

Rapid Channel Incision of a Large Fluvial River (The Pear River) in China

XI XI LU¹, SHU RONG ZHANG¹, SHAO PING XIE ², PAI KE MA²

¹*National University of Singapore*

²*Zhaoqing Branch of Hydrological Bureau, Guangdong, China 526060*

Channel incision of fluvial river as a result of sediment depletion has a series of effects on groundwater, flood level, floodplain vegetation, instream biological communities and several other biological and environmental impacts. Large Chinese rivers have seen a dramatic depletion of sediment fluxes in fluvial rivers as a result of the combined effects of declining rainfall, dams construction, water diversion, reforestation and afforestation and sand mining over the past decades. This paper reports that during the past 10 years the channel incision of the Pearl River (second largest in terms of water discharge in China) has been dramatic. This rapid incision is in part the result of extensive sand mining in the lower Pearl River delta due to the booming economic development. The observed dramatic river bed down-cutting has important implications for river management in China.