

# **Social and cultural values of wetlands in Tanzania**

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## **Summary**

The socio-economic aspects of wetland farming and fisheries' are discussed together with the cultural values of wetlands such as scenery, sources of traditional medicine, and diseases. The socio-political features of wetland life are mentioned as well as the international considerations of wetland water needs. A plea is made for more research into indigenous knowledge of wetland values and products.

## **Introduction**

Wetlands are important natural resources which provide water to living creatures. People living near wetlands have developed socio-cultural values around the wetlands which are part of the people's history and current existence.

This paper takes a social-developmental approach to wetlands. It describes and analyses some of the socio-cultural value systems that have developed and become part of the lives of societies living around wetlands. It briefly examines the future of these natural resources, given the destructive culture which has developed globally.

## **Background information**

In geographical and geological terms, wetlands are freshwater swamps, coastal swamps, mangroves, floodplains and lake edges. They also include water sources like springs and basins which are always the centre of those political and social organisations which form the value system of the people associated with these resources.

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There are 51,000 km<sup>2</sup> of inland waters in Tanzania, including the large lakes such as Victoria, Tanganyika, Nyasa and Rukwa, and rivers such as Rufiji, Ruvu, Pangani, Kagera, Malagarasi and Wami (United Republic of Tanzania, 1967). There are over 10,000 ponds and reservoirs on the mainland. The coastal area of

Tanzania extends 1,300 km along the Indian Ocean (NEMC/WWF/IUCN, 1990).

There are extensive river basins in Tanzania. For example, the Malagarasi basin covers about 126,000 km<sup>2</sup>, the Wembere and Eyasi basins cover 65,500 km<sup>2</sup>; the Rufiji basin covers 177,500 km<sup>2</sup>; the Wami River basin covers about 20,100 km<sup>2</sup>; the Pangani River basin covers 29,500 km<sup>2</sup> and the Ruvu River basin covers

18,400 km<sup>2</sup>. At the same time many areas of Tanzania experience long periods of dry weather and much of the arid regions are sparsely populated. The uneven water distribution in Tanzania was recognised from the time of the German administration and there was a plan to draw water from Lake Victoria to alleviate shortages in Central Tanzania.

The use and misuse of wetlands is related to the availability of water among the people. Discussing use of water in Africa, Jarret (1979) concluded that there was a need for adequate water control since about 30% of the continent received less than 250 mm annually.

## **The values of wetlands to people**

The following sections discuss the value systems that people tend to develop as they try to manage and control their environment and resources, in this case wetlands.

### **The socio-economic values of wetlands**

Wetlands have been, and are, the basis of community economic activities. People who live within or around wetlands have, for a long time, been involved in various economic activities and their settlement patterns have been influenced by the wetlands.

#### **Farming**

Farming activities are the major economic pursuits around wetlands with the cultivation of crops such as paddy, maize and various types of vegetables and fruits-. The practice of growing rice in swamps is increasing in many countries of Africa, led by Egypt; between 1974 and 1975, Tanzania produced 160,000 t of paddy (Janet, 1979).

The farming activities in floodplains are controlled by the seasonal floods. People who live and farm in some floodplains move to higher lands during the floods and return to the valleys during the cultivation season. In fact some people, like those in the lower Rufiji floodplain, have developed a 'two homes' system. They live in one house during the cultivation season and the other

during the flood season. This type of settlement pattern has traditionally enabled the peasants to cultivate two types of crops. Some crops are planted when the areas are still wet but the water level is falling (flood recession agriculture). The use of such seasonal floodplains allows the planting of a range of crops; paddy is planted in standing water as the water level falls, while quick growing crops (such as cucumber and tomato) are planted later in damp soil. In this way, wetlands of this type influence not only settlement patterns but economic activities as well. The people adapt themselves to the seasons and organise their various activities accordingly. The disadvantage of this type of settlement pattern is that people cannot build permanent houses but must move their habitation between the floodplain and the uplands. It was on this basis that in the 1970s, at the peak of the implementation of 'Ujamaa' programmes, the people in the Rufiji floodplain were moved by force to the uplands for their own safety.

The ownership of land in these areas follows the traditional land tenure system. The family land, where family members have been living and cultivating for a long time, is passed to the next generation. If members of the family want to cultivate new areas, they normally follow the community based land tenure system whereby the land which does not belong to a specific family or clan can be assigned to those in need.

Traditionally, only subsistence farming took place in wetlands but with the introduction of the money economy peasants have also been producing for market. For example, peasant production contributes a significant percentage towards Tanzania's paddy production and these smallholders help the country to meet its food production targets. In swampy areas, peasants normally cultivate at the edges of the water, using various crops such as paddy and maize. Such cultivation is found in the Malagarasi and Kagera Basins.

### **Fishing**

Another important economic activity in wetlands is fishing. Jackson (1975) estimated that 51,000 km<sup>2</sup> of freshwater and 10,000 family fishponds produce 83% of Tanzania's total fish catch by weight and 60% by value (40% of the total value was from Lake Victoria alone). Tilapia was the major fish (35%) caught in Lake Victoria (Jackson, 1975) but it is likely that this percentage has been reduced due to the introduction of Nile perch.

In Lake Tanganyika, the fishing of *dagaa*, a fresh water sardine (*Stolothlorissa tanganyikae*), has been carried out for both local consumption and export, mostly to Zambia (Jackson, 1975). Demand for fish meal, made from *dagaa* for use in the stockfeed industry, may affect the economics of the fishery by increasing the price of *dagaa* beyond the scope of the poor.

People's nutritional status is often threatened by commercialisation of the fishing industry as fishermen often sell the whole catch, retaining none for home consumption, or prices rise so the poor can no longer afford to eat fish.

In the past, fishing by peasants was carried out using traditional technology. Most of the methods used were not harmful to non-target species but the recent use of

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dynamite, especially in the coastal areas, threatens the aquatic environment and thus a major part of the people's diet.

The commercialisation of the prawn fishery has made the coastal areas of Tanzania, especially the Rufiji Delta, places where foreign trawlers are found. Some of these trawlers fish indiscriminately, being interested only in total catch, and they may deplete the prawn fishery which is a natural resource and part of Tanzania's wealth.

### **Medicinal, scientific and aesthetic values of wetlands**

Some wetland trees, grass, leaves and flowers have been used as traditional medicines by the local people. The value of medicinal trees associated with wetlands is being studied by collaboration between researchers and traditional doctors, 'waganga', at Muhimbili College of Health Sciences, Traditional Medicine Centre.

At the University of Dar es Salaam, the Department of Botany is carrying out research on marine algae, which show promise as an export crop and for use in local industry.

Wetlands are green throughout the year and attract various birds and animals. They have their own unique and balanced environments. Such areas are attractive to both local and foreign visitors and have become tourist centres. The coastal areas provide places where people go to enjoy swimming, picnics and parties. When these environments are developed and conserved, they become a source of income and recreation and are a pride to the nation.

Everyone in Tanzania has the right to recreational facilities. Young and old, men and women need places to exercise this aspect of their rights. Wetlands provide that opportunity. However, wetlands may harbour hazards to the communities in their vicinity; besides the danger of floods, water-associated insects, such as mosquitoes, can spread malaria and elephantiasis, and snails spread bilharzia.

## **The socio-cultural aspects of wetlands**

### **Political and cultural organisation**

The political organisation of the people living near or around wetlands is governed by the existing social structures. The socio-economic activities carried out by the people in such areas do, to some extent, influence their socio-political life. The main economic activities of the people living near or around wetlands are fishing and farming. In both economic systems, the political life of the people, especially at community level, may be looked at as the management of resources and the decision making processes.

In general, the societies living around or near wetlands are not separated totally from the life of many of the ethnic groups living in the uplands. For example,

people living on the Rufji River and coastal areas are patrilineal in their family social structures and their socio-political structures may be similar to nearby communities. Thus, the management of resources, be it fishing or land availability, is controlled by men, and women have little influence on those resources. As Swantz (1985) has shown in her research on women's position in Tanzanian society, women do not own the means of production or productive forces although they use them when developing the family's properties and wealth. The customary inheritance system determines the ownership and control of land.

Most of the women in wetlands participate in economic activities according to the assigned roles and divisions of labour which are normally based on gender. In a fishing village, men go into the deep waters to fish while women participate in fishing activities in the shallows but once the fish have been brought ashore, both men and women participate in selling them. As in other economic activities, men tend to dominate in the matter of dispersal of income obtained from the sale of fish. There are very few fisherwomen in Tanzania. Around Nyumba ya Mungu Dam in Kilimanjaro Region, many women are involved in the fishing business. These women may own the fishing gear and transport facilities, and travel to Dar es Salaam to sell their fish but, in many cases, women cannot participate in the actual fishing. It is, therefore, very important that research on women's involvement in fishing activities around or near wetlands be carried out.

In order to have control of the resources found in wetlands, local development in the management and control of resources must be emphasised. The collapse of TAFICO (Tanzania Fishing Company) was a warning that the fishing industry must be supported through the development of human resources, technology and marketing venues. Without such development, the control of the fishery resource in wetlands will remain in the hands of the powerful minority while the local people, who are the majority, and owners - women included - become toiling workers only.

## **Management of national resources**

To understand the international politics related to wetlands, there is a need to look into the existing commercial and business licences. Tanzania's natural resources associated with wetlands should be utilised for the development of the indigenous people rather than foreign companies. In the wake of trade liberalisation, anything produced in Tanzania should reduce its foreign debt and develop its economy. Natural resource exploitation must be planned so that Tanzania gets its rightful share in world business and economic development.

There must be development of appropriate technology to develop and exploit the natural resources available in Tanzania's wetlands. For example, marine algae has potential use in local industry as well as its foreign market value but such a product needs to be developed for the local industry with appropriate technology. Without this the possibility of being exploited is very high and the people of Tanzania may lose the power to control and manage their own natural resource.

Finally, the sensitive issue of the use of water from Lake Victoria to irrigate dry parts of central Tanzania should be discussed. Germany had a long term vision of making Tabora the central administrative centre for their Eastern Africa Colonial Empire, which included Rwanda, Burundi and part of Zaire. After independence, the plan to draw water from Lake Victoria was not implemented, due to geopolitical reasons; any reduction of water flow to Lake Victoria, and thus the River Nile, would affect Uganda's electricity production and agricultural systems in Sudan and Egypt. The effect of water extraction needs to be re-examined as Lake Victoria gets its water from many sources and harnessing some of this water for the development of the people in Tanzania could be one way for the Tanzanian people to control and manage their own natural resources. The cost of such a project would be high, but worthwhile attempting if political development and empowerment of the people to control their own natural resources is to become meaningful. The geo-politics involved in such a development could be solved without ruining any country's economic development.

## **The future of wetlands**

The future of wetlands depends on how much people change their attitudes towards environment preservation and management. Human survival and wellbeing depend on the successful development of sustainable global ethics; economic growth and environment protection should go hand in hand (World Commission of Environment and Development, in Engel, 1990, p.1).

Natural resources belong to the whole community; they were used in the past development of communities and will do so in the future (Amari, 1990) but sometimes development projects and programmes using non-Tanzanian experts do not take this into consideration. Very often the local people are overlooked or blamed for causing desertification through poor cultivation and inappropriate animal husbandry methods. Very infrequently are criticisms leveled against the experts who participate in the environmental destruction in the name of development. The pollution of our wetlands is not brought about by peasants but by the developers. For example, industries are established without appropriate systems for the disposal of waste products which flow into rivers, oceans and lakes, destroying wetland environments. The wetland areas of the Msimbazi River in Oar es Salaam and the sources of water in lower Moshi, lower Arusha and Tanga are polluted, because of developments upstream.

The harvesting of timber to earn foreign exchange is affecting some water sources. Foreign experts have recommended the introduction of exotic species of trees to our catchment forests with adverse environmental effects. In the Arumeru Forests project, the need for foreign exchange caused exotic trees from cold climates to be planted, on the advice of foreign experts. The trees grew quickly but certain questions were not addressed. The long term effects of the project, especially in relation to sources of water which once fed the wetlands near Mount Meru, have not been analysed. There are socio-economic problems which need to be investigated

and their results made public. If they are not made public we are violating the rights of the people who used to profit from those wetlands.

## **Conclusion**

This paper has sought to describe and analyse the values of the people associated with wetlands in Tanzania. I conclude that wetlands have existed for a long time and have been utilised by the local people for their sustenance. Wetlands are a resource of the Tanzanian people and they should be used for the benefit of the nation.

The paper has shown briefly that there are environmental problems related to the current development of wetlands and we should guard against the destruction of these wetlands.

In conclusion, the following question should be asked. How can we cooperate to educate decision makers that the destruction of wetlands is the destruction of the social lives of the people who live near or around these areas? Many living creatures make up the ecosystem and if it is disturbed it will also affect us socially, economically, politically and culturally. It must, therefore, be the task of everyone to develop and preserve the wetlands rather than destroy them in any way that may advance certain people or social groups.

Finally, there is a need to study and evaluate the indigenous knowledge of wetlands. People living around or near the wetlands have had an opportunity to develop knowledge about fauna, trees and rocks through their experience. Such knowledge should be retained for future use in the community.

## **Bibliography**

- Berry, L. 1975. Utilization of Water Resources. Pages 74-75. In: L. Berry (Ed.). *Tanzania in Maps*. University of London Press, London.
- Engel, J.R. 1990. Introduction: The ethics of sustainable development. Pages 1-23. In: J.R. Engel and I.G. Engel (Eds). *Ethics of Environment and Development: Global Challenge and International Response*. Belhaven Press, London.
- Jackson, I.J. 1975. Fisheries. Pages 66-67. In: L. Berry (Ed.). *Tanzania in Maps*. University of London Press, London.
- Jarret, H.R. 1979. *Africa*. MacDonald and Evans Ltd, Plymouth.
- NEMC/WWF/IUCN. 1990. Development of a wetland conservation and development programme for Tanzania. IUCN, Gland, Switzerland. 113 pp.
- Oamari, c.K. 1990. Traditional African land ethics. Pages 167-175. In: I.R. Engel and I.G. Engel (Eds). *Ethics of Environment and Development: Global Challenge and International Response*. Belhaven Press, London.

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- Oamari, c.K. 1991. A short report on the future of Lower Moshi Irrigation Project.  
Unpublished report submitted to Japanese International Cooperation Agency.
- Swantz, LM. 1985. *Women in Development: A Creative Role Denied? The Case of Tanzania*. G. Hurse and Company, London. 177 pp.
- Temple, P. 1975. Geology. Pages 42-43. In: L Berry (Ed.). *Tanzania in Maps*.  
University of London Press, London.
- United Republic of Tanzania (URT). 1967. *Atlas of Tanzania*. URT, Dar es Salaam.