

Mainstreaming River Restoration in Norway

Creating an enabling environment for river and wetland restoration efforts

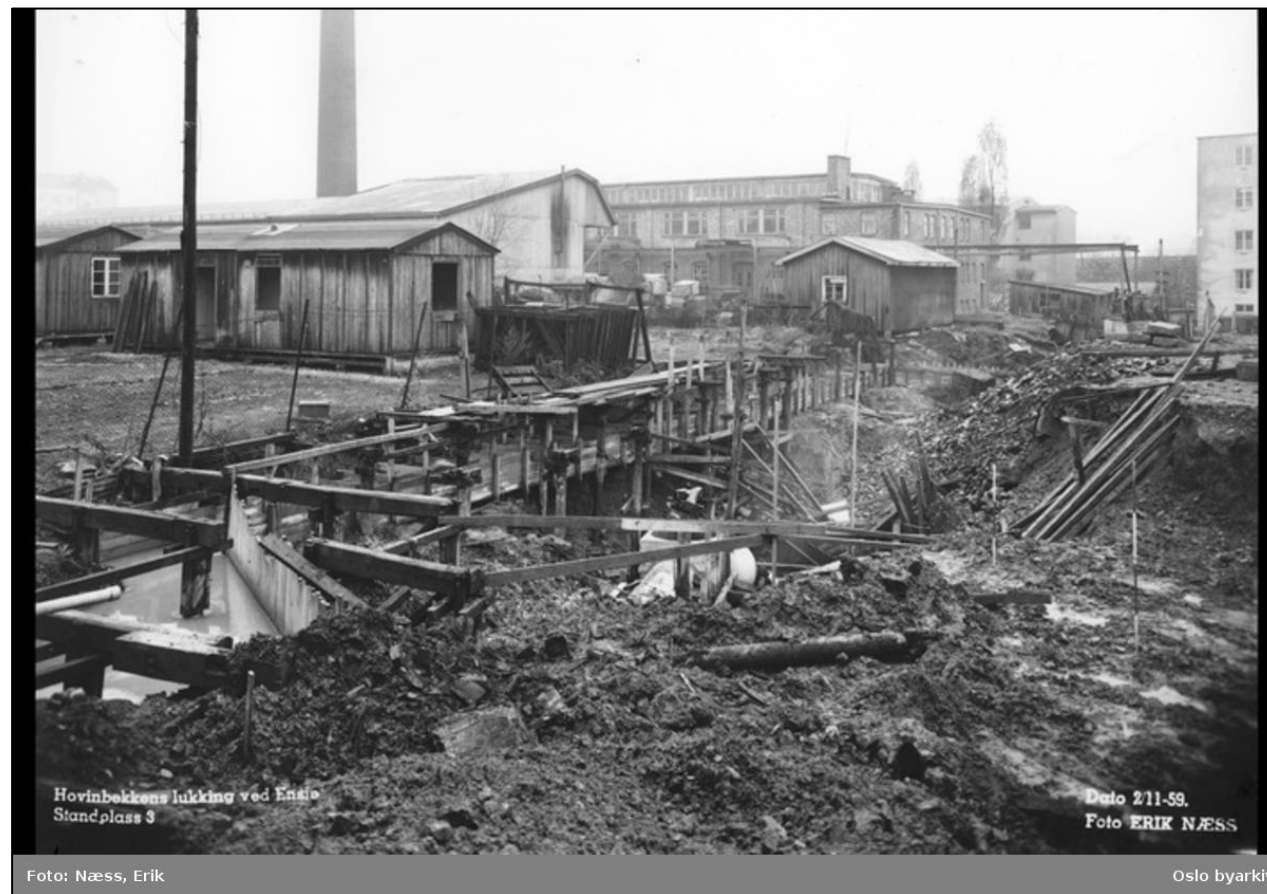
Our rivers had deteriorated....

Example: Flood protection in Bognelva



Our rivers had deteriorated.....

Example: Teglverksdammen (Hovinbekken)

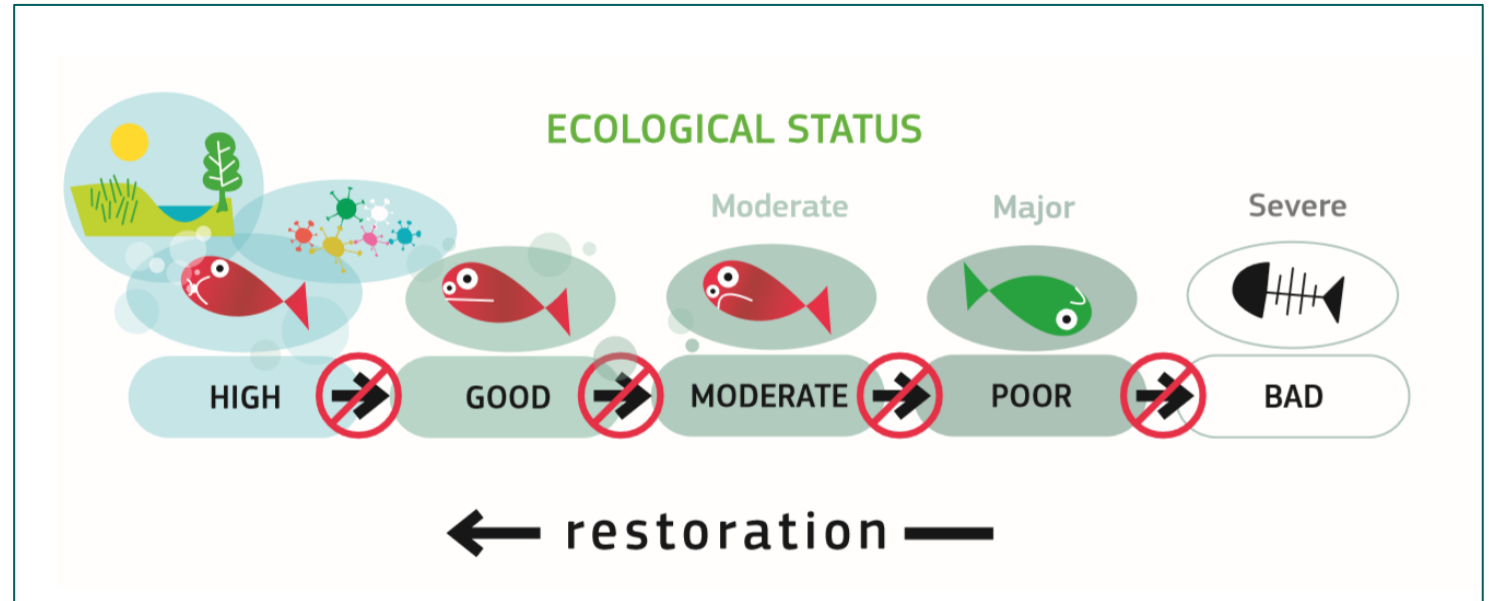


Timeline – river restoration in Norway



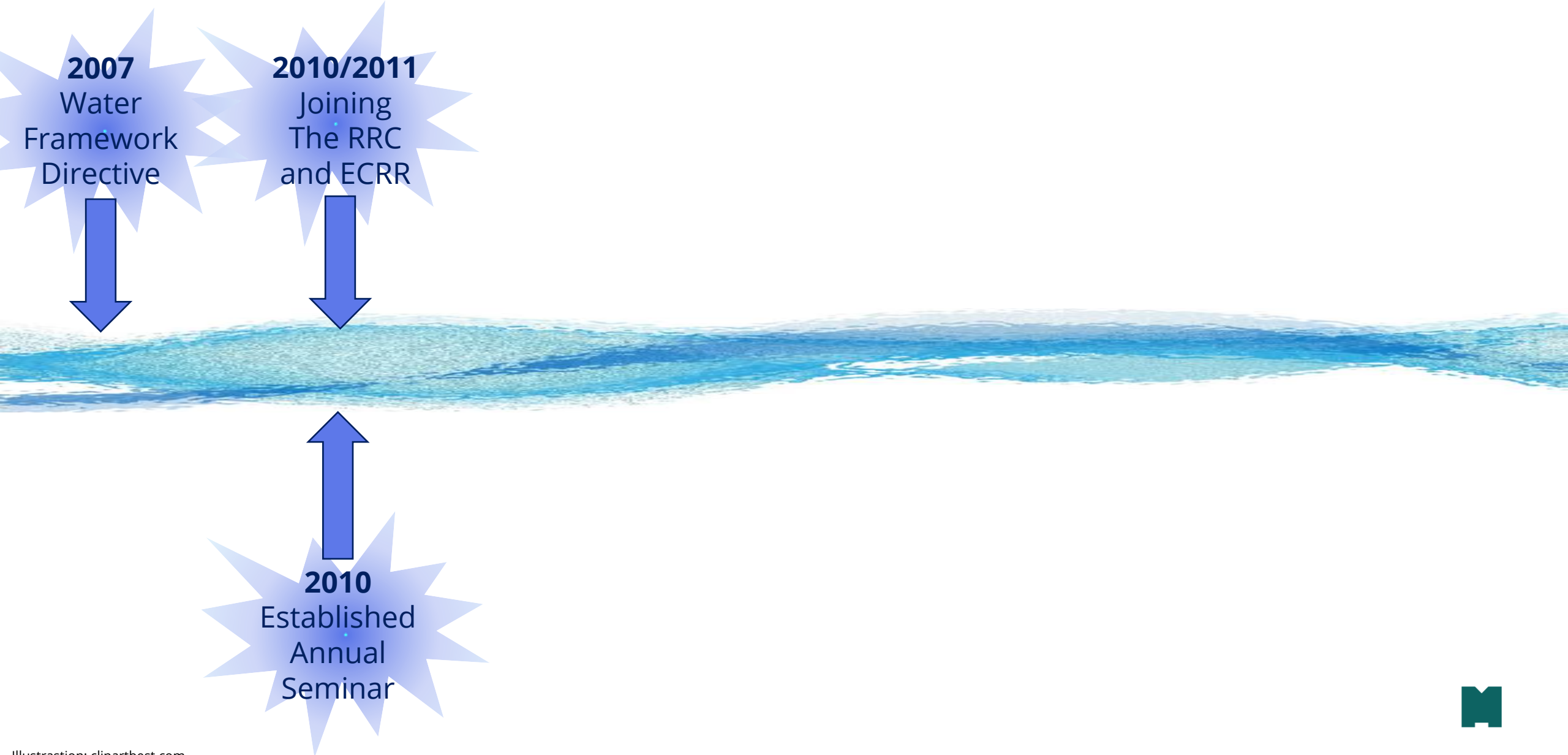
2007: Water Framework Directive

- Member States shall protect, enhance and restore all bodies of water*



- River Basin Management Plans and Programmes of Measures*

Timeline – river restoration in Norway



2010: First National River Restoration Seminar

- 2010 – 2015: Collaboration between Environment and Energy Agencies, in collaboration with Norwegian Water Association.
- From 2015: inter-agency restoration project, in collaboration with Norwegian Water Association.
- Sharing knowledge, examples and experiences.
- Networking between local and regional water management, agencies, research, consultants, NGOs.
- Inspiration from international key-note speakers.



Foto: Anders Iversen



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Benefits of participating in the European Network

The Norwegian Environment Agency is a member of:

- The [European Center for River Restoration](#) – the network for best practices of River restoration in Greater Europe.



- The [River Restoration Centre](#) (UK) – participation at training courses and annual conferences.



Foto: ECRR



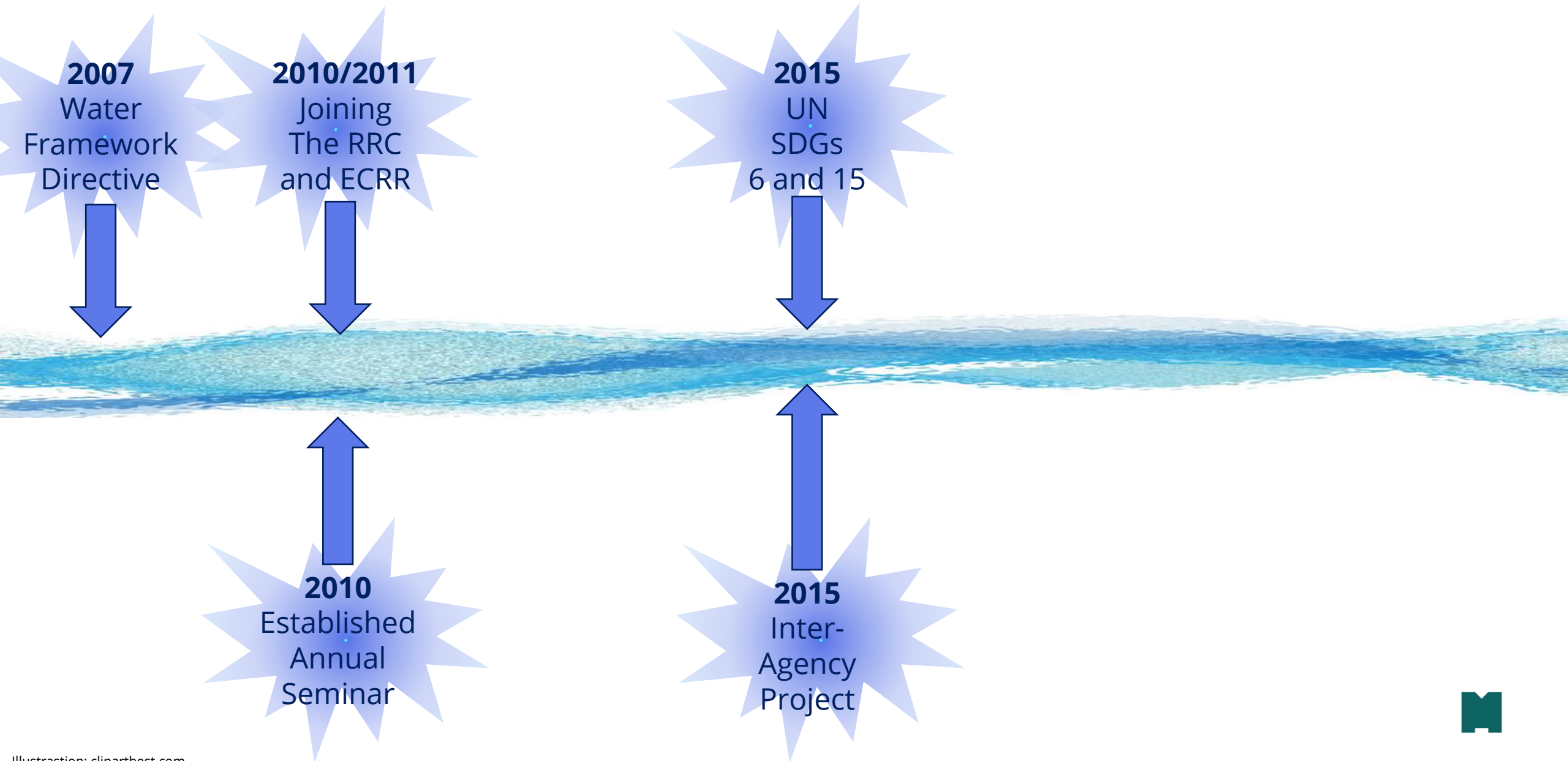
2010: Basis of Ecological River Restoration

Web-based course co-organised by International Network of Basin Organisations (INBO) and European Centre for River Restoration (ECRR).

- 1: An introduction on River Restoration and Good Ecological Status.
- 2: Water quality: a basin scale strategy to achieve Good Ecological Status.
- 3: Hydrogeomorphology and River Restoration: interaction with Good Ecological Status.
- 4 : Round table.



Timeline – river restoration in Norway



2015: Inter-Agency Project

Establishment of an Inter-Agency Project for restoration of rivers and wetlands.

- Provide for increased cooperation and coordination of restoration activities.
- Prepare for implementing an increased restoration effort.
- Contribute to the exchange of knowledge, experience and best practice.
- Benefit from synergies with European networks and projects.

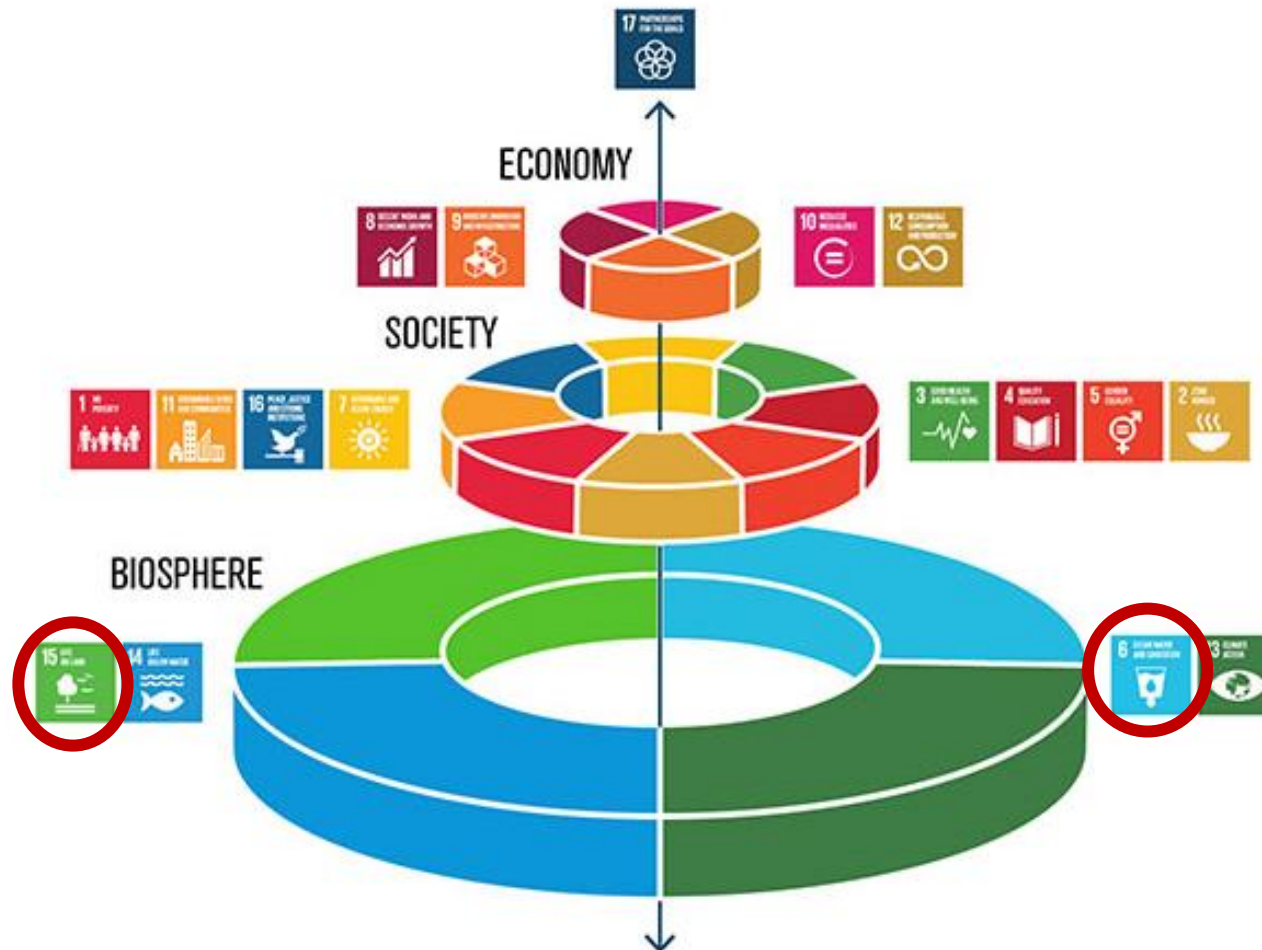


Illustration: Miljødirektoratet

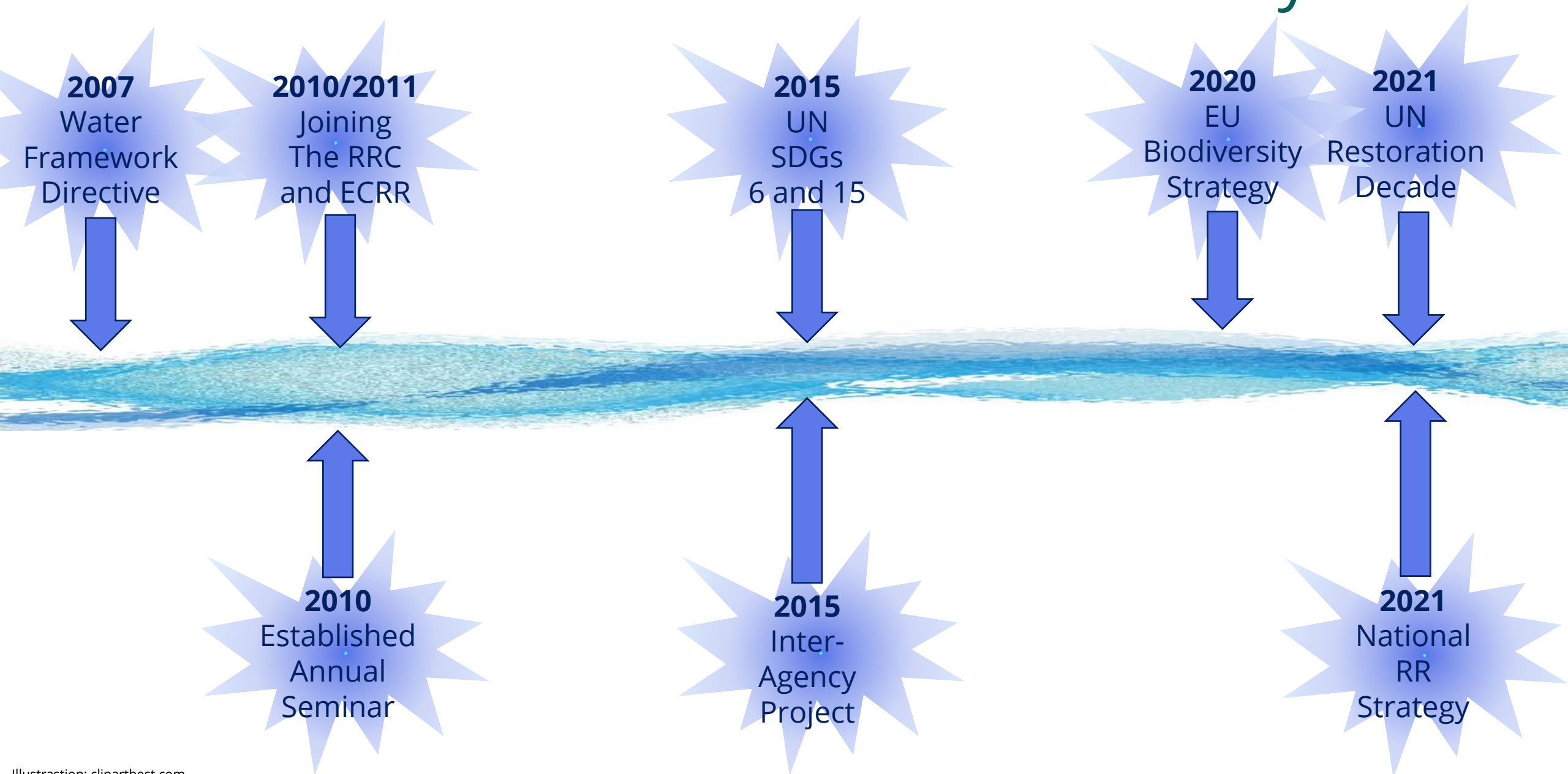


UN SDG targets 6.6 and 15.1

restore freshwater ecosystems



Timeline – river restoration in Norway



EU Biodiversity Strategy and Restoration Plan

At least 25,000 km of rivers will be restored into free-flowing rivers by 2030:

- *Removal of primarily obsolete barriers.*
- *Restoration of floodplains and wetlands.*
- *Review permits to implement ecological flows in order to achieve good status or potential of all surface waters, as required by the Water Framework Directive.*

Large-scale river and floodplain restoration can improve water regulation, flood protection, nursery habitats for fish, and the removal of nutrient pollution.



UN decade on Ecosystem restoration 2021-2030

preventing, halting and reversing the degradation of ecosystems



More vigorous watercourses

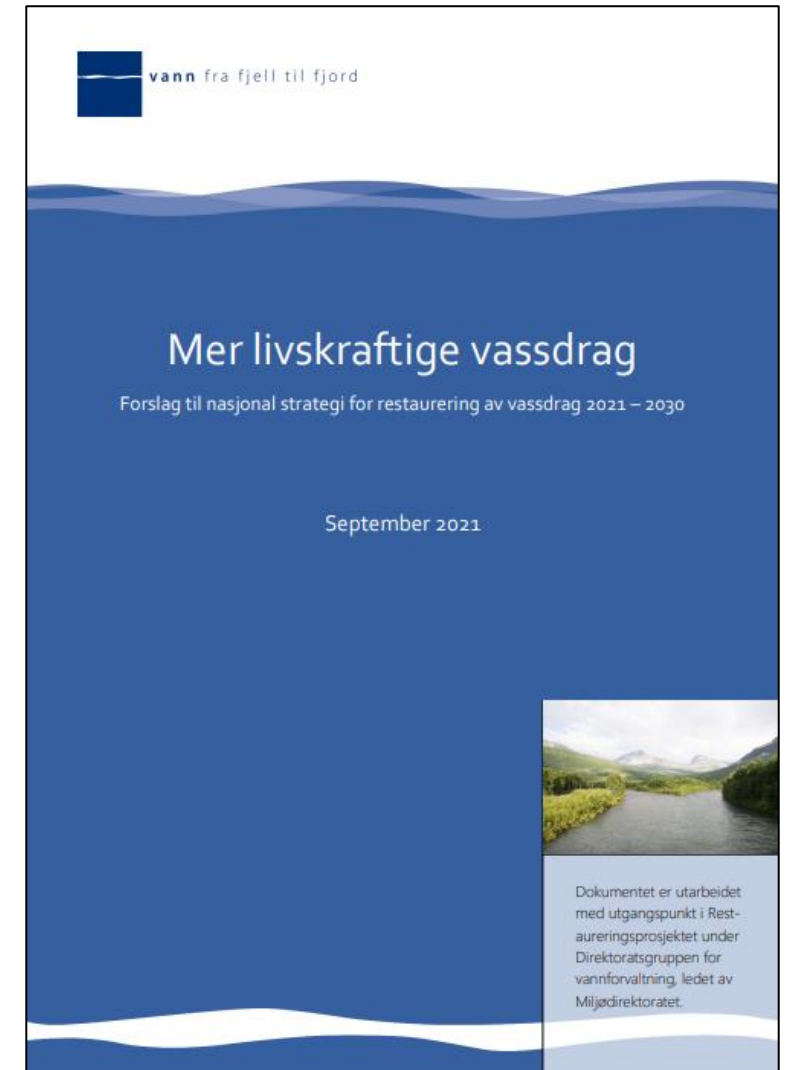
The inter-agency proposal for a National River Restoration Strategy towards 2030 will be presented after lunch today.

Objectives:

- ***Restore at least 15 % of degraded watercourses by 2030.***
- ***Reverse the negative trend by 2030, restoring watercourses at a higher pace than they are degraded.***

Aiming for synergies with:

- The updated River Basin Management Plans 2022-2027.
- Wetland restoration.
- Climate adaptation.



More vigorous watercourses

Three focus areas:

1. Improved coordination across sectors for planning, financing and use of legislation for river restoration.
2. Reinforced knowledge based on existing and new experiences, systematic pre- and post-investigations.
3. Enhanced dissemination of knowledge, examples, results and experiences.

The strategy will be followed by a dynamic action plan specifying how the focus areas will be fulfilled.



Financing of River Restoration in Norway

- **Polluter pays principle:** applies where the entity causing deterioration can be clearly identified and held accountable. *E.g. Pollution permits for industry, Hydropower license conditions.*
- **Environment Agency:** annual grant scheme for water environment measures. Approx. 2 – 2,4 mill Euros annually (2019-2021). *E.g. improve habitats/connectivity, reduce pollution.*
- **Water Resources and Energy Directorate:** grant scheme for flood and landslide protection measures, and environmental measures. *E.g. move or reopen old style flood defenses.*
- **Agriculture Agency:** regional and local grant schemes to reduce agricultural run-off. *E.g. ponds for sedimentation and nutrient retention, riparian vegetation zones etc.*
- **Roads Authority:** measures to mitigate or restore environmental degradation are integrated in the budgets for construction and maintenance. *E.g. redesigning culverts to allow reestablishment of fish passage.*
- **Municipalities:** land use planning tools (e.g. sequence provisions and agreements with developers), ordinary budget for water services.

Conclusion: We have financing possibilities for well-planned and well-justified projects.



Wetland Restoration

2015: Plan for restoration of wetlands 2016-2020.

Collaboration between Environment and Agricultural Agencies.

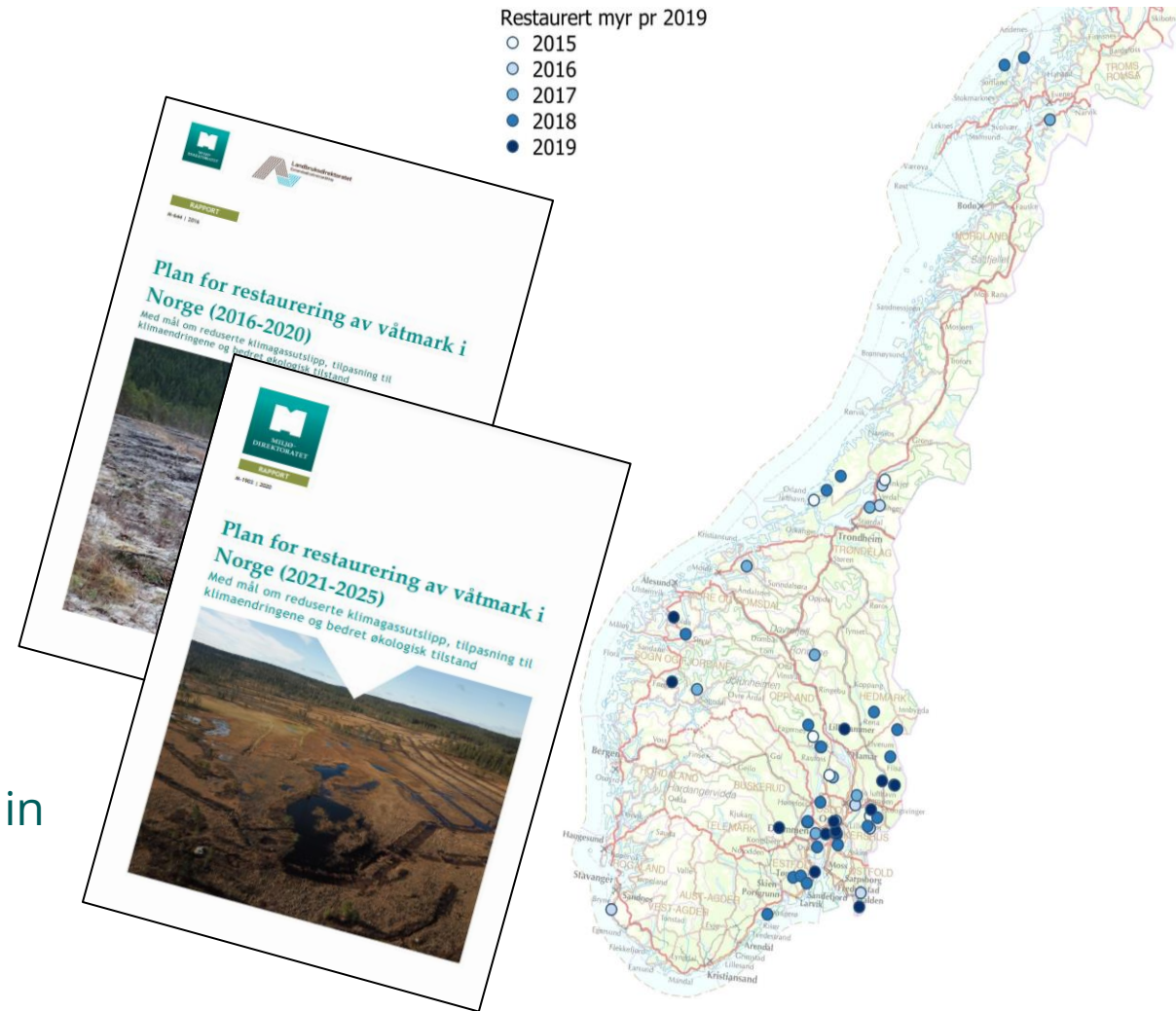
Objectives:

- Reduced carbon emissions.
- Adaptation to climate change (water retention)
- Improve ecological status.

2020: Update of the plan for 2021-2025.

More than 90 raised bogs restored since 2016, mainly in protected areas. Only a few projects in other types of wetlands.

Annual budget of approx. 2 million Euros.



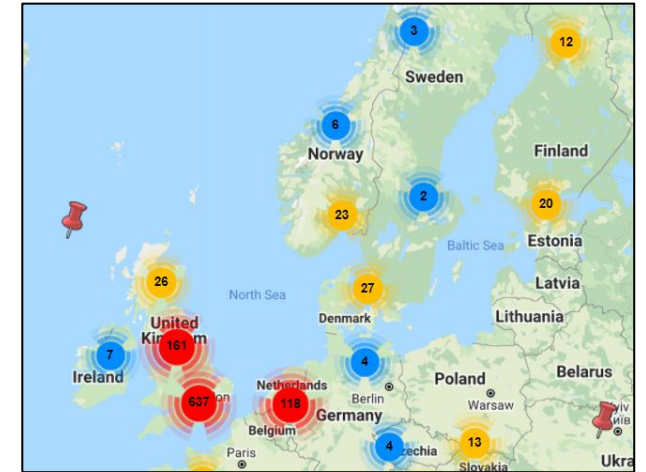
Making use of European tools

The [River Wiki](#) database holds 1399 river restoration case studies from 31 countries.

- Project with the Norwegian Water Institute (NIVA) to enter Norwegian “good practice” cases and make a [Norwegian user manual](#) (launched in webinar May 2021).
- Now 30+ Norwegian cases entered, and is a requirement for new projects supported by the Environment Agency.

The AMBER [Barrier Tracker](#) allows stakeholders to register barriers in rivers, and the [Atlas](#) holds 630.000 barrier recordings.

- Project with the Norwegian Water Institute (NIVA) to develop Norwegian language version to be launched TOMORROW!



Source: amber.international

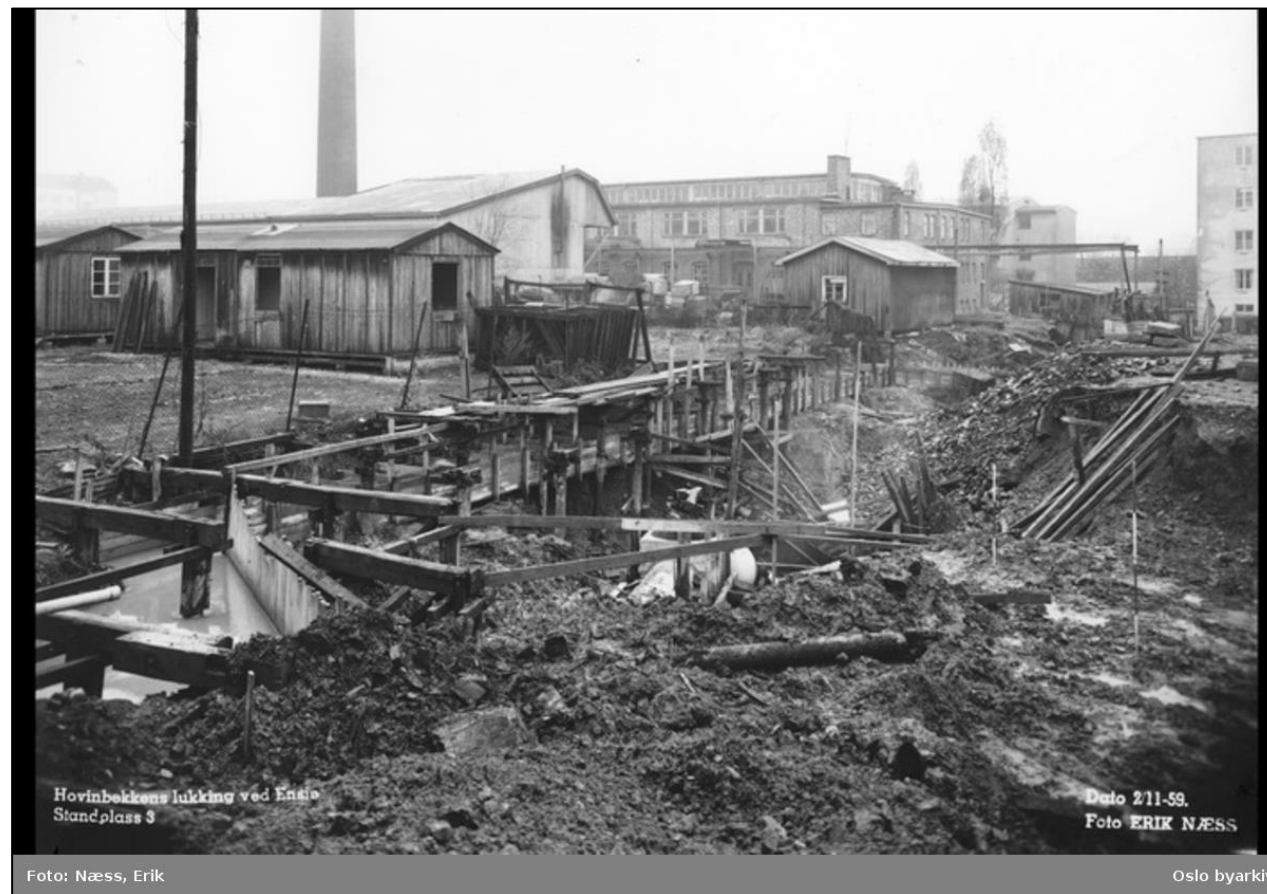


Source: amber.international



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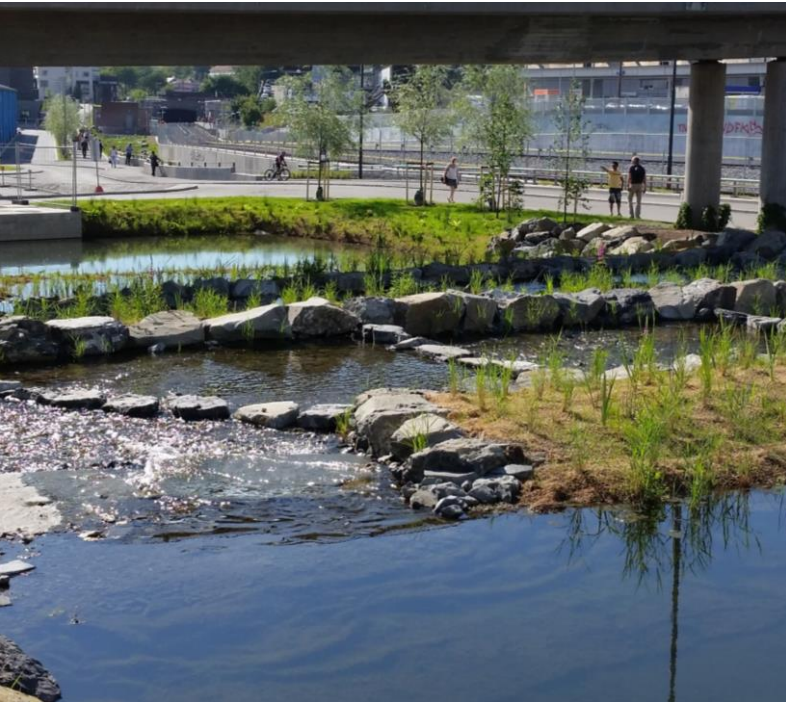
Example: Teglverksdammen (Hovinbekken)



From deteriorated to restored: Teglverksdammen 2014



From deteriorated to restored: Teglverksdammen 2015





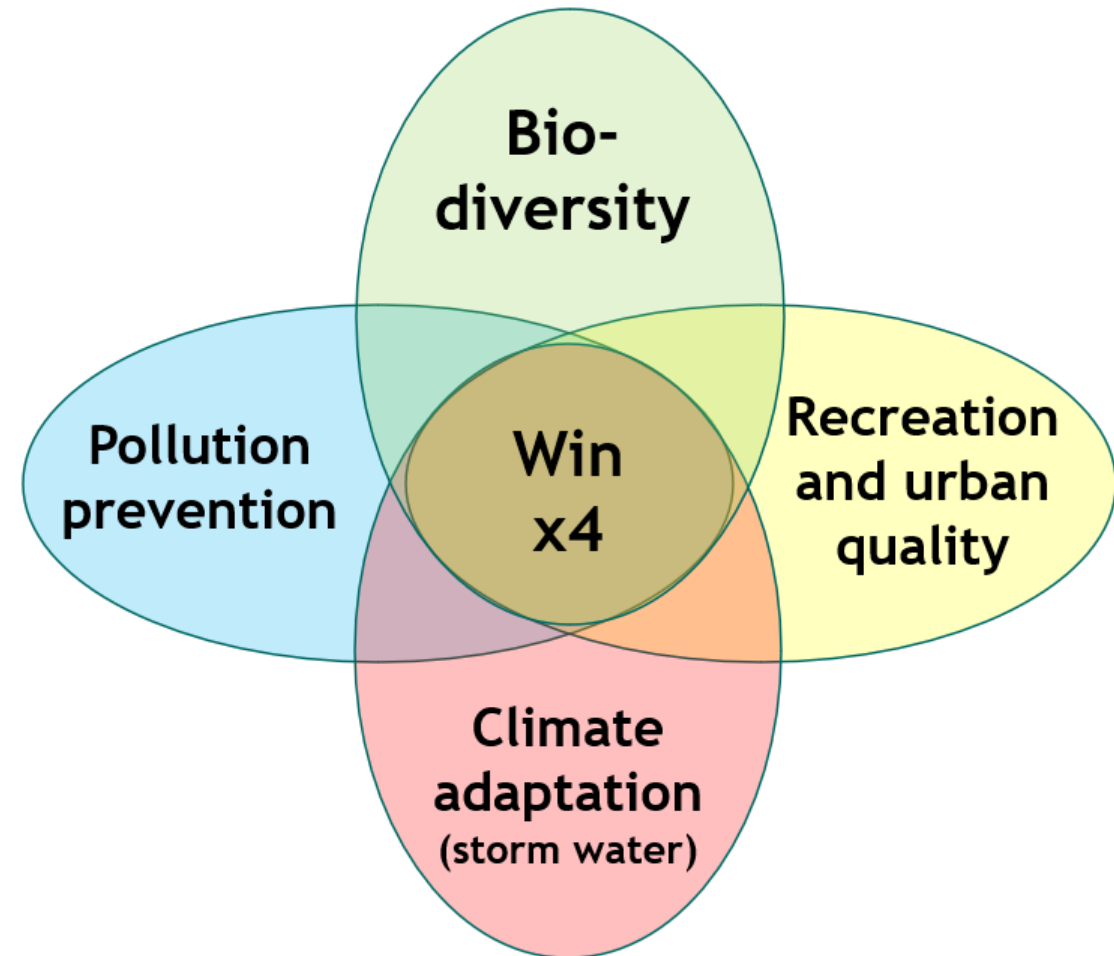
Kilde: Oslo kommune



Foto: Anders Iversen

Nature Based Solutions

Multiple benefits in several policy areas





Norwegian
Environment
Agency