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**Bio-diversity and Mutual Benefit-sharing
of Genetic Resources:
Experience of Tanzania**

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Prepared by: Adelaide Tillya and Lucas N. Saronga
Please send comments to: vpodoe@intafrica.com
mic@raha.com attn: Lucas Saronga

INTRODUCTION

1.1. Tanzania signed the convention on Biological Diversity in 1992 and ratified the same in March, 1996, thereby committing herself to join other global partners aspiring to conserve biological diversity and enhance development opportunities, banking on more sustainable uses of biological resources and promoting more equitable measures of sharing accrued benefits across local, regional, national and global stakeholders. By ratifying the convention, Tanzania is committed to join other parties in a global partnership to address the provisions of the convention.

1.2. An Overview on Tanzania's Biodiversity

Tanzania is ranked as amongst one of the biodiversity rich countries in the world. One of the biodiversity hot spots in the world is found in Tanzania. This area covers the Eastern Mountain Range. Factors which has led to this outstanding biodiversity include among others, diverse topography, diverse climate, and diverse habitat and ecosystems.

Tanzania's biodiversity is located in both natural ecosystems including forests, woodlands, grasslands, wetlands, marines and freshwater ecosystems. Biodiversity is also found in man made ecological areas namely: farmlands, ranches, forest plantations and man made dams.

Available statistics indicate that, of the 10,000 plant species recorded so far, over a quarter are endemic. The forests of Tanzania also harbours 31 endemic amphibians, 18 endemic species of lizards, 9 species of snakes and 10 species of birds. There are a number of wild varieties of several cultivated crops including coffee, rice and millet. Tanzania has 40% of the worlds wild coffee varieties and about 80% of the famous African violet flower plant species. The oceans, rivers and lakes contain many species of fish including about 600 fish species in the coastal waters and 700 species in the rivers and lakes. The country is also famous in terms of game. The Selous Game Reserve has the largest concentration of elephants in East Africa. The tree-climbing lions of Manyara National Park are unique throughout the world.

About a quarter of Tanzania's land area is covered by unique ecosystems in the form of forest reserves, national parks and game reserves. Tourism is one of the biggest export earning industries in the country and account for about 7.5 % of GDP and nearly 25% of the total export.

Apart from national parks, the country has other rich varieties of ecosystems of economic, scientific and aesthetic values. The outstanding ones are the Eastern Arc Mountains which have a high level of endemism. Others include mountain ecosystems, coastal forest patches, mangroves and wetlands. Most of them have important genetic resources for medicinal plants, timber tree species and other plants of economic importance.

2. BIODIVERSITY CRISIS

The Tanzania biodiversity is threatened by a variety of human activities, including heavy pressure for agricultural expansion, livestock grazing, wild fires and over exploitation. Poaching is a concern where people hunt large mammals for horn and ivory and hunting for tourism is beginning to make an impact in some areas.

2.1 Contributing factors

Although Tanzania has contributed about 25% of her land area to protected area networks, many times those protected areas have been created without consideration of the demand of the surrounding communities (grazing areas, fuelwood, water etc). Neither are the surrounding communities benefiting from the proceeds accruing from the protected areas. As a result, local people have no incentive to respect protected area boundaries, and frequently disturb habitat through land clearance and natural resource extraction, and take wildlife for their own uses, such as food, skin and sell for profit.

2.2 Current responses

Tanzania recognize that, visible stream of benefit to local people is critically important if conservation and sustainable utilization of biodiversity is to be realised. To effect this Tanzania has taken a number of approaches:

2.2.1. Incorporation of benefit- sharing aspects in policies

The currently reviewed natural resources management policies have statements/strategies on how to address the issue of benefit sharing.

The Wildlife policy strategies are:

Involving various stakeholders in determining distribution of revenue and benefits among themselves, and determining proportions for benefit sharing by the government and vary them from time to time.

Forestry policy States:

In order to improve forest conservation and management and to ensure equitable sharing of benefits among all stakeholders, joint management agreements between the central government, specialized executive

agencies, private sector or governments, as appropriate in each case, and organized local communities or other organizations of people living adjacent to the forest, will be promoted. The local community will be granted appropriate user rights for forest produce and forests will be managed in accordance with approved management plans.

The Bee-keeping policy states:

Apiary establishment and management in game reserves by organized local communities, individual beekeepers, NGOs and executive agencies will be encouraged. Joint management agreement including benefit-sharing mechanisms and incentives may be made between the government (Wildlife Division) and the local beekeepers (organized productive groups). Formal cross-sectoral co-ordination mechanisms between beekeepers and wildlife authorities will be established in order to improve coordination of activities under approved management plans.

2.2.2. Projects on Biodiversity

Tanzania is implementing a number of projects geared towards conservation and sustainable utilization of biological resources. Some of these are discussed below:

(a) The Cross Border Biodiversity Project

This is a five-year project (1998-2002) with Global Environmental Facility (GEF) funding and a sizeable national baseline activity. It covers three countries- Kenya, Uganda and Tanzania which are said to constitute a mega-biodiversity region of the world. The project was developed through participatory processes at central and district levels and is being implemented through national execution modalities in the environment sector.

The project works with communities and with district policy initiatives that affect forest and wetland resources in the four cross-border sites. In addition the project looks at central government policy issues which influence the conservation of biodiversity at local levels. This includes incentives and disincentives for conservation.

(b) The Participatory Environment and Natural Management Project (PERM).

PERM is a framework for undertaking activities in support of Community Based Natural Resources Management (CBNRM) in Tanzania. It is meant to support efforts being made to implement action plans and strategies for sustainable development.

Approach:

Under the stewardship of PERM, participation of stakeholders and key players will be emphasised to maximise opportunities of partnership with communities and resource users. This builds on efforts already in progress by the Government of Tanzania of establishing pilot Community Based Conservation project with the aim to safeguard ecological integrity and ensure participation of communities and generation of benefits to them.

The project has two main objectives, stemming directly from the problem analysis:

- (i) Creating an enabling environment in which government agencies and communities can jointly regulate resource use. This has three outputs:
 - ⇒ Addressing government agent capacity,
 - ⇒ Community capability and
 - ⇒ The policy institutional environment.

- (ii) Balancing the supply and demand factors that impact on biodiversity conservation and wise use
This has four outputs:
 - ⇒ Addressing the need for a participatory management strategy and action plan process for the sites of biodiversity interest;
 - ⇒ Looking at alternative ways of using biodiversity resources;
 - ⇒ Looking at alternative land-use options and livelihoods;
 - ⇒ Considering the broader planning perspective of District Environmental Plans, Pastoralist Strategies etc.

(c) Lake Victoria Environmental Management Project (LVEMP)

The LVEMP is a comprehensive programme aimed at rehabilitation of the lake ecosystem for the benefits of the people who live in the catchment, the national economies of which they are a part, and the global community. The project covers three countries, Tanzania, Kenya and Uganda. The program objectives are to:-

- ◆ Maximize the sustainable benefits to riparian communities from using resources within the basin to generate food, employment and income, supply safe water, and sustain a disease-free environment; and
- ◆ Conserve biodiversity and genetic resources for the benefit of the riparian communities and the global community.

2.2.3. Development of a National Biodiversity Strategy and Action Plan

In March 1998, Tanzania started developing a National Biodiversity Strategy and Action Plan (NBSAP), and it is now on its final stages. The NBSAP has been formulated taking into further consideration the country's dependency on the biodiversity wealth worldwide.

The guiding principles of the NBSAP are that the protection of the biological diversity is the responsibility of each and every Tanzanian and :-
⇒ All life forms have intrinsic value and their use should be sustainable.

- ⇒ Each and every Tanzania has the right to understand and appreciate biodiversity and participate in resource use decisions that affect the biodiversity particularly within the ecosystem within which they live and depend upon.
- ⇒ Empowerment of women is a critical factor in the eradication of poverty and hence in the sustainable use of biological diversity.
- ⇒ It is vital to anticipate, prevent and attack at source the cause of significant reduction or loss of biological diversity.
- ⇒ Biological diversity is best conserved in the wild (in-situ).
- ⇒ It is only when people can satisfy their needs, have control of their resource base, and have secure tenure to land, that long-term objectives of biological diversity conservation and sustainable use can be satisfied.
- ⇒ Science and technology have a central role in the exploitation processing and utilization of the biological diversity.
- ⇒ The knowledge, innovations and practices of indigenous and local communities should be respected, preserved maintained and used with the approval and involvement of those who possess the knowledge.
- ⇒ The conservation of Tanzania's biodiversity is affected by international activities, which require a global co-operative action and benefits.

One of the objectives of the NBSAP, is to improve community standards of living through equitable sharing of income generated from the sustainable utilization of biodiversity resources at national and international level.

3. BIODIVERSITY PROSPECTING

At the moment, scientific research on biodiversity is regulated through the issuance of a research permit. This is issued by the Commission for Science and Technology, which is under the Ministry of Science, Technology and Higher Education. The applicant has to submit a research proposal and his/her Curriculum Vitae (CV) to the Commission. Permit is issued after the approval of the research proposal, by relevant institutions and scrutinizing the CV of the applicant. The researcher has to submit a report of research findings to the Commission.

4. CHALLENGES AHEAD

The Convention on Biological Diversity is an international legal framework which regulates access to genetic resources and promote fair and equitable sharing of benefits arising from their use.

Article 8 (j) of the Convention calls on each Contracting party to:
Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyle, relevant for the conservation and sustainable use of biological diversity, and promote their wider application, with the approval and involvement of the holder of such knowledge, innovations and practices, and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.

Tanzania has moved a step on the issue of benefit sharing by formulating strategies at policy level. These strategies however need to be backed by a legal framework and a modalities / guidelines on how benefit sharing is to be effected.

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