



Millions of people depend on Lake Victoria for their livelihoods. The lake has shrunk in part due to over-releases from dams.

■ **Lake Victoria drained by dams:** The world's second largest lake was at record low levels in 2006, affecting millions of people in Kenya, Tanzania and Uganda. A report by an independent hydrologist published by IRN in February revealed that the operation of two existing dams was the main reason for the declining water levels. The dam primarily responsible for the decline was built by the World Bank, which used a highly optimistic and much-contested estimate of how much water would flow out of the lake to power the dams.

■ **Sardar Sarovar rising:** On March 8, the Indian authorities decided to raise the height of the Sardar Sarovar Dam in the Narmada Valley by another 12 meters. This decision violated orders by India's Supreme Court, which stipulate that any increase in the dam height must be preceded by resettlement and rehabilitation measures. The increase, which was completed at the end of the year, submerged the homes of thousands of families during the 2006 monsoon season.

■ **San Joaquin restoration moves forward:** Water will return to a dry stretch of California's San Joaquin River by 2009, according to a settlement filed in federal court in 2006. The agreement caps an 18-year legal battle over how much water should be allowed to flow from the Friant Dam to allow salmon to return to the river. The San Joaquin is California's second longest river. The settlement will restore 246 km of the San Joaquin River – making it one of the biggest restoration projects in the US.

■ **Carbon credits for big dams:** The Xiaogushan Dam in China was registered as eligible to receive Kyoto Protocol carbon credits in August 2006. The World Bank persuaded the UN's Clean Development Mechanism to approve this dam on the grounds that it needed income from selling credits to go forward, even though the project was already nearing completion. Credits are only supposed to be granted to projects that would not go forward without this financial boost. This is just the latest example of developers and carbon consultants cheating the carbon trading system.

■ **Unsafe dams:** The privately owned Kaloko Dam in Hawai'i breached on March 14, resulting in seven deaths and massive flooding. A 2005 report by the American Society of Civil Engineers identified 22 dams in Hawaii that raised safety concerns, but Kaloko was not on the list of dams rated "high-haz-

ard" structures that could cause deaths and significant damage if they failed. Other dams collapsed in Southern Austria, Shaanxi province (China), and Gusau (Nigeria) during 2006. In July, the failure of a diversion tunnel resulted in the uncontrolled drainage of the reservoir of the newly built Campos Novos Dam in Brazil, the world's third-largest concrete-faced rock-fill dam.

■ **Record floods** on the Danube affected several Central European countries in April. Mozambique's Zambezi valley was hit by major floods in February. Floods also affected Northern Thailand, parts of China, North Korea, Ethiopia, Jammu & Kashmir in India, Turkey, Malaysia, and the Horn of Africa. Earlier during 2006, the Horn of Africa had been hit by a devastating drought. Record droughts also hit Australia, the United Kingdom, and parts of the United States.



The funeral procession for Eduardo Maya Manrique, a community activist who was murdered in Mexico last year for his work to halt the La Parota Dam.

■ **Human rights abused:** On April 22, militias employed by the Merowe Dam authorities in Sudan killed three villagers and wounded 47 who were resisting their eviction to desert locations. The massacre was one of many killings of anti-dam activists in 2006. Andres Arroyo Segura, an activist against the proposed Baba Dam, was killed in Ecuador. Rafael Markus "Makoy" Bangit and Alice Omengan, two activists for indigenous rights who were also fighting dam projects, were killed in separate incidents in the Cordillera region of the Philippines. Omengan's husband,



The failure of the Kaloko Dam in Hawaii killed seven.



The flooded Danube

Constancio "Chandu" Claver, was wounded in the attack. In China, Fu Xiancai, an advocate for the people displaced by the Three Gorges Dam, was attacked and severely wounded.

■ **Three Gorges milestone:** China completed construction of the main wall of the Three Gorges Dam, the world's largest hydropower project on May 20. So far, one million people have been displaced for the project, and the authorities announced that another 300,000 people would be displaced. Meanwhile, dam construction in China continues apace. In 2006, construction began on the \$1.8 billion, 4,200 megawatt Laxiwa Dam on the Yellow River, and on the \$3.7 billion, 6,000 megawatt Xiangjiaba Dam on the Yangtze.

■ **Tehri Dam complete:** The hydroelectric plant of the Tehri Dam in India became operational and started electricity generation in July. Located in an earthquake-prone zone in the Himalayan foothills, the \$1.2 billion project submerged a town with a population of 14,000 and all or part of 112 villages.

■ **Inspection Panel faults Pakistan project:** On October 31, the World Bank discussed the findings of a report by the Inspection Panel, the Bank's independent appeals mechanism, on the Pakistan National Drainage Project. The Panel report found that the drainage project led to widespread environmental harm and suffering among local communities, and violated six of the World Bank's binding operational policies. The project contributed to deadly floods in 2003.

■ **Corruption punished:** After years of procrastination, the World Bank in November debarred the German engineering firm Lahmeyer International from receiving further Bank contracts for up to seven years for bribing the chief official of the Lesotho Highlands Water Project. In the first case of cross-debarment, the European Bank for Reconstruction and Development decided to also blacklist the company because of corruption in the World Bank project.

■ **Big Hydro's new clothes:** The International Hydropower Association made efforts to promote what it perceives as sustainable hydropower in 2006, with a new sustainability agenda, a website, and the adoption of (voluntary) guidelines for dam builders to assess the sustainability of their projects. The scores in the guidelines are based on self-assessments to questions that have a decidedly pro-hydro bias, and very few teeth. The industry lobby group is pushing the guidelines as its alternative to the recommendations found in the World Commission on Dams' final report.

■ **Renewable energy soars:** Advances in solar, wind, geothermal and ocean power brought the world closer to a green-energy future. California adopted a "Million Solar Roofs" law to dramatically increase solar power in the state. Meanwhile, Germany led the world for installed solar photovoltaics. Wind energy remained the fastest growing source of new energy globally. Some new turbines now provide as much as 6 megawatts per turbine. Solar cells continued to get more efficient and cheaper, and large-scale "concentrating solar" plants began to take off, with large new projects underway in Spain and the US, and a proposal for a 150 MW project in Egypt. Pilot projects for various types of ocean power were developed, and new policies meant to encourage their development were adopted in Britain and Portugal.

■ **Poverty fuels water crisis:** The UN Development Programme's 2006 Human Development Report was devoted to water. Unlike the World Bank and many industry bodies, the UNDP report argued that the global water crisis was "rooted in power, poverty and inequality, not in physical availability." Published in November, the report supported a similar analysis which IRN had published at the 4th World Water Forum in Mexico City in March.

■ **IFC supports pulp mill:** In November, the International Finance Corporation approved \$200 million in support of the \$1.2 billion Botnia pulp and paper mill on the banks of the Uruguay River. The mill will have massive impacts on air and water quality, and led to an ongoing political conflict between Argentina and Uruguay. Project opponents blocked a bridge from Argentina to Uruguay for several months.

■ **Madeira River dams stalled:** After independent experts found grave faults in the environmental studies for the Santo Antônio and Jirau dams on Brazil's Madeira River, the Bolivian government protested construction of the dams in December. The Madeira River, a principal tributary of the Amazon, supports a treasure trove of biodiversity, including 33 endangered mammal species. The dams would have a total capacity of 6,450 megawatts, and could result in the flooding of forests in neighboring Bolivia.

■ **Sacred Lake spared:** In early November, local authorities in China canceled plans to build the Megoe Tso Dam in favor of tourism development. The Megoe Tso project (also known as Mugecuo Dam) would have severely impacted a sacred lake and important center of biodiversity in Eastern Tibet.



Megoe Tso Lake in Tibet was spared when a dam project was cancelled.