

## Wetland Tourism: Tunisia - Lake Ichkeul



Tunisia, Lake Ichkeul, Water buffalo © Photos DGF

**Lake Ichkeul** is one of the most important wetlands in the Mediterranean region. It is a major stopover point for hundreds of thousands of migrating birds, such as ducks, geese, storks and pink flamingoes, who come to feed and nest there. The lake supports a rich fish fauna including eels, mullet, sole, sea bass, barbel, and seahorses. In addition to its ecological importance, the lake is a popular site for tourism and recreation; the lake itself covers 8,500 hectares (85 km<sup>2</sup>), and the Park also includes a further 2,740 ha (27.4 km<sup>2</sup>) of marshes and a mountain area of 13.6 km<sup>2</sup> that includes the Djebel Ichkeul. It is a National Park, a Ramsar Site, a Biosphere Reserve (MAB), and a UNESCO World Heritage Site.

Ichkeul is the last remaining lake in a chain that once extended across North Africa. The area has been settled by people since pre-Roman times and has been used extensively for hunting and fishing at various stages in its history.

The rest of the National Park has a semi-arid Mediterranean flora that includes olive groves, 'maquis' evergreen scrub habitats, juniper and other mountain shrubs. The lake has extensive beds of pondweed (*Potamogeton pectinatus*) that is the major food plant for wintering ducks, and it is fringed by reedbeds, rushes and Tamarix scrub that provide habitat for many birds and other species that thrive around the lake.

Lake Ichkeul is one of the most important wetlands in the Mediterranean region. It is a major stopover point for hundreds of thousands of migrating birds, such as ducks, geese, storks and pink flamingoes, who come to feed and nest there. The lake supports a rich fish fauna including eels, mullet, sole, sea bass, barbel, and seahorses. In addition to its ecological importance, the lake is a



popular site for tourism and recreation; the lake itself covers 8,500 hectares (85 km<sup>2</sup>), and the Park also includes a further 2,740 ha (27.4 km<sup>2</sup>) of marshes and a mountain area of 13.6 km<sup>2</sup> that includes the Djebel Ichkeul. It is a National Park, a Ramsar Site, a Biosphere Reserve (MAB), and a UNESCO World Heritage Site.

Ichkeul is the last remaining lake in a chain that once extended across North Africa. The area has been settled by people since pre-Roman times and has been used extensively for hunting and fishing at various stages in its history.

The rest of the National Park has a semi-arid Mediterranean flora that includes olive groves, 'maquis' evergreen scrub habitats, juniper and other mountain shrubs. The lake has extensive beds of pondweed (*Potamogeton pectinatus*) that is the major food plant for wintering ducks, and it is fringed by reedbeds, rushes and Tamarix scrub that provide habitat for many birds and other species that thrive around the lake.



Tunisia, Lake Ichkeul, Flamingos © Photos DGF

## Lake Ichkeul's rich ecosystems

depend on annual variations in water levels and salinity that result from a complex hydrological balance between seasonal inflows of freshwater from six rivers that feed into the lake and flows of water between Lake Ichkeul and the sea via the Tindja canal. When freshwater inflows are high during the winter rains between October and March, the lake level rises, its salinity falls, and excess water flows into the sea. When freshwater flows are low, the lake level falls, and seawater then flows into the lake via the Tindja canal, thus raising the salinity again. Between 1992 and 2002, the hydrological balance was disturbed as a result of two prolonged droughts and by diversion of a large amount of the water from the rivers flowing into the lake. This led to major declines in the lake's ecosystems, with a fall in its productivity, loss of key habitat, and a major reduction in the populations of waterbirds using the lake and its surroundings. Wintering waterfowl numbers decreased from 200,000 to 50,000. These problems have been rectified by the implementation of active water management practices to ensure that Lake Ichkeul receives sufficient freshwater inflows to sustain its ecological value and productivity, and to control

## A Ramsar Case Study on Tourism and Wetlands



salinity by regulating seawater inflows through the Tindja canal.

Lake Ichkeul National Park now receives around 50,000 visitors each year, double the number in 2005 when the park's ecosystems were still recovering. The majority of visitors are Tunisians, who also visit and stay in neighbouring towns. The Park offers many attractions for tourists, including nature trails and guided excursions, a museum, sightseeing in the douars (tented camps) and local villages, birdwatching, mountain biking, caving, hiking and sports trekking on Djebel Ichkeul, which rises 500 metres above the lake and offers panoramic views of the marshes. The park also includes Roman remains and natural hot springs close to the lake which feed traditional Hammams (hot baths). Some longer horse or camel trekking excursions around the edges of the lake are also available, with visitors camping overnight by the lake shore.



Tunisia, Lake Ichkeul, Welcome Centre, © Photos DGF

The Park authorities actively promote tourism to Lake Ichkeul and its surrounding areas through tour operators, travel agents, and the Tunisian National Tourist Organization. It is included in travel guides and brochures, and has been the subject of several television programmes, which have also helped to encourage tourists to visit the Park.

By attracting large numbers of visitors to the region, Lake Ichkeul makes an important

contribution to employment and the local tourism economy in the villages and towns around it. For example, local people frequently organize open days to sell the agricultural produce from the surrounding areas.

Management of the site is complex: the lake, mountain, and some marshland are state property, owned by the Direction des Forêts, Direction des Ressources en Eau and Terres Dominiales, while most of the marshland is privately owned. Six



government departments have responsibilities for different aspects of the Park: for administration, lake waters, marshland, fisheries, agriculture and environmental planning. Maintenance of the park's ecosystems also depends on management of upstream freshwater resources.

Between 2003 and 2008, funding was obtained through the Global Environment Facility (GEF) to prepare and start to implement a Development and Management Plan (DMP) and a Community Development Plan (CDP) for Lake Ichkeul National Park. These plans were approved by all parties in 2007. Their main features are: the progressive establishment of an autonomous management structure with clear decision-making processes for the Park; development of zoning within the Park; management of water resources through consultation with the authorities responsible for the dams and through use of mathematical models; participatory management with local communities; and generation of income from the Park through sustainable tourism. The Ichkeul National Park Management Committee has also been formed with representatives from local inhabitants, the Ichkeul Agricultural Development Group (an association of local farmers and inhabitants), government departments, and other stakeholders.

The Park is currently managed by the Regional Commission for Agricultural Development (RCAD) attached to the Ministry of Agriculture. In addition, two agencies, the ANPE and the Forestry Department, are involved in monitoring the Park, and there remains a need to ensure a permanent, harmonized structure with clear decision-making mechanisms. The role of joint programming, monitoring of implementation, and coordination is currently fulfilled by the project management team that was created for the GEF project and includes the different stakeholders.

The Park is surrounded by areas of intensive arable farming, orchards and pasture. There are also several settlements on the edges of the Park. Despite enforcement efforts, illegal hunting, grazing and quarrying pose continuing management problems for the Park. Impacts from tourism are kept low by prohibiting general access to the marshes and the lake, by creating special circuits, with observation towers and lookout points offering views of all the ecosystems in the park and well-signed trails for visitors, and by the use of trained guides. The main problem is litter and wastes left behind by tourists, particularly at weekends, which the Park then has to collect to prevent damage to wildlife.

A number of activities have been undertaken over the past two years to improve the Park's tourism infrastructure. Various community outreach activities targeted at both the local population and the wider public have also been undertaken, including school visits to the Park.

Promoting the National Park and surrounding areas as a tourism destination has helped to raise awareness about conservation and the importance of the sustainable use ("wise use") of wetlands, and has generated income that has contributed to maintaining the Park's infrastructure, including its visitor centre, and to conservation management. The Park now has a programme of support, including basic training and credit schemes, to increase the involvement of local businesses and communities in tourism activities, in order to expand local employment and economic benefits from tourism.

## Sources:

Information provided by Habib Abid, Direction Générale des Forêts, Ministère de l'Agriculture, Tunisie Valeurs attractives du Parc National de l'Ichkeul (PNI) – Rapport remis à la DGF, juillet 2005 Plan d'aménagement et de gestion (PAG) Plan de développement communautaires (PDC)

« *Tourisme dans les parcs nationaux de Tunisie, cas de l'Ichkeul »,* thèse de doctorat en géographie, université Provence, France, par Mme Salma Zaiane Ghlia.