Introduction

Medicinal plants are key components of biodiversity, vital for ensuring primary health care and livelihoods of the poor in Sub-Saharan Africa in general and Eastern Africa in particular. They are used in various traditional systems of health in developing countries and as complementary or alternative medicine in western societies. However, these resources are diminishing at an alarming rate as a result of their wide and unsustainable use, increasing demand, and environmental factors. The loss of medicinal plant diversity is compounded by the even more rapid loss of related indigenous/traditional knowledge especially in Africa, where this knowledge is transmitted orally from generation to generation.

Introduction (Cont.)

Research and development efforts carried out to address problems encountered in this area in Eastern Africa are scattered and they are not sufficiently supported by national governments and international development aid agencies. There are also gaps and weaknesses in existing policy and legislative measures. As a result, the potential of medicinal plants and traditional medicine for ensuring healthcare needs and livelihoods has not yet been adequately utilized.

Human welfare → Biological Resources
Role of Medicinal Biodiversity

I. Globally:

- There are 30,000 - 70,000 medicinal plant species worldwide;
- Ensure primary health care for up to 80% of the people in developing countries;
- Sources of food supplements, nutraceuticals;
- Use in cosmetics & development of new drugs;
- Global market estimated at 60 billion $US per year.

II. Africa:

- The ratio of THPs to population is between 1:200 and 1:400, while the ratio of doctors to the population is 1:20,000 in Uganda (WHO, 2002);
- 26,500 tons of African medicinal plants exported to Europe in 1996 (raw material);
- 6,000 tons of Rooibos tea exported per year (USD 3.6M)
- 700 tons of Aloe ferox extract exported per year for cosmetic and medicinal products;
- 3,310 tons of Prunus africana (bark) traded to Europe in 2000;

Role of Medicinal Biodiversity (cont.)

II. Africa:

- More than 4,000 plant species are used as medicinal plants in Tropical Africa out of 6,300 plant resources used (PROTA, 2002);
- 50,000 tons of medicinal plants consumed per year in SADC region (M. Mander, 2003);
- 20,000 tons of medicinal plants traded in SADC region (1000 species) (M. Mander, 2003);
- 450,000 traditional healers for 90 million consumers in SADC region (M. Mander, 2003).

Role of Medicinal Biodiversity

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II. Africa:

- 2000 tons of Marula fruit (Sclerocaria birrea) processed per year into Amarula liqueur exported to 149 countries;
- 10,000 people derive income from harvesting Devil’s Claw (Harpagophytum procumbens and Harpagophytum zeyheri) in Namibia
- 30 companies processing, packaging and selling wholesale natural products in SADC region (M Mander, 2003).
Conservation Concerns

• There is a continuous loss of Medicinal Biodiversity and associated knowledge and practices as a result of:
  - Population growth and poverty
  - Environmental degradation (destruction of natural habitats)
  - Trade (unsustainable harvesting), etc.
  - « Cultural change »

• Medicinal Plant species reportedly of conservation concern in Eastern Africa (N. T. Marshal, 1998):
  - Kenya: 15 plant species
  - Tanzania: 9 plant species
  - Uganda: 16 plant species
  - Sudan: 14 plant species

Policy Environment/Framework

At international level:

• 1993: The Chiang Mai declaration and the WHO/UCN/WWF Guidelines on the Conservation of Medicinal Plants;
• 1992: The Convention on Biological Diversity (CBD) provides a global and broad policy framework and a legal instrument;
  - Objectives: to conserve biodiversity; use it sustainably; and ensure fair and equitable sharing of benefits.
  - The CBD recognizes the importance of TK, innovation and practices of indigenous and local communities that are relevant for the conservation and use of biological diversity (CBD, 2001);

Policy Environment/Framework (Cont.)

At international level:
  - Medicinal plants are highlighted among priority species to be considered for conservation and sustainable use; and
  - Through the Global Strategy for Plant Conservation (April 2002), the CBD sets an agenda to halt the rate of loss of plant species with 16 specific targets most of which are relevant to medicinal plants;
  - The convention on International Trade in Endangered Species of Fauna and Flora (CITES).

Policy Environment/Framework (Cont.)

At Regional/Continental level:

• WHO Strategy for Traditional Medicine;
• WHO guidelines, standards and policies related to herbal therapies, safety and efficacy, methodologies for research, legal status, registration of Traditional Health Practitioners; etc.;
• AU Decade for African Traditional Medicine;
• OAU Model Law for the Protection of the Rights of Local Communities, Farmers and Breeders and for the Regulation of Access to Biological Resources;
• NEPAD: New Partnership for African Development
### Policy Environment/Framework (Cont.)

**At National Level:**
- National Biodiversity Strategies and Action Plans;
- National Environment Management Authorities (NEMAs);
- Forest policies;
- Health policies

**Gaps**
- Lack of harmonisation of existing policies;
- Problem/constraints for implementation;

### Policy Environment/Framework (Cont.)

**At National Level:**

**Gaps**
- Lack of integration of TM within national health policy and legislation;
- Outdated laws (e.g. witchcraft acts relating to TM);
- Lack of/insufficient public awareness;
- Lack of ABS policy and legislation within IPRs regimes;
- Lack of domestication of international/regional conventions and treaties (e.g. International Treaty on PGRs for Food and Agriculture, OAU/AU model law);
- Insufficient capacity for research

### Research Needs & Issues

**Past and current focus:**
- Phytochemical and pharmacological screening of plants in order to discover and characterize active ingredients;
- Safety and efficacy of traditional remedies;
- Development of phytopharmaceuticals;
- Documentation of ethnomedicinal knowledge and practices, and identification of methods to improve standards of health care;
- Plant population studies and development of conservation & management strategies at community level;
- Gender differentation in the roles and responsibilities pertaining to access to resources, traditional health knowledge and practice;

### Research Needs & Issues (Cont.)

**Health and Nutrition (Health systems):**

**Goal:**
- To strengthen the development of improved traditional practices and herbal medicinal products in order to facilitate the integration of TM into national healthcare delivery services

**Research questions:**
- How can scientific knowledge be used to strengthen local practices of TM?
- What are the key considerations in integrating TM and use of medicinal plants in public health care sector in Eastern Africa?
- What are the factors and policies that determine and constrain household dietary diversity and nutritional status; and what are the opportunities to enhance it?
Sustainable management

Goal:
• To contribute to halt the loss of biodiversity and to improved livelihoods of the people, through sustainable utilization of medicinal and aromatic plants

Research questions:
• How can integration of cultivation and wild harvesting lead to sustainable management of medicinal plants and their habitat?
• What are the best tools and practices for quality management and standardization that promote sustainable use of medicinal plants in Eastern Africa?
• What are appropriate mechanisms, including suitable tenure arrangements, to ensure sustainable management of medicinal plants and their habitat, while improving equity in access to and benefits from medicinal plant resources?

Sustainable Livelihoods

Goal:
• To support community-based processing of plant materials, quality control and quality management, and to provide relevant market information to producers/harvesters

Research questions:
• What are the social, biological and legal impacts of domestication and cultivation of medicinal plants?
• What institutional mechanisms can support more equitable benefit sharing among local producers?
• What are the best mechanisms to resolve potential conflicts between local level access and benefit sharing priorities, and national/international interests?

Policy and legislation

Goal:
To contribute to policy development and implementation processes in order to achieve sustainable development and maintain the resource base.

Research issues
• Identification of gaps within existing policies and legislation relating to environment, forests, wildlife, plant genetic resources (access, ownership, protection of community rights, conservation), health and traditional medicine, intellectual property rights, etc.
• Analysis of challenges faced with policy implementation processes

Policy and Legislation

• Review of progress in domesticating and implementing relevant international conventions and instruments (WHO policy guidelines, CBD decisions, policy guidelines such as the Bonn Guidelines on ABS and the AU Model Law)
• Development of policy briefs, case studies, and facilitation of policy fora
References