



Water Adaptation Community,  
Global Center on Adaptation



Sharing information and good  
governance key to adaptation in  
deltas: webinar  
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**ABSTRACT**

Deltas, facing challenges of land use change, decreasing water flows exacerbated by climate change, need a coordinated long-term approach underpinned by community engagement to become resilient.

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Deltas around the world face multiple threats from changes in land use, changing rainfall patterns, expanding human footprints in the form of urbanization and agriculture, and pollution. Climate change exacerbates these threats. To adapt to the rapidly changing impact of these factors and actors, speakers at the webinar on Adaptation in deltas - good practices and reaching impact at scale, said.

They presented cases from Bangladesh, Cambodia, the Netherlands, Africa and Latin America. The speakers highlighted the governance aspects from their countries. They mentioned the importance of engaging with communities and transparency in projects. A multi-disciplinary approach, premised on the understanding that local communities have lived experiences that are more important than expert opinions, and includes the private sector, is the key to effective adaptation in delta regions. [WAC, a platform](#) promoted by the Global Center for Adaptation, hosted the webinar.

### Challenges before deltas

Planning often cannot address the speed and uncertainty of changes in deltas caused by climate change, said Veronica Zagare, Argentinean Wing Coordinator, Delta Alliance. Speaking about the need for improved delta management in the Parana Delta, she said the region was affected by infrastructure development, and expansion of agriculture and urbanization.

The Netherlands is a delta country, said Peter Glas, Delta Programme Commissioner of the Netherlands. Three major rivers, the Rhine, the Schelde and the Maas, converge forming deltas in the country. A quarter of the country is below sea level, and 10 million people live behind dykes. The country's deltas face issues of sea level rise, storms, erosion, saline ingress, subsidence, changing river discharges and summer droughts.

In Bangladesh, where the world's largest delta of the Meghna-Brahmaputra-Ganges rivers is located, faces issues of increasing urbanization and agriculture, floods and freshwater shortages. Two-thirds of the country's 110 million people depend on the delta for their livelihoods, said Giasuddin Choudhury, Deputy Team Leader Support to Implementation of Bangladesh Delta Plan 2100.

The Okavango Delta, in Botswana faces similar challenges, said Jobe Manga, The District Environment Coordinator in Maun, Botswana. This delta is an internal drainage system that empties onto land. Expansion of agriculture, urbanization, land use change and tourism are some of the threats the delta confronts. The delta is home to rich biodiversity – 64 species of animals and more than 1.3 million plants.

In the Mekong, that faces challenges of rapid expansion of agriculture, saline intrusion, excess water withdrawals upstream and urbanization, said Nguyen Thanh Phong, Resilient Deltas Initiative of WWF.

### Facing the challenges

The root causes of vulnerabilities, said Sumona Banerjee and Cai Ladd of Living Delta Research Hub, can be addressed better if researchers and policies makers learn from the frontline adapters. The main aim of the hub is to create sustainable deltas, while learning from communities. The researchers of the hub have recognized that lived experiences can be the basis of transformative change, said Cai Ladd of the hub.

The deltas given in these examples stretch across one or more countries. This poses challenges of international cooperation for effective management. The riparian countries have set up commissions or similar governance mechanisms, such as the permanent Okavango River Basin Commission. Some others like the

Argentinian and Bangladeshi governments have long-term plans for delta management. The Netherlands Delta Commissioner has a vast and long-term mandate for managing the country's deltas.

The Netherlands initiated the second delta program 15 years ago in response to a debate on whether the country could continue to live in the deltas. This forward-looking long-term program is managed by the Delta Commission with an annual fund of E1.3 billion. Using a scientific approach it aims to manage flooding, provide sufficient safe water and provide protection from extreme weather events, using nature-based solutions.

The national program is supported by the delta community, that comprises members from the central, regional and local governments, water boards, NGOs, businesses and residents. It has regional and thematic steering committees.

In Argentina, the government launched an integral strategic plan for the sustainable management and conservation of the Parana delta in 2014. It engages the national, 3 provincial and 19 local authorities, said Veronica. In 2020, it was modified to align with the country's national adaptation policy and the SDGs, prompted by a severe drought and fires in the delta that destroyed 10% of the delta.

As part of the first phase, the government started the Conservational Lighthouses Network program that is the basis for environmental management and conservation control. The national and provincial govts signed an agreement to set up lighthouses in the delta to prevent, detect and control fires, develop infrastructure, and increase civil society participation. So far, five towers have been made in the Delta.

The Bangladesh Delta Plan 2100 is a very long-term plan. Giasuddin said it is an integrated, holistic and water-centric

strategic plan for land and water management, resulting in climate resilient sustainable environment. One of the major aims is to alleviate poverty, raising Bangladesh to the level of a middle-income country by 2041, while eliminating extreme poverty by 2027.

As many as 32 institutions and ministries are involved in the implementation and 80 projects worth \$37.5 billion will be executed. It has support from the Prime Minister and the central government council. A Delta Wing is to be set up in the national planning commission to steer the plan and ensure the different entities work together. Bangladesh is developing water management organizations to engage with farmers who have the best knowledge about local adaptation. It is also setting up regional and national stakeholder platforms.

The Okavango River Basin Water Commission, an agreement between three countries, manages the water resources of the Cubango-Okavango River. It is responsible for ensuring the long-term yield of water, conservation, equitable allocation of water, planning for development of water resources, and preventing pollution and the growth of aquatic weeds.

Jobe said the delta has multiple levels of management. The governance structure has a forum of ministries for policy making. The second rung is council of commissioners of senior government officials for general supervision. The third level has the secretariat for program management. There is a steering and technical committee.

In the Mekong Delta, said Nguyen, the private sector has played a role in adaptation using NBS. This has helped increase the agricultural yield from small and marginal farmers, for example in Batambang where they have adopted new

rice cultivation practices that are resilient to climate change.

### Success factors

The delta management plans are highly context specific and countries in different stages of development that dictate the priorities. Peter said the Dutch delta program is focused on protecting assets. However, most other countries could prioritise livelihoods, economic development and poverty alleviation.

He spoke about the Water Governance Initiative of the OECD, that is now focusing on adaptation. One of the gaps the Initiative has identified is information. While the principles talk about efficient and effective water management, they also emphasise integrity and the availability of data that obliges governments to provide information to local communities so they can engage meaningfully.

The delta plans of Parana, Mekong, Okavango, and Bangladesh emphasise protecting and enhancing livelihoods, simultaneously protecting the ecology of the deltas. Jobe said thematic areas are livelihoods and socio-economic development, water resources management land management and environment and biodiversity.

The Okavango plan has resulted in better coordination and sharing of resources among the different entities and communities. The goals are to establish efficient and accountable institutional and governance structures; to ensure long-term conservation of the Delta; to sustainably use the natural and cultural heritage of the Delta and to sustainably manage and enhance the environmentally sustainable tourism and other developments.

Thus, sharing knowledge and better coordination, driven by a defined governance mechanism was the key to effective delta resilience, said Ase

Johannessen, facilitator of the Water Adaptation Community. WAC was one such platform that was brokering knowledge between experts from different parts of the world and disciplines.

### Conclusions

The speakers said information sharing and good governance were key to effective delta management. In the Mekong Delta, the private sector worked with farmers to combine their finance and technical knowledge for effective management, as public finance was not adequate for addressing all the challenges.

An inter-disciplinary approach was key including the researchers, private sector, practitioners and the government. However, they said language was a barrier even among disciplines for common approaches. It is critical to develop knowledge for collaboration. Platforms such as WAC could generate information that can be shared with practitioners, said Ase.