

Quenching China's thirst

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China's lakes and rivers are drying up, says Wang Yongchen, and rising temperatures are partly to blame. The country needs to take its worsening drought into account – before it's too late.

On January 3, 2007, the level of the [Yangtze River](#) was seen to plummet at the point where it passes through the city of Shashi, in central China's [Hubei](#) province, two metres below the average for this time of year. A similar story is seen repeated throughout the middle and lower reaches of the river; water levels are falling to an extent not seen in 140 years, when records first began.

At the end of June last year, waterways dried up, cracks appeared in the earth and drinking water became scarce across China. As Focheng Liu stood on the banks of west China's [Minjiang River](#), he told me: "I've lived here for 65 years, but the river has never stopped flowing before. This is the first time I've seen it dry up like this." Liu had never dreamed the river would become so depleted, or that the well pumps would fail to draw water. Surveys have found that the Minjiang River, already suffering a 50% drop in its water flow, has dried up in 10 kilometre stretches, exposing its bare riverbed. Over 50 days of hot, dry weather, a lack of snowfall on the plateau and the diversion of water underground are all to blame.

The fishermen of south China's [Dongting Lake](#) usually land their best catches in October. But last year there was barely a fisherman to be seen – only their boats stranded on a dry lakebed. Figures from the local fishery authorities show that 7,600 fishermen have had to abandon their boats, with two-thirds now out of work and incomes slashed by a third. Qianming Tong, a professor at Hunan's Geological Institute, found two reasons for the vanishing water. The main problem is simply the climate; hot, dry weather since August has affected both the lake and the local rivers that feed it. But a lowered supply of water from the Yangtze is also a factor, he said.

On November 6, south China's [Poyang Lake](#) was at its lowest level, for the time of year, since 1949. The lake marks the boundary between the middle and lower reaches of the Yangtze. It is China's largest freshwater lake and has Asia's largest freshwater wetlands. But the once vast lake was reduced to a few stretches of water twisting between exposed sandbanks.

The runoff that flows into the Min River has also had a calamitous effect on its fish. A survey by biologist Deng Qixiang found that only 16 of the 40 species recorded in the 1950s are to be found today. The Sichuan [Taimen](#), a protected species, has not been seen in one stretch of river, the Wenchuan, for an entire decade. Another fish, the shad, called

“the beauty of the water” by China’s early poets and known today for its economic value, has also disappeared.

“The water's off again!” sighs Miao Juan, a housewife in southwest China’s city of [Kunming](#). “We don't even use two tonnes a month between the five of us,” she adds, proud that she [conserves water](#). Despite being the capital of Yunnan province, traditionally China's third most water-rich province, the “Spring City” of Kunming has suffered water shortages since July 2006. Experts predict that serious water shortages and problems in managing sewage will continue for the world’s 22 cities that have populations over 10 million. China is even worse off; the water supply is inadequate in 550 of its 600 largest cities. Industry’s ever increasing demand for water has led to the overexploitation of water resources and resulted in shortages for farmers and urban residents. This reduces grain production, increasing China’s reliance on imports and affecting other countries in the process, which can exacerbate international tensions.

Biyun Gao, a expert on Dongting Lake and former Yueyang city official, says falling water levels present government with a new problem. In the past, a set of response mechanisms were in place to minimise losses when high water levels led to flooding. But this is the first time in decades that low water levels have been an issue. The harm caused is just as great, but more easily overlooked. The government should put warning systems in place for low water levels, just as it has done for flooding.

This is all very well, but it is important to ask what the causes of low water levels are. They are no longer passing phenomena, but still do not get the attention they deserve. And the situation is getting worse.

A key source of the Yellow River is in northwest China’s Maqu county, known commonly as the river’s “reservoir” or “China's water tower.” But in recent years, the water flowing into the Yellow River has decreased, with marshes and wetlands drying up and desertification increasing at a rate of 2.99 square kilometres every year. Thousands of wells are dry, and 11 of the Yellow River's 27 main tributaries no longer flow. The water table has plummeted by 20 metres, and the water flowing into the Yellow River has decreased by 15% since 1980. The region’s marshes and [wetlands](#) have shrunk by 1.6 million *mu* (around 1,067 square kilometres). A lack of management means riverbank collapses and [soil erosion](#) lead to frequent changes in the course of the river, damaging the grasslands, causing dusty weather and damaging biodiversity. In the 1970s, 230 rare species were reported in the region, but today only 140 survive, many of which face extinction.

Our rivers and lakes are drying up, and it is a disaster not only for humanity but also the planet on which we live.

Water management in China is spread across many different government departments; water resources, environmental protection, fishing, forestry, shipping, urban construction and mining all involve water, but each have their own department. The [Ministry of Water Resources](#) has established seven committees that oversee major waterways, most of

which are sub-ministerial administrations. These do not have enough power, especially when dealing with provincial branches of the ministries, to manage the full length of China's rivers. So who should be in charge?

China has no laws that handle rivers specifically. Current opinion favours establishing separate laws, such as a Yangtze River law, a Yellow River law and so on. But this will not give the overall consideration that the problem needs. The management, protection and use of these large rivers are already major problems.

But we cannot simply blame the Three Gorges dam, as some media reports have done. [Global warming](#) and overexploitation of water resources are to blame. We must all play a role in the solution: we need managers to oversee the rivers, scientists to propose plans of action and the public to participate in the process. With water levels at a 140-year low, there is no more time to waste.

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