Project Name: Sri Lanka-Conservation and Sustainable Use of Medicinal Plants Project

Region: South Asia

Sector: Other Agriculture

Project ID: LKGE35828

Borrower: Government of Sri Lanka

Implementing Agency: Ministry Health and Indigenous Medicine/Provincial Councils.

Estimated Project Cost: US$ 4.7 million

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Background:

Medicinal plants are an important part of the biodiversity resources of Sri Lanka. The island has more species per unit than any country in Asia containing over 3,350 species of flowering plants and over 300 species of ferns. A large number of these flora are endemic; as much as 27% of the flowering plants, 18% of the ferns, and 16% of the terrestrial vertebrates are endemic to the island. In particular, the island is well endowed with several species of medicinal plants. Among the native flora of Sri Lanka, there are well over 500 species that have been used in traditional medicine.

Benefits:

The project’s benefits accrue at both global and local level. Global benefits of this project will include the conservation of rare and endemic medicinal plants. At least 189 species of the 1,414 medicinal plants used in Sri Lanka are endemic to the island and of these, 79 species are threatened. These 79 species are either endemic to the island or have a limited distribution over the Indian sub-continent. Even among the non-endemic species found in Sri Lanka, the indigenous populations often represent eco types that are distinct from those found elsewhere. Conservation of these plants will secure the continued existence of these rare and endemic species of plants. Another global contribution of the project will be the preservation of knowledge on medicinal plants. The preservation of traditional knowledge on medicinal plants will ensure that practitioners knowledge of plants and their uses is globally recognized and that the source of this knowledge is easily identifiable. Laboratory research on plants and their uses will also augment existing information on this subject. Research on identification of methods and levels of sustainable extraction will help to improve global knowledge on sustainable cultivation of medicinal plants.
Benefits at the local level will include increased choices of livelihood and better income opportunities for people who will be involved in home gardening and plant cultivation. Further, ethnobotanical reserves will attract some increase in income. The project will also broaden people’s choices of livelihood by promoting alternative sources of income generation. Management of Medicinal plant Conservation Areas and promotion of site visits by tourists will provide employment to local people. The project’s focus on community participation will promote community involvement in resource conservation and more equitable sharing of natural resources and benefits. The project will also clarify the role of the community and governmental agencies in resource management.

National benefits of the project will include improved supply of medicinal plants. Improved information will be available on factors which affect the supply of plants and existing sources of knowledge will be compiled and preserved in-country to maximize national benefits. An analysis of market factors will promote greater efficiency in the production of traditional medicine and remove supply side inconsistencies which hinder their availability throughout the year. Further, the project will promote sustainable use of natural resources through managing critically endangered habitats and monitoring its rate of regeneration. The project will also build skills and increase awareness on conservation of medicinal plants.

Threats to Sri Lanka’s Medicinal plants:

Sri Lanka’s valuable medicinal plants are threatened by a number of factors. Of principal importance are:

1. Unsustainable collection and cultivation practices: The number and quality of medicinal plants is adversely affected by overharvesting and lack of care to their habitat when collecting plants from the wild. Overharvesting of plants is directly linked to the high demand for Ayurvedic medicines. Currently 60% of the demand for medicinal plants is met through imports. The domestic production which meets the remaining demand, does so through over exploitation of indigenous plant resources. Since most of the supply for plants is from the wild, this has led to overharvesting of wild populations of species. Nursery capacity and cultivation in home gardens, which has the potential to increase supply of plant and thus take the pressure off wild stocks, is too restricted at present to meet the demand without overharvesting wild populations of plants. In addition, increased demand for agricultural land and unsustainable cultivation practices such as shifting cultivation and ‘Chena’ or slash and burn cultivation destroy plant habitat. As a result about 79 species of medicinal plants are immediately threatened with extinction.

2. Lack of information, awareness and technical skills on medicinal plants and their uses: Since no comprehensive analysis of social and economic causes of plant loss has yet been undertaken, the socio-economic causes and effects of plant loss are not clear. Further, the lack of comprehensive and authoritative information on
medicinal plants hinders an assessment of their status, implementation of activities necessary for preserving their habitat and monitoring the effect of rehabilitative efforts. At present either the sources of knowledge are contradictory (e.g. several plants are identified under different names and uses by practitioners of traditional medicine) or are scattered and fragmentary. A shortage of skills on ethnobotany have also hindered effective conservation strategies.

Sri Lanka is fortunate to have a rich stock of indigenous knowledge on medicinal plants due to a large number of practitioners of traditional medicine. However, this important source of knowledge is currently under threat as little effort has been made to understand and document their knowledge. As a result, the death of a practitioner signifies a net loss to the pool of this important source of information. Unless a concerted effort is made to record the knowledge of plants used by practitioners of indigenous medicine, it is very likely that vital information on plant uses, their characteristics and habitats will be lost. As a result of the above factors, the habitat for medicinal plants has suffered considerably. Many species of plants which were readily available only a decade or two ago are now rare. About 20 of these plants are immediately threatened with extinction. Sustainable management and use of this globally important resource is, therefore, of considerable importance.

Government Sector Strategy:

In recent years, Government of Sri Lanka (GOSL) has developed its strategy on key environmental issues and awarded some attention to the conservation of medicinal plants. The main policy instruments of GOSL’s strategy have been the National Conservation Strategy of 1986, the National Environmental Action Plan -NEAP- in 1991 and an updated NEAP of 1994. Further, several institutions such as the Ministry of Health and Indigenous Medicine, National Environment Steering Committee (NESC), Forestry and Wildlife Departments have also been formed. Some attention has been paid to the conservation of medicinal plants through National Health Policy which provides for the development of traditional systems of medicine as an integral component of the overall health program for the country. The favorable effect of this strategy is the existence of a broad framework on environmental issues. However, specific attention to natural resource conservation is not present since policy formulation has focused primarily on urban environmental problems and inadequate attention has been awarded to natural resource management. GOSL’s ability to provide increased resources and attention to conservation of medicinal plants is limited due to other political and economic priorities.

Project Objectives

The objective of this project is to conserve globally and nationally significant medicinal plants, their habitats, species and genomes and promote their sustainable use in Sri Lanka.
Project Description:

The project will consist of the following components:

1. Expansion of in-situ conservation: Under this component the project will establish five Medicinal Plant Conservation Areas (MPCAs) at Ritigala, Naula, Rajawaka, Kanneliya and Bibile. Villages in and around the MPCAs will be the focus of community organization for planning and implementation of village activities. This will include management planning, inventories of plant resources and their use, cultivation and enrichment with medicinal plants in the wild and extension services to promote the sustainable harvesting of plants. This component will also support investigations to promote sustainable utilization of plants and ethnobotanical research to document the knowledge of plants used by practitioner of traditional medicine. To promote financial sustainability, the project will develop the MPCAs as sites for the promotion of informational material and educational site visits. In addition, this component will target the villages in and around the MPCAs to promote village development activities. Realizing that one of the key reasons for plant loss is their overexploitation by collectors who have no other means of livelihood, the project will also promote village development activities under this component. These activities will consist of alternative income generation to those who are currently dependent on MPCA resources for their livelihood and to find substitutes for currently destructive activities. Lastly, the project will improve access to market information and development of value added activities.

2. Expansion of ex-situ cultivation and conservation: This component will address the need for increased nursery capacity and cultivation of plants in home gardens and farms. The project will support the formation of nurseries at each MPCA and enhance the capacity of three existing nurseries. Research under this component will include the feasibility for propagation of selected species of plants and suitability of plants for cultivation and home gardening. This component will also provide training to improve skills and undertake development of educational materials for building awareness.

3. Information and institutional support: Currently, information on medicinal plants is available in various research centers. This component will support the compilation of existing information into a database. Access to this database will be available by satisfying the criteria to be specified by the Government of Sri Lanka. Additionally, the project will promote appropriate legal and policy environment through studies and draft regulations. This component will also support project monitoring and evaluation, coordination and project management.

Project Financing:

Total project cost is estimated to be US$ 4.57 million of which 4.7 million is proposed for financing from the Global Environment Facility.
Sustainability:

The community-based management strategy of the botanical reserves will strongly favor the long-term viability of the project by developing incentives for surrounding villages to maintain their environmental integrity. This is also an approach that minimizes Government recurrent expenditures.

Social sustainability will be assured through involving local people and NGOs in the design and implementation of the project. The project will ensure that the economic benefits from conservation of medicinal plants flow to local communities especially those involved in collecting and cultivating them. Representative institutions will be supported at the local level and the clarification of legal rights will contribute to the social sustainability of the project.

Through increasing the technical skills and capacity of government agencies, the project will also build a sustainable skill base. Improved local skills will ensure that the technical aspects of the project such as data collection and maintenance, ethnobotanical surveys and monitoring are conducted efficiently and contribute effectively to the project’s success.

Lessons from previous IDA involvement:

Since the proposed project is the first of its kind to be supported by the World Bank/GEF, there are no closely related projects to draw specific lessons. However, lessons from other concluded and ongoing projects point to the lessons that (a) biodiversity conservation requires an adequate policy, legal and regulatory framework; (b) a strong institutional framework is necessary to promote biodiversity conservation; (c) successful design and implementation of conservation projects depends heavily on the active participation of resource users and beneficiaries; and (d) improvement of information sources is necessary to make qualitative and informed decision.

These considerations are being taken into account to ensure that means for institutional cooperation are created, public participation is ensured and information sources are updated.

Poverty Category:

The project will specifically address the needs of the poor who are involved in medicinal plants collection and cultivation. Majority of the collection takes place in the wild and is undertaken by the poorest people in rural areas. These people will form the target beneficiaries of the project’s activities. Through improving their skills, conserving the habitat of plants that are their source of income, improving their access to markets and implementing community programs the project will provide direct benefits to the local communities. Consequently, the project will act as an instrument for targeting poverty.
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Note: This is information on an evolving project. Certain components may not necessarily be included in the final project.

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Environmental Aspects

The project has been placed in Category B for the purposes of environmental assessment. The effects of the projects are largely beneficial for the environment.