



## Celebrating the First International Day for Biosphere Reserves and 50<sup>th</sup> Anniversary of Man and Biosphere (MAB) Programme on 3<sup>rd</sup> November 2022



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*Yesterday 3<sup>rd</sup> November was the International Day for Biosphere Reserves, a day when we join the entire world to recognize the importance of Biosphere reserves and take the opportunity to share important information with you members of the general public for continued support for the preservation and conservation of nature for Sustainable development.*

*The Theme “Building a shared future for all life” speaks to our collective responsibility towards reconstructing, repairing and undoing what has gone wrong for us to have a better life without forgetting the future generation.*

*It is anchored on the principles of Sustainable development in tandem with what mother earth has given us in form of the biosphere reserves.*

***This article will therefore give you information about UNESCO, Uganda National Commission for UNESCO and their mandates in as far as Biosphere reserves are concerned as well as the relevance of the Day.***

*UNESCO through its National Commission in Uganda boosts Uganda’s capacity for attainment of its Vision 2040, the EAC Vision 2050 the African Union Agenda 2063 aspirations and nine Sustainable Development Goals.*

### Introduction

United Nations Educational, Scientific and Cultural Organization (UNESCO) is a specialized agency of the United Nations founded in 1945 to contribute to the construction of peace, human development and dialogue through education, the sciences, culture, communication and information.

UNESCO contributes to world peace and development through its five functions: Laboratory of ideas and foresight, Standard setter, Clearing house, Capacity-building and Catalyst of International cooperation. UNESCO’s Fields of competence include Education, Sciences, Culture and Communication & Information. These fields of competence are programmed into Five (5) namely: Education, Natural Sciences,

Social and Human Sciences, Culture and; Communication and Information. UNESCO carries its mission through a global network of field offices, regional bureaux and institutes in over 195 countries, 8 Associate members and National Commissions for UNESCO.

**The Uganda National Commission for UNESCO/ICESCO (UNATCOM)** was established in November 1963. Later in 2012, it also became the secretariat for the Islamic Educational, Scientific and Cultural Organization (ICESCO), an equivalent of UNESCO in the Islamic Countries founded by the members of the Organization of Islamic Countries (OIC). OIC was established in Sept. 1969 to which Uganda became a member 1974 and on 21<sup>st</sup> November 2012, was admitted as the 51<sup>st</sup> member of ICESCO. The role of the National Commission in Uganda is to ensure the promotion and implementation of UNESCO’s mandate in

Uganda, engage partners at national, local, regional or international level and work with a worldwide network of National Commissions. At the National level, UNATCOM is mandated to assist the government Ministries, Departments, Agencies, Institutions, Individuals, Community Based Organizations, and NGOs in developing their plans and projects in line with the UNESCO guidelines and Programme framework.

Uganda National Commission for UNESCO’s carries out its functions through: Consultation, Liaison, Information, Programme formulation, implementation, monitoring and evaluation in all the UNESCO Programmes of Education, Natural Sciences, Social and Human Sciences, Culture and; Communication and Information.

As a result, UNATCOM’s activities contribute to and support the NINE (9) line Ministries of Education and Sports, Science and

Technology, Energy and Mineral Resources, Water and Environment, Lands and Urban Development, Disaster Preparedness, Tourism and Antiquities, Gender, Labour and Social Development and Information, Communication and National Guidance. The beneficiaries Agencies that fall under these Ministries are: National Curriculum Development Centre, Universities and other Educational Institutions, National Council for Science and Technology, Academy of Sciences, Geological Surveys, Various Energy Consortia, National Forestry Authority, National Environment Authority, Cities and other Urban Authorities, Museums, UNESCO-designated Sites, Uganda Wildlife Authority, Cultural Institutions, Performing and Creative Arts Institutions, Uganda Communications Commission.

### Uganda Wildlife Authority (UWA)

Uganda Wildlife Authority (UWA) is a semi-autonomous government agency that conserves and manages Uganda’s wildlife for the people of Uganda and the global community. This agency was established in 1996 after the merger of the Uganda National Parks and the Game Department, and the enactment of the Uganda Wildlife Statute, which became an Act in 2000. UWA is mandated to ensure sustainable management of wildlife resources and supervise wildlife activities in Uganda both within and outside the protected areas. The Biosphere Reserves are among the 10 national parks and 12 wildlife reserves under the jurisdiction of UWA which also plays a leading role in managing the country’s tourism industry and attracting investors to the sector. It also manages five community wildlife management areas and 13 wildlife sanctuaries.

Uganda National Commission for UNESCO works very closely with UWA on matters affecting the Biosphere Reserves. Already the Commission has secured some funding to build the capacity of the staff of UWA in the management of the Biosphere Reserves.

### Relevance of the Biosphere Reserves

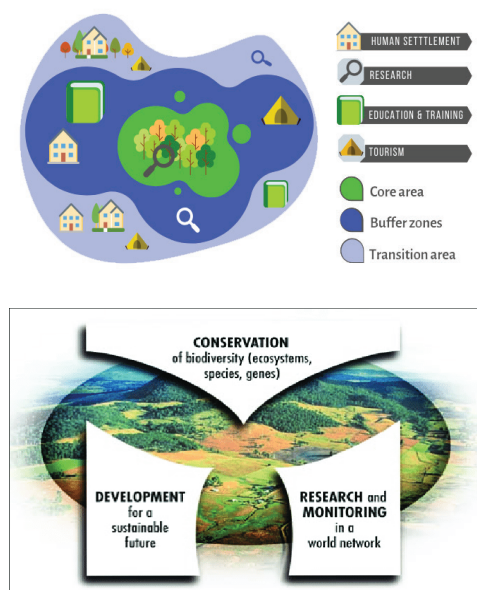
The BRs help to realize Uganda’s Vision 2040, National Development Plan (NDPs) 3, the EAC Vision 2050, the African Union Agenda 2063 aspirations and nine (9) Sustainable Development Goals (Agenda 2030) specifically SDG 4, 5, 6, 9, 11, 13, 14, 15 and 16, all of which are equally the major priorities for UNESCO. The Uganda Vision 2040 has an overall objective of ‘a transformed Ugandan society from a peasant to a modern and prosperous country within 30 years’ meaning that Uganda is to transform from a predominantly low income country to a competitive upper middle income country. The aspirations of the Vision 2040 are pursued through 5-year National Development Plans (NDPs). The current NDP 3 (2021/22-2025/26) has 18 integrated programmes of which seven namely: Natural Resources,



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Environment, Climate Change, Land and Water Management; Digital Transformation; Sustainable Energy Development; Sustainable Urbanisation and Housing; Human Capital Development; Community Mobilization and Mindset Change and Innovation, Technology Development and Transfer are within UNESCO's fields of competence. The EAC Vision 2050 on sustainable, adequate, affordable, competitive, secure and reliable supply of energy to meet regional needs at the least cost, while protecting and conserving the environment, Natural Resource and Environment Management that has the goal to realize effective natural resource and environment management and conservation with enhanced value addition including sustainable use of natural resources ,green growth promotion/green economy for in the context of sustainable development and poverty reduction, climate change adaptation and mitigation and peace and security.

The African Union Agenda 2063 aspirations of: A prosperous Africa based on inclusive growth and sustainable development, a peaceful and secure Africa, an Africa with a strong cultural identity, common heritage, values and ethics, an Africa, whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children are within UNESCO's fields of competence. The Sustainable Development Goals (Agenda 2030) gives pride of place to the fundamental contribution of quality, inclusive education at all levels and to the importance of lifelong learning opportunities for all (SDG 4). It breaks new ground in acknowledging the growing importance of science, technology and innovation (STI) for sustainable development (SDG 9). It contains ambitious goals in the areas of freshwater (SDG 6), biodiversity (SDG 15), the ocean (SDG 14), and climate change (SDG 13). It recognizes the role of public access to information and the safety of journalists in accelerating development opportunities and in promoting good governance and the rule of law (SDG 16). It promotes culture, through heritage and creativity, as a key enabler of sustainable development. It acknowledges the value of creating inclusive, safe, resilient and sustainable cities, and contains targets on the preservation of natural and cultural heritage (SDG 11), as well as on the recovery and return of stolen assets (SDG 16), which also include the illicit tracking of cultural objects. It upholds a vision of just, peaceful, equitable and inclusive societies recognizing the value of knowledge, heritage and diversity. It promotes human rights and has a strong focus on gender equality (SDG 5). All these are major priorities for UNESCO.



*The Model of Biosphere Reserves showing the triple zonation reflecting the functions that bring about the benefits of BRs (<https://en.unesco.org/biosphere/about>)*

## The Rationale for the International Day for Biosphere Reserves

The 41st session of the General Conference of United Nations Educational, Scientific and Cultural Organization (UNESCO), held in 2021 designated the 3<sup>rd</sup> November every year as the International Day for Biosphere Reserves. The purpose of this international day is to provide a wake-up call on the importance of caring for the environment and achieving a balance between human activities and the conservation of natural resources - and on the leading role that the World Network of Biosphere Reserves plays in this regard. Encompassing all types of ecosystems and sometimes urban areas, the World Network of Biosphere Reserves (WNBRs) has a global presence, comprising 738 sites in 134 countries. 21 of which are transboundary sites (three in Africa, 12 in Europe and North America, three in Latin America and the Caribbean, and two intercontinental sites). More than 260 million people have their home in a biosphere reserve. Altogether, these sites protect about 5% of the earth's surface representing more than 1.3 million km<sup>2</sup> of protected areas worldwide. Every year, an increasing number of sites join the WNBR.

A Biosphere Reserve (BR) is an international designation by UNESCO for representative parts of natural and cultural landscapes extending over large areas of terrestrial or coastal/marine ecosystems or a combination of both. Each BR consists of areas comprising terrestrial, marine and coastal ecosystems. The goal of each BR is to promote solutions reconciling the conservation of biodiversity with its sustainable use. Biosphere reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located, but their status is internationally recognized. They are sometimes referred to as: 'Science for Sustainability support sites' as a result of being special places for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity. Each BR has three interrelated zones that aim at fulfilling three complementary and mutually reinforcing functions of conservation, logistics and development.

The BRs were initiated under the UNESCO Programme called Man and the Biosphere Programme (MAB), an intergovernmental scientific program, launched in 1971 to establish a scientific basis for the improvement of relationships between people and their environments. MAB addresses challenges linked to scientific, environmental, societal and developmental issues in diverse ecosystems. MAB combines the natural and social sciences, economics and education to improve human livelihoods and the equitable sharing of benefits, and to safeguard natural and managed ecosystems, thus promoting innovative approaches to economic development that are socially and culturally appropriate, and environmentally sustainable.

The MAB program provides a unique platform for cooperation on research and development, capacity-building and networking to share information, knowledge and experience on three interlinked issues: biodiversity loss, climate change and sustainable development. It contributes to better understanding of the environment and also promotes greater involvement of science and scientists in policy

development concerning the wise use of biological diversity. The MAB Programme and the biosphere reserve model have, over the past 50 years, become an international example of sustainable territorial development and highlight UNESCO's and the MAB's commitment to the global biodiversity agenda and the Sustainable Development Goals.

The International Day for Biosphere Reserves (IDBRs) is being commemorated at national and local levels through activities and events that contribute to a better knowledge of the role and impact of biosphere reserves. Its celebration this year also marks the close of the celebrations of the 50<sup>th</sup> Anniversary of the Man and Biosphere (MAB) Programme.

## The Context and Importance of the Celebration:

Uganda has two Biosphere Reserves: Mt Elgon and Queen Elizabeth National Parks. Queen Elizabeth was designated by UNESCO as Biosphere Reserve in 1979 while Mt. Elgon was designated in 2005. There are a number of other sites proposed for nomination including Mt Moroto, Budongo Forest, Mabira, Timu Forest, Morungole, Kalinzu-Kasyoha-Kitomi, Bungoma, Sango Bay, Zoka, Kadam, Lake Mburo and Lake Victoria Basin among others. The purpose of celebrating the IDBRs is to provide, on an annual basis, a wake-up call to Ugandans and the whole world on the sustainable development approaches being promoted by the WNBRs. In this regard, the celebration of the benefits of the IDBR:

- Inspires our national leaders and decision-makers to act on the importance of reinforcing care for the environment and of resolutely supporting actions, practices and systems of production and consumption that balance human activities with the conservation of natural resources, thus contributing to meeting global challenges and climate, health and environmental objectives that are the subject of numerous policies and agreements at all levels (global, international, national and local).
- Creates understanding of the fact that social awareness about the environment is more necessary than ever to address the urgent conservation needs of the planet and its resources.
- Provides an opportunity to demonstrate the importance of respecting an environment that has been preserved over the millennia.
- Encourages our communities to understand the importance of sustainability in achieving well-being and encourage young people to see it as an effective way of life for creative problem-solving and for developing practical solutions to the many problems faced in the areas in the vicinity of the BRs.
- Recognizes the role of rural people and sustainable traditional practices in conserving natural resources, maintaining the landscape, reducing emissions and increasing absorption of CO<sub>2</sub> to attain climate neutrality objectives set by the Global Agenda 2030 and African Union 2063 Aspirations.
- Raises awareness of the participation in the provision of ecosystem services and the benefits they bring to society that reach beyond the boundaries of the biosphere reserves

## BIOSPHERE RESERVES IN UGANDA

The two BRs in Uganda though designated at different times conform to the general model for a BR with basic ecological and socio-economic characteristics. The core, buffer and transitional

zones are used as a model for conservation education, research and monitoring of biodiversity trends. The vast savannah and forest animal species and the scenic landforms attract an increasing number of tourists to the reserve. Hence, the reserve greatly contributes to the tourism industry, which is the second Uganda's leading income earner. Below is the detailed description of each BR.

### 1. Mt Elgon Biosphere Reserve (BR)

Mt. Elgon is located on the Uganda-Kenya border and also the oldest and largest solitary, volcanic mountain in East Africa has the largest volcanic base in the world. It is 4,000km<sup>2</sup>, 80km in diameter and rises more than 3,000m above the surrounding plains.

It is an important water tower. Ecologically, this BR is home to over 300 species of birds and other species of biodiversity including the rock and tree hyraxes, blue monkeys, elephant, buffalo, Defassa waterbuck, oribi, bushbuck, duiker, forest hog, bush pig, leopard, civet and serval cats, serval cats, spotted hyena; aardvark, several rodent species and the endangered Lammergeyer, Mt Elgon is home to two dominant tribes, the Bagishu and the Sabinu and other ethnic minorities namely Benet and the Ndorobos all spread across the eight districts of Bukwo, Kapchorwa and Kween for sabinys and Bulambuli, Sironko, Mbale, Bududa, mnafw and Namisindwa occupied by the Bagishu or Bamasaba.



Pictures showing the Geodiversity and Biodiversity of Mt. Elgon BR (Courtesy UNESCO file photos)

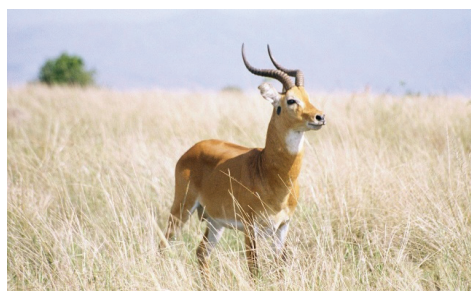
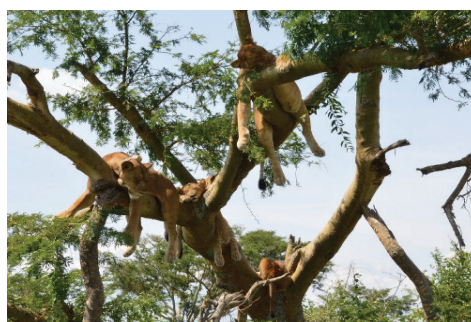
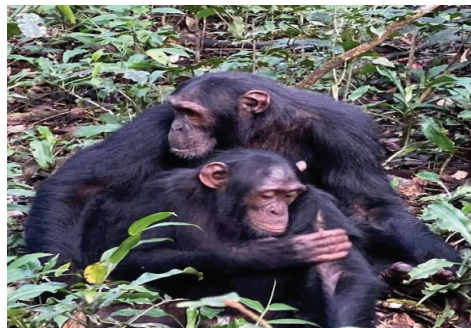
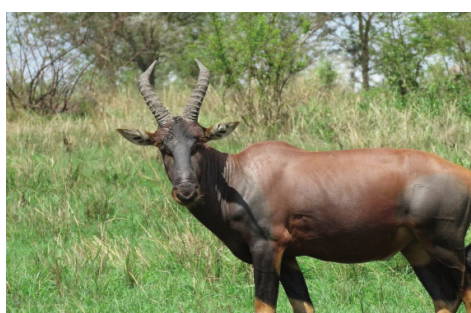
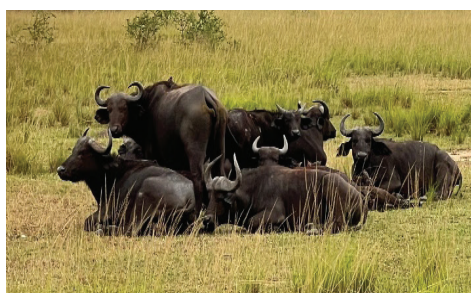


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## 2. Queen Elizabeth Biosphere Reserve

This Biosphere Reserve (BR) is about 1978 sq. km large and with a unique selection of biodiversity supporting a wide range of Uganda's natural habitats and landforms, including grassy plains, distinctive savanna woodlands, tropical forest, wetlands, rivers, swamps, lakes and volcanic craters. It has a greater biodiversity than any other protected area in Uganda including the large herbivores species like hippopotamus, elephant, buffalo, Uganda Kob, waterbuck and Topi and large carnivore species include lion, leopard, and spotted hyena. There are over 619 species of birds, crocodiles, different types of antelopes, butterflies among the rest. There are also endangered wildlife species found in the reserve including chimpanzees (Pan troglodytes), the African elephant (Loxodonta africana), leopards (Panthera pardus), and the Shoebill stork. The northern Queen Elizabeth lions (Panthera leo) generally scheduled as Vulnerable in CITES are at a high risk of extinction due to human-lion-livestock conflicts. The BR is also famous for its volcanic features, including volcanic cones and deep craters, many with crater lakes, such as the Katwe craters from which salt is extracted.

Socio-economically, fishing and salt extraction provide the main sources of income for the inhabitants within the BR.



The diversity of Landscapes and Species in Queen Elizabeth BR (All photos courtesy of UNESCO)

## UNESCO and UNATCOM Interventions in Uganda's Biosphere Reserves over the last Decade.

UNATCOM has been carrying out studies and capacity building activities in the two BRs over the past decade.

### i) Integration of Cultural Values in the Management of Biosphere Reserves.

In 2012/13, UNATCOM commissioned a study to undertake a cultural analysis of communities living in and neighbouring Queen Elizabeth and Mt. Elgon National Parks, which are designated biosphere reserves (BRs). The goal of the study was to generate data to be used as a basis for intercultural dialogue to improve management effectiveness of the two BRs. The study was conducted among the Bamasaba, the Sabiny and the Benet peoples in Mt. Elgon National Park. In Queen Elizabeth National Park, the study focused on the Banyabutumbi, the Banyaruguru, the Basongora and the Bakonzo.

The study findings indicate strong historical and cultural connections of the people and the BRs even before the areas were gazetted as protected areas (PAs). The communities that were studied are culturally organized along the clan systems, other like the Bamasaba and the Basongora have re-established cultural institutions such as the Inzu y'Masaba and Busongora bwa Kogyere that restores the social significance of elders. The Benet have foretellers or prophets that advise the elders as part of their cultural institution. The study recommended among others the urgent need for the BR management to make peace with neighboring communities, re-zone a buffer where cattle grazing, collection of herbs, and access to cultural values in the BR took place, establish a core conservation areas which would be meaningful and jealously protected with support of the local communities and undertake more research into indigenous knowledge and how it can be used in the management of the park

### ii) Eco-System Approaches and Alternative Green Enterprises for Peaceful Co-Existence in the Biosphere Reserves in Uganda.

In 2016-2017 biennium, UNATCOM supported the BRs with the above project that generated a lot of enthusiasm generated in the communities towards peaceful co-existence between the Biosphere Reserve Managers and the communities in the Biosphere Reserves including ending the common human-animal conflicts that are rampant in the reserves. It was confirmed that the relationship between the BR management and the communities had continued to be bad as the residents have continued to rely on the natural resources of the BRs for almost all their livelihood needs. This project created awareness among 788 participants from 8 tribal communities resident in 47 Sub-Counties (Lower Local Governments) in 10 host and neighbouring districts (Higher Local Governments) to the BRs and 8 BR staff on the values of Biosphere Reserves, ecosystem approaches and identification and adoption of green enterprises for peaceful coexistence with the Biosphere Reserves' Management. Some 4 Enterprise-based groups were formed by the communities in the Biosphere Reserves.

In Queen Elizabeth Biosphere Reserve, former poachers formed themselves into ten anti-poaching groups with membership of 2,254. Various green enterprises were identified and prioritized to minimize the total dependence of communities on the natural resources of the BRs so as to support conservation.

### iii) Promotion of Sustainable Utilization and Conservation of Endangered Medicinal Plants in Mount Elgon Biosphere and Metu Forest Reserve Through Active Ingredient-Guided Plant-Parts Substitution".

UNATCOM also commissioned a study arising from the major concern over the disappearance of the highly valued medicinal plants: Prunus africana and Chlorophytum sp (Alomi) in Metu Forest Reserve, and Oleaewilwitschii (Elgon teak) and Zanthoxylum macrophyllum due to poor harvesting practices, an ethnobotanical survey was carried out to document the traditional uses of wild plants among the local communities in the BRs and related Forest Reserves.

A total of 238 plant species of medicinal importance were recorded and the utilization of roots and stem barks for medicinal use to treat a wide spectrum of human ailments were documented. The possibility of substitution of the stem bark with the leaves, by comparing the phytochemicals, toxicological effects and pharmacological activity of the two plant parts using laboratory methods and models. The study provides a proof-of-concept on the need to explore evidence-based plantpart substitution as a basis for sustainable utilization of endangered wild medicinal plants.

### iv) Gender-responsive conservation and empowerment of women in conservation of BRs in Uganda".

In the latest project in the 2020-2021biennium, UNATCOM demonstrated the importance of "Gender-responsive conservation and empowerment of women in conservation of BRs in Uganda".

## Conclusion

UNESCO through the National Commission in Uganda boosts Uganda's capacity for attainment of its Vision 2040, National Development Plans (NDPs) 3 on Programmes on Natural Resources, Environment, Climate Change, Land and Water Management; Digital Transformation; Sustainable Energy Development; Sustainable Urbanisation and Housing; Human Capital Development; Community Mobilization and Mindset Change and Innovation, Technology Development and Transfer are within UNESCO's areas of competence, the EAC Vision 2050 on sustainable, adequate, affordable, competitive, secure and reliable supply of energy, Natural Resource and Environment Management with enhanced value addition including sustainable use of natural resources, green growth promotion/green economy for in the context of sustainable development and poverty reduction, climate change adaptation and mitigation and peace and security, the African Union Agenda 2063 aspirations of a prosperous Africa based on inclusive growth and sustainable development, a peaceful and secure Africa, an Africa with a strong cultural identity, common heritage, values and ethics, an Africa, whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children are within UNESCO's areas of competence and finally the Sustainable Development Goals (Agenda 2030) SDG 4, 5, 6,9, 11,13,14,15 and 16.

All Ugandans, especially those resident in the BRs and various Stakeholders including the MAB National Committees are therefore invited to participate in the celebration of this event this first year 2022 and continue to reflect annually on the importance of BRs. The same theme for this year's World Biodiversity Day is still relevant:

**Building a shared future for all life.**