

Sustainable Deltas in a Changing World¹

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Short Abstract:

A key policy challenge is to understand what sustainability means within a dynamic delta experiencing climate, environmental and socio-economic changes, hazards and migration. This paper reviews current knowledge on migration and adaptation to environmental change to assess delta sustainability.

Long Abstract:

Deltas and low-lying coastal regions have long been perceived as vulnerable to global sea-level rise due to multiple climatic, environmental and socio-economic drivers, with the potential for mass environmental change and displacement of exposed populations. Populations in deltas are however already highly mobile, with significant urbanization trends driven primarily by economic opportunity. Yet environmental change in general, and climate change in particular, are likely to play an increasing direct and indirect role in future migration trends. The policy challenges centre on understanding what sustainability means within such a dynamic context and how this informs regional adaptation strategies to climate change; the protection of vulnerable populations; and the future of urban settlements within deltas. This paper reviews current knowledge on migration and adaptation to environmental change to assess sustainability in delta regions. It is based on a new integrated methodology to assess deltas, and most particularly migration in those deltas. It uses the Volta delta (Ghana), Mahanadi delta (India) and Ganges-Brahmaputra-Meghna delta (India and Bangladesh) as case studies. Our integrated method focuses on: biophysical changes and spatial distribution of vulnerability; demographic changes and migration decision-making using multiple methods and data; macro-economic trends and scenarios in the deltas; and the policies and governance structures that constrain and/or enable adaptation. Initial results suggest that migration decision-making strongly interacts with diverse measures for adaptation of land, water and agricultural management. Any notion of sustainability in such dynamic environments cannot be static and must consider and steer these large-scale trends towards more desirable goals.

¹ Conference link: <https://www.devstud.org.uk/conferences/2017/>