Setting up a national restoration monitoring criteria

"better now than never"

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Before restoration  After restoration
Policymaking and monitoring restoration

- Need for good quality freshwater is still increasing and globally highly important
- There is already a lot of monitoring for WFD
- Other EU policies like Flood, Habitat, Bird, Biodiversity should be considered equally important
- We have some good examples where restoration clearly enhances ecological state – or at least helps it to remain
How monitoring will help in mainstreaming restoration measures?

- Restoration goal realistic or not?
- Need to prove it
  - Success stories needed
- Or was it a bottleneck after all? Should we mainstream something else?
All Finnish sites with fish monitoring for WFD

Juvenile (0+) trout density (individuals per acre)

Data & figure: Teppo Vehanen, Finnish Game and Fisheries Research Institute
Setting up a monitoring program

GOAL for restoration

METHOD

SELECTED MONITORING VARIABLE

RELATES TO WFD

SUGGESTED MONITORING METHOD
GOAL for restoration  

More available spawning and rearing habitat

METHOD

Increasing heterogeneity, boulder placement and gravel introduction

SELECTED MONITORING VARIABLE

Depth, velocity and bottom roughness

RELATES TO WFD and possible OTHER MONITORING METHODS

Monitoring fish population densities and age structure

SUGGESTED MONITORING METHOD

Cross sectional depth, velocity and bottom roughness (B-A, number of sections in relation to width and length)

If monitoring is possible for several years before and after a fish population monitoring is highly recommended
In reality

Implementing monitoring to a restoration project

- Restoration requires a permit – permit will be given if monitoring programm is included
- State contributes to the project
  - easy to require certain monitoring
- Large projects
  - there is already some money which could be directed on monitoring
  - related to the project goal (or otherwise bottleneck might be not known)
- Small projects, volunteer work, NGO’s
  - small budget, inexpensive methods, enthusiastic participants
  - more related to the project method than overall goal
“The method used depend on the project goal.”

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