Worksheet 4.6: The Three Gorges Dam

Fish extinctions and the Three Gorges Dam

The Upper Yangtze Rare and Endemic Fish Nature Reserve was created in the 1990s as a refuge for species that were threatened by China’s Three Gorges Dam, the world's biggest hydroelectric plant. Among the hundreds of species the Reserve protects are four types of wild carp that experts say are essential to China's food security, because they provide the diverse genetic stock on which fish farms depend for healthy breeding.

In recent years, the importance of this 400 km-long ecological refuge has increased as China's hunger for energy has driven power companies to build two more mega-dams. These have drowned the shoals and rapids along thousands of kilometres of Asia's biggest river. Downstream, the combination of dams, pollution, overfishing and river traffic has decimated fish stocks, wiped out at least one mammalian species – the Yangtze River Dolphin – and left several other species – like the giant Yangtze sturgeon, the Chinese paddlefish and the finless porpoise – critically endangered.

Upriver, the state has promised to safeguard the last untamed stretch. A coalition of scientists and conservationists has opposed development in the reserve.

The Three Gorges Project Development Corporation want to build another hydroelectric plant at Xiaonanhai to power the development of the local economy. The Ministry of Environmental Protection announced plans in January 2011 to redraw the boundary of the reserve so that it would no longer encompass the area of the proposed dam.

Less often calculated is the economic impact of loss of biodiversity. With fewer wild carp to bolster farm stocks, environmental experts say China is taking a risk with a primary source of protein. Since the Three Gorges Dam was built, the downstream carp population has crashed by 90 per cent. This is economically important. The Chinese people eat a lot of these fish.

It is rare for the Nature Conservancy to oppose dam construction, which they accept as important to China's development. But the US-based NGO has sent a letter to the Chinese government urging full protection of the Yangtze reserve, which looks set to be a test case of the authorities’ willingness to conserve.

Questions

**1** Outline two environmental advantages of hydroelectric plants. *[2 marks]*

safeguard the last untamed stretch of the river and retain more energy to start powering more parts of the city

**2** Describe two disadvantages of hydroelectric plants. *[2 marks]*

biodiversity loss and economic losses from the loss of fish population

**3** Why has the carp population of the Yangtze declined? *[2 marks]*

less water downstream, causing them to lose their habitat and thus not being able to live anywhere else.

**4** Why is this important? *[2 marks]*

people should be considerate between helping themselves and helping the environment and find that the people rely on the environment, such as the Chinese who rely on fish significantly, so by preserving the environment it is better from the society as well over the construction of the dam.

|  |
| --- |
| Theory of Knowledge |
| To what extent is it possible to balance economic development with environmental issues? |