BRINGING BACK ECOLOGICAL FLOWS: MIGRATORY FISH, HYDROPOWER AND LEGAL MALADAPTIVITY IN THE GOVERNANCE OF FINNISH RIVERS

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“Almost all large Finnish rivers flowing to the Baltic Sea have been dammed for hydropower production.” (HELCOM 2011)
Main reasons:

- Recession & war;
- Ad hoc laws

Why are we still in trouble?

- Hydropower as private property
- Doctrine of permanence in hydropower licenses
FLOWS OF CHANGE: ENERGY MIX

Electricity Production by Energy Sources 2015 (66,2 TWh)

- Nuclear power: 33.7%
- Waste fuels: 1.2%
- Peat: 4.1%
- Bio mass: 16.2%
- Wind power: 5.5%
- Hydro power: 25.1%
- Coal: 8.3%
- Natural gas: 7.6%
- Oil: 0.3%
- Renewable: 45% (Year 2014: 39%)
- Carbon dioxide free: 79% (Year 2014: 73%)

20.1.2015
FLOWS OF CHANGE: LAW

EU Water Framework Directive (2000/60/EC)

- Member States shall
  - protect, enhance and restore all bodies of surface water with the aim of achieving good surface water status (art. 4.1 (a)(ii))
  - protect and enhance all artificial and heavily modified bodies of water, with the aim of achieving good ecological potential (art. 4.1)(a)(iii))
- Annex V: fisheries included in good ecological status/potential
- Member states shall periodically review freshwater impoundment projects with a view to achieving the directive’s objectives (art. 11.3(e))
FLOWS OF CHANGE: SCIENCE
DISCUSSION

• Lessons learned for governing water management with a functioning science/policy -interface?

• Where do we go from here?
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