

Kyrgyzstan (Kyrgyz Republic)

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Location and area

Kyrgyzstan is an independent republic in Central Asia, bordered on the north by Kazakhstan, on the east by China, on the south by China and Tajikistan, and on the west by Uzbekistan. The total area is 198,500 km². (Microsoft Encarta Encyclopedia 2002).

Topography

Kyrgyzstan is located at the juncture of two great central Asian mountain systems—the Tian Mountains and the Pamirs, which run mainly east to west. More than half of the territory lies at an elevation higher than 2,500 m and only about one eighth of Kyrgyzstan is lower than 1,500 m. The highest peak is Peak Pobedy with an elevation of 7,439 m. Glaciers and permanent snowfields cover more than 3 per cent of total land area. (Microsoft Encarta Encyclopedia 2002).

Climate

The climate is continental, with much variation in climatic conditions. Average daily temperature in the valleys is 25° to 27° C in July, and -4° C in January. Conditions are much colder at higher elevations. (Microsoft Encarta Encyclopedia 2002).

Water

The River Naryn and other tributaries of the River Syr Darya drain more than half of the country. Numerous small and medium-size rivers drain northern Kyrgyzstan and dissipate into the deserts and semi-deserts of southern Kazakhstan. Ysyk-Köl, the largest of the republic's many lakes is located at about 1,600 m a.s.l. (Microsoft Encarta Encyclopedia 2002).

Land use

Steppe and alpine vegetation predominate, and forests occupy 3.5 per cent of the total area. Only 7 % of the land is arable. Livestock raising, especially of horses, sheep, and cattle, remains an important agricultural occupation, although the national herds have declined since the early 1990s. Extensive irrigation permits the production of cotton, grain, and fruit at lower elevations (Microsoft Encarta Encyclopedia 2002).

Peatlands

Dokturowsky (1938) mentions the presence of peatlands (“Moore”) at Lake Sonkul, the second largest lake of the country.

Neishtadt (1946) (in Kazakov 1953) gives a total area of “peat resources” of 50 km² with peat reserves of 5.6 Mt of air-dried peat.

Zlotin (1997) describes peatlands (“bogs”) from the interior Tien Shan at heights from 3000 to 3900 m.

According to an overview of Heinicke (1999, 2000) suos and peatlands around 1970 covered 850 km², of which peatlands with a peat thickness > 30 cm covered 153 km².

According to the interpreted World Soil Map (Van Engelen & Huting 2002) no histosols exist in Kyrgyzstan and 1,529 km² of gley soils.

Mire and peatland losses

Already Dokturowsky (1938) mentions the presence of a peat extraction site near Bishkek. Currently over 150 km² are drained and used for peat extraction (Heinicke 1999).

Since the break-up of the Soviet Union, the peatlands in the Issyk-Köl-area, formerly used as meadows and hayfields by collective farms, were divided among the villages. Nowadays "private property" milch-cows are grazing in the peatlands in high numbers and concentrated herds.

During winter, they are joined by other cattle and horses, that in summer graze in higher mountain areas. As long as the peatlands are frozen (November - March), no harm is done.

Intensive trampling from spring to autumn, however, changes the vegetation of *Carex compacta*, *C. orbicularis*, and *C. pamirensis*, to a community of *Carex divisa* hummocks and hollows with *Carex orbicularis*. The hummocks degrade by oxidation, whilst the areas between the hummocks are increasingly damaged by trampling. Peat particles flush away and accumulate as peat mud in the lower parts of the peatlands. Within a few years, most of the peat is lost leaving a mineral soil on which only a few remnants of the former peat layer may still be visible. Because of the diminishing forage, the animals take refuge in neighbouring, less damaged peatland areas, that in turn are irreversibly destroyed. (Heinicke 1999)

A picture of a peatland landscape south of lake Issyk-Köl can be found under:

<http://www.ucd.ie/~kyr/firstmeeting.htm>