

# Climate Risks for Infrastructure in Deltas

28 November -2 December 2022, Lorentz Center @Snellius

## Objectives of the workshop

The workshop tackled the challenge of formulating effective science-based policies of adaptation of river deltas infrastructures to climate change. Arguably among the most densely urbanized and vulnerable living environments in the world, these (macro)regions include from small world heritage cities like Venice to European capitals like London up to Asian metropolises like Bangkok. The 'science-policy' challenge discussed during the workshop consisted of integrating the multiple fields of knowledge and practices that gravitate around climate risk assessment and modelling with climate adaptation policies applicable to these social-geographical contexts. The workshop counted on the participation of ethicists, planners, scientists and climate modelers, and on policymakers from the European Commission and the Dutch Delta Commission.

## Outcomes and indications for future initiatives

1. **From 'science for knowledge' to 'science for action':** Scientific knowledge must inform climate adaptation policies and deliver tools applicable to the complexity of river delta infrastructures. However, the traditional model science-policy interface, whereby scientists deliver knowledge to policymakers, is no longer effective. A 'science for action' models must be embraced;
2. **From field-specific to transdisciplinary approaches:** It is well-known that inputs from the social sciences and the humanities, ethics specially, should be integrated at the early stage of formulation of climate-related strategies. However, this is not an established practice yet. Public involvement and support are essential for promoting such transition from field-specific to transdisciplinary approaches to transformational phenomena like climate change. The European Commission, national and local authorities have a major role to play in promoting such extended participation of society.
3. **From 'single-risk' to 'integrated risks' modelling:** Current climate risks models tend to focus on single-risk sources. Impacts of climatic and non-climatic pressures on delta areas are therefore modelled separately. Furthermore, the datasets that inform these models are often of broader geographical reach than the reach of the policies and interventions on which policymakers are called to take action. Integrated risks models and the ability of incorporating distributive considerations in the making of scenarios are important steps forward toward the policy-relevance and usability of future models.

## Organization

**Preparation: 1) Synchronous:** In the run up to the workshop, we organized two webinars for setting the scene and laying the foundation of the joint work during the week. First, Arthur Petersen presented Tools for Analysing Climate Risks for Infrastructure in Deltas and the Limitations in Dealing with Uncertainty and Stakeholders. Then, Behnam Taebi presented a perspective from the social sciences and humanities regarding (climate) risk assessment methods. **2) Asynchronous:** We recorded the webinars and asked the participants who missed them to watch them before the workshop. Also, the participants worked on an online presentation in which they introduced themselves, their expectations, and how their expertise would contribute to the workshop's objectives.

**Duration of the workshop and time management:** It was a five-day workshop including an evening event. There were several presentations but most time was reserved for discussions and group work. The panel discussion with external stakeholders became a lively interaction with all participants.

**Platforms:** We used the research drive of the Lorentz Centre as main platform. For future dissemination (internally and to the public) we have established a research drive. The drive is accessible by the workshop's organizers and participants.

**Short- and long-term plans for follow-up:** Point 3 on the outcomes list will be followed-up by means of a dedicated workshop at the Netherlands Environmental Assessment Agency (PBL). The workshop will be held in 2023. In the mid-term, the special issue of a journal inclusive of the inputs from the participants in the workshop will be produced. The special issue will draw also on the outcomes of the workshop to be held soon in PBL. Furthermore, the aim is to organize a follow-up visit to University College London (UCL), one of the workshop organizer's main affiliation.

**Lessons learned & comments:** We had some no-shows and participants who could not attend the entire week of the workshop. One lesson learnt is verifying the commitment of invited experts more pro-actively, and aim for more junior participants.

**Lorentz Center (virtual) Support:** we are very grateful and happy with the flexible and friendly support by Lorentz and have no points for improvement at all.

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