

Tanzania (United Republic of)

Last updated: 31-01-2004

Location and area

Tanzania is a republic in southeastern Africa, bordered on the north by Lake Victoria and Uganda, on the north-east by Kenya, on the east by the Indian Ocean, on the south by Mozambique, Lake Malawi, and Malawi, on the south-west by Zambia, and on the west by Lake Tanganyika, Burundi, and Rwanda. The country includes the islands of Zanzibar and Pemba, and other offshore islands in the Indian Ocean. The total area of Tanzania is 945,100 km², of which 942,453 km² is on the mainland. (Microsoft Encarta Encyclopedia 2002).

Topography

The landscape of mainland Tanzania is generally flat and low along the coast, but a plateau at an average altitude of about 1,200 m constitutes the greater part of the country. Isolated mountain groups rise in the northeast and southwest. The volcanic Mount Kilimanjaro (5,895 m), the highest mountain in Africa, is situated near the northeastern border with Kenya. The Southern Highlands, the Ruwenzori Mountains in the West, and smaller mountain ranges in the East are a source of many river systems. The Eastern and Western Rift Valleys traverse the country forming important internal drainage basins (Kalinga & Shayo 1998).

Zanzibar, separated from the coast of the mainland by a channel some 30 km wide, is about 90 km long, and covers an area of approximately 1,650 km². It is the largest coral island off the coast of Africa. Pemba, some 40 km northwest of Zanzibar, is about 70 km long, and has an area of approximately 980 km². Both Zanzibar and Pemba are mostly low-lying.

Three of the great lakes of Africa lie on the borders of Tanzania and partially within it. Lake Tanganyika lies on the western border, Lake Victoria on the northwest, and Lake Malawi on the southwest. (Microsoft Encarta Encyclopedia 2002).

Climate

Tanzania's climate is varied and controlled largely by altitude and distance from the sea with the highest rainfall concentrated on the coastal plains and in the highlands (Howard 1991).. On the coastal plain of mainland Tanzania, the climate is tropical, being hot and humid. Temperatures average 27° C and rainfall varies from 1,000 to 1,900 mm. The inland plateau is hot and dry, with rainfall averaging from 500 to 750 mm. The semi-temperate highlands in the southwest are wetter.

The climate on the islands is generally tropical, but the heat is tempered by a sea breeze throughout the year. The annual maximum and minimum mean temperatures for the city of Zanzibar are 29° C and 25° C respectively; for Wete in Pemba, they are 30° C and 25° C respectively. (Microsoft Encarta Encyclopedia 2002).

Wetlands

Wetlands in Tanzania (Figure 1) have been classified into three categories (Mwanukuzi 1991):

1. Coastal wetlands including mud flats, marshes, mangrove swamps, estuaries and deltas. They dominate in Tanga towards the Kenyan border and support 16.2 km² of mangrove swamps in Mtwara and 62 km² in Lindi in the south. They are characterized by heavy saline soils.
2. Rift system wetlands in the rift depressions and characterized by salt lakes, playas, swamps and short streams with inland drainage. Soils are heavy and are affected by salinity.
3. Wetlands of the highlands drainage basins, resulting from rivers originating in the highlands and meandering through the plains forming lakes, swamps and flood plains (figure 1). They are characterized by fertile alluvial soils of varying textures.

Tanzanian wetlands are mostly utilized for crop production and grazing. Especially the cultivation of rice is important. A Wetland Biodiversity Project, which started in 1994, made an inventory of wetlands (1:50,000) (Kalinga & Shayo 1998) and found a total of 8,513 km² of wetland to be suitable for irrigated agriculture (www.fao.org/DOCREP/003/X6611E/x6611e04c.htm).

Important wetland systems include the Upper Kagera River lakes and floodplain (340 km² shared with Burundi and Rwanda), the Lower Kagera River lakes and floodplain (180 km² shared with Rwanda), the Usangu floodplain and swamp (518 km²), the Kilombero floodplain (6,647 km²) and swamp (89 km²), the Rufiji River floodplain (1,450 km²), Lake Rukwa (2,300 km²), the floodplains and swamps of Malagarasi (7,357 km²) and Wembere, and the swamps of Moyowosi and Lake Victoria (the latter shared with Uganda and Kenya) (Howard-Wiliams & Thompson 1985).

Fig. 1: Wetlands in Tanzania (from Kalinga & Shayo 1998).

Peatlands

Already Janensch (1914), who discovered them during the palaeontological Tendaguru dinosaur expedition, described about 10 km² of peatlands in present-day Tanzania. Von Bülow (1929) referred to observations of peatlands by Krenkel (1920, but not in his references): “in all parts of that area: terrestrialisation mires are found in the coastal area, in the dry backlands (Hinterland), in the humid uplands, as far as precipitation exceeds 1,300 mm and the mean annual temperature does not exceed 22° C.” Schneider (1976, 1980) mentions the occurrence of peatlands in Tanzania but does not give an area estimate. Kivinen & Pakarinen (1981) mention the presence of peatland in Tanzania but present no estimates for its area.

On the basis of the FAO Soil Map of the World, Bord na Mona (1985) and Shrier (1985) mention the occurrence of Histosols associated with Orthic Ferrasols and Humic Gleysols. According to Markov et al. (1988), there are some mangroves at the Indian Ocean and some inland “peatlands” along rivers. In the mountains (Kilimadsharo) “peatlands” up to 5 km² can be found. The peat layer is here up to 15 – 20 meters, the peat is highly decomposed. Forest-peatlands have peat layers up to 1,5 m (Markov et al. (1988). According to the interpreted World Soil Map (Van Engelen & Huting 2002) 4,517 km² of histosols exist in Tanzania and 55,063 km² of gley soils.

Mire and peatland losses

After the genocide in Rwanda, refugees in Tanzania were stimulated to use peat as cooking fuel to protect wood resources (www.un.org/documents/ga/docs/50/plenary/a50-506.htm), implemented by the Swedish Disaster Relief (SDR) (<http://stone.cidi.org/humanitarian/wfp/96a/0018.html>, <http://stone.cidi.org/humanitarian/wfp/96a/0019.html>).

Still to be checked:

Krenkel, E. 1925, 1928, 1934, 1938. Geologie Afrikas. vol. 1-3, Berlin, Gebrüder Bornträger.