World Wetlands Day, 2nd February 2007

Draft briefing sheet for education staff

What is World Wetlands Day?

World Wetlands Day is celebrated on 2nd February every year. It marks the date of the signing of the convention on wetlands on 2nd February 1971 in the Iranian city of Ramsar.

The day was celebrated for the first time in 1997 so this is its 10th year of being celebrated internationally.

The aim of the day is for all those involved with wetlands (be that government agencies, non-government organisations etc) to raise public awareness of wetland values and benefits in general and the Ramsar convention in particular.

What is the theme for WWD 2007?

The themes of WWD are kept vague in order for all countries to be able to work with them. The theme for 2007 is ***fisheries (fish for tomorrow).***

The theme recognises:

- *the needs of the one billion people who rely on fish as their primary source of animal protein;*
- *the state of the world's fisheries where 75% of commercially important marine and most inland water fish stocks are either currently overfished or being fished at their biological limit, and where the effects of unsustainable aquaculture practices on wetland ecosystems are of growing concern;*
- *the important role that inland and coastal wetlands play in supporting fish and fisheries at all levels, from large-scale, commercial fisheries to subsistence fishers, and from wild, capture fisheries to farmed fish; the critical role that coastal wetlands play as spawning and nursery areas for many marine species; and the urgent need for effective management of fisheries and the wetland ecosystems that support them.*

How does this link into our conservation work?
We have two examples of fish projects. One shows how you can control fish for conservation aims for birds; the other is an excellent example of how WWT work with local communities on wetland management.

Project 1: Managing wetlands for sustainable livelihoods at Koshi Tappu, Nepal

Where is this project and what is it?
The project is based at Koshi Tappu Wildlife Reserve, a Ramsar site in lowland Nepal. The protected area is important for waterbirds and mammals. People living in areas adjacent to the reserve depend on wetland resources, particularly fish, for their livelihoods. This has resulted in pressure on fish populations both inside and outside the reserve. Recent Nepali bird studies have shown that populations of fish eating birds have decreased dramatically. The aim of the project is to work with local communities to help them manage wetlands outside the reserve to obtain a sustainable livelihood so that they are not forced to exploit fish and other wetland resources inside the reserve. A buffer zone around the reserve has been created by Nepalese authorities to help achieve this. WWT recognises that it is not realistic to simply create an amazing reserve and put a fence around it and forget about the fact that the lives of local people are dependent on wetlands for fish and other resources.

The participation of local people in the project is crucial. A project officer has been employed and they are consulting the local community about what the problems are and what the needs of the local community are so that what is implemented is realistic.

When did it begin?
The project was launched in Nepal at the beginning of October 2006

Who are we working with?
This project is a collaborative effort, involving several Nepali and UK organisations. Bird Conservation Nepal is the main Nepali partner organisation. The project is UK Government funded.

Who is running this project at WWT?
Seb Buckton

How can you support this project?
Subscribe to Action for Survival

Project 2: Fish population and status and the WWT London Wetland Centre (an example of controlling fish for conservation aims for birds)

Some background
The London Wetland Centre was built on the site of four Victorian concrete reservoirs owned by Thames Water. When work began in 1995 the water was defished and then completely drained from the site. This therefore provided the perfect opportunity for a study of re-establishment of fish populations.

Are there fish now?
Yes. These fish will have entered the site either as eggs on birds legs or from the Thames Lea tunnel, which supplies for the centre, bringing fresh water from the river Thames several miles further upstream at Hampton.

What do the studies show?
We have ten species of fish recorded so far. These are:
Regularly recorded
Perch
Roach (lower levels than perch)
Stickleback
Common eel

Others recorded
Chub
Gudgeon
Common bream
Tench
Ruffe
Flounder (this is normally an estuarine flat fish and was recorded when a cormorant was observed catching and eating one)

How have these populations changed?
When the lakes were first established stickleback dominated the waters, but since 2000 larger-sized perch and roach became more numerous and stickleback numbers fell as a consequence through predation.
About 2003 perch numbers started to drop. This is thought to be because in the last few years in Feb/March there have been high numbers of cormorants and they more resident throughout the year now which keeping these numbers under control.

High numbers of fish attract good numbers of fish eating birds, but too many fish of the wrong sort could be problematic. Our waters are nutrient rich, but species like roach tend to feed on zoo plankton, which can lead to an increase in micro-algae. Too many bottom feeders (e.g.carp and common bream) feed on the bottom sediments of lakes can destroy plant populations and stir up sediment. In nutrient- rich waters this can lead to high levels of nutrients such as phosphate and nitrate being released into the water (a process know as icth eutrophication), which can be the cause of algal blooms. Too much algae is often systematic of lakes with too many nutrients in their waters.

A recent study also suggests that there has been a general decline in fish sizes over time and a change in their diet composition. Zoo plankton is now a major dietary component.

What is the impact of this fish research?
It shows there is a need for fish management on reserves with similar conservation aims as the London Wetland Centre.
In the absence of management, over time the numbers of carp, bream and roach will grow in size so that cormorants (a very effective avian fish predator) are no longer able to control them. This will lead to an increase in bottom feeding and therefore leading to murky water, algae etc.

Management is something that we predicted anyway. The site was designed with a fish trench so that we can defish the main lake if necessary and remove the fish to another water body once health screened. We knew this might be necessary because when this site was a reservoir, there was a dramatic fall in the numbers of wintering duck in 1975 when a shift was made to mange the site for fish. The fish competed with the wintering

duck which is thought to be the reason for their sudden decline. This, and other research around the UK by the Game Conservancy Council into the influence fish have on waterfowl led to the trench being built into the design of LWC.

Why is this project interesting?
Stresses that all species interdependent.
Very interesting case as starting from no fish in 1995 and looking at how has developed.

Who is managing this project at WWT?
Kevin Peberdy, Richard Bullock and John Arbon.

Who is carrying out this research for WWT?
Steve Kett (Middlesex University)