Environmental Protection of

International River Basins Project

Contract No. 2011/279-666

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EPIRB Project Activity 1.3
Development of WFD-compliant monitoring programmes

Agenda for the Training of the Ecological Status Classification System for the Assessment of Surface Water Bodies

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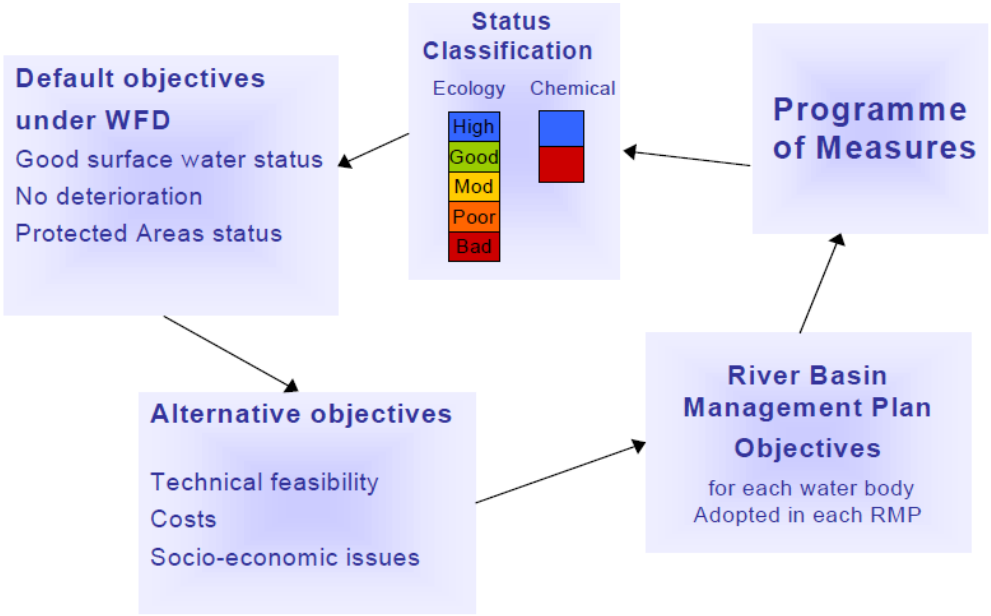
Objectives:

- Define and explain the biological elements used in the EPIRB project as element of status classification in order to reflect the basin pressures and impacts.
- Explain the overall classification of Biological Quality Elements, according to the ecological status protocol and according to the ESCS documents.
- Show the biological elements approach and the calculations: taxonomic description, main metrics, results for each basin and statistical analysis.
- Training on the use of the new guidance document using macroinvertebrates for the ESCS.

1. INTRODUCTION

The development of ecological assessment and classification systems is one of the most important and technically challenging parts of the implementation of the Water Framework Directive.

The Water Framework Directive (WFD) asks us to classify waters in a different way, using new and revised environmental standards to assess whether environmental conditions are good enough to support biology. According to the Ecological Status Classification Guidance from the EU, we have to use both Biological, Physico-Chemical and Hydromorphological elements in order to calculate the Ecological Status.



An assessment of the biological quality elements must be taken into account when assigning waterbodies to any of the ecological status or ecological potential classes. The status of each of the biological elements for natural waterbodies is determined by measuring the extent of the deviation, if any, of the observed condition from the *reference condition* established for

that waterbody. Reference conditions are the conditions established for the biological elements in the absence of pollution or disturbance.

In order to get biological results in each waterbodies, some parameters related with biological elements should be selected and sampled. This suggested training will try to achieve the standard sampling guidelines for each river basin pilot in order the beneficiaries will have the same common procedures. This training is mainly oriented for calculate the ESCS using macroinvertebrates but also the other elements recommended by the WFD are going to be fully trained.

The purpose of this training is to provide general guidance on the assessment of ecological status leading to the overall ecological classification of water bodies for the purposes of the EC-Water Framework Directive. The document that will be used as base in the training process also provides specific guidance for each basin on the role of the general physico-chemical quality elements and hydromorphology in ecological classification.

The ESCS exercise is a learning process that will continue according to the next steps in all the pilot basins with the objective of doing some intercalibration process in the near future.

2. SEMINARS AND PRACTICAL CLASSES

Trainers: Romina Álvarez and Peter Rončák

Date and place: 24th of November in the Labor Institute in Chisinau.

Objective: Training for understanding the process of the Ecological Status Classification Exercise using the JFS biological teams in each beneficiary country for being autonomous in selecting the points for monitoring, in preparing for the fieldworks, in determination the fauna, in doing the metrics calculations.

Beneficiaries of the training: local biomonitoring experts and other members of EPIRB project.

1 day for training with all the regional experts involving in the Ecological Status management:

- 9.00-11.00h General introduction of the day in theoretical classes. Biological/ecological monitoring programs and classification systems:

  Introduction on requirements of EU WFD on ESCS (10 min) Romina
  Steps to come to ESCS Romina and Peter

  - **Video on sampling macroinvertebrates, HMWE and chemical parameters (40 min); Peter**
  - **Presentation on the macroinvertebrates taxa identification (microscope and one sample will be needed) (40 min); Romina**
  - **Calculation of metrics via ASTERICS (10 min). Peter**

    The training will start with general information about the Guidance document for surface water and the process of Classification Scheme.

    The status of each surface water body is judged using separate 'Ecological classification' and 'Chemical classification' systems. The overall status of the water body will be determined by whichever of these is the poorer. To achieve 'good status' overall, a water body must achieve both good ecological and good chemical status.

    There are four quality elements to be considered for each surface water category, in order to assess its ecological status (or ecological potential); they are as follows:

    - biological quality elements
    - general conditions (physico chemical)
    - specific relevant pollutants

- hydromorphological elements - dealing with water flows, physical characteristics, etc.

- 11.00-11.30 Coffee break

- 11.30-13.00 The Classification process will be explain and the results achieve during 2015 in the JFS in all the pilot basins will be used. Each participant will received a pack of data in order to recreate the process for doing the classification exercise.

  Principles used in the development of the ESCS for the pilots (two ppts, one for Kura region pilots (Peter) and one for EPIRB pilots (Romina)). Those ppts will also include the classifications schemes developed for the pilots. (60 min)

  One presentation related to importance of the supporting quality elements (General conditions and other specific pollutants and HMQE. (15 min) Peter

- 13.00-14.30 Lunch break
- 14.30-16.00 General review of the results achieved and possible explanations

  Eionet and other EU networks and their relation with the dataset of the EPIRB project Romina and Peter

  Practical exercise in each groups to make classification of the pilot river basin (data from spring JFS for Kura region and summer for EPIRB pilots will be used). Participants will be sub-dived based on the pilots and the exercise will be supervised by the EPIRB project experts. Results of exercise will be presented as map for each pilot (maps of pilots are needed and colour markers (blue, green, yellow brown and red). (120 min) Peter and Romina

- 16.00-16.30 Coffee break

- 16.30-17.30
  (Continuation) Practical exercise in each groups to make classification of the pilot river basin (data from spring JFS for Kura region and summer for EPIRB pilots will be used). Participants will be sub-dived based on the pilots and the exercise will be supervised by the EPIRB project experts. Results of exercise will be presented as map for each pilot (maps of pilots are needed and colour markers (blue, green, yellow brown and red) Peter and Romina
- 17.30-18.15
  Summarize of the training, other examples and experiences in different basins and other waterbodies. Doubts and questions.

- 19.00 Dinner at venue

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3. ONLINE ASSISTANCE

Before the workshop will take place and after the training, Peter and Romina will be available for answering all the doubts and to give all the support needed.

Also we will prepare some materials (the material for the presentations and other important papers) for the participants and we will check the main taxa groups during the training.

4. BIBLIOGRAPHY

There are different documents that will be taken into account as baseline:

- Guidance document nº7 (WFD) :Monitoring under the Water Framework Directive https:/circabc.europa.eu/sd/a/63f7715f-0f45-4955-b7cb-58ca305e42a8/Guidance%20No%207%20-%20Monitoring%20(WG%202.7).pdf
- Guidance document nº13 (WFD): Overall approach to the classification of ecological status and ecological potential (https://circabc.europa.eu/sd/a/06480e87-27a6-41e6-b165-0581c2b046ad/Guidance%20No%2013%20-%20Classification%20of%20Ecological%20Status%20(WG%20A).pdf)
- EPIRB Instruction document for macroinvertebrates sampling (2015).
- EPIRB Instruction document for Ecological Status Classification (2015).
- UNE – EN 14996: 2007 – Water quality - Guidance on assuring the quality of biological and ecological assessments in the aquatic environment.

Scientific papers:

- Water Framework Directive 2000. Directive of the European Parliament and of the Council 2000/60/EC Establishing a Framework of Community Action in the Field of Water Policy.
- Wright, J.F.; Sutcliffe, D.W.; & M.T. Furse (eds.) 2000. Assessing the biological quality of fresh waters: RIVPACS and other techniques. Freshwater Biological Association, UK