

# Three Gorges Dam's flood capacity 'limited'

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The flood control capacity of the Three Gorges Dam, the world's largest hydropower project, is designed to be limited, a senior engineer said on Thursday amid mounting concerns over the project's ability to manage floods.

The multi-billion dollar dam was designed to withstand floods with water flow of 83,700 cubic meters per second, covering the Jingjiang River area and the Chenglingji region in Hubei and Hunan provinces, Zhao Yunfa, deputy director of the China Three Gorges Corp's cascade dispatch center, told China Daily.

"The dam's flood-control capacity is not unlimited it has a capacity of 22.1 billion cu m and protects, by design, a limited area any flood with water flow exceeding 122,000 cu m per second would put the dam's own safety at risk," he said.

As China's main reservoir on the Yangtze River, the dam on Tuesday passed its first and largest test by sustaining a water flow greater than the flood of 1998, which killed 4,150 people across the country.

The flow of water into the dam's reservoir peaked at about 70,000 cu m per second. The dam, which was completed in 2008, discharged water at about 40,000 cu m per second.

Zhao's explanation came amid growing concern over the controversial dam, which officials hope would play a pillar role in flood control and clean power generation.

In the past few days, members of the public have been hotly debating online posts comparing four reports of the dam's flood-control capacity.

The first, released in June 2003, claimed that the dam "could fend off the worst flood in 10,000 years". The second, dated four years later, changed that number to "the worst flood in 1,000 years". In October 2008, the number was again modified to "the worst flood in 100 years."

On Tuesday, a report on State broadcaster China Central Television's website was titled "The Three Gorges Dam's capacity to store floodwater is limited". The story urged the public not to "lay all hopes on the dam".

In an exclusive interview with China Daily that same day, China Three Gorges Corp's chairman Cao Guangjing said he can "absolutely guarantee" that the dam is capable of withstanding "the worst flood in 100 years".

Cao, an engineer with the corporation since 1985, said the dam's flood-control facilities are "complete and need no adjustment".

Instead, the immediate focus of the work is on ways to improve weather forecasting ahead of the next major flood-control test, which will likely take place some time in August, he said.

Liu Ning, vice-minister of water resources, earlier praised the dam, which was completed in October 2008, as "instrumental" in China's flood control efforts.

Cao said the dam is able to do much more. "The peak flow this time was historical. But the frequency, peak period and volume of water were all comparatively limited - the worst in about 20 years. The dam is far from displaying its full potential," he said.

China had spent 181.5 billion yuan (\$26.5 billion) on the dam project by the end of 2008. But critics claim that the project has caused, or will cause, consistent landslides and severe erosion downstream.

Cao, 46, dismissed the allegations as "nonsense". All these issues were addressed in preliminary feasibility studies from years ago, he said. The project began in the early 1990s and billions of yuan have been invested to preventing possible ecological disasters, he said.

"Extreme climate change and large natural trends are far beyond the control of the Three Gorges Dam project," Cao said.

The dam, which spans the Yangtze River, China's longest river, in Yichang city of Hubei province, has a capacity of more than 20 billion cu m and its water level can rise to 175 meters.

Its monitoring systems cover 60 percent of the upper reaches of the Yangtze, which incorporates an area of about 1 million square kilometers.

*Source: China Daily*

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