

## **Current activities of Europe's information exchange network and river policies**

Jukka Jormola

Landscape Architect, ECRR/Finnish Environment

Institute SYKE, Finland

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- Looking forward for ARRN
- European Centre for River Restoration ECRR
- Examples and policy of river restoration in Europe

## **Establishment of ARRN**

- Exchange of experiences  
– fastest way for policy change
- Methods and ideas are international – solutions are local
- Asian tradition is admired  
- nature-like solutions in landscape design
- Future ideas for river restoration?



## European Centre for River Restoration ECRR

- Established after an EU-river restoration project in 1995, Denmark and United Kingdom active
- Constituting meeting 1999: 22 countries present, management board was set up
- National representative organizations in ECRR
- EU –program granted funding 1999-2002, secretary in Denmark
- Secretary until 2006 at RIZA, the Netherlands
- 2007 CIRF in Italy will take secretary

## Activities of ECRR

- Networking - putting people in touch with each other
- Reporting - newsletters, Internet [www.ecrr.org](http://www.ecrr.org)
- Catalogue case studies and database
- Workshops, meeting and conferences
- Implementation of EU water policy
- Information outside Europe
- Flood risk management through river restoration
- Demonstration projects and site visits
- Cost-benefit of river restoration cases
- Restoration combined with water use – environmental river management and engineering

## Examples and policy of river restoration in Europe

- Water quality rather good after permit policy since 1970 - , purification
- Ecological structure and diversity of rivers still bad because of modifications
- EU water policy: good status for watercourses until 2015
- Each member country fits goals into own legislation
- Discussion in Europe: restoration of fish populations/ increase of hydropower (Kyoto protocol)
- Mitigation measures



- Oulujoki, Finland, 7 powerplants, only one fishpass, interest for bringing salmon back

## Hydropower and connectivity

- Nature-like fishpasses preferred, slope 0,5 to 10%, all fish species and bottom fauna can migrate  
**Varkaus**, Finland
- **Freudenau**, Wien, Austria - bypass as restoration of braded river system of **Danube** river



## Reproduction of fish in hydropower bypasses

- Compensation of lost reproduction areas
- **Perhonjoki**, Finland, gravel beds in bypass
- 5,3 m/320 m, slope 1,7 %  
discharge 0,5-0,9, m<sup>3</sup>/s
- Combination of fishpass and spawning channel (Canada)



## Floods and restoration

- **Rhine** (The Netherlands, Germany) – from chemical sewage to salmon river
- Room for floods: dam removal, wetland restoration
- Tributary restoration
- Stormwater retention in urban areas
- Restoration and flood management and have same goals - wetland increase



## Erosion and natural morphology

- Straightened rivers with hard protection
- Bio-engineering with plants
- **Isar** in Bavaria, Germany: natural erosion creates recreation areas for Munich city



## Urban stream restoration

- Urban streams have value for green areas and for migratory fish
- Interest of inhabitants, positive political stress
- Stormwater management in urban planning
- Municipal stream restoration and stormwater programs
- Restoration by volunteers, spawning trouts, **Helsinki** city



## Restoration and drainage

- Maintenance of small agricultural streams needs new practices
- Natural recovery and restoration of straightened streams for fish production
- Flood terraces for high discharge
- Longinoja and Viikinoja, **Helsinki** city



## Restoration after former river use

- In Scandinavia timber floating needed river beds clear from stones
- Placement of stones back for hiding place for fish
- Restoration goals for straightened rivers: guiding view (leitbild concept), based on original natural state, limitations considered
- Ecological and esthetic goals
- Best principles of landscape design can be applied
- Myllypuro Brook in Nuuksio National park, Finland  
Natural and restored section

