Ethiopia: Traditional Medicine and the Bridge to Better Health

In Sub-Saharan Africa, thousands of kilograms of medicinal plants and/or their parts are collected and used every day by mothers in the home, traditional healers,1 livestock owners and pastoralists. For more than 500 million people and hundreds of millions of livestock they are the only readily available and affordable source of human and livestock healthcare. However, the loss of 5.5 million hectares of resource lands every year due to deforestation, cultivation, over-grazing, burning, erosion, etc. severely decreases this supply. Medicines, foods and other natural resource products that have sustained rural people for centuries are now seriously threatened and many potential medicinal plant species may be lost forever. This increasing scarcity of medicinal plant species represents a trend that should be immediately addressed.

The majority of Ethiopians depend on medicinal plants as their only source of health care, especially in rural areas where access to villages is lacking due to the absence of vehicular roads. Modern health care through the construction of new hospitals and upgrading of existing hospitals, health centers and health posts, imported drug supplies and training of doctors and nurses is of little value at the present time to the majority of the rural population (in excess of 40 million people). Medicinal plants and knowledge of their use provide a vital contribution to human and livestock health care needs throughout the country. The plants are generally readily available, have minimal side-effects and are free and/or affordable. They are an important component of the agricultural and environmental sectors and have the potential to make major contributions to both macro and economic growth and rural poverty reduction in the country. Environmental degrada-

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tion, deforestation, agricultural expansion, over-harvesting and population growth are principal threats to medicinal plants in the country. The loss from plant extinctions could result in significant socio-economic loss to Ethiopia and could be of global significance.

At present in Sub-Saharan Africa, there are no country-wide quantitative data available on the supply of, or consumer demand for, medicinal plants and on economic benefits derived by the use of medicinal plants and their contribution to health care. Similarly, most collectors/producers and end users are unaware of the extent to which the expanding demand in medicinal plants is threatening the survival of an increasing number of medicinal plant species. The prices paid to collectors tend to be very low, and resources are frequently open-access or common property. As a result, commercial plant gatherers often “mine” the resources rather than managing them.

The health and drug policies of the Ethiopian Ministry of Health recognize the important role medicinal plants and traditional health systems play in health care. Unfortunately, little has been done in recent decades to enhance and develop the beneficial aspects of traditional medicine including related research and its gradual integration into modern medicine. Despite Ethiopia’s commitment to the health sector, its ability to provide increased resources for the study and sustainable use of medicinal plants has been limited.

In most African countries, and Ethiopia is no exception, there is a cadre of highly-trained professionals whose talents and expertise in the field of plant chemistry, pharmacognosy, pharmacology, natural resource management, and the industrial utilization of medicinal plant-based products are underutilized. These professionals acknowledge their indebtedness to traditional healers and birth attendants and the need to work together to establish processes to manage and validate traditional medicines. At present, both levels of knowledge capital (traditional and scientifically-based) are underutilized.

The increasing demand by the industrial countries for herbal remedies has put increasing pressure on the supply of raw materials available in developing countries. Ethiopia is particularly conscious of the loss of its genetic resources, especially in this case where such resources are the primary, if not only, source of healthcare for the rural and urban poor populations. By developing national Pharmacopoeia, governments will initiate a process to formalize processes for the extraction, standardization, safety and efficacy, and dosage and formulation of phytomedicines. The formal integration of traditional and western medicine systems will build upon an ancient and acceptable cultural heritage, give strength to biodiversity conservation and management programs and provide a level of health care to all citizens that will be reflected in future social and economic prosperity.

After a somewhat circuitous development passage, the Ethiopian government, with World Bank assistance, will soon start to implement the first conservation and sustainable use of medicinal plants project in Sub-Saharan Africa. The overall objective of the project is to initiate support for conservation, management and sustainable use of medicinal plants for human and livestock health care. The project’s specific objectives are to: (i) strengthen institutional capacity; (ii) confirm and document selected commonly-used medicinal

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Ethiopia conservation and sustainable use of medicinal plants
lead agency and contributing institutes, agencies and communities

Lead agency
Institute of Biodiversity and Conservation Research (IBCR)

In situ & sustainable use
IBCR & communities

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- Biology Dept, AAU
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- Department of Drug Research (DDR), MOH
- Healers/Birth Attendants

Livestock healthcare
- Faculty of Veterinary Medicine, AAU
- Pastoralists

Database
National Herbarium, AAU

Intellectual property rights
Ethiopian Science and Technology Commission

Goals
- Improved human and livestock healthcare
  - Globally significant biological resources secured

plants for the treatment of three major human diseases
(tapeworm infections, bronchopneumonia, hypertension)
and three livestock diseases (tapeworm infections, mastitis, dermatophilosis); (iii) initiate studies for the safe utilization
of effective medicinal plant remedies for these three major
human diseases and three livestock diseases; (iv) assess the
economic benefits derived from medicinal plants in human
and livestock healthcare on a national level; (v) develop a
national medicinal plant database; and (vi) support in situ
conservation and management and initiate ex situ cultivation
of medicinal plants in the Bale Mountains National Park area.

Project funding will be both credit and grant. The credit
will support: development of a national database of medi-
cinal plants; assessment of current levels of usage and eco-
nomic benefits derived in the country from the use of medicinal plants; training and institutional strengthening; development of Intellectual Property rights guidelines for sharing traditional medicinal knowledge; determining safety and efficacy of plant remedies used to treat three major human diseases and three major livestock diseases; initiating studies of propagation and cultivation methods for selected medicinal plants; and project implementation, monitoring and evaluation. Grant funds will support biodiversity conservation and sustainable management of *in situ* medicinal plant resources in and around the Bale Mountains National Park as a means of reducing harvesting pressure on wild plants. The grant will also cover the costs of education and mass awareness campaigns, local training, and pilot farmer-based cultivation trials of selected threatened medicinal plants in home and community gardens and boundary and buffer zones of the national park. The lead agency and collaborating agencies, institutes and communities are identified in Figure 1.

Recommendations for using traditional plant-based remedies in primary health care programs will carry weight only through studies that establish their credibility and illustrate their safety. The use of such remedies over a long period of time may provide important information on pharmacological effects in humans and livestock of particular groups of chemical compounds – information not usually available when testing a new synthetic drug. Testing requirements formulated by regulatory authorities to ensure safety of "new" drugs are not necessarily applicable to traditional remedies. A more limited range of pre-clinical toxicological tests may be adequate.

Medicinal plants and knowledge of their use are a thread that links education and knowledge institutions, health and population issues, sustainable development, environmental and cultural issues, gender, and rural, urban and private sector strategies. Consequently, this project should be monitored carefully by the concerned departments both in the World Bank and other development organizations to see how it can be effectively integrated for the benefit of the poor. While not the panacea, they are basic to poverty alleviation and development effectiveness and should be viewed within the long-term holistic and strategic framework.

1 Traditional healers in this context only include herbalists, bone setters, psychic healers and traditional birth attendants. Faith healers, diviners and spiritualists also use medicinal plants, but not as the primary source of healing.