



Rapid reduction of suspended sediment flux from large Chinese rivers to the seas

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The suspended sediment flux from the nine large Chinese rivers (Songhuajiang, Liaohe, Haihe, Huanghe, Huiahe, Changjiang, Qiangtangjiang, Minjiang and Zhujiang) to the seas was reduced from 1.75 billion metric tons (BT) per year in the 1950s to only 0.46 BT per year in the last 5 years (2001-2005). The sediment decline in north China started in the 1970s or even earlier in some cases and has been associated with the decline of water discharge as a result of precipitation reduction, and water diversion and consumption. Such decline in south China started at least 10 years later and has not be associated with obvious decline in water discharge. Apart from the water discharge decline in the north, the construction of numerous reservoirs across China plays a major role in the massive decline (e.g. 0.76 BT retention per year by the five largest reservoirs), though frequent sediment mining and reforestation/afforestation in recent years are also important reasons.