

A FRAMEWORK FOR COMPARATIVE ASSESSMENTS OF VULNERABILITY AND RESILIENCE APPLIED TO TEN DELTAS

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The challenge for sustainable development of deltas is to strike a balance between economic development and environmental stewardship. In a research conducted by Deltares and Alterra, trends and responses have been identified and compared for ten major deltas of the world: Nile delta (Egypt), Incomati delta (Mozambique), Danube Delta (Romania), Yellow River Delta (China), Rhine Delta (the Netherlands), Mekong River Delta (Vietnam), Chiliwung River Delta (Indonesia), Ganges-Brahmaputra Delta (Bangladesh), Mississippi River Delta (USA) and the California Bay Delta (USA). In all these deltas, climate change, population growth and economic development are the main drivers for change. These developments pose extensive demands on the available natural resources. In addition to these drivers there are a number of societal trends – of which decentralization and privatization are the most prominent – that affect the organization and outcome of planning for sustainable delta development. The challenge is to utilize the advantages of both trends, while minimizing their undeniable drawbacks. This calls for a selective enhancement of governance structures, reflecting the regional scale, integrated nature and long term perspective of delta development.

This inventory used an innovative analysis framework that combines environmental, infrastructural and occupational delta characteristics with institutional and governance aspects. A major finding was that notwithstanding the diverse cultural, environmental, technical and political conditions of the studied deltas, significant similarities exist in the way societies strive to overcome climate change and related problems towards more sustainable delta development. By using this common analysis framework the exchange of knowledge and experiences between the deltas of the world can be enhanced, thereby enabling to share their best practices