

Major World Delta Variability and Wetland Loss

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ABSTRACT

Geologic and geomorphic data on forty-two world deltas were compiled for a NASA-sponsored research project. Satellite images from fourteen of these deltas (Danube, Ganges-Brahmaputra, Indus, Mahanadi, Mangoky, McKenzie, Mississippi, Niger, Nile, Shatt el Arab, Volga, Yellow, Yukon, and Zambezi) were analyzed for delta plain wetland loss caused by natural causes and conversion of wetlands for agricultural and industrial use. These analyses indicated that a total of 15,845 sq. km of wetlands have been irreversibly lost during the past fourteen years and the average rate of loss is 95 sq. km/yr. If a similar trend is present in the other deltas, a total wetland loss in the delta plains of the forty-two deltas would be on the order of 364,000 sq. km over the past 15 to 20 years.