# NEWS AND EVENTS

## Iraq marshes' recovery 'in doubt'

Story from BBC News
http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/5295044.stm

The long-term recovery of the Iraq marshlands is in doubt because of uncertainties over water supplies to the wetlands, research suggests. The first study to look at the marshes' recovery warned that increased water demand from farmers and cities could lead to only a portion being restored. Large areas were drained in the 1990s to punish the Marsh Arabs for rebelling against former leader Saddam Hussein.

The findings will be presented next week to the British Ecological Society. Curtis Richardson, from Duke University, North Carolina, US, who led the research, warned that the recent faster-than-expected pace of recovery was unlikely to continue in the long term. "Our recent field studies have found a remarkable rate of native species reestablishment - of macroinvertebrates, macrophytes, fish and birds in re-flooded marshes. "But the future availability of water for restoration is in question because of increasing urban and agricultural demands for water in Iraq, as well as in Turkey, Syria and Iran, suggesting only a portion of the former marshes can be restored, " Professor Richardson observed.

### End of Eden?

The Iraq marshes, sometimes identified as the site of the Garden of Eden, once covered an area twice the size of the Florida Everglades and were famous for their biodiversity and cultural heritage. A study in the 1970s said the marshlands were home to more than 80 species of birds, including about 90% of the world's population of the Basra reed warbler *( Acrocephalus griseldis ).* The wetlands also served as important fish spawning and nursery grounds, as well as acting as a natural filter for waste and other pollutants.

Tens of thousands of Marsh Arabs who lived in the area depended on the habitat for fishing and as grazing sites for their buffalo herds. The marshes were devastated in the 1990s after Saddam Hussein's regime diverted water away from the region. This reduced the marshlands, the Middle East's largest wetlands, to just 7% of their original size of 15,000 sq km. Following the collapse of Saddam Hussein's regime in 2003, locals broke down the dams and dykes, re-flooding nearly 20% of the marshes. Recent conditions also helped in the restoration of the region, said United Nations Environment Programme (UNEP) senior environment expert, Hassan Partow. "The past several years have been a good time for the marshes because there has been good rainfall and snowfall in the upper catchment areas of the Tigris and Euphrates rivers." He added that the current unrest in Iraq also meant that little water was being abstracted for agricultural use, allowing about 40% of the marshlands to re-flood. "But it could be envisaged that in the coming years, when the situation has stabilised, there will be more water taken for other uses, such as agriculture and hydroelectricity," Mr Partow observed.

### Limited supply

Professor Richardson said there was a direct link between the volume of water reaching the wetlands and its recovery. "Scientists are very nervous about setting a target, but the amount of restoration is directly proportional to the amount of water available," he said. "An estimate made by Iraqis suggests that to restore the marshes could take half of the nation's total water supply. That will be very difficult; human needs have always come first."

Mr Partow said targets could help in the long-term management of the wetlands: "There is a need to define a target for restoration, whether it is 50%, 60%, etc. "This will make it easier to decide how to allocate the water resources available for the marshlands." Professor Richardson said he was hopeful about the area's future, despite the challenges ahead. "I am optimistic that a significant proportion can be maintained, especially now we have removed the 'environmental genocide' that destroyed them in the first place. "We will put them on life-support for a period of time, and some areas will really recover provided there is a sustained water supply," he added. "But there will have to be a minimum water allocation, otherwise when push comes to shove, nature will lose." Professor Richardson will outline his findings next week when he addresses the annual meeting of the British Ecological Society.

Fig 1. Field teams surveying at Al-Hammar (© Mudhafar Salim)

Fig 2. Marsh Arab on a boat (© Mudhafar Salim)