WORKING TOGETHER TO HELP PROTECT THE WORLD'S FRESHWATER RESOURCES

HSBC The world's local bank

SUMMARY

2011

Freshwater

WWF'S YANGTZE PROGRAMME

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Background

The 6,300km-long Yangtze River runs through a 1,800,000 km^2 basin - more than seven times the size of the UK. It is home to one-third of China's population - 470 million people - and a rich abundance of animals and plants. Industry and agriculture in the Yangtze basin generate 30-40% of China's GDP.

Threats

Despite these mighty statistics the Yangtze faces multiple threats. The central basin was once described as the land of the 1,000 lakes, because of its many floodplain lakes and oxbows, which were particularly rich in biodiversity. During the 1960s, demand for urban and agricultural land meant many lakes were disconnected from the river and left to dry up. The region became less able to cope with floods and the disconnection reduced fish migration and stocks, which in turn impacted the now extinct Yangtze River dolphin (the Baiji) and the threatened finless porpoise.

As China's economy has developed over the last 40 years, pollution from industry, agriculture and large-scale fish and pig farming has grown.

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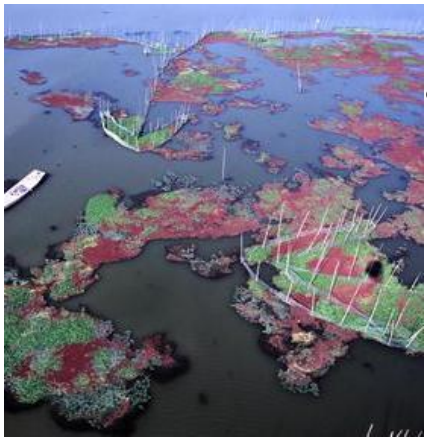
The central Yangtze is home to the world's biggest hydropower dam, the Three Gorges. At 181m tall, 2,335m long, it causes a large number of problems - such as disrupting fish spawning cycles and stopping silt being delivered downstream, where it's vital for protecting the Shanghai estuary from flooding.

Climate change also poses a serious threat to the Yangtze. Predictions indicate that sea level rise will affect the Shanghai estuary area and that the Yangtze will suffer from increased flooding.

WWF has been working with HSBC to tackle these threats since 2002, firstly through Investing in Nature (HSBC's first global environment programme) and now under the HSBC Climate Partnership. Our most recent achievements are highlighted below.

Restoring floodplains

When WWF decided to attempt re-linking lakes to the Yangtze it was a bold move which ran contrary to Government policy - many believed it would reintroduce and spread a harmful type of snail. We persuaded the local government in Wuhan to let us conduct a trial in a nature reserve of 40sqm. We reconnected a lake by opening sluice channels in the reserve to the Yangtze, and demonstrated that the lake's water quality improved. By allowing fish to migrate from the river into the lake, their numbers and genetic stock were replenished. This, in turn, benefited the lake's endangered finless porpoises that fed on this fish stock. We showed how the lake could store vast amounts of excess water in the event of flooding – which is an all-present threat in this region.



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Seeing the benefits of the small-scale trial, the local government allowed us to re-link a huge lake system back to the river. We also transformed Lake Hong, a famous lake in China which has been celebrated for thousands of years in popular culture for its purity and wealth of wildlife, but which had degraded sharply due to over-fishing and intensive aquaculture.

Following our demonstrations China's Ministry of Agriculture has made it national policy that the Yangtze River should be reconnected to its lakes. In Wuhan City this has led to a programme to connect six lakes to the Yangtze. The central government has committed $US2.3 billion of funding to this

programme, which will create china's largest urban wetland landscape.

As of 2011 we have overseen the re-linkage of 50 lakes – great news for the millions of people who live nearby them.

Cleaner, smarter agriculture

The Yangtze is one of the country's main food baskets and produces 50-60% of all fish eaten in China. Many fish farmers use huge amounts of fertilizers which cause harmful algae to bloom and kill virtually all aquatic life save the carp that is being produced. WWF has been supporting farmers to use new fish rearing techniques using natural fish feed. It has meant that farmers can rear higher quality fish, which in turn can be sold for higher prices. Our model has been adopted into Ministry of Agriculture policy and is actively promoted by the government in the Yangtze basin. We estimate that over 100,000 fish farmers are benefitting from increased incomes because of our 'eco-fisheries' model and lake reconnection work.

Networks of protected areas

Protected areas of lakes and marshes in the central and lower Yangtze floodplains are critical in maintaining the hydrological function of the region. They provide vital refuges for some of China's most endangered species and lie on one of the major bird migration routes between Siberia and Asia.

But years of mismanagement at a time of huge development led to the degradation of many of these reserves, leaving them unable to provide their critical hydrological and wildlife refuge functions.

With HSBC's support we've worked with the Chinese local authorities to establish a network of effective protected areas. Through the network, we're providing technical support, collating data about the status of the reserves and building capacity among reserve managers to restore the biological function of the reserves. We're also helping flora and fauna adapt to the impacts of climate change.

There are now over 40 protected areas in the central and lower Yangtze, covering 16,500 sq km. It's led to new habitats being found for the critically-endangered Yangtze alligator. Populations of 46 other threatened species have increased in the protected areas.

China's government has acknowledged the success of this network and has asked us to expand it along the entire Yangtze. When complete, it'll comprise 102 protected areas across approximately 185,000 sq km.

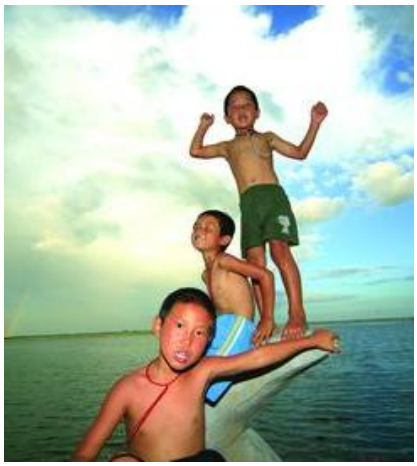
Advising and influencing

Since we started working on the Yangtze, we've become known for our expertise in developing solutions that can be implemented on a huge scale to address some of China's main water problems.

We were invited to help establish the Yangtze Forum, which brings together government organisations from 10 provinces from the entire river basin to discuss how best to manage the river from source to sea.

We're now advising the Chinese Ministry of Water on how to incorporate international best practice in sustainable water management into China's next 25-year master plans for river management. As a result, the authorities will have to ensure that environmental flow is maintained in all Chinese rivers to maintain living ecosystems.

Finally we now have a signed a memorandum of understanding with the Three Gorges Dam. We're working with the commission to mitigate and reverse some of the most significant ecological impacts the dam project has had on the Yangtze River. For example in June 2011 the Dam released additional water (2,000 m^3/second for 4-6 days) to meet flow and breeding requirements of Chinese carp.



Yifei Zhang/WWF-Canon

IF YOU'D LIKE MORE INFORMATION ABOUT THE HSBC CLIMATE PARTNERSHIP

Please feel free to contact

Hugh Mehta on hmehta@wwf.org.uk

Why we are here
To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.
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