



# 2<sup>nd</sup> IMMERSE Transnational Estuary Exchange Lab

24 November 2020, Online

## Workshop Report for the Introductory Session – ‘Setting the Scene’

The IMMERSE Transnational Estuary Exchange Labs (TEEL) provide a platform to share practices and progress on the development of solutions for estuarine management issues. The purpose is to advance development and transfer of solutions across those involved in estuary management in the North Sea Region.

Drawing from the programme of the TEEL planned for April 2020 in the Netherlands, IMMERSE organized an online TEEL to share project activities and foster exchange on the topic of **sediment management in estuaries and estuary governance structures and processes**. The Estuary Exchange Lab featured the management context of the **Eems-Dollard estuary** and discussed the value, role and importance of sediments in estuarine ecosystems.

The following report presents a summary of the presentations, discussions and audience engagement from the **Introductory Session – ‘Setting the Scene,’** which introduced participants to the IMMERSE project, the TEEL concept, and management issues in the Ems-Dollard estuary. The session was attended by 50 individuals, in addition to the presenters and session moderators. All materials from this session and the two thematic breakout sessions can be found on the TEEL event page: <https://northsearegion.eu/immerse/transnational-exchange-labs/>

**Welcome and Introduction to the IMMERSE project** (Frederik Roose – IMMERSE project coordinator, Department of Mobility and Public Works, Flanders, Belgium)

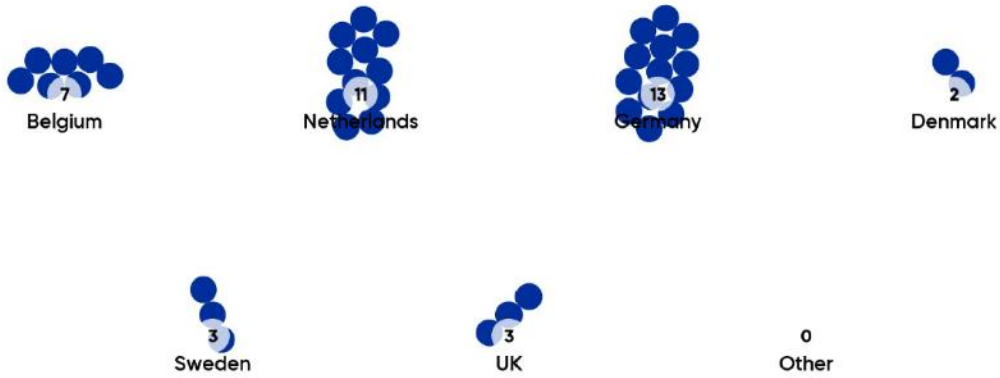
Following a video introducing the IMMERSE project, **Frederik Roose** from the **Flemish Department of Mobility and Public Works (IMMERSE Lead Partner)** kicked off the session with a brief presentation of the project’s set up, objectives and activities.

- [IMMERSE video](#)
- [Introduction presentation](#)

Participants were then asked to provide some information about themselves so the audience could get to know one another. The following images show poll results from Mentimeter.com:



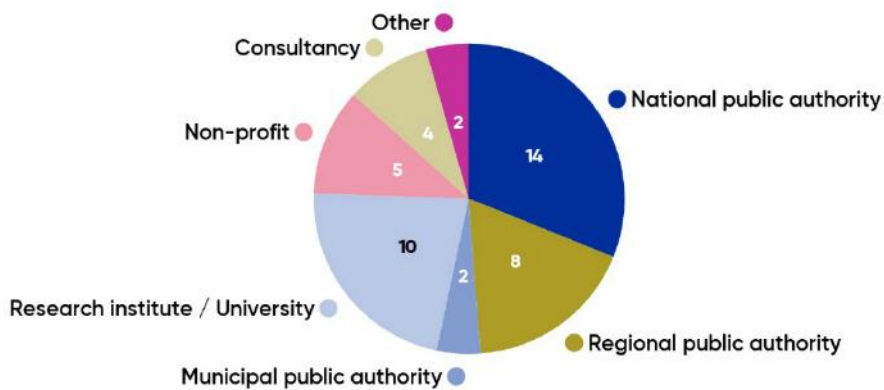
## Which country are you from?



39

Figure 1. Geographic distribution of TEEL participants

## Which type of institution do you represent?



45

Figure 2. Institutional representation of TEEL participants



## What are you hoping to gain from participating today?

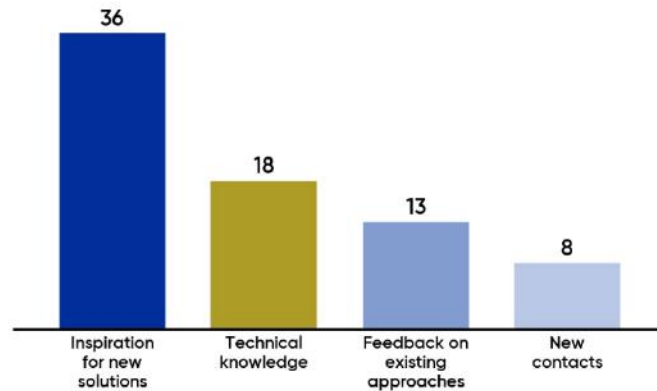


Figure 3. Motivations for TEEL participation

### Introduction to the TEEL concept (Frederik Roose – IMMERSE project coordinator, Department of Mobility and Public Works, Flanders, Belgium)

The Transnational Estuary Exchange Labs provide a platform to share practices and progress on the development of solutions for estuarine management issues and for collaboration on solutions that are being developed in the context of IMMERSE and across the North Sea Region. The concept was piloted at the first TEEL held 12 – 13 June 2019 in Gothenburg, Sweden, and all materials from that event can be found [on the IMMERSE website](#).

The aims of the second TEEL were presented as follows:

1. To promote exchange and interaction on the topics of sediment management strategies and estuary governance, especially for cross-border estuaries
2. To learn about management issues in the Eems-Dollard estuary, external to the IMMERSE project



## Introduction about the management issues in the Eems-Dollard

(Emiel Hakvoort – program manager Eems-Dollard 2050)

### *Summary*

The Eems-Dollard is one of the last two natural estuaries in the Netherlands. This unique area, where dynamics still occur and which is an important habitat for estuary species, is under threat. Studies (by Deltares, TU Delft, WMR and UU) showed that the turbidity level in water in the Eems-Dollard has increased over the decades, due to the decreased sedimentation capacity of the estuary. This change is related to land reclamation, artificial coastlines, and major changes in hydromorphology of the estuary. Knowledge and understanding of the estuary system are evolving, and ongoing scientific research provides insights into promising ways to improve the ecological quality of the estuary.

Mr. Hakvoort presented the current understanding of sediment management issues and how they are being addressed through the program Eems-Dollard 2050, a joint effort of national and regional parties which builds on the unique dialogue between local, regional and national governments, industry/businesses, nature and environmental organisations. Although the program focusses on ecological improvement (Natura 2000 & Water Framework Directives), its ambition is to balance ecology and economy which means creating synergy with other issues like water safety, climate adaptation, regional economic development and quality of life. It links short-term concrete measures to the longer-term vision. The program also has a cross-border cooperation with Germany (Niedersachsen), which is taking shape in the elaboration of an ecological sediment management strategy and the exchange of knowledge.

Looking forward, the new program (2021-2026) will build on previous results and (knowledge) insights. The program will scale-up pilots of the track 'beneficial use of fine sediment', introduce new strategies and we will strengthen the current collaboration with partners. Cross-border collaboration will focus on making plans for the ecological sediment management and explore possibilities of joint pilot projects.

### *Materials*

- [Video: Eems-Dollard 2050 Programme](#)
- [Presentation slides](#)

### *Questions & Answers*

Q1. Do you have contamination of the clay, which limits its use in the top layer of soil?

A1. We learned that we get different types of clay from the sediment, so you can use it for different things. If you want to use clay for agriculture, you need it to have more sand, and for dyke reinforcement you may need more solid clay. It depends on the place that you dredge from. The clay from the harbour of Delfzijl has another substance than in the Eems harbour. They do check the quality of the clay before it is used, for both agriculture as well as for dyke reinforcement. Some clay has a quality that is not good enough for some purposes, but they can still use it for other purposes.



Q2. Are nature compensation measures required for the flushing fields in front of the dyke?

A2. For the green dyke, not yet in this pilot project. When they scale up the project they need more compensation, but the goal of the programme is not to look at a specific project but to manage that in the whole region. Maybe some projects can help each other out for compensation measures, and they look not only outside the dyke but also inside, at the land side of the dyke.

Q3. Is salt a "contamination"?

A3. It depends on which type of activity it will be used for, and this is an issue being researched now. Different regulations on the local and regional level don't match right now. At the moment, it's not an issue for all types of measures.

Q4. Was the land used for the 'twin dyke' property of a farmer or from a local authority/waterboard? In other words, how is the public sentiment in Groningen about breaching an existing dyke for the purpose of rising it naturally with sediment from the estuary? Any lessons learnt there?

A4. It's a paradox, water safety and creating a hole in the dyke. It's important to tell the people what happens if you do nothing – you need more room for reinforcement of the dykes. If you can connect projects with local issues, it will help with creating support. For instance, we talk with inhabitants and for them it's very important to have bicycle roads or connections with the village and recreational environment and if you can integrate this into your programme so that it's also beneficial for them, this helps a lot. We now have a vision twin dyke concept so they can show people how it works, and this helps a lot also. You have to start small and take inhabitants along in all steps. In this project, inhabitants were asked to co-design together with the planners; they were not just presented the plan. This takes a lot of time. Alone you go far, together it goes slower, but you get more and better results.

Q5. When will the 'Twin Dyke' be finally implemented?

A5. In 2022 they will make the hole in the dyke and it will be implemented in 2023. They are in contact with some farmers who want to explore aquaculture with saline farming and that's also important for the business case, because you need land for the *water* safety concept and you have a space in-between and they want to use it for experimentation and maybe in the future for saline farming.



## Introduction to the breakout sessions and interactive tools (Session moderators – Holger Rahlf, BAW & Henk Smit, WING Consulting)

The moderators for the two thematic breakout sessions briefly presented the session objectives and presentations. More information about the sessions can be found in the session reports:

- [Breakout session I ‘What works in sustainable sediment management strategies’](#)
- [Breakout session II ‘Estuary Governance: structures and processes’](#)

## Looking forward in IMMERSE (Clare Waldmann, IMMERSE External Project Coordination Office, s.Pro – sustainable projects GmbH)

Information about next steps following the TEEL was shared, including how to follow IMMERSE through the project’s [website](#), [Twitter](#) and [LinkedIn pages](#). IMMERSE has also set up a LinkedIn Group for [North Sea Region Estuary Managers](#), to serve as an active exchange forum on estuary management practices beyond the lifetime of the project.

The next TEELs are anticipated to take place as follows:

#	Time	Main theme
3	Spring 2021	Flood protection strategies for local authorities
4	Fall 2021	Managed realignment: flood protection and nature development



## Participants

Last Name	First Name	Country	Organization
Abratis	Martin	Germany	Generaldirektion Wasserstraßen und Schifffahrt / Federal Waterways and Shipping Agency
Ahlhorn	Frank	Germany	Wadden Sea Forum e.V.
Andringa	Tessa	Netherlands	Sweco
Backx	Joost	Netherlands	Rijkswaterstaat
Bengtsson	Henrik	Sweden	Swedish Geotechnical Institute
Benndorf	Julia	Germany	BAW
Boerema	Annelies	Belgium	IMDC
Breitung	Vera	Germany	Federal Institute of Hydrology
Brinke	Alexandra	Germany	German Federal Institute of Hydrology
Claus	Beatrice	Germany	Umweltstiftung WWF
Cox	Jana	Netherlands	Utrecht University
Craven	Richard	United Kingdom	Chichester Harbour Conservancy
De Beukelaer-Dossche	Michaël	Belgium	De Vlaamse Waterweg NV
De Maerschalc	Bart	Belgium	Flanders Hydraulics Research
Grubbe	Jørgen	Denmark	Holbaek Municipality
Hawley	Sue	United Kingdom	Isle of Wight Estuaries Partnership
Kaptein	Steven	Belgium	Flanders Hydraulics Research
Klocke	Elisabeth	Germany	Elbe Habitat Foundation
Liek	Gert-Jan	Netherlands	Rijkswaterstaat
MEldgaard	Lotte	Denmark	sweco
Marx	Sarah	Netherlands	Rijkswaterstaat
McCarty	Clare	United Kingdom	Marine Management Organisation
Meier	Elke	Germany	NABU Niedersachsen e.V.



Ortiz	Victoria	Germany	Federal Waterways Engineering and Research Institute (BAW)
Page	Dean	United Kingdom	University of Hull
Pauwels	Cynthia	Belgium	Havenbedrijf Antwerpen
Pede	Annelies	Belgium	DMOW
Porschke	Alexander	Germany	NABU
Ravenscroft	Zahra	United Kingdom	Environment Agency
Sanders	Eve	United Kingdom	Thames Estuary Partnership
Schaper	Jürgen	Germany	Helmholtz-Zentrum Geesthacht - Institute of Coastal Research
Schilling	Eike	Germany	NABU Hamburg
Seifert	Annedore	Germany	Hamburg Port Authority
Sieben	Eline	Netherlands	Utrecht University
Sittoni	Luca	Netherlands	EcoShape / Deltares
Spencer	Faith	United Kingdom	Environment Agency
Sprenger	Judith	Germany	Hamburg Port Authority
Stark	Jeroen	Belgium	Flanders Hydraulics Research
Steege	Volker	Germany	Ministry of Transport and Digital Infrastructure
Strömvall	Ann-Margret	Sweden	Chalmers University of Technology
Taal	Marcel	Netherlands	Deltares
Törnqvist	Oscar	Sweden	Geological Survey of Sweden
Van Bentum	Floris	Netherlands	Rijkswaterstaat
Van Goethem	Patrick	Belgium	Maritieme Toegang
Van Malderen	Eline	Belgium	MOW
Vander Elst	Mieke	Belgium	De Vlaamse Waterweg nv
Weisscher	Steven	Netherlands	Utrecht University





White	Tatiana	United Kingdom	Ea
Williams	Nick	United Kingdom	Natural England
van Zuylen	Jos	Netherlands	Sweco