SedNet Progress 2025

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We are the European Sediment Network

Our Mission

- Leading European network for sediment issues
- Integrate sediment knowledge into EU & national policies
- Support good environmental status

SedNet

We are the European Sediment Network

Our Identity

- Network of experts: science, policy, NGOs, industry
- Strong links with European & international organisations
- Open to cooperation and knowledge sharing

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We are the European Sediment Network

Our Focus

- Sediment quality & quantity issues
- Impact on ecosystems: freshwater → estuarine → marine
- From local to river basin scale

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SedNet Steer Group

A strong network

NL

BfG Federal Institute of Hydrology

BOKU UNIVERSITY

brgm Geoscience for a sustainable Earth

oekotoxzentrum centre ecotox

CORILA

Deltares Enabling Delta Life

GeoEcoMar®

HPA Hamburg Port Authority

Hochschule für Angewandte Wissenschaften Hamburg Hamburg University of Applied Sciences

ICPDR IKSD International Commission for the Protection of the Danube River Internationale Kommission zum Schutz der Donau

idaea

RB

CNR ISMAR ISTITUTO DI SCIENZE MARINE

ISPRA Istituto Superiore per la Protezione e la Ricerca Ambientale

ELSA Remediation of contaminated Elbe sediments

departement Mobiliteit en Openbare Werken

CSIC

SAMEN MAKEN WE MORGEN MOOIER OVAM

Port of Antwerp

Port of Rotterdam

Rijkswaterstaat Ministry of Infrastructure and Water Management

ROTHAMSTED RESEARCH

Ciências ULisboa Faculdade de Ciências da Universidade de Lisboa

The New Chairs

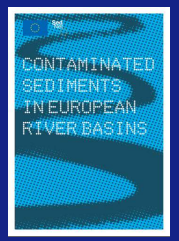
Henrich Röper
Hamburg Port Authority, Germany

Ilka Carls
Ministry of Environment of the City of Hamburg, Germany

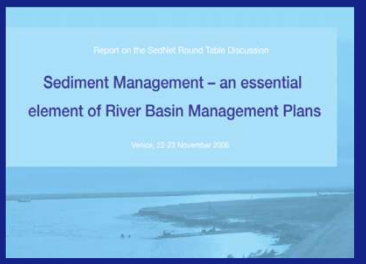
launch WFD: sediment not properly addressed

Launch SedNet

WFD please include sediment



1st Round Table



2000 2001 2002 2003 2004 2005 2006 2007 20

08 2009 2010 2011 2012 2013 2014 2015 2016 20

2nd Round Table

1st RBMP (2009-2015):
hardly inclusion sediment, but Rhine adopts a sediment management plan

3rd Round Table

2nd RBMP (2016-2021):
Elbe includes sediment (inspired by SedNet)
others hardly include sediment

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Policy Brief

SedNet in
ECOSTAT

Sediment workshop
ECOSTAT

Sediment in CIS WG
ECOSTAT Work progr.

3rd **RBMP** (2021-2027):
Scheldt and Meuse
includes sediment
(inspired by SedNet)
others hardly include
sediment

SedNet in
Chemicals

2017 2018 2019 2020 2021 2022 2023 2024 2025

European Commission

CIS Guidance
Document on
Integrated Sediment
Management

SedNet


WFD CIS
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Revision of WFD/GWD/EQSD

- A political agreement between the European Council and the European Parliament was finally reached on 23/09/25 after 4 trilogue negociation meetings

- For chemical status, effect based monitoring is introduced for surface waters, in particular for estrogenic substances.

European Commission

Two additional exemptions included

- One exemption allowing for the deterioration of the chemical status of water bodies caused by the relocation of polluted water or sediments. When applied, there should be a prior authorisation ensuring that :

  - all possible steps to treat the water are applied prior to relocation;
  - the receiving water body is in bad chemical status for most of the relocated pollutants (and in particular the most persistent and bioaccumulative)
  - The receiving water body is not expected to deteriorate its ecological status as a result of the relocation;
  - bodies of water used for drinking water are not affected
  - no better environmental options are available, for reasons of technical feasibility or disproportionate cost.

European Commission

Related to Nature Restoration Law

Guidance on criteria for identifying free-flowing river stretches

Version 1 - Criteria for identifying free-flowing river stretches for the EU Biodiversity Strategy, (JRC report EUR31972EN)

Version 2.1 - 15 August 2025 - Updated version as draft CIS guidance

- Ample attention for sediment (free flowing = also free flowing for sediment)
- SedNet commented DRAFT version 2.1
- Most of our suggestions were taken aboard!

On agenda WFD CIS SCG 5 October 2025

2 – SCG Endorsement of the CIS Guidance on criteria for identifying free-flowing river stretches

Outcome:

- Lots of comments by different member states (MS), such as:
  - We can not contribute as we do not have obsolete barriers
  - Heavy and strict guidance, too ambitious
- Thus several MS abstain from voting or do not endorse it!

- EC DG Env WFD team will:
  - Get it back to ECOSTAT: work better on communication, framing, positioning
  - Not bring it to Water Directors meeting for endorsement end October

WFD 3rd RBMPs assessment

See assessment report per MS here:

https://circabc.europa.eu/ui/group/9ab5926d-bed4-4322-9aa7-9964bbe8312d/library/32a20d02-5a63-4d0f-816f-1ea2ab4ddd0d?p=1&n=10&sort=modified_DESC

Suggestion:

- Scan all documents for sediment and sediment related measures and make a synthesis report on this?
- Discuss in one of next SedNet SG meetings and see where to proceed from there:
  - Another RTD?
  - Workshop under ECOSTAT flag (SedNet as co-organiser)?

PS: the option for such a workshop was kept open in the ECOSTAT work program.

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CIS Working Group Chemicals

TBT EQS proposal

- **January 2023 :** WFD amendment proposal with EQS for TBT in sediments.
- **May 2023 :** Critical review of TBT EQS derivation sheet
- **June 2023:** SedNet considerations and recommendations regarding EQS sediment implementation
- **3-5 June 2024 :** Joint WG sediment quality – circular economy workshop, among other issues focussing on TBT EQS derivation
- **October 2025 :** adoption of WFD amendment

CIS Working Group Chemicals

April 2025 Meeting
Work Program 2025-2027
Task 4: Harmonise EQS for RBSPs –
- Criteria for prioritising RBSPs for harmonisation, and list of RBSPs to address
- Derive EQS for prioritised RBSPs

23-24 October 2025 Meeting
Agenda (not complete)
- WL monitoring workshop and further needs
- Effect-based monitoring tools (estrogens)
- Cu dossier discussion
- CIS Work Programme 2025-2027 tasks – participation, planning
- Criteria and selection of RBSPs for EQS harmonisation
- TGDs update EQS derivation and biota monitoring

Copper Dossier:

- JRC is preparing a dossier on EQS derivation for Copper in freshwater, marine waters and sediments. Cu may be considered a priority substance under EU WFD.
- Current status:
  - After first commenting round, second draft just received by nominated experts (including SedNet).
  - Sediment quality standards proposed, and preliminary risk assessment included.
  - Current suggestions for sediment QS derivation are controversially discussed with regard to (organic carbon) normalization, added versus total risk approach, framework of EQS-guided decisions.
- The aim is to send of a final document to SCHEER by November because SCHEER‘s mandate ends this year and the Cu dossier will be needed for the next review of the WFD.


2025 conference
SedNet


Sed Net
Sed Net International Conferences
2025 Madrid, Spain
2023 Lisboa, Portugal
2021 Lille, France (online)
2019 Dubrovnik, Croatia
2017 Genoa, Italy
2015 Kraków, Poland
2013 Lisboa, Portugal
2011 Venice, Italy
2009 Hamburg, Germany
2008 Oslo, Norway
2006 Venice, Italy
2003 Venice, Italy
2002 Venice, Italy
2001 Rotterdam, Netherlands

Healthy Sediments

14th International SedNet Conference

6–10 October 2025

Madrid, Spain

Conference & Poster Sessions

- Sediment Quality and Risk Assessment
- Sediment flows
- Nature-based solutions and beneficial use
- Sediment literacy and citizen science
- Data Collection, Sharing & AI
- Sediment management concepts and policy

Sediment Quality and Risk Assessment

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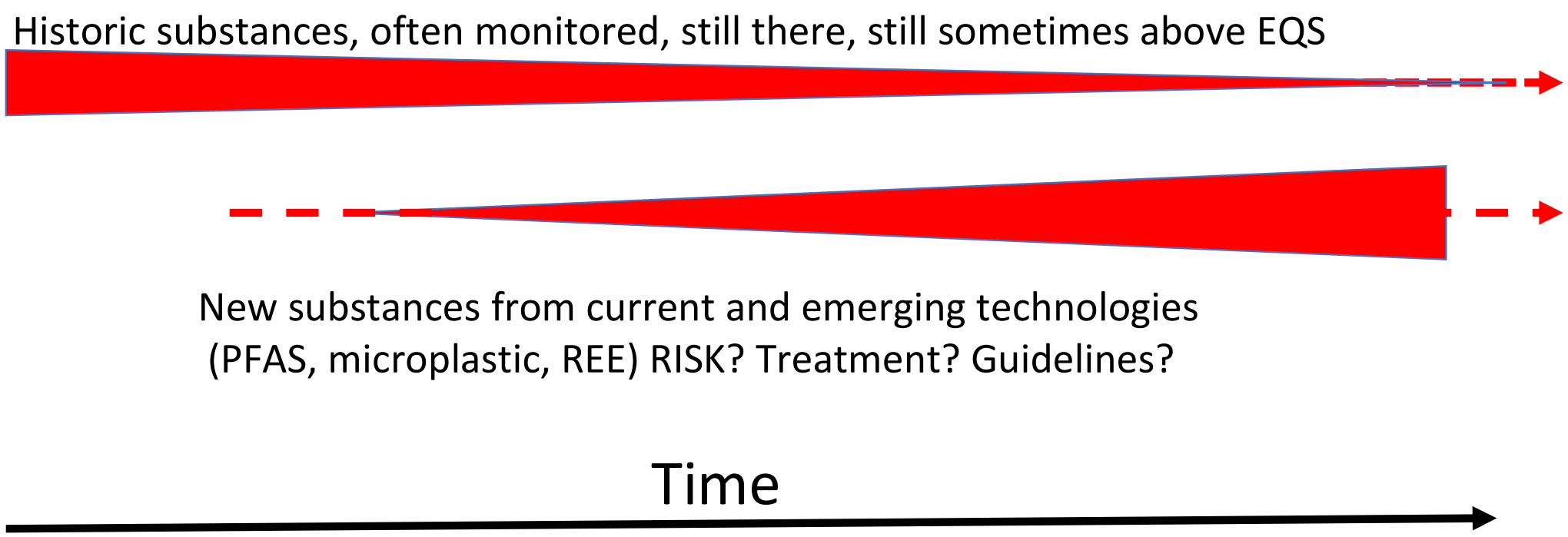
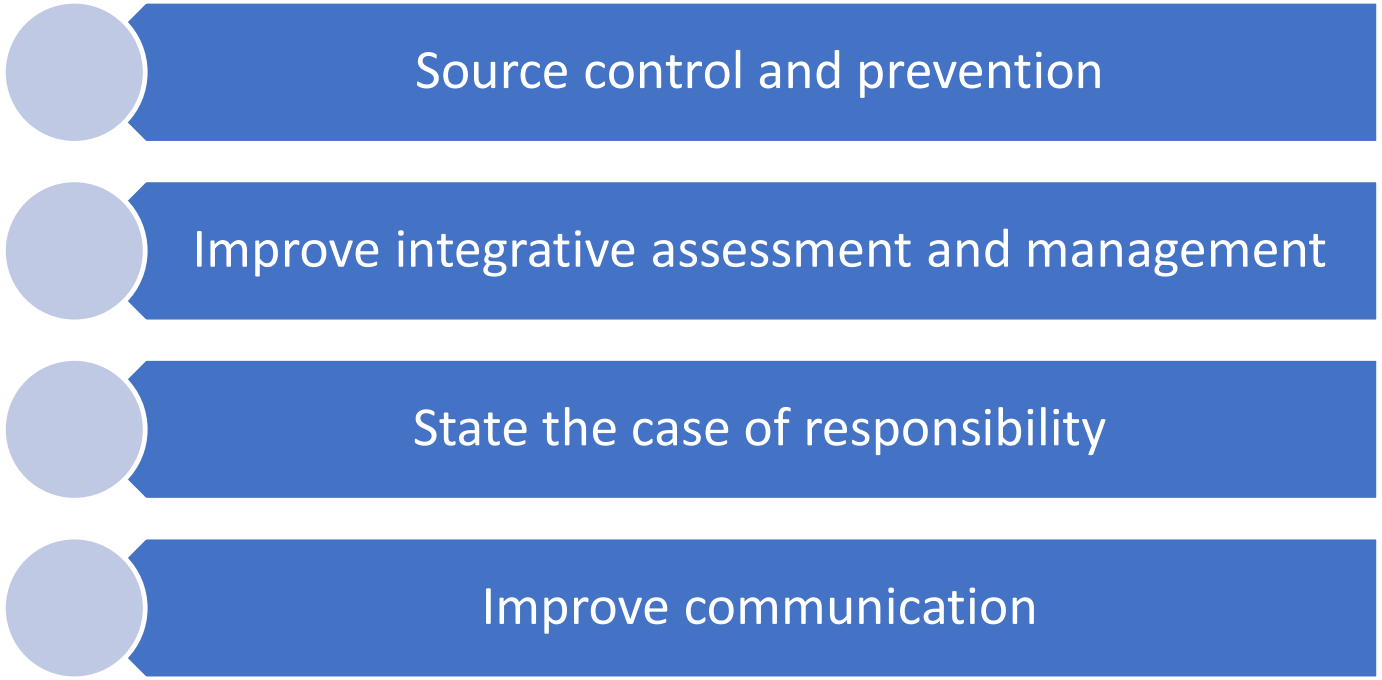
Coverage of topics…e.g.



Unhealthy sediments → unhealthy waters

How can we improve?



Unhealthy sediments → unhealthy waters

Sediments need more weight and consideration in environmental assessments.

How can we convince regulators, stakeholders, citizens….?

What we need more of……

show cases that link

- sediment contamination to water contamination
- bioaccumulation in benthos → food chain → ? humans

WHILE continue stating the importance of sediments as a component of the aquatic system

one health perspective

Sediment flows

14th International
SedNet Conference 2025

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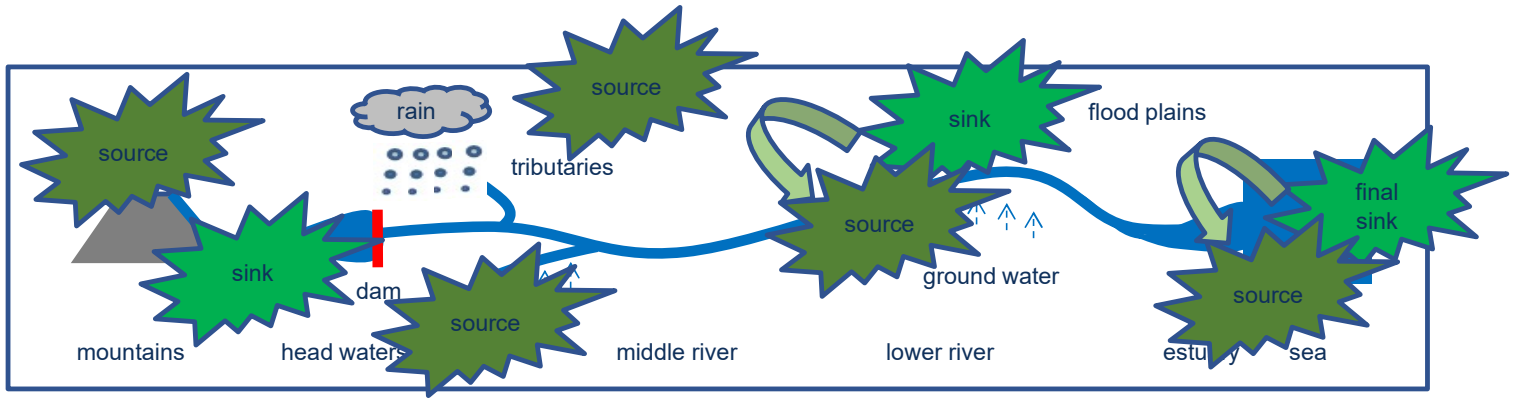
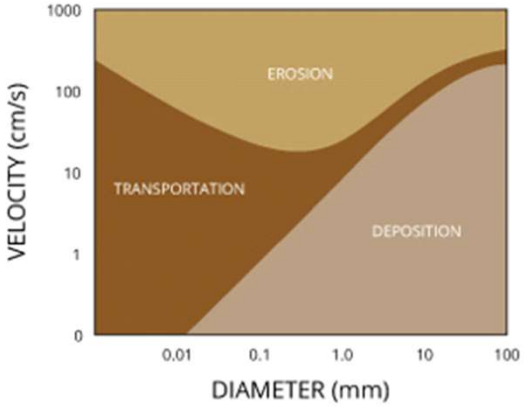


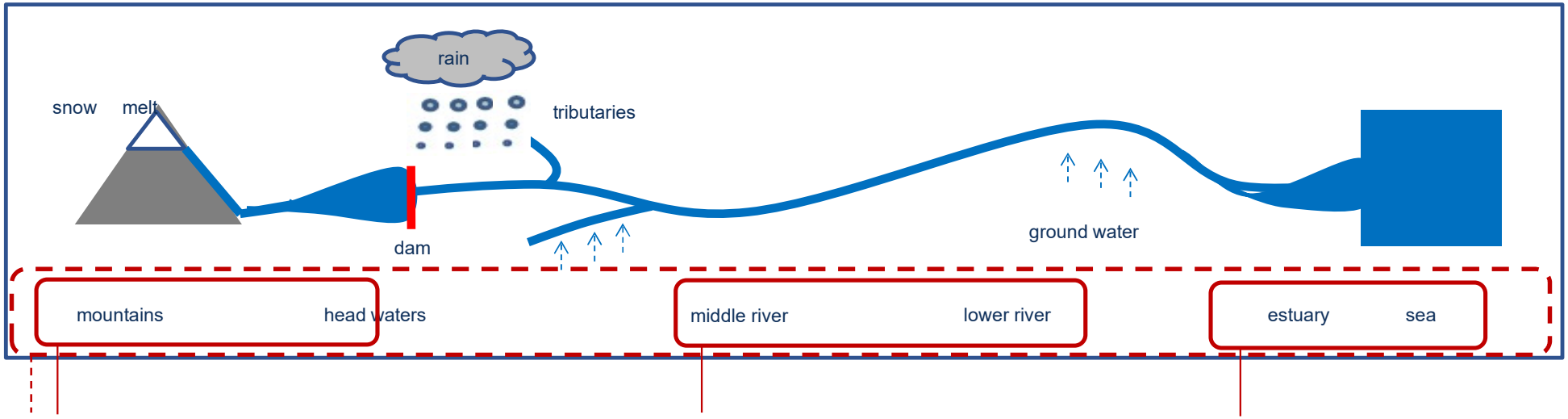


Sediment moves with water, but at a different pace!

gravel sand silt / mud clay sand

river flow

tide



- Presentations & posters addressed state-of-art in sediment dynamics observation, modelling and even its relation to ecology in all these sections
- Sediment dynamics is complex!
- First time ever that we had such a session
- Keep this session in every next conference

Nature-based solutions and beneficial use

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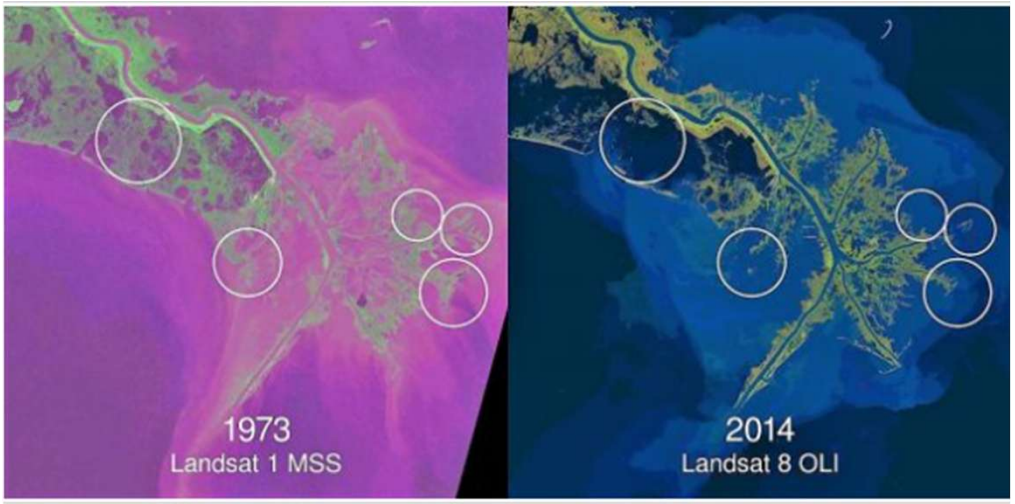
Some remarks that stuck:

- The need for raw materials exceed the need for 100% clean material.
- Sediments are an excellent building material, but only 2% is beneficially used that way (nature-based solutions make up the bulk).
- Even when technical requirements of raw materials are met, the application of sediments is often not permitted -> need for EU technical standards.



his image shows four decades of coastal land and wetland loss in the Mississippi River Delta, a observed by Landsat (USGS/NASA Landsat Program). (Credit: Zachary Tessler. Data: USGS/NASA Landsat Program)

Some remarks that stuck:

- Setting clear and quantifiable goals on nature-based solutions before implementation helps to avoid failures.

- Reduce the impact of contaminants, not the loads

‚FE Narmena creëert wetlands aan de Laak en Winterbeek

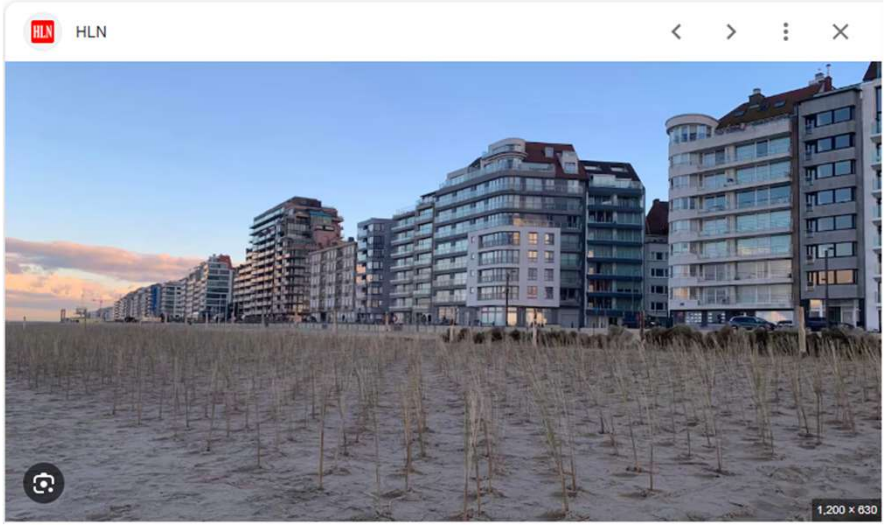
Some remarks that stuck:

- You can create value by using sediments by avoidance of costs (like for fertilizer)
- Quantifying and modeling of ecosystem services help local communities and policy makers to justify building with nature projects.
- Mix and match, engineering solutions like sand suppletion can be combined with building with nature concepts.

Closing agricultural phosphorus cycle based on research on Lake Mustijärv (Kiani, 2023)

Lake sediment nutrient removal and recycling in agriculture: integrating circular economy to lake restoration

Olga Tammeorg
Researcher in lake water quality and sustainable lake restoration, Associate Professor (Docent) in Aquatic Sciences at University of...



Sediment literacy and citizen science

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1. Highlights

- The key takeaway of the session was the need to increase the effort of providing better communication about sediments, which includes the need to increase sediment literacy.

  COMMUNICATION is the future.

- Two “aha” moments 😲 :

  1) Historical context and meaningful examples help communicate impact

  2) AI should be leverage to help us communicate better – age/complexity appropriate messages about sediments.

2. Relevance for Practice and Policy

Communicating about sediments should be targeted to each audience, policy and decision makers should try to communicate to the community their work in an appealing and visualized manner.

(good) Communication is key in a world of (dis)information and increased complexity.

3. Trends, Innovations and Research Gaps

- Uptake of social media to help spread the message, build on the advantages and leveraging the caveats
- Historical context – storytelling are effective ways of communicating information about sediments
- Activities that increase the connection with nature and the environment also are needed to counter act the effect of the digital world – “get the hands/feet dirty”
- More attention to communication strategies that connect technology with nature approaches are still needed: take the good of the two worlds.
- AI will be (is) the next be thing and we need to use it to our advantage

Data Collection, Sharing & AI

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This session focused on big data: how to collect, manage, explore, use, and model data.

TAKE HOME MESSAGE

- There is a need to bring sediment quality assessment into the 21st century. We are still assessing and managing sediments using methods and standards developed in the 1990s.

- New and exciting technologies were presented during the session, including the use of drones and AI algorithms. Equally exciting is that big databases are becoming open, more accessible, and easier to use.

- We look forward to future developments in these new technologies and approaches in research.

Sediment management concepts and policy

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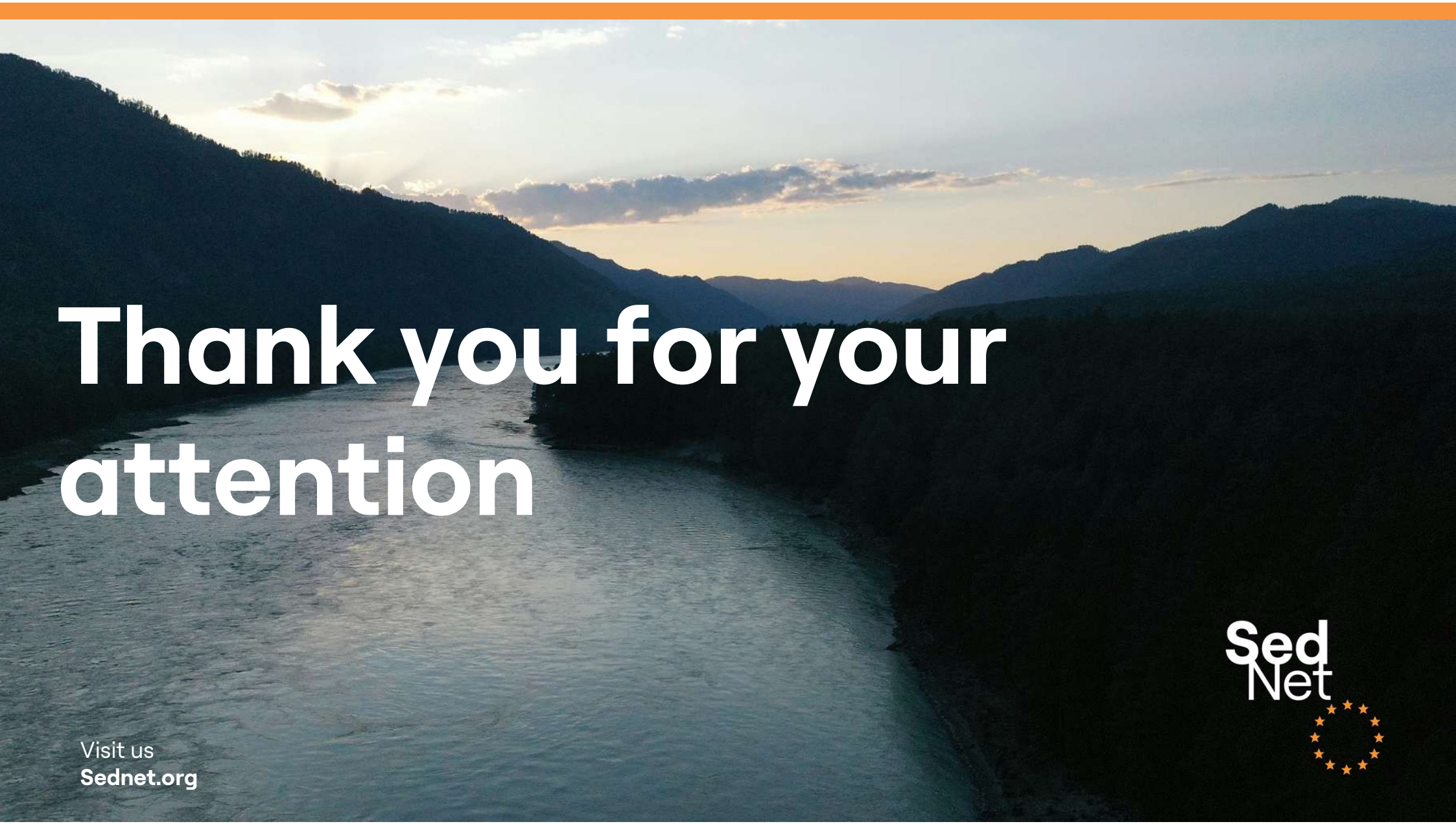
Summary and conclusion

- The goals of the WFD will not be met in most EU Rivers in 2027.
- One of the reasons is that sediments are not addressed properly.
- And that rivers and coastal areas have (very) different characteristics.
- Addressing sediments with EQS alone is not enough, it often hampers decision making.
- Knowledge gaps have to be closed for example on the bioavailability of contaminants, but also on the sediment (un)balance of rivers.

Summary and conclusion

- The CIS document “of SedNet” is being used in making sediment management plans!
- Ideas for measures are part of sediment management plans already.
- However priorisation of measures is very difficult. Because of the (high) costs, and uncertainties on the effectiveness. More knowledge is needed.
- The proposal of the EC on “no deterioration” helps to manage sediments in practice.
- However, to go forward, elaboration of the proposal is needed with the help of SedNet!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