

THREATS AND MANAGEMENT IN THE DANUBE DELTA

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As a result of the human activity along the Danube River, changes have occurred in the hydrologic regime as well as in the quality of water. These have had a negative influence on the ecosystems found in the Danube Delta and on the northwestern coast of the Black Sea.

The embankment works executed in the '60s on approx. 800 km along the Romanian border in order to obtain new land have practically led to the disappearance of the flooding areas. As it happens in large systems, the ensuing effects appeared much later and were obviated by:

- eutrophication of Danube Delta waters, and partly of those in the north-west Black Sea, due to the elimination of the filtering effect caused by intensive agriculture and non-filtered streams from towns along the rivers (possible only in the presence of the flooding areas);

- changes in the specific diversity of fish and the dramatic decrease in fish populations with great economic value (especially carp), due to a lack of shallow water zones in the flooding areas, which is needed for their reproduction.

Another factor, whose detrimental effects were not initially considered, has been the building of dams and water reservoirs for the electric power supplies. Their appearance has led to changes in the flood patterns and to a fall in the quantity of alluvia carried by the Danube, due to water decantation. It has also caused major distortions in the Romanian coastal ecosystems. Another effect caused by dams was the disruption of migration paths for the reproduction of valuable sturgeon species.

The Danube Delta is the largest humid zone in Europe. It has been included on the list of International Natural and Cultural Heritage, and in the Ramsar Convention. As a direct effect of the flooding areas disappearance, the Danube Delta's capacity to retain nutrients has increased sharply since the '80s. It is currently affected by eutrophication, which has led to the reduction or loss of low water macrophytae, to changes in the range of periphytic and epiphytic algae, and to the spreading of rival species favoured by the nutrients in excess.

Apart from the losses caused by eutrophication, the Delta's biodiversity is affected by the changes in the habitats, by changes in the hydrological patterns. The latter are due to the creation of man-made channels or meander interruption, by transforming large areas into agricultural or fishing zones, or by the change in water quality (transformation of the Razelm lagoon into a fresh water lake).