Deltares ADB

EVENT SNAPSHOT

Part 3 – Dynamic Adaptive Policy Pathways and Climate Adaptation

Event Details

Date and Time
8 September, 3:00–4:00 p.m. (Manila time)

Venue
Zoom

Related water subthemes

	Water supply, sanitation, and wastewater	x	Flood/drought risk management and disaster resilience
	Irrigation and productivity		Water governance and finance
	IWRM, storage, water-food-energy nexus		Water and health

Many investments and policy decisions in water management have significant and often long-term consequences. At the same, there are investments being made that influence adaptation requirements and long-term options to adapt. Therefore, making sound near-term decisions is critical—unfortunately, we live in an increasingly unpredictable dynamic world governed by competing and changing beliefs and preferences.

When decision makers and analysts face a deeply uncertain future (e.g., due to climate change), they need more than traditional prediction or scenario-based decision methods to help them to evaluate alternatives and make decisions.

In this seminar, Deltares' Marjolijn Haasnoot presented an approach to support the development of an adaptive pathways plan that supports decision-making under deep uncertainty. She demonstrated its use for climate adaptation – explaining the steps to assessing vulnerabilities and opportunities, as well as identifying adaptation tipping points – and supporting climate resilient economic development, and provided lessons from 10 years of pathways studies in practice.

This third part of the series was supported by the Flood/Drought Risk Management and Disaster Resilience advisory team of the ADB Water Sector Group. Water resources specialist Junko Sagara moderated the session, which gathered 158 participants.

Key Takeaways

Ignoring uncertainty could mean that we limit our ability to adapt and can result in missed opportunities and regret of investments. Various tools are available to enable pathways design, including the Sustainable Delta

Game to introduce the approach to people, a pathways generator tool, and systems models to assess performance of options and pathways.

Exploring pathways can help to map the solution space and assess when and how much to adapt. An analysis of pathways can be done in different phases from exploring narratives describing short-, mid-, and long-term options to more detailed model-based pathways. A pathways analysis can also be incorporated into other policy analysis approaches. For example, it has been adopted in guidelines on flood risk management (e.g. New Zealand, CRIDA guidance from AGWA).

Exploring pathways including transfer costs (the costs of course correction) over a longer time horizon (> 25 years) will help to will illuminate the path-dependency of decisions and avoid economic inefficiency and stranded assets if conditions change. Investment decisions about capital-intensive, long-lived infrastructure are challenging due to uncertainty about their future performance, particularly if the performance is sensitive to climate change. Such investments need to be evaluated over their total operational lifetime, during which socioeconomic and environmental changes can cause potential lock-ins and reduced options for future choices that lead to high costs to transfer to other options.

COVID-19 recovery investments can be an opportunity to accelerate climate adaptation. During and shortly after a crisis, crucial decisions are taken under time pressure that do not always consider long-term impacts and options. Using a pathways map can help to identify sustainable options that could contribute to achieving both short-term and long-term goals.

> **"Under deep uncertainty decision-makers should aim for robust plans that can be adapted over time."**
>
> — Marjolijn Haasnoot

About the Speaker

Marjolijn Haasnoot
Environmental Scientist, Deltares
marjolijn.haasnoot@deltares.nl

Dr. Marjolijn Haasnoot is an environmental scientist specializing in water management and integrated assessment modeling and decision making under deep uncertainty. She is the initiator of the Dynamic Adaptive Policy Pathways approach. Her current research focuses on (adaptive) delta management and planning and climate change adaptation. Model-based adaptation pathways, fast integrated models, and signals for timely adaptation are key tools in this research. She is a lead author of the 6th Assessment Report of the IPCC.

Related Resources

Decision Making under Deep Uncertainty
https://link.springer.com/book/10.1007/978-3-030-05252-2

Pathways Generator tool
http://pathways.deltares.nl

Sustainable Delta game
https://www.deltares.nl/en/software/sustainable-delta-game/#1

Investments under non-stationarity: Economic evaluation of adaptation pathways
https://doi.org/10.1007/s10584-019-02409-6

Video: Deltares policy hackathon
https://www.youtube.com/watch?v=wlBuEMTBW3w