcare, b) enhanced livelihood security, c) potentially sustainable use of the biodiversity, and d) improved benefit sharing with local communities, the promotion of sustainable management of medicinal plants can help our biodiversity rich State to develop the Indigenous System of Medicine into a well-organised sector.

In addition, conservation of medicinal plants is important for a number of reasons. Firstly, they are an important source of natural ingredients used by the manufacturers of modern pharmaceuticals. The WHO has estimated the demand for medicinal plants is approximately ₹14 Billion per annum (2006) and the demand is growing at the rate of 15 to 25% annually. The WHO estimates that by 2050 the trade will be up to US\$ 5 Trillion. The pharmaceutical industry is very big and its demand for medicinal plants is correspondingly large. Furthermore, a large number of plant species are yet to be screened for active compounds, indicating that the importance of medicinal plants for the pharmaceutical industry is likely to increase further.

Secondly, medicinal plants form the basis of homeopathy and traditional medicines, including Chinese, Tibetan, Ayurveda, Siddha and Unani. Medicinal plants and traditional knowledge are also crucial for traditional healers, who play a vital role in the lives of poor people in developing countries as often the main (and sometime the only) source of health care available to these people, and their animals.

Work done so far: The Bio-resources Development Centre has over the past few years worked closely with Traditional healthcare providers of the State so as to promote and conserve the traditional healing system of the State. In our recently completed project, over 500 Traditional Healers across the State has been trained and capacitated with basic information and knowledge related to primary health care. They have also been supported with basic amenities to further their traditional practices.

Way Forward: In many parts of the State, economic circumstances have made it difficult for people to access modern medicine. In addition, traditional and herbal medicines are well sought after because of their efficacy and less side-effects. Recognizing the need for a viable alternative to expensive imported drugs, commercialisation of traditional medicine using the abundant natural

resources that is affordable and easily accessible, will pave way for addressing social issues relating to health, economic growth and development.

Development of Medicinal Plant Nurseries and systematic cultivation of medicinal plants offers potential livelihood option to many of the farming communities in view of its greater importance attached in the alternate medicinal system that is, of late, replacing the use of allopathic medicines that have more side effects. The Traditional Medicine (TM) based on the medicinal plants is widely accepted in the State as it is time-tested and affordable. There is a need to revitalize, promote, consolidate, advance and strengthen the system since it is facing many changes such as, scarcity of herbs due to over exploitation and deforestation in view of its natural quality and safety.

One of the effective ways to ensure the protection and conservation of medicinal plants is their cultivation, which is advocated as a measure to take the pressure off wild stocks, especially for species collected in large quantities for trade. Various factors influence the feasibility of cultivation, its impact on conservation and by whom it is best undertaken. Creation of **micro-credit groups** at community level/ cluster level for cultivation of species in demand, and also endemic and threatened species can be one possibility to sustain the medicinal plant sector in the State. For sustainability, community participation and ownership is a pre-requisite. **Financial support** can be extended to the Local Health Practitioners for enhancing the herbal gardens and to further the cultivation of medicinal plants used by them. Processing units as an enterprise needs to be set in the cluster near to the cultivation area for easy access to raw materials. Un-employed youths and interested partners will be trained and capacitated on processing technology at pioneer institutions in the country.

In this regard, the Bio-Resources Development Centre, Planning Department, Government of Meghalaya in collaboration with the State Medicinal Plants Board/ Meghalaya Biodiversity Board, Department of Forest, Environment & Climate Change, Government of Meghalaya can set up a demonstration unit for cultivation of the indigenous Medicinal and Aromatic plants alongwith a Common Facility Centre (CFC). The CFC will accommodate infrastructure and facilities (treatment, processing, packaging, etc.,) required by LHPs to exercise their services and also for popularisation of these indigenous and traditional practices. It will also provide a podium for facilitating and promotion of this traditional health practices as a major livelihood source as health tourism. The Ethno-medicinal Archive can be set at the demonstration unit and this setup will be the first of its kind in the State.

These Common Facility Centres can also be established at 3(three) Agro- Climatic Zones (tropical, sub-tropical and temperate) of the State and Mobile units at each district in tourist spots. They will be a prominent set-up for various traditional healers to assemble in a single platform and expedite their services in a more systematic approach. The location of the CFCs is proposed to be centrally situated to many tourist destinations in tropical, sub-tropical and temperate agro-climatic zones in Meghalaya to attract tourists for availing traditional healing and experience the natural treatment methods.

Details of Project benefit:

Traditional medicine in the state of Meghalaya is a thriving business both in urban and rural areas and has the potential to be taken up for integration into public healthcare sector. It has the potentiality to be promoted as health tourism for economic development and livelihood promotion at districts especially in tourist spots in line with the home-stays. Therefore, setting up of Common facility cum training Centre is proposed for promoting this ancient traditional healthcare therapy and to put the state of Meghalaya in the national map of health tourism where tourists will visit the State not only for its scenic beauty but to seek relaxation of body, mind and soul.

The Common Facility Centre will also act as a Training Centre for Apprenticeship programmes with duration of six months to one year. The apprenticeship programme will also be carried out at local level in the clinics of the Traditional Healers. Two trainees may be allotted to each Traditional Healer. A detail routine for the programme will be worked out with the Trainers (Traditional Healers). The trainees after the 1st year training will be allocated to different tourist spots with the mobile units to be set up at different districts.

One of the major constraints faced by the Traditional healers of the State is the processing of the raw materials. Processing of raw materials is prerequisite before the developing a formulation or a herbal product. The processing procedures constitute sorting, grading, drying, grinding (barks/ roots/ leaves, etc) of the raw materials. Customised technologies for drying, grinding and storage of the raw materials is therefore needed to be developed. The Centre thus proposes to take-up Action Research to develop such technologies which are low-cost, easy to construct and fabricate with available materials, easy to operate (zero energy), effective in promoting better quality and easy maintenance.

The Project will also accommodate a packaging unit for the Traditional/ herbal medicine. It will facilitate branding of the various products produced by the Centre for use and sale to customers/ patients coming for treatment.

Herbal garden will be set up in an area of 5000 ft² for demonstration and for development of ago techniques of the local and indigenous medicinal plants.

Employment likely to be generated: 25 youth/ apprentice will be trained by the Traditional healers per district at the CFC and also at the mobile CFC units at each district. Therefore, 300 youths are expected to be employed per year.

Financial Implication:

Sl. No.	COMPONENTS	AMOUNT (INR)
(A) Non-recurring		
1.	Construction of CFC & Office-9000 ft ² including furnishing (Furniture & fittings, pharmacy setting & accommodation facilities	12000000.00
2.	Setting up of mobile CFCs at district level (12 district) @	1800000.00
3.	Audio Visual equipment	50000.00
Total (A)		13850000.00
(B) Recurring		
1.	Setting up & maintenance of Herbal Garden	300000.00
2.	Travel expenses, etc	300000.00
3.	Development of customised tools for processing, etc	200000.00
4.	Honorarium to Traditional healers	350000.00
Total (B)		1150000.00
Total Project Cost (A+B)		15000000.00