

# **Malawi**

**Last updated: 31-01-2004**

## **Location and area**

Malawi is a republic in southeastern Africa, bordered on the north by Tanzania, on the east by Lake Malawi, on the southeast and south by Mozambique, and on the west by Zambia. Malawi extends about 835 km from north to south and varies in width from about 80 to 160 km. The total area of the country is 118,484 km<sup>2</sup>, nearly a quarter of which is water, mainly Lake Malawi and three smaller lakes.

## **Topography**

The East African Rift Valley runs through Malawi from north to south. In this deep trough lies Lake Malawi (also known as Lake Nyasa), the third-largest lake in Africa. From the southern end of the lake the Shire River flows to join the Zambezi River in Mozambique. To the east and west of the Rift Valley the land rises to form high plateaux, generally about 900 to 1,200 m in elevation but reaching about 2,400 m in the Nyika uplands in the north. South of Lake Malawi lie the Shire Highlands, which rise to more than 2,700 m.

## **Climate**

Malawi's climate varies with elevation. In the low-lying Shire Valley it is hot and humid, with temperatures averaging 23° to 26° C. In the highlands the climate is more temperate. The rainy season lasts from November to April. Annual rainfall averages about 1,000 mm in the highlands and about 900 mm (in the lowlands).

## **Land use**

Malawi's resources are almost entirely agricultural. A thin forest of small trees covers large parts of the country, and some timber trees grow in the damp ravines of the mountains and along the riverbanks. There are environmental problems of deforestation and erosion. Around 98 % of Malawi's electricity is produced by hydroelectric power stations. (Microsoft Encarta Encyclopedia 2002).

## **Wetlands**

Lappalainen & Žurek (1996c) use the figure of 910 km<sup>2</sup> for the total wetland area (incl. coastal mangroves and other wetlands (cf. Bord na Mona 1985).

## **Peatlands**

Kivinen & Pakarinen (1981) mention the presence of peatland in Malawi but present no estimates for its area.

Bord na Mona (1985, referring to **Gore 1983**) and Shrier (1985) mention the occurrence of montane "peat resources" resp. "mires" on the Nyika Plateau in the north of Malawi and on Mulange to the south. Bord na Mona (1985) and Shrier (1985), furthermore, referring to the the FAO/UNESCO 1971-1981 Soil Map of the World 1:5,000,000, mention Histosols resp. a "mire area" of 910 km<sup>2</sup>, consisting of lowland peats along the Shire River, southwest of

Blantyre (cf. Dudal 1980). Next to along the Shire River, Markov et al. (1988) mentions the presence of swamps at the lakes of Malobe and Chilwa, but cannot confirm the presence of peatlands in these areas. Andriessse (1988) uses the figure of 910 km<sup>2</sup> for the extent of organic soils in Malawi, as do Schneider & Schneider (1990) and Pfadenhauer et al. (1993) for the peatland area.

Master & Duane (1998) refer to organic hydromorphic peats in “bogs” or “dambos” of the Nyika Plateau [5,6]. Radiocarbon dating of a 3 m peat profile at the head of the Chilinda landslide site indicated ages spanning the period cfrom 10,500 B.P. (3.2 m depth) to 4,200 B.P. (c. 0.2 m depth).

According to Howard-Williams & Walker (1974) the permanent swamp area of Lake Chilwa in Malawi is 700 km<sup>2</sup>, whereas 500 km<sup>2</sup> of “marsh and grassland” are flooded for a short period in the year. The presence of peat was not affirmed.

Other possible peatland areas in Malawi and adjacent countries are presented in Table 1.

Table 1: Possible peatland areas (in km<sup>2</sup>) in Malawi and adjacent countries (after Howard-Williams & Thompson 1985). W = area in wet season, D = area in dry season.

Lake Malombe	Malawi	Shallow lake and swamp	390
Shire River: Elephant marsh	Malawi	Swamp	W 520 D 140
Ndindi marsh	Malawi, Mozambique	Swamp	W 170 D 60
Lake Chilwa	Malawi, Mozambique	Shallow lake and swamp	600 W 800 D 700
Lake Chiuta	Malawi	Shallow lake and swamp	113
Lake Amaramba	Malawi, Mozambique	Shallow lake and swamp	ca. 50

According to the interpreted World Soil Map (Van Engelen & Huting 2002) 353 km<sup>2</sup> of histosols exist in Malawi and 4,930 km<sup>2</sup> of gley soils.

Still to be checked:

**Meadows**, H. E. 1983. Past and present environments of the Nyika Plateau, Malawi.

Palaeoecology of Africa and the surrounding islands 16: 353-390.

**Shroder**, J. F. 1976. Mass movement on Nyika Plateau, Malawi. Zeit. Geomorph., N. F., 20, 56-77.