

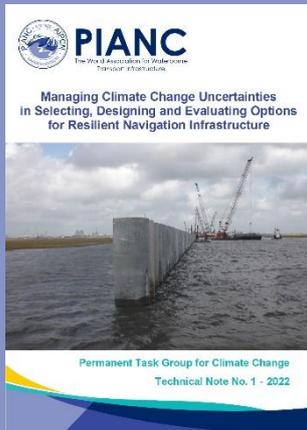


# PIANC

The World Association for Waterborne  
Transport Infrastructure

## PRESS RELEASE

20 April 2022



### PTG CC TECHNICAL NOTE No. 1 – ‘MANAGING CLIMATE CHANGE UNCERTAINTIES IN SELECTING, DESIGNING AND EVALUATING OPTIONS FOR RESILIENT NAVIGATION INFRASTRUCTURE’

PTG CC Technical Note

€ 0,00 - Free for PIANC Members

<https://www.pianc.org/publications/envicom/ptgcc-1>

The recent IPCC report on Impacts, Adaptation and Vulnerability (IPCC, 2022) highlights the ‘dire consequences’ of failing to adapt to climate change. The IPCC makes clear that urgent action is needed to adapt infrastructure – including port and navigation infrastructure and operations – and to strengthen their resilience.

But climate change emphasises existing uncertainties and introduces new ones ... and these uncertainties have potentially significant ramifications for those involved in navigation infrastructure design, evaluation and investment. What steps can therefore be taken to accommodate these uncertainties while avoiding unintended adverse consequences such as increased future vulnerability, diminished well-being or elevated greenhouse gas emissions?

This PIANC PTG CC Technical Note aims to help project owners, designers and financiers deal with climate change uncertainties – not only in relation to the selection, design and evaluation of options for new waterborne transport infrastructure, but also the maintenance or modification of existing assets.

It explains that future climate scenarios can be used, with sensitivity testing, to accommodate uncertainties such as how quickly changes in temperature, precipitation, sea level, wind, waves and associated physical processes will take place; their magnitude; and whether and when critical thresholds will be crossed. It cautions against relying only on past data to predict low probability future events for long-life or high investment infrastructure, and explains the value of considering unlikely-but-plausible scenarios when making major, long-term investments. It also stresses the need to prepare for the ‘unprecedented’, including for joint occurrences and cascading failures.

The Note offers an insight into the critical role of adaptive and flexible solutions including ‘no-regret’ options, and it highlights why non-structural (e.g., operational, institutional) as well as structural interventions should be assessed. It focuses on the use of monitoring to inform decision-making (adaptive management). Finally, it stresses the importance of selecting option evaluation methods that recognise and accommodate uncertainty.

This Technical Note complements and supplements PIANC’s Working Group 178 report, Climate Change Adaptation Planning for Ports and Inland Waterways (2020) available at <https://www.pianc.org/publications/envicom/wg178>.

### Notes to Editor

PIANC is the global organisation providing guidance and technical advice for a sustainable waterborne transport infrastructure to ports and waterways. Established in 1885, PIANC unites the international experts for technical, economic, and environmental topics related to waterborne transport. Our members include national governments and public authorities, corporations, industry and academic experts and young and experienced professionals. IPCC (2022). *Climate Change 2022: Impacts, Adaptation, and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Lösschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press.

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