

Iran (Islamic Republic of)

Last updated: 31-01-2004

Location and area

Iran is a republic in the Middle East, bordered to the north by Armenia, Azerbaijan, Turkmenistan, and the Caspian Sea, to the east by Afghanistan and Pakistan, to the south by the Gulf of Oman, the Strait of Hormuz, and the Persian Gulf, and to the west by Iraq and Turkey. The area of Iran is 1,648,000 km². (Microsoft Encarta Encyclopedia 2002).

Topography

Iran is dominated by a central plateau that is about 1,200 m high and is almost ringed by mountain chains. In the north are the Elburz Mountains (with the highest peak in Iran, Mount Damavand, 5,604 m), paralleling the southern shore of the Caspian Sea. The Caspian Sea, at 28 m below sea level, is the lowest point in Iran. Along the western border the Zagros Mountains extend southeast, running parallel to the Persian Gulf. Mountains of lower elevation lie to the east of the central plateau. Except for the relatively fertile plateaux of the northern Iranian provinces of East and West Azerbaijan, the mountain soils are thin, heavily eroded, and infertile. The narrow Caspian coastal plain, in contrast, is covered with rich brown forest soil. The only other generally flat area is the plain of Khuzestan in the west. Two of the world's driest deserts, the Dasht-e Lut and the Dasht-e Kavir cover nearly one third of the country (Baer 2001). In the winter and spring small streams flow into the Dasht-e Kavir, creating small, seasonal lakes and permanent swamps. At other times of the year both deserts are extremely arid. (Microsoft Encarta Encyclopedia 2002).

Climate

Climatically Iran is divided into four main regions:

1. The extremely hot and humid coast along the Persian Gulf and the Gulf of Oman;
2. The arid central plateau, with cold winters and baking summers;
3. The Elburz and Zagros mountain chains, with cold winters, mild summers, and high precipitation; and
4. The narrow Caspian Plain, a fertile, semi-tropical area, with a very warm and humid microclimate.

Temperatures range from a high of 51° C in summer in Khuzestan in the west to a low of -37° C in winter in the north. The average temperatures for the months of January and July in Tehran are 2° C and 29° C, respectively. The average temperatures during the same months in Abadan are 12° C and 36° C.

Precipitation also varies widely, from less than 50 mm in the southeast to 1,950 mm in the Caspian Sea coastal region. The annual average for the country is about 350 mm. Average annual precipitation in Tehran and Abadan is 250 mm (10 in) and 200 mm respectively. (Microsoft Encarta Encyclopedia 2002).

Water

Most of Iran's rivers are seasonal, flowing only during the part of the year when precipitation is heaviest. The River Karun, flowing from the Zagros Mountains to the Shatt Al Arab at Khorramshahr, is the country's main river. Besides the Caspian Sea, Iran has few large lakes.

Most shrink in size during the hot, dry summer and have a high salt content. The largest water body entirely within Iran is Lake Orumiyeh, a salt lake in the northwest. It varies in area between 3,900 km² and 6,000 km² (Microsoft Encarta Encyclopedia 2002).

The only permanent lake of significant size in the interior drainage region is the Hamnun-I-Helmand at Zabol at the Afghanistan border. This lake owes its existence primarily to the Helmand River which heads in the Hindu Kush of Afghanistan. Swamps occur around the margin of the Hamun-i-Helmand and in the playas west of Iranshahr. Streams feed these swamps with reduced but generally dependable flows during the dry season (Kransley 1972). Extensive marshes are found in the south Caspian lowlands in Iran's northwest.

Land use

Approximately 11 % of the country is forested, especially in the Zagros Mountains, on the seaward slopes of the Elburz Mountains and on the Caspian plain.

About 40 per cent of agricultural land is irrigated (Microsoft Encarta Encyclopedia 2002).

Peatlands

Van Zeist (1967) mentions that Lake Zeribar (5 x 3 km) in the Zagros Mountains of Western Iran is surrounded by a sedge mat from which a core of > 3 m peat was taken. The distribution of peatlands in/around this lake must have been more extensive in the past, but was restricted by raising water levels (Wasylikova 1967). Markov et al. (1988) report the presence of "peatlands" on the Caspian Sea and along rivers.

According to the interpreted World Soil Map (Van Engelen & Huting 2002) no histosols exist in Iran and 11,510 km² of gley soils.

Mire and peatland losses

Wetlands have been largely subject to the drainage and 'reclamation' for agriculture, industry and urban development, and diversion of water for irrigation purposes (Spiers 1999). Van Zeist (1967) reports that the valley and the lower part of the broad alluvial fens around Lake Zeribar are "cultivated intensively."

One of the major environmental threats to wetlands came from the prolonged military conflict between Iran and Iraq in the 1980s. (Spiers 1999)