ECOSTAT Workshop on Hydromorphology and WFD classification, Oslo, October 2015

On 12 and 13 October 2015, around 70 participants attended the ECOSTAT workshop on “Hydromorphology and WFD classification” that was hosted by the Norwegian Environment Agency in Oslo, Norway. The workshop was organized jointly by ECOSTAT and REFORM representatives and held back-to-back with the 30th ECOSTAT meeting that took place on 14-15 October in the same location.

The outcome of the REFORM project was one of the main motivations for the working group ECOSTAT of the WFD Common Implementation Strategy to organise this workshop.

The aims were to:

- Address new scientific insights and recommendations (mainly from REFORM)
- Present best practices from selected Member States
- Discuss key issues, especially on the:
    - Suitability of existing biological methods to detect hydromorphological alteration
    - Use of hydromorphological assessment methods in WFD classification
    - Bottlenecks for research and practitioners in practical implementation
    - Need for further work on hydromorphology in the coming mandate of the WFD Common Implementation Strategy

The workshop was run in a pleasant working atmosphere alternating plenary sessions with work in breakout groups. It promoted lively discussions amongst others on which biological quality elements (BQEs) are best suited to assess hydromorphology and what is essential for a good hydromorphological assessment.

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Figure 1: ECOSTAT Workshop on Hydromorphology and WFD classification at the Norwegian Environment Agency (photo: Jo Halvard Halleraker)

Four presentations were given by REFORM partners on the full overview of the project, the potential and limitations of BQE methods and indicators for hydromorphological pressures, new tools for an integrated hydromorphological assessment of European streams and remote sensing information in hydromorphological assessment.

Further presentations were given by DG Environment, JRC, the European Committee for Standardisation (CEN) as well as Member States (Germany, the Netherlands, Italy, Norway, Sweden and France). All workshop presentations are available on CIRCABC (link).

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Figure 2: Presentation of Johan Kling, Swedish Agency for Marine and Water Management and Member of the REFORM Advisory Board (photo: Jo Halvard Halleraker)

The following are some highlights of the key workshop conclusions:

- Fish, macrophytes, macroinvertebrates and (more rarely) diatoms are the biological quality elements most used to detect effects of hydromorphological pressures.
- Many of the **intercalibrated WFD methods** are generic multi-metric indices responding weakly to specific hydromorphological pressures because they were not originally designed to be sensitive to such pressures. This can be improved by using **more targeted indicators or an adjusted monitoring strategy**. There are already good examples of Member States using such targeted indicators in their biological assessment systems.
- River **typologies** should reflect natural variability in hydromorphological characteristics and processes. This is crucial because differences in natural hydromorphology result in different reference conditions for the BQEs.
- BQE assessments need to be supplemented with information from the supporting elements in order to identify inconsistencies between hydromorphological and biological assessment, to diagnose problems and to identify effective restoration measures. A clear understanding of **what is meant by "supportive element",** how it should be used, how it is reported is needed.
- Until recently, there were few **shared and standardized multiscale hydromorphological assessment methods**. This has prevented a proper analysis of the linkages with BQEs so far. Recent scientific work (including the REFORM project) has resulted in new and better approaches and tools, which could now be used and further standardized.
- **Data from remote sensing** are increasingly available from many sources, including EU space programs. This data has a great potential to be used in hydromorphological assessments at different scales, in combination with field data and other existing relevant information. This is likely to result in a more robust and cost-effective implementation of the WFD. The main challenge is not data availability and acquisition, but to solve issues with data

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processing and interpretation.

It was acknowledged that the majority of the work on hydromorphology is taking place in the Member States. The advantage of a European project such REFORM was that international cooperation was made possible and an interdisciplinary team of scientists could pull different sources of information together in order to advance knowledge on certain aspects. Further sharing of knowledge and cooperation on working areas related to hydromorphology is crucial for the future development of comparable methods and indicators across Europe.

The summary of the workshop conclusions is also available on CIRCABC (link).

ECOSTAT and the work programme of the WFD Common Implementation Strategy will follow up in 2016-2017 with the outcomes of this workshop.

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Links
[1] https://reformrivers.eu/email/field_collection_item/129/field_contact_person_email

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