



United Nations
Educational, Scientific and
Cultural Organization

Sustaining the Sudd through the Man and the Biosphere (MAB) Concept



Geographical scope/benefitting country(ies):	Government of South Sudan Communities around the Sudd
Duration (in months):	60 months
Name and Unit of Project Officers	Melody Ocloo, Noeline Raondry Rakotoarisoa Division of Ecological and Earth Sciences (Biosphere Networks and Capacity Building Section)
Partner(s) institutions:	To be identified
Total estimated budget inclusive of Programme Support costs	USD 5,000,000

¹ Picture was accessed from http://www.bahr-el-jebel-safaris.com/Boat_Trip_Into_The_Sudd_Zeraf_Game_Reserve_-5_Days.html

Rationale and background

Africa boasts a rich endowment of natural resources including wetlands. Wetlands play a central role in the economy of most African countries. They provide an abundant supply of freshwater for people and their animals, irrigation for farms and for generation of millions of megawatts of electrical energy. For wetlands along the coastal zones, apart from fishing, salt extraction is a major source of livelihood for local communities. In terms of biodiversity, they serve as habitats for diverse flora and fauna. Despite these significant roles wetlands play they are one of the continent's most threatened ecosystems. This can be attributed to the many demands associated with urbanization such as draining of wetlands to construct roads and other infrastructure coupled with the increase demand for agricultural lands.

The Sudd in South Sudan is the largest freshwater wetland in the Nile Basin, one of the largest floodplains in Africa. It is also reportedly one of the largest tropical wetlands in the world. It is estimated to occupy an area of 30,000 km². However the Sudd can extend to 130,000 km² during the rainy season². This wetland serves as an important breeding area for the Nile ecosystem fish and it is the largest potential source of freshwater fish in Southern Sudan. Estimates are that it could provide 100,000 to 300,000 tons of fish annually. However accurate statistics on actual production have been unavailable since 1991³. It also serves as the natural habitat for the Nile crocodile and the threatened hippopotamus. The white pelican and the black-crowned crane which are birds of international and regional conservation importance also inhabit the Sudd.

The Sudd and its surrounding areas are used by the Nilotic People made up of the Dinka, Nuer and Shilluk tribes. Livestock raising is the traditional livelihood activity for the Nilotic People and this wetland provides a source of water and dry-season grazing land for livestock. A few years ago it was reported that the livestock population using the floodplain was about 1 million head, which by estimation was one of the highest human to cattle ratios in Africa (Okeny, 2007)⁴. The local inhabitants also depend on the Sudd swamps for agriculture. They grow food crops such as sorghum and cash crops such as ground nuts. There are also small fishing communities in the Sudd. One is therefore justified in saying that the present economy of the area is highly dependent on the natural environment. Such high dependency on the natural environment has its attendant consequences such as fragmentation of the vegetation, land degradation and subsequently loss of biodiversity.

There are three protected areas in the Sudd Region covering a total area of 10,000km². These are the Zeraf Game Reserve, Shambe National Park and Fanyikang Game Reserve. In 2006, 57,000km² of the Sudd floodplains was designated as a Ramsar site. These are indeed laudable efforts by the national government to conserve this unique and valuable resource. However, with the dependency of communities on the Sudd, pursuing strict conservation measures would be unsustainable if the link between the existence and the well-being of the environment of the Sudd with the livelihood of the people is not clearly established. There is a general consensus that once such a link is established people and therefore communities are more incentivized to not only support conservation efforts but also play their part in utilizing natural resources in a sustainable manner.

² Water Food and Poverty in River Basins: Defining the limits. A publication under the CGIAR Challenge Programme on Water and Food.

http://books.google.fr/books?id=hS3aAAAAQBAJ&pg=PA174&dq=The+Sudd&hl=en&sa=X&ei=rfdYU7HKOI2S7Abir4HQAQ&redir_esc=y#v=onepage&q=Sudd&f=false

³ http://www.photius.com/countries/sudan/economy/sudan_economy_fisheries.html

⁴ Okeny, A. (2007) Southern Sudan: Launch of a Project to Improve Animal and Fish Production, news release 2007/269/AFR, World Bank, Washington, DC.

Why UNESCO

In a 2007 report produced by the International Resource Group for USAID on an assessment of the environmental threats and opportunities for South Sudan, some key threats to South Sudan's biodiversity identified include: i) limited policy and legislative framework for biodiversity conservation, ii) limited institutional capacity to manage natural resources and iii) effects of development on wetlands, water resources, other sensitive areas and on wildlife⁵.

The Man and the Biosphere (MAB) Programme of UNESCO seeks to establish a scientific basis for the improvement of the relationship between people and their environment through sites established by countries and given the designation biosphere reserve by UNESCO. Biosphere reserves seek to reconcile conservation and socio-economic development. In other words, biosphere reserves aim at establishing the link between the well-being of the environment with the livelihood of communities. With more than four decades of experience in biological and cultural diversity conservation and socio-economic development in partnership with communities and nature, the MAB Programme with its World Network of Biosphere Reserves has evolved to be globally recognized as a tool to help countries implement the results of the World Summit on Sustainable Development and, in particular, the Convention on Biological Diversity and its Ecosystem Approach.

South Sudan being a new nation will need to develop its own unique environmental policies as part of its environmental governance structure. To develop well informed policies that will stand the test of time requires extensive research and the testing of research results where applicable. Biosphere reserves offer the platform to carry out such research and test and demonstrate results. It is in this vein that this project would aim at assisting the Government of South Sudan and the relevant stakeholders to nominate the Sudd for designation as a biosphere reserve. One of the major activities to be undertaken in the nomination process would be consultation with stakeholders at all levels. It is envisaged that through these consultations, institutional capacity building needs for natural resource management will be identified and addressed accordingly. There is little reliable ecological information available on the Sudd. Given its importance and extent, there is the need to not only update extant information but also to add to it. The MAB Programme requires up to date ecological information on prospective biosphere reserve sites. Thus it will ensure that the same is done for the Sudd.

Designating the Sudd as a biosphere reserve will address to a large extent some of the threats to South Sudan's biodiversity mentioned above. Ultimately, it is not only the environment and the community that would benefit but also the entire country. UNESCO's biosphere reserve concept could serve as a beacon to guide the Government of South Sudan towards the path to sustainable development.

This project will specifically contribute to the achievement of the fourth flagship programme within the framework of the Operational Strategy for UNESCO Priority Africa. The fourth flagship programme seeks to foster science for the sustainable management of Africa's natural resources and disaster risk reduction.

Overall Goal

The overall goal of this project is to use the integrity approach of the biosphere reserve concept to promote the appropriate management of the Sudd to foster sustainable development in South Sudan. It is envisaged that through this project gaps in data or statistics on the biological diversity of the Sudd will be bridged and institutional capacity

⁵ http://pdf.usaid.gov/pdf_docs/PNADL108.pdf

building needs will also be addressed in order to facilitate the development of relevant environmental and natural resource management policies for the country.

Main expected results

1. Awareness of the communities around the Sudd on the importance of local natural resources to their socio-economic development enhanced.
2. The capacity of communities living around the Sudd to take up additional alternative livelihoods or add value to existing ones towards improvement in their livelihoods is strengthened.
3. Institutional capacity gaps/needs for natural resource management identified and addressed.
4. The biosphere reserve concept extensively promoted throughout South Sudan through assisting the government and relevant stakeholders to constitute a National MAB Committee and nominate the Sudd as a biosphere reserve.
5. An electronic database created for the ecological or biodiversity information collected on the Sudd.

Activities and outputs/deliverables relating to the achievement of expected results

Activity 1. Stakeholder mapping and consultation

This activity involves the identification and mapping of all the relevant stakeholders to determine those that would be directly or indirectly impacted by the project. After the identification stage a strategy or plan will be designed for meeting and informing them about the project. Having a strategy or plan is particularly important for the community entry and consultation phase due to issues of culture and language. The consultation process will also seek to elicit the views of stakeholders about the project and also their aspirations. With respect to the nomination of the Sudd as a biosphere reserve, consultations will be held at both the national and community levels. This activity will contribute to expected results 1, 2 3 and 4.

Activity 2. Socio-economic studies

Through community workshops, focus group discussions and surveys, this activity will gather information on some dynamics of both male and female members of the community such as their income level, levels of education, family structure etc. It is envisaged that baseline data against which a project deliverable such as improvement in the livelihood of community members could be measured will also be collected through this activity. This activity will contribute to expected result 1, 2 and 4.

Activity 3. Needs assessment

At the community level focus groups discussions, workshops and interviews will be used to identify the needs and aspirations of community members, both men and women, including separately if needed. Through these interviews their desired alternative livelihood and training needs would also be identified. At the national level the training needs of relevant institutions will be ascertained through interviews. This activity will contribute to expected results 1, 2, 3 and 4.

Activity 4. Capacity building

Trainings will be provided for both male and female community members interested in taking up alternative livelihoods. Beneficiaries will also be trained on adding value to their products and how best to market those products. The relevant Government ministries and institutions will also be trained according to the training needs that will be identified. This activity will contribute to 2, 3, 4 and 5.

Activity 5. Biodiversity inventory, mapping and ecosystem assessment.

This activity will begin with a desk study by reviewing literature on the biodiversity or ecological information available on the Sudd. This will help identify the gaps and inform on the best approach for carrying out the biodiversity inventory of the Sudd. A mapping and ecosystem assessment exercise will also be carried out. This activity will contribute to the attainment of expected results 3, 4 and 5.

Activity 6. Promoting the biosphere reserve concept

Consultations will be carried out with relevant stakeholders. Representatives of relevant institutions and ministries will be invited to participate in the AfriMAB Network meetings and other relevant MAB Programme meetings in order to engage them and also enable them to gain in-depth knowledge about the MAB Programme. This activity will contribute to expected results 4.

Beneficiaries and stakeholders

This project will directly benefit the men and women in communities around the Sudd who are highly dependent on this wetland for their livelihood. Relevant public institutions that are identified and selected to receive trainings will also be direct beneficiaries.

Relevant government ministries such as Ministry of Environment, the Ministry of Education, Science and Technology and the Ministry of Electricity, Dams, Irrigation and Water Resources will be influential in the successful implementation of this project. In view of this, consultations will be held with these ministries and others before this concept note is developed into a full project proposal. In the implementation of community related activities, prior and informed consent will be sought from community leaders and representatives, with special attention to ensure women's voices are heard, before activities are carried out. It is envisaged that ownership of this project by direct stakeholders and beneficiaries can be established if their views elicited during the consultation process is adequately reflected in the final project proposal such that interventions are linked to those needs and aspirations. To sustain the participation of beneficiaries, consultations will continue in various forms during the project implementation phase.

Implementation strategy

The Biosphere Networks and Capacity Building section under the Division of Ecological and Earth Sciences will be responsible for the overall coordination and management of the project. The section will identify technical needs and provide support and relevant intellectual resources available in UNESCO. The Head of Office and UNESCO Representative to South Sudan will coordinate and lead project activities in relation to Government ministries and institutions.

Certain activities will be outsourced to consultants and implementing partners where UNESCO's technical or intellectual resources are insufficient. These implementing partners will be identified before and during the finalization of the project proposal.

After building the capacities of the relevant Government ministries and institutes one of the opportunities for the country to benefit from the newly acquired competencies of its people could be through the use of their expertise in the biosphere reserve nomination process. It is foreseen that the newly trained people will be involved in carrying out activities like the biodiversity inventory and ecosystem mapping.

Gender equality will be addressed through various approaches which will begin with having consultations with the Government ministry responsible for gender affairs. These consultations will inform on what the challenges are, what has been done already and what this project could also do. During the capacity building activity the training of women in the various ministries and institutions will be prioritized. In carrying out the needs assessment, specific information will be elicited on gender related issues. The plan or strategy for community consultation will be designed in a way to ensure that no gender group is alienated.

The project implementation strategy will include periodic project progress reviews and monitoring in order to realize the overall goal of the project. In addition an evaluation planned in consultation with IOS will be conducted.

Sustainability and exit strategy

UNESCO strongly believes that a country-led agenda is a necessary condition not only for the success of projects but also for sustaining them after project completion. In view of this all relevant Government ministries and institutes and communities will be consulted before the project proposal is finalized. The country's development agenda in relation to natural resource management will be reflected in the project document and subsequently in the project interventions.

The capacity building for community members will be done in a holistic way to ensure that any new livelihood activity they take up will be sustained. People trained from the various ministries and institutes will be given the responsibility of preparing the nomination file for the Sudd as a biosphere reserve. The biosphere reserve nomination process is led by countries themselves and therefore ownership is created from the onset. UNESCO only provides technical guidance where needed.

Finally, men and women in communities will be incentivized to continue to support the conservation of natural resources once the link between the sustainability of the Sudd and their livelihood has been established.