

Navigating change to mainstream barrier removal: Using a Nature-based Solutions (NbS) approach with the hydropower sector across Europe

MERLIN

Mainstreaming Ecological Restoration
of freshwater-related ecosystems
in a Landscape context:
INnovation, upscaling and transformation



→ Aim?

Co-develop an EU Hydropower Sector Strategy for mainstreaming a Nature-based Solutions approach involving barrier removal

→ How?

- ❖ Desk top reviews
- ❖ Expert interviews
- ❖ Group discussions
 - Within MERLIN
 - Multistakeholder roundtables (x2)

= 34 people, 24 organisations, 7 sector organisations (energy companies and sector networks)

Current situation?

→ **Untenable system: Challenges**

- ❖ Lots of barriers
- ❖ Hydropower barriers
- ❖ Vary in importance

- ❖ Negative ecological impacts
- ❖ Compliance approach dominates
- ❖ Piecemeal action by sector

- ❖ Climate change impacts

→ **Opportunities: Pointing towards the direction of travel**

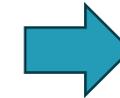
- ❖ Understanding – perception
- ❖ Political – voluntary standards
- ❖ Practical – examples

- ❖ EU Policy signals

- ❖ Consensus change needed
- ❖ How to do this? All stakeholders need to be involved, especially private sector

Scope of strategy: NbS

- Mainstreaming a Nature-based Solutions Approach
 - **Nbs are:** “actions to protect, sustainably manage, and restore natural or modified ecosystems, which address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”(IUCN, 2016).
 - Reframes restoration as a way to support human activities (win-win)
 - **From a sector perspective – address challenges and deliver multiple benefits (private, public and for biodiversity)**



IUCN NbS Criteria
1: Effectively address societal challenges
2: Design is informed by scale
3: Result in a net gain to biodiversity and ecosystem integrity
4: Economically viable
5: Based on inclusive, transparent and empowering governance processes
6: Equitably balance trade-offs between achievement of their primary goal(s) and the continued provision of multiple benefits
7: Managed adaptively, based on evidence
8: Sustainable and mainstreamed within an appropriate jurisdictional context

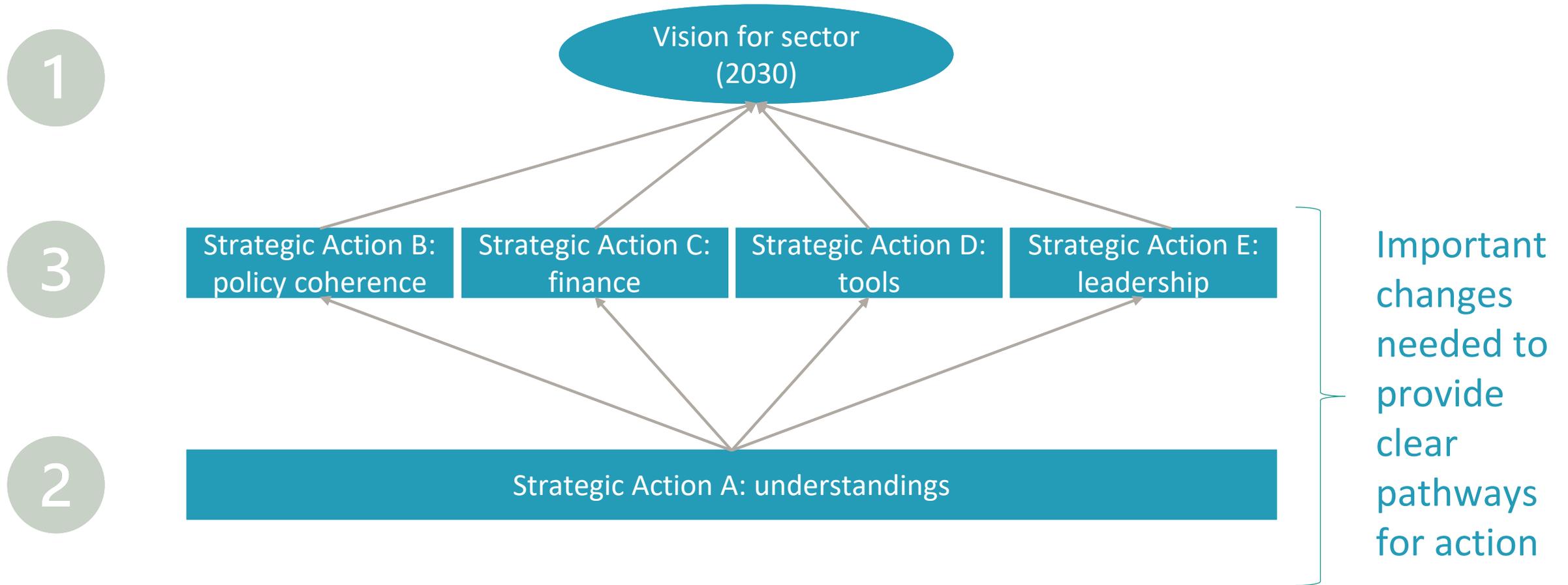


Scope of strategy?

- Increasing focus on barrier removal
- Increasing focus on Nbs
- **Scope: Mainstreaming barrier removal by sector explicitly within an NbS approach**



Key aspects



Strategic vision for the sector: What is the desirable future?

2050: The sector has made **an active and significant contribution** to the restoration of freshwater ecosystems involving removal of barriers and the co-development of multiple (public and private) benefits across catchments, MS and EU region

2040: The sector;

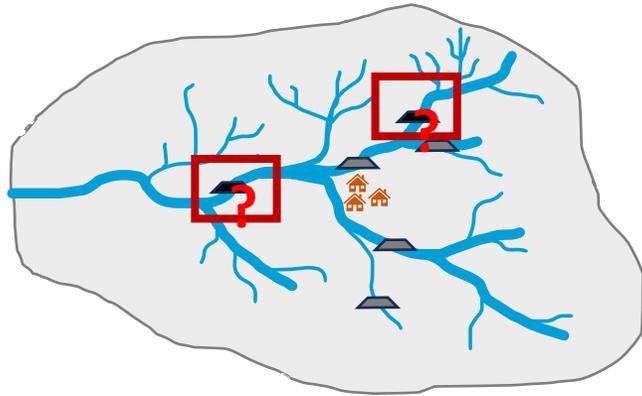
- ❖ Is celebrated for its commitment to restoring freshwater ecosystems through barrier removal programmes that adopt an NbS approach and contribution to implementation of the EU Nature Restoration Law
- ❖ Actively collaborates with other relevant stakeholders to design at scale barrier removal programmes through an NbS approach
- ❖ Addressing sector challenges by working with nature is considered the norm to enhance resilience and efficiency of strategically important hydropower assets

2030: The sector;

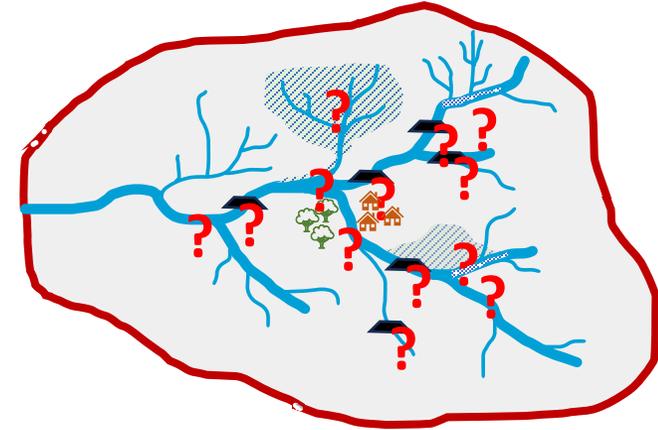
- ❖ **Has embedded in company and sectoral sustainability policies** an NbS approach involving barrier removal
- ❖ **Provides financial resources** for designing and delivering barrier removal within an NbS approach programmes
- ❖ **Has helped create clear delivery pathways** at the MS and EU level to better organise barrier removal within an NbS approach at scale
- ❖ Is contributing to **learning and development** for continued improvement/ refinement for how programmes are developed and delivered



Action A: Increase understanding of what NbS approach could and should entail **with an explicit focus on benefits for the sector**



Different approach/ way of thinking about restoration



Ad hoc removal of barriers

Enhances **localised** longitudinal connectivity by restoring free flows in channel.

Design can;

Address regulatory, reputational and financial challenges
Deliver localised benefits

May catalyse other restoration measures to strengthen and enhance localised benefits.

Strategic barrier removal within an NbS approach

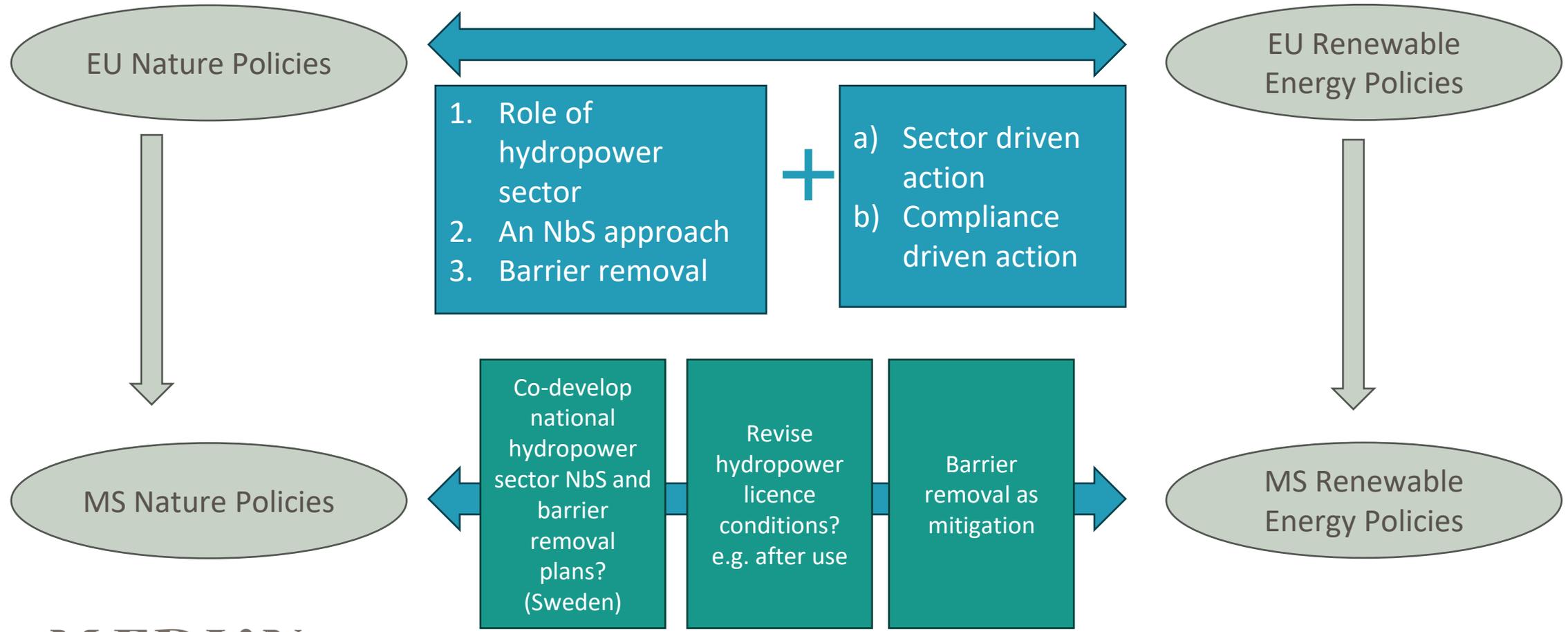
Enhances longitudinal connectivity within a **catchment/ sub catchment** through barrier removal in conjunction with other restoration measures.

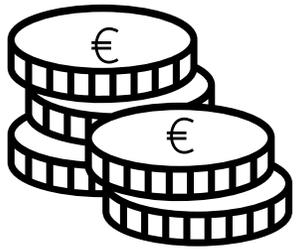
Design can;

Help the hydropower sector address regulatory, reputational and financial challenges and environmental risks (e.g. adapting to fluctuating water levels in the context of changing climate)
Deliver many socio-economic and freshwater ecosystem and biodiversity benefits.



Action B: Establish clear pathways within EU and MS policy for the hydropower sector to contribute to energy, climate change and biodiversity policy objectives



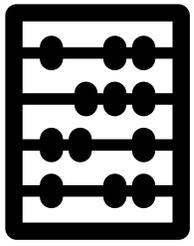


Action C: Action C: Develop an NbS with barrier removal fund for the hydropower sector aligned with the IUNC NbS criteria

- Cost = hindering action
- Public + Private sector resources
- Sector is diverse (capacity for action varies)

- Need: Hydropower sector fund to help incentivise decisions for removal
- Source of funds? How it is distributed?
 - Small operators
 - IUNC NbS criteria

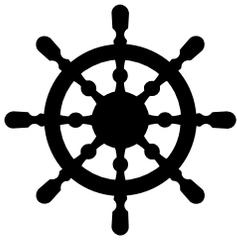
- Existing examples: Sweden and Finland



Action D: Action D: Co-develop with the sector tools for the design of barrier removal within an NbS approach programmes

- Barrier removal Tools = lots of attention!
- Key principles:
 - Co-develop
 - Catchment scale (cumulative)
 - Holistic approach (multiple parameters)
 - Informed by evidence (scientific and local knowledge)
 - Adaptable (as understandings/ conditions change)
 - Flexible (different business environments)
- Support:
 - NbS approach = challenge driven, multiple benefits
 - Relevant, credible tools
 - Support partnership development, stakeholder engagement, transparency in decision making (increase legitimacy)
 - Adaptive





Action E: Build stakeholder leadership capacity for initiating/ coordinating the development of strategic barrier removal programmes within an NbS approach

- Complex process and system
 - Many actors, views, skills, knowledge, abilities to act etc
 - Need to forge and work through connections
- Work at scale and in partnership
- Fraught with difficulties!

- Leadership for collective action (and learning)
- Examples;
 - Metrics to demonstrate impact
 - Refine incentivise, tools
 - Etc.



Key messages

- New ways of thinking and acting needed – radical change
- Agree change is needed – but how?

- Challenges and opportunities
- Some examples
- Sector involvement

- Foundation - Shared understandings
- Create action and learning pathways across Europe



What's next?

- **Work in progress!**
- More sector group discussions next month (3rd Roundtable 14th May)
- Cross sector routemap

- **Can you contribute?**
- We always seeking to involve more people!
- Interested in understanding and shaping how to involve the hydropwer sector more in barrie removal?
- Come chat with/ contact me



MERLIN

Thank you for your
attention!

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