



Hula Nature Reserve (Israel)

Reserva Natural de Hula (Israel)

LOCATION

Northern Israel, in the southern Hula Valley, 15 km south of Qiryat Shemona. Coordinates: 33°04'N 035°35'E

HYDROLOGICAL/PHYSICAL NOTES

The Reserve is located in the Jordan rift valley. The main sediment types are silty soils from lake sediments, with patches of peat soil in the north. Water comes from the Western Canal (mainly polluted water from the Jordan River) and clean water from a nearby spring. The lake's water levels are artificially stabilized. The reserve acts as flood control basin for the small streams of Eliezer and Enan. The site also acts as a sediment trap. It's a man-made wetland. Hula Lake was drained in the 1950s. The Ramsar site comprises part of the lake and swamps, that have been restored since then. The reserve has two types of waterbodies; permanent waters, including a lake, pools and a sedimentation reservoir, and intermittent waters, mainly marshes and wet meadows. It is the largest wetland reserve of this region.

BIOLOGICAL/ECOLOGICAL NOTES

Hula plays a substantial ecological role in the natural functioning of the Upper Jordan River system. It supports globally threatened species, including the ducks *Marmaronetta angustirostris*, *Aythya nyroca* and *Oxyura leucocephala*, as well as some plants. The reserve hosts several wet habitats. They are open limnetic water, a *Nuphar* belt, a *Cyperus-Polygonum* belt, a *Phragmites australis-Scirpus lacustris* belt, and a *Rubus sanctus* belt. There is riparian forest along the canals, with *Tamarix jordanis* and *Populus euphratica*, and there are wet and semi-wet meadows, with *Paspalum paspaloides*, *Phyla nodiflora*, *Trifolium fragiferum* and *Cynodon dactylon*. The site hosts *Phalacrocorax carbo*, *P. pygmaeus*, *Mycteria ibis*, *Ciconia ciconia*, *C. nigra*, *Pelecanus onocrotalus*, *Plegadis falcinellus*, *Platalea leucorodia*, *Anser anser*, *A. albifrons*, 14 duck species, five rails and coots, *Grus grus* and 16 species of waders. The site is also important for raptors like falcons, hawks, harriers and eagles. Mammals like *Erinaceus europaeus*, *Herpestus ichneumon*, *Felis chaus* and *F. caracal*.

HUMAN USES / CONSERVATION MEASURES

The site is government owned, and managed by the Nature Reserves Authority (NRA). The main activities at the site concern nature conservation. Access to the site is restricted; visitors are only allowed at certain hours. Access outside the recreational area and the trails is prohibited. Hunting and fishing is not allowed. Monitoring programmes are conducted, under the supervision of the NRA. The NRA also registers visitors, and manages water supply, water levels and water quality, and monitors waterfowl, vegetation, grazing impacts and the re-introduction of vulnerable species. Establishment of a new ecological centre commenced in 1996. Hula was declared a Nature Reserve in 1964. Currently, water level management replicates the seasonal water regime from the old Hula Lake and swamps. In 1981, a reservoir was built close to the site, to maintain water supply to the reserve during irrigation season. The entire water supply and drainage systems are gradually being improved. The wetland is still being expanded, and eco-tourism possibilities are under development. Water buffalo grazing is a method used to prevent the meadow areas from being overgrown with tamarisk. The size of the herd is controlled.

ADVERSE FACTORS

The main threat is invasion of exotic plant and animal species: two fish, a snail, a rodent and some trees and plants, including *Eucalyptus camaldulensis*. In dry years, water shortage due to irrigation can occur, although measures are being taken to prevent this. The organic content of the water is very high, due to pollution from surrounding villages and agricultural fields. Due to a high organic matter load, there is accelerated sedimentation. Mice poisoning in agricultural fields causes problems for birds during migration season. Development of eco-tourism may create problems in the future.

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