

Dam puts Shanghai wetlands at sea's mercy

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TIDAL wetlands on the Yangtze delta near Shanghai in China are in danger of disappearing because of sediment trapped in the Three Gorges dam. The amount of sediment coming downstream has more than halved since the dam's construction. As a result the tidal wetlands around Shanghai have been eroding rapidly, damaging coastal ecological systems and limiting Shanghai's ability to expand.

Shi-lun Yang and his colleagues from East China Normal University in Shanghai studied sediment discharge data collected between 1951 and 2004. They found that sediment carried in the Yangtze river has dramatically fallen since construction of the Three Gorges dam began in 1993.

Yang's team found that in 2004, one year after the Three Gorges reservoir began to fill, the river's sediment load dropped to 35 per cent of its average. Using satellite readings, they showed that the tidal wetlands have already started to shrink, with erosion rates of up to 4 square kilometres per year (Geophysical Research Letters, DOI: 10.1029/2005GL025507).

"The lack of sediment means that there will be less and less land available for Shanghai to reclaim," says Cheng Zong, an expert on coastal evolution at Durham University, UK.

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To read the abstract and purchase the full paper (US\$9):

<http://www.agu.org/pubs/crossref/2006/2005GL025507.shtml>

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