



Save the date!

Sediment management opportunities to address the climate change challenge

Joint SedNet-Navigating a Changing Climate online Workshop on 10 February afternoon and 11 February morning, 2021

Navigating a Changing Climate is a PIANC-led Global Climate Action initiative under the UNFCCC 'non-state actor' process, set up to promote the sharing of knowledge on how ports and waterborne transport infrastructure can reduce emissions and adapt to climate change (find out more at <https://navclimate.pianc.org/>). SedNet is the European network aimed at incorporating sediment issues and knowledge into European strategies to support the achievement of a good environmental status and to develop new tools for sediment management (see <https://sednet.org/>).

Navigating a Changing Climate and SedNet are collaborating to run a workshop exploring areas of common interest. The workshop, entitled "**Sediment management opportunities to address the climate change challenge**", will comprise two consecutive half-day sessions. Its aim is to facilitate knowledge exchange, disseminate good practice, highlight opportunities, and identify gaps in understanding or research needs in relation to the four topics mentioned below, with an emphasis on ports, waterways, dredging and associated infrastructure/activities.

It promises to be an inspiring workshop for sediment practitioners (policy and management) as well as scientists. Invited key-note speakers and selected abstracts will address in the following (non-parallel) sessions – with room for Q&A – these four topics:

1. Role of sediment management in carbon sequestration and storage: opportunities to contribute to a net reduction in greenhouse gas emissions;
2. Sediments and climate change adaptation: seeking flexible and adaptive solutions to strengthen resilience and adapt port and navigation infrastructure and operations;
3. Habitat enhancement and creation, Working-with-Nature and other nature-based solutions;
4. Sediment management, circular economy and the waste hierarchy: reduce, reuse, recycle.

See the Annex for a detailed description of the sessions.

The four workshop sessions conclude with a panel discussion and an interactive session with the audience to determine:

- Key climate change-related challenges for sediment managers;
- Key opportunities for sediment management to contribute to addressing the climate change challenge;
- Key topics for further research and development.

More detailed information on this workshop, such as on the speakers and presentations, will be provided in January 2021 by the SedNet Secretariat (Marjan.Euser@deltares.nl) and Navigating a Changing Climate ([navclimate@pianc.org](https://navclimate.pianc.org/)).



Annex: Description of the four workshop sessions

1. Role of sediment management in **carbon sequestration and storage**: opportunities to contribute to a net reduction in GHG emissions

Sediments and their associated aquatic habitats play a vital role in sequestering and storing carbon. Understanding these critical natural processes can help sediment scientists, dredging managers, port and waterway operators and others identify win-win opportunities, for example related to sustainable dredged material management. This session will provide an introduction to carbon sequestration in sediment; discusses some practical experiences of how sediments can be used in this context (Blue Carbon); and explores related issues such as water quality and the use of riverine and marine sediments on land.

2. Sediments and climate change adaptation: seeking flexible and **adaptive solutions** to strengthen **resilience** and adapt port and navigation infrastructure and operations

The resilience of port and navigation infrastructure is often intertwined with the resilience of the natural environment. Climate change will impact on both. Many ports and waterways will need to invest in strengthening the resilience of their infrastructure and operations to ensure business continuity, particularly in the face of more frequent and/or severe extreme events. Coastal and riverside towns, cities and local communities face similar challenges so there are common lessons to be learned. The inherent uncertainties in projections for rates of change in parameters such as rainfall, storms, wind and waves mean that flexible and adaptive solutions will offer the best way forward. Sediments can play a crucial role here, not only in relation to physical infrastructure solutions, but also understanding and managing morphological processes.

3. **Habitat enhancement** and creation, Working with Nature and other **nature-based solutions**

Nature-based solutions are moving rapidly up the international climate change agenda as a potentially cost-effective win-win solution to help address both the climate and ecological crises. At the same time, nature-based solutions are important to the achievement of national and international environmental protection objectives, some of which will become increasingly difficult to achieve due to climate change impacts on natural as well as built environments. This session will highlight these important climate-environment inter-relationships. It will explore both ecological protection imperatives and practical experiences, highlighting the critical role of sediments and sediment management in the effective and sustainable delivery of nature-based solutions.

4. Sediment management, **circular economy** and the **waste hierarchy**: reduce, reuse, recycle

The climate crisis and the ecological crisis are closely interlinked. But the COVID-19 pandemic has highlighted that societies are also vulnerable, and without a thriving economy, it is sometimes difficult to deliver the measures needed to redress the balance. Those responsible for sediment management have an important role to play in achieving this balance, enabling the continuation of essential economic activities whilst on the other as achieving the ecological balance between on the one hand retaining sediment in the natural system and on the other ensuring that contaminants do not compromise aquatic life and ecosystem functioning. In the context of the waste hierarchy (e.g. reduce the need for extraction of virgin aggregate); reuse (e.g. shift perceptions of sediment from a waste to a resource); recycle (e.g. optimising sediment placement), sediment managers have an important role to play within the circular economy concept.