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Session C3: Policy Shift In Reviving Migratory Fish Stocks - Examples From RESTORE Life+

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Policy shift in reviving migratory fish stocks - examples from RESTORE Life+

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FISH PASSAGE 2015
International Conference on Connectivity Best Practices and Innovations
Groningen, Netherlands June 22-25 2015
RESTORE 2011-2013
Life + project initiated and hosted by ECRR
European Centre for River Restoration

- Contents to be seen on ECRR web site www.ecrr.org
  Goals of RESTORE:
- Strengthening networking
  - Establishing new national River Restoration Networks
- Incorporating river restoration into the policy of water management
  - Solving conflicts with the Renewable Energy directive - Water power
- Creating River Wiki https://restorerivers.eu
  - Database of good river restoration cases in Europe (worldwide?)
  - Updated continuously (?)
How to restore constructed rivers with hydro power?

- Water Framework Directive about Heavily Modified Water Bodies:
  - Maximum ecological potential will be gained
  - “… once all mitigation measures have been taken to ensure the best approximation to ecological continuum, in particular with respect to migration of fauna and appropriate spawning and breeding grounds”
- Connectivity but also continuity - continuous series of habitats
- Problems in rivers with several dams - chain of lacustrine habitats, loss of rapids for reproduction, regulation of discharge regime
- Restoration goal: mitigation and compensation of impacts
- Fish passes up/down, compensative habitats, environmental flows
New EU-policies which can be utilized for policy shift for continuity

- Green infrastructure: Promoting ecological continuum
  - Strengthening connections between Natura 2000-areas
- Environmental/ecological flows
  - Ensuring ecosystem services for all functions and uses of watercourses
- Discharge demands for
  - Fish migration, attraction and fish passes
  - Spawning and rearing habitats year round
  - Flood discharges for sediment and habitat dynamics
- Applying national legislations to promote compensation of endangered habitats
  - Compensation required in impacts for Natura 2000 sites
  - Impacts of power plants for habitats should be compensated in permits
Dam removals

- Best option for restoration of connectivity
- Cultural history must be considered

Koskenkylänjoki, Finland
Measures for existing or new hydro power – best fish pass types

- Best practice of fish passes: Nature-like bypass channels
- Several ecosystem services can be gained
  - Migration for all species, also weak swimmers
  - Ecological corridors for mammals and bird juveniles
  - New habitats for spawning and rearing can be created
  - Landscape values and tourism benefits by good design
Combining all functions in a bypass channel - Entrance

- Good location of entrance near to the obstacle

Kissakoski
Planner: Ecoriver

- Connection from a bypass channel to a fish pass, if needed

Albbruck-Dogern, Rhine
Planner: R.J.Gebler
Design options of bypass channels

1. Bypasses with function as fish pass and habitats

Special sections with low gradient for habitats and steeper sections to allow migration

Kämärinkoski, Finland

Parallel parts or arms for migration and habitats

Albbruck-Dogern, Switzerland, Rhine
2. Channels with main function as habitats

Separate arm for reproduction

Ruppoldingen
Switzerland

Combination of bypasses with natural streams

Plan for Ijoki, Finland
3. Reproduction channels

- Not necessarily any fish pass function
- Common in Canada

Imatra urban brook, Finland

- Serves as a compensative habitat for trout and as a touristic attraction
- Opened June 2015
- Design: MA-arkkitehdit, SYKE
River Wiki  https://restorerivers.eu
Database for river restoration cases

- Search according to country, measure type etc.
- Contains also cases about hydro power and connectivity
New cases are needed for good coverage

- UK dominates in updating, River Restoration Centre RRC is active
- One case from USA – do we want River Wiki to be international?
France

Case study: Removal of a dam on the Allier river in Saint-Etienne-du-Vigan
Sweden

Case study: Eldbäcken

To discuss or comment on this case study, please use the discussion page.

- Biocanal, compensative habitat for trout and pearl mussel

Photo Olle Calles
Case study: Ålgårda nature-like bypass channel at River Rolfsán

Location: 57° 29' 19" N, 12° 14' 27" E

Left click to look around in the map, and use the wheel of your mouse to zoom in and out.

Photo Outi Laamanen
Sweden

Case study: Kvarnekulla nature like bypass channel at River Knipån

Photo Maria Arola
Norway

Case study: Built Kjøsnesbekken in the river Stjørdalselva

- Constructed side channel for habitat compensation
Finland
Case study: Sågarsfors

- Dam removal and bypass with habitats

Photo: Esa Lehtinen
Germany

Case study: Rheinfelden bypass

- Reproduction channel
- Largest in Europe

To discuss or comment on this case study, please use the discussion page.
Conclusions

- Policy shift is ongoing to compensating habitats in fish pass projects
- Good examples are available in River Wiki
- Need for more restoration projects, with monitoring results

Questions:
- How to get better coverage and updating in countries with no river restoration centre?
- How to spread out the information to promote policy change?

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Thank you!