

The power of adaptive delta management

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A Dutch consortium led by Twynstra Gudde is working on the Bangladesh Delta Plan 2100 to make the country climate-proof for the future. Given the scope, scale, and time horizon of the plan, this is a unique and exciting assignment. The plan intends to provide solutions for current issues, but will primarily anticipate for the long term up to 2100. Adaptivity is key. "One hell of a job, but also a once-in-a-lifetime opportunity", says Jaap de Heer, Director of the consortium and Partner at Twynstra Gudde. Alongside Twynstra Gudde, the consortium furthermore includes Euroconsult Mott MacDonald, ECORYS, Witteveen+Bos, D.EFAC.TO, Deltares, Wageningen UR, and UNESCO-IHE.



Like the Netherlands, Bangladesh has a low-lying delta area, and the Delta Plan is consequently somewhat comparable. But De Heer underlines that there are some big differences too, certainly when it comes to the huge number of subjects addressed, both in terms of the water system as well as governance. Massive rivers like the Ganges and Brahmaputra flow through the country and into the Bay of Bengal. The dynamic delta faces a complex series of issues. The low-lying coastal area is relatively unprotected and battling salt intrusion. There is ample flooding during the monsoon season. "People are used to that - flooding also creates fertile soil", De Heer says. "But because of climate change, the flooding has taken on other forms that require action. What's more, Bangladesh is a developing country. With a strong population growth and an annual economic growth of 6-7%, there is a need for improved safety. The country wants to prevent the frequency of economic setbacks. The prevailing thought is that if we do nothing, then this will ultimately cost money. So we're better off investing now."

Complex process

"Our strength lies in thinking strategically and conceptually for the long term, as well as in managing complex processes with political and administrative insight, and accelerating transition, partially due to our know-

ledge of this market. Technical expertise is of course essential as well, but to be able to maximise how this is used requires a vision, strategy, and an effective collaboration between political and administrative parties. We have heavily invested in analyses, interactive designs, cohesive strategies, and the administrative organisation in Bangladesh. The government sees the need for a multi-sectoral approach and as such has assigned the Delta Plan to the Ministry of Planning. Collaborating and coordinating between the seven ministries involved is thus a huge task."

Adaptive plan

The Delta Plan focuses on the year 2100, with the years 2030 and 2050 as mid-term deadlines. That's quite a long horizon. "Because of various uncertainties, including those of climate change, we are keenly investing in adaptive delta management, which means not laying down too much in rigid measures that may be regretted in the future, but instead safeguarding flexibility. Being adaptive means that under and over-investments can be avoided, depending on whether, for instance, the climate changes faster or slower. This will avoid high investments that may only be required at a later stage, if at all."

Short term

In addition to improving water safety, other issues that need to be tackled in Bangladesh include sufficient

drinking water, sanitation, water quality, land reclamation, more transport via inland shipping, and irrigation for agriculture. A range of projects has already been selected for the short term. A \$38 billion investment plan for the period up to 2030 has been set up with the World Bank. "This is money that can't be spent on education or fighting poverty, which is a sensitive topic in terms of decision-making. But by making smart connections by integrated water management, you can substantially contribute to economic development."

Interactive strategic approach

"At Twynstra Gudde, we take full advantage of the expertise that we have previously gained from (inter) national projects such as the management of complex projects, cross-cultural collaboration, strategy alignment and mutual gain approach with stakeholders in relation to water governance, and anticipating how the implementation of the Delta Plan will be organised. This expertise is also used in the Parana Delta in Argentina, and it was applied in Colombia to set up a modelling body. Our starting point there was also an interactive strategy analysis and a design approach for gathering (local) knowledge and insights. This provides a wealth of information and input for strategic development and governance, and ensures more support and engagement." •