Promising signs for Iraq marshes

By Paul Rincon
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Iraq's devastated marshlands can be partially revitalised, says a team writing in the journal Science.

Local people reflooded the marshes after the fall of Saddam

Saddam Hussein ordered the extensive draining of the wetlands, in part to punish the native Marsh Arabs who opposed his rule.

But the quality of water now flowing into the marshes is better than expected and researchers say 30% of the former wetlands could be restored.

Details were presented at a major science conference in Washington DC.

A number of drained areas show early signs of recovery, says the US-Iraqi team, but there are many obstacles blocking the realisation of the overall vision.

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>
> Curtis Richardson, Duke University

Sometimes identified as the site of the Garden of Eden, the wetlands have been home to the Marsh Arabs for at least 5,000 years. They once covered an area of 20,000-15,000 sq km - twice the size of the Florida Everglades.

Clear water

Saddam's concerted effort to drain the marshes in the 1990s and the diversion of water further upstream by some of Iraq's neighbours have left the wetlands standing at just 7% of their original size.

Most Marsh Arabs were left without a home, with 70,000-80,000 living in camps in Iran, most of which have been vacated since the fall of Baghdad.

"The marshes are an ecological disaster as well as a human disaster. I think it's really critical that we get the international community to focus on doing more to restore them," co-author Curtis Richardson, of Duke University in North Carolina, told the annual meeting of the American Association for the Advancement of Science (AAAS).


Richardson (c) believes greater international effort is required

Fisheries crashed and the food pyramid is now inverted, with many more large catfish - top predators in these waters - than the smaller carp species that were once the most abundant here.

Water from the Tigris and Euphrates - the rivers which feed the marshes - was thought to be heavily contaminated with pesticides and other pollutants. However, the study found this was not the case, which bodes well for restoration of the wetlands.

Since Saddam's regime collapsed, jubilant locals broke open the dikes and dams, re-flooding nearly 20% of the marshes.

About 60% of the wildlife has since returned to the marshes. But although some areas are flooded and well-vegetated, others remain as baked mudflats or salt pans.

Neighbouring issues

Analysis of soil and water samples revealed excessive build-ups of natural salts in some drained areas. In some cases, these were so high they stopped plant life from returning once the area had been re-flooded.

They also found abnormally high levels of selenium, a naturally occurring toxic metal. The researchers fear that this could accumulate in the food chain and poison the ecosystem.

Regardless, engineers will need to flush the soil with clean water to remove salt and hydrogen sulphide. The question is whether there is enough water to do this.


The region is famous for its arched buildings made from reeds

"The future of this area will depend directly on the quantity of water. Turkey and Iran control most of it," said Dr Richardson.

"Turkey could cut off almost all of the Euphrates' flow and Iraq has no basis at the moment to negotiate hard with them."

He added that there was currently not enough money to carry out soil tests to determine the places that would benefit most from being re-flooded; and providing fresh water was now a priority in all areas of the country, so the marshes could lose out.

The Iraqi government has set up an agency to draw up a blueprint for revitalising the area. The international community has pledged $30m to the effort.