

**15<sup>th</sup> Meeting of the Inter-African Expert Committee on African Traditional  
Medicine and Medicinal Plants.**

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**2001-2010 : OAU Decade for African Traditional Medicine**

Paper:

**IDRC<sup>1</sup> Support to Research on Medicinal Plants and Traditional Medicine in  
Africa**

by

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<sup>1</sup> The International Development Research Centre (IDRC) is a public corporation created by the Parliament of Canada in 1970 to help developing countries use science and knowledge to find practical, long-term solutions to the social, economic, and environmental problems they face. Support is directed toward developing an indigenous research capacity to sustain policies and technologies developing countries need to build healthier, more equitable, and more prosperous societies.

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## **I. Introduction**

Most of the World population in developing countries continue to rely on traditional health systems and medicinal plants to meet their health care needs. In Sub-Saharan Africa, health provision is beyond the reach of most rural population. The incidence of tropical diseases and the HIV/AIDS epidemic continues to rise as a result of weak health infrastructure and declining standards of living. In most cases traditional medicine is the only option available to the people. It is estimated that about 85 per cent of rural communities in Sub-Saharan Africa rely on traditional remedies, most of which are plant-based.

In addition to their use in traditional medicine, medicinal plants are precious resources for the pharmaceutical, food and cosmetic industries. Yet their stock are diminishing due to the rapid loss of biodiversity as a result of environmental degradation factors such as demographic pressure, unsustainable utilization of resources, drought, deforestation, and lack of adequate resource management. At the same time, there is a gradual loss of indigenous knowledge on medicinal plants and traditional medicine as a result of death of the older people who have traditionally been the custodians of this knowledge.

## **II. Support to Research on Medicinal Plants and Traditional Medicine in Africa**

The International Development Research Centre (IDRC) support for research on medicinal plants and traditional medicine is consistent with the recognition that biodiversity, or genetic variability, is vital to the health of the planet and its people. It secures our food supply, provides a source of medicine, and helps regulate our climate.

The International Development Research Centre, through its Sustainable Use of Biodiversity Program Initiative (SUB PI), supports medicinal-plant research that reflects its commitment to promoting the production and use of knowledge to attenuate poverty and improve living conditions in the developing countries. Accordingly, the Centre played a major role in the process that led to the Declaration on the Decade for African Traditional Medicine (2001-2010) by the Summit of the African Union (Lusaka, July 2001), and hopes to participate in this event

### **II.1 Sustainable Use of Biodiversity Programme Initiative (SUB PI)**

The SUB PI addresses two related concerns:

- ▶ the importance of biodiversity resources to human livelihoods, particularly to marginalized communities; and
- ▶ enhancing the role of these communities in the sustainable use of biodiversity



### SUB PI's Objectives:

- ▶ To promote the use, maintenance, and enhancement of the knowledge, innovation, and practices of Indigenous and local communities that conserve and sustainably use biodiversity;
- ▶ To support the development of policies and legislation that recognize the rights of Indigenous and local communities to genetic resources, as well as to the equitable sharing of benefits from the use of these resources;
- ▶ To develop gender-sensitive incentives, methods, livelihood options, and policies that facilitate community-based participation in biodiversity conservation and management strategies.

## II.2 In the area of medicinal plants

### Approach:

- ▶ IDRC supports research on medicinal plants through a multidisciplinary approach that integrates key issues in health, conservation, indigenous knowledge, and local economic development. IDRC supports research activities that are community-based but that can influence national and international policy objectives

### Research Focus

- ▶ **Biodiversity conservation:** documenting the uses of medicinal plants, their taxonomy and relative abundance, identifying those which may be endangered, and establishing community-based conservation strategies and practices;
- ▶ **Improved access to health care:** promoting collaboration between health care institutions and traditional medicine practitioners to undertake research leading to safe, effective, affordable, and culturally appropriate treatments and practices;
- ▶ **Marketing and employment opportunities:** identifying potentially marketable medicinal plants as a source of income and employment for local communities. The development of standardized production, quality control, and sustainable harvesting methods are emphasized;
- ▶ **Use of indigenous knowledge:** supporting collaborative and participatory research between local communities and scientific institutions. Documentation and development of medicinal plants based on traditional knowledge must ensure that local communities have control of, access to, and benefits from research through intellectual property rights legislation, protocols and other

mechanisms;

- **Networking:** facilitating linkages and exchanges, within and between regions, that enhance local access to information and benefits from research and development opportunities. Improved access to information and communication technologies can amend inequalities in access to information on medicinal plants, and help to foster national, regional and international collaboration.

### **II.3 Examples of current IDRC-funded projects and activities in Africa**

IDRC has supported projects and activities on medicinal plants and traditional medicine in Africa since 1974. Currently, IDRC supports projects and activities in Africa that involve local communities and non governmental organizations, universities, national governments, and international bodies in research and development on medicinal plants and natural products.

The following projects and activities are current examples of IDRC-funded activities.

- **Medicinal Plants and Biodiversity (Uganda)**

Like many other African countries, Uganda faces an acute shortage of drugs, most of which are imported from abroad. A large part of the population depends on medicinal plant products. However, the plants are facing depletion -- some are endangered, largely because of increased pressure on the land and destructive harvesting methods. Building on baseline information on medicinal plants, this project works with local communities, traditional healers, and health practitioners to investigate 15 rare and endangered species of medicinal plants. The aim is to understand local perceptions of these plants and their uses, and determine plant conservation issues in four regions of the country. Effective strategies will be developed to conserve, propagate, and use these plants in a sustainable way. At the same time, the project is helping traditional healers, ethnomedicine researchers, and health workers gain experience in non destructive methods of harvesting, and more effective preservation. They are also learning how to investigate the safety and efficacy of widely-used traditional remedies.

*Natural*  
*Institutions:* ~~National~~ Chemotherapeutics Research Laboratory and the Entebbe Botanical Gardens, and Makerere University

- **Medicinal Plants in Traditional Health Practices (Ethiopia)**

Home to some 80 ethnic groups with distinct languages and dialects, Ethiopia has an extremely varied socioeconomic and cultural landscape. Even within a relatively small geographical area, farming and production systems, and the use of plants as a source of medicine, can vary widely. This project seeks to acquire information and document the use of locally important medicinal plant genetic resources and traditional knowledge systems in selected Ethiopian communities. The project will also identify gender differences in traditional health knowledge and practice, and access to resources, and



assess community access to and use of modern health services. Potential areas of complementarity between traditional and modern health systems will be identified.

*Institutions:* Biodiversity Institute, National Traditional Healer Organisation, Addis Ababa University, and University of Oxford/Development Studies Centre.

► **CD-ROM Database on Malagasy Medicinal Plants**

Madagascar is endowed with rich and unique plant diversity: 13 000 species are found on an area of 590 000 square kilometres. Documenting, conserving, and using Malagasy biodiversity in a sustainable way are pressing priorities as the island is threatened with desertification. This project gather and compile all existing information and data on the use of Madagascar's medicinal plants to help develop a policy for their conservation and sustainable utilization. The compiled information will be disseminated on CD-ROM.

*Institution:* Institut malgache de recherche appliquée (IMRA)

► **Community Based Conservation of Medicinal Plants (Kenya)**

Kenya's biological resources are diverse, with an estimated 35,000 known species of animals, plants and micro-organisms. These resources form the basic source of livelihood especially for the 80 % of the country's rural population who relies directly or indirectly on biodiversity for its survival. Like most countries in Sub-Saharan Africa, health provision in Kenya is beyond the reach of most rural population. The incidence of tropical diseases and the HIV/AIDS epidemic continues to rise as a result of weak health infrastructure and declining standards of living. In most cases traditional medicine is the only option available to the people. Moreover, biodiversity is being rapidly lost as result of environmental degradation factors such as demographic pressure, unsustainable utilization of resources, drought, deforestation, and lack of adequate resource management. At the same time, there is a gradual loss of indigenous knowledge on medicinal plants and traditional medicine as a result of death of the older people who have traditionally been the custodians of this knowledge.

Although Kenya was one of the first countries in the developing world to create a National Environment Secretariat (NES) in 1972 to address environmental policy formulation and implementation, and despite the recently developed National Biodiversity Strategy (1996), most of the research and conservation efforts undertaken at various levels are fragmented resulting often in duplication and inefficient utilization of limited resources and capacity.

This project builds on preliminary surveys conducted within Luo-Suba and Kamba communities in respectively the Nyanza and Eastern provinces of Kenya and seeks to enhance capacity and capability at local community, institutional and national levels for the sustainable use and conservation of medicinal plants biodiversity and improvement of health and productivity of the people. To this end, the project is focussing on conducting ethnobotanical surveys to complement previous studies in the target



regions, developing conservation strategies for identified threatened plant species, conducting toxicological assessment on selected plants in order to determine their levels of safety and to avoid possible health risks. In addition, the project further aims at addressing the national institutional capacity and capability for medicinal plants biodiversity use and conservation.

*Institutions:* Maseno University; National Museums of Kenya and Kenya Forest Research Institute

#### ► **Medicinal Biodiversity (West Africa)**

In West Africa, a shortage of basic medications, lack of health services, high cost of drugs, and traditional practices, mean that most of the population – particularly in rural areas – resorts to traditional medicine, healers, and herborists. Unfortunately, this centuries-old traditional knowledge is being eroded. This project seeks to restore confidence in this accessible and culturally appropriate system of health care by increasing the knowledge and capacities of populations and developing sustainable methods of producing plant-based medicines in Mali, Guinea, and Togo. The project team is identifying medicinal plants with potential therapeutic properties against common ailments; evaluating biologically active components; and testing toxicity levels of selected plants. In addition, the project is examining threats to conservation and proposing conservation options. The researchers are working in collaboration with traditional healers, herbalists, students, researchers, and decision to create viable policy options for the sustainable development of medicinal plants.

*Institutions:* Département de médecine traditionnelle - INRSP (Mali), Université de Lomé (Togo), and Institut de recherche et d'appui au développement communautaire - IRADEC (Guinea).

#### ► **Sacred Forests (Ivory Coast)**

In the Ivory Coast, the sacred forests are steeped in village lore and lineages. For a long time, populations' cultural practices contributed to the forests' protection. Unfortunately, there is now pressure to change the status of these forests: forested land has decreased from 21 million hectares in 1957 to 2.8 million in 1995. Deforestation is increasing by 6.5 percent a year (approximately 300,000 hectares). This is affecting the cultural and spiritual heritage of the local communities and is causing a severe decline in biodiversity, particularly in uncultivated food crops and medicinal plants. The Sacred Forest project aims to develop strategies, based on the local populations' cultural practices, to preserve the forests and their biodiversity. It also recognizes medicinal plants' social and economic importance for stakeholders.

*Institution:* Croix Verte de Côte d'Ivoire.

#### ► **Economic Importance and Conservation of Medicinal Plants (Senegal)**

The project builds on the recommendations of several workshops and meetings held previously in Senegal on conservation of medicinal plants. In order to increase sustainability of activities dedicated to the conservation and valorization of medicinal plants, the project seeks first to document the socio-economic profiles of stakeholders, and main market characteristics of medicinal plants. It tries to improve understanding of various aspects of medicinal plants exploitation by communities and other stakeholders within the context of rural economy, which is becoming more and more important as a result of increasing poverty. The project's activities also aim to propose a legal framework, as well as a framework for exchange and dissemination of information, in collaboration with organized traditional healer associations.

*Institutions:* UICN-Sénégal, ENDA tiers Monde, and Université Cheikh Anta Diop de Dakar/Faculté de Médecine et de Pharmacie

### **Workshops and Conferences**

IDRC has organized and/or supported the organization of workshops and conferences about medicinal plants and traditional medicine. These include:

- ▶ The "First OAU/STRC/DEPA/KIPO<sup>3</sup> Workshop on Medicinal Plants and Herbal Medicine in Africa: Policy issues on Ownership, Access and Conservation," Nairobi, Kenya, April 1997;
- ▶ The "Regional Workshop on Medicinal Plants and Traditional Medicines in Africa," Conakry, Guinea, November 1997, for Francophone participants including nongovernmental organization (NGO) representatives, researchers, and tradipractitioners;
- ▶ The "Regional Workshop on Medicinal Plants and Traditional Medicines in Africa," Cape Town, South Africa, April 1998, for English-speaking NGO representatives, researchers and tradipractitioners;
- ▶ The "International Conference on Medicinal Plants, Traditional Medicine and Local Communities: Challenges and Opportunities of the New Millennium," Nairobi, May 2000, in parallel to the 5th Conference of the Parties to the Biological Diversity Convention (COP V).

The Conakry and Cape Town workshops and the Nairobi international conference were organized within the framework of the IDRC-supported Medicinal Plants and Local

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<sup>3</sup> First OAU/STRC/DEPA/KIPO Workshop:

OAU: Organization of African Unity

STRC: Scientific, Technical and Research Commission, Nigeria

DEPA: Development Partners (an NGO based in Kakamega, Kenya)

KIPO: Kenya Industrial Property Office



Communities (Africa) project, implemented by Environment Liaison Centre International (ELCI, Nairobi).

- First National Workshop on Medicinal, Aromatic, and Other Underutilized Plant Species in Kenya: Towards the Promotion of Medicinal and Other Underutilized Plants in Kenya for Sustainable Socio-economic Development. Naivasha, 29<sup>th</sup> October- 3<sup>rd</sup> November 2001.

## **II.4 IDRC Involvement in the 2001-2010 Decade for African Traditional Medicine**

The conference held in Nairobi in 2000 was hosted by a coalition of organizations, including ELCI and Global Initiative for Traditional Systems of Health, among others. Conference participants formally requested African governments and the Organisation of African Unity (OAU) to adopt a Decade devoted to the promotion and development of medicinal plants, traditional medicines, and pharmacopoeia in Africa, as a means of drawing public attention to both the rich heritage of African traditional medicine and the pressures it now faces. A formal recommendation was drafted to this end.

As a follow up, a process coordinated at IDRC's Regional Office for East and Southern Africa in Nairobi involved most of African participants in the conference -- especially IDRC partners -- to sensitize African governments to this important issue. Contacts were also established with the OAU Secretariat. As a result, three governments requested the OAU Secretary General to put the Decade of Traditional Medicine on the agenda of the OAU Summit to be held in Lusaka, Zambia, in July 2001: first Uganda, followed by Madagascar and Ghana. The issue was put on the agenda of the 74th OAU Council of Ministers. IDRC facilitated the participation of projects leaders, Mr. Corn Alele Amai of Uganda and Prof. Philippe Rasoanaivo of Madagascar, in the OAU meetings.

And on the 11<sup>th</sup> of July 2001, the 2001-2010 Decade for African Traditional Medicine was launched by the Summit of the Organization of African Unity.

### **Initiative**

#### **Regional Collaborative Program of Research and Networking on Medicinal Biodiversity and Traditional Medicine (Africa)**

##### **General Objective:**

*This initiative seeks to build on existing activities, experiences and networks in the concerned area in Africa,*

To develop a programme of research and networking that will enable more coherent and effective collaboration among interested international, national and local



organizations currently working in Africa towards the sustainable, safe, and effective use of medicinal plants and herbal products.

**Specific objectives:**

- ▶ To develop, in collaboration with the main stakeholders, a regional programme of research and specific activities to promote the development of medicinal plants and traditional medicine in Africa;
- ▶ To support the development and integration of information, research and experts networks (local, national, regional) dedicated to the sustainable, safe, and effective use of medicinal plants in Africa;
- ▶ To build capacity of relevant networks for research, exchange of information, and management of plant resources;
- ▶ To increase impact of the networks' activities on health, plants conservation, policy, and economic objectives.

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