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 on the Delineation and Typology of Surface Water Bodies

Project title: Environmental Protection of International River Basins Project

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Objectives:

The training in 'Delineation and Typology of Surface Water Bodies' is part of the general capacity building strategy demanded by the key beneficiary institutions during various regional and national stakeholder meetings, also required under Task 1.3.4 of the project ToR: ***Training courses in WFD-compliant monitoring prepared and presented.*** As clearly defined in the EU WFD and Common Implementation Strategy (CIS) documents, *Surface Water Bodies* (SWBs) are core elements for ecological and chemical status monitoring and thus train appropriate beneficiary institutions in delineation techniques and typology classification skills is one of the priority issues for the project.

The following objectives are identified with regards to the training:

- Explain the EU WFD principles for the identification surface water bodies, delineation, and typology.
- Explain the relationships between the abiotic descriptors and biological indicators to delineate the surface water bodies.
- Training on the use of GIS tools for proper delineation of surface water types.

1. INTRODUCTION

The Water Framework Directive (EU WFD) requires that bodies of surface water be assigned to the categories of rivers, lakes, transitional waters and coastal waters. In addition, the artificial waters shall be designated, and a preliminary classification as heavily modified is to be made.
In general, the following types of waters are to be included in this classification:

- rivers and streams with a catchment area of more than 10 km^2
- lakes with a surface area of more than 0.5 km^2
- transitional waters
- coastal waters up to a line of one nautical mile seawards from the baseline; with regard to chemical status, the territorial limits form the decisive boundary.

Under Annex II, Paragraph 1.1 (ii) a further differentiation of water body types is to be made within each surface water category based on pressure and status of the water bodies.
The water body types form the basis of the assessment of the ecological status of waters in accordance with biological communities specific to certain eco-regions.

System A as defined by the EU WFD will be applied for the typology of the surface water bodies (abiotic descriptors). Biological check of the surface water body types will not be done due to both lack of data and time space.

Note: Training will concentrate only on inland surface water (both transitional and coastal waters are not included).

Important remark:

It is highly recommended for all training participants to read three Guidance Documents presented in Bibliography (Guidance Document N 2, 9 and 10) before training workshop to be familiar with the principles defined by the EU WFD regarding the identification, delineation and typology of the surface water bodies. Out of these three documents, part of the Guidance N2 is translated to Russian and is attached as a methodology part to the EPIRB Activity 2.2 reports (Water body identification and typology in pilot basins). Guidance N9 is particularly important for GIS practitioners, whose participation in SWB delineation and typology process is essential. In this context CWMEs are called to assist participants, if there is a difficulty with understanding the contests.

2. TRAINING WORKSHOP AND PRACTICAL EXERCISE

Trainers:

Peter Rončák - Senior Monitoring Expert (NKE),

Zurab Jincharadze - Deputy Team Leader/River Basin Management Expert (KE2),

Giorgi Mikeladze - Information Engineering Center (IEC)*

Date and place: December 14 - 15, 2015 in Tbilisi.

Objective: Training for understanding the process of the delineation and typology of the surface water bodies for experts from six beneficiary countries for being autonomous in identification, delineation and typology of the surface water bodies in the countries.

Beneficiaries of the training: hydrology and GIS-DB experts from project countries and other members of EPIRB project.

**Information Engineering Centre (IEC) is a Georgia based consulting company, specialized in GIS and integrated natural resources management in watersheds, as well as catchment modeling and water coding, development and maintenance of information systems and database tools for geological, hydrological, other natural and land resources information systems, etc. The IEC was involved with EPIRB as a sub-contractor and has been working on development of the following RBMP deliverables in Georgia: Act 2.1 - River Basin Analysis for the selected pilot basins; Act 2.2 – Water body identification and typology; Act 2.3 - preliminary classification (GIS mapping part) based on available data.*

Therefore, it is now recommended that IEC is invited as a trainer to prepare and deliver presentations on introduction to basic principles of Geographic Information Systems (GIS) and its use for environmental and natural resources management, particularly stressing on GIS for water management and practical exercise in delineation and typology.

Agenda of the training is as follows:

December 14, 2015

- 9:00-11:00
  General introduction of the day in theoretical classes. Identification, delineation and typology of the surface water bodies:

  Introduction on requirements of EU WFD on Identification, Delineation and Typology (20 min)
  Steps to come to surface water bodies types

  - Presentation on the EU Guidelines No. 2 and No. 10 (70 min);
  - Presentation on the EU Guidelines No. 9 (30 min).

- 11:00-11:30 Coffee break

- 11:30-13:00
  Introduction to basic principles of Geographic Information Systems (GIS) and its use for environmental and natural resources management, particularly stressing on GIS for water management, i.e. water balancing, calculation of water flow, hydraulic modeling, resource allocation, etc.

- 13.00-14.30 Lunch break

- 14.30-16.00
  (Continuation) Introduction to basic principles of Geographic Information Systems (GIS) and its use for environmental and natural resources management, particularly stressing on GIS for water management, i.e. water balancing, calculation of water flow, hydraulic modeling, resource allocation, etc.

- 16.00-16.30 Coffee break

- 16.30-18.00
  Introduction to the practical exercise: present the GIS data and background information from the Chorokhi-Adjaritskali pilot river basin. Each country expert group will received a pack of data in order to conduct the practical exercise.

The exercise will be supervised by the EPIRB project experts. Results of exercise will be presented as map for the pilot river basin with surface water body types at the end of the training workshop

- 18:00-18:30
  Summarize of the training results and experiences. Questions and answers.

December 15, 2015

- 9:00-9:15
  Brief summary on the previous day. Questions and answers.

- 9:15-11.00
  Practical exercise in each group: identification, delineation and typology of surface water bodies for the pilot river basin

- 11:00-11:30 Coffee break

- 11:30-13.00
  (Continuation) Practical exercise in each group: identification, delineation and typology of surface water bodies for the pilot river basin

- 13.00-14.30 Lunch break

- 14:30-16.00
  (Continuation) Practical exercise in each group: identification, delineation and typology of surface water bodies for the pilot river basin

- 16.00-16.30 Coffee break

- 16:30-17:30
  Presentation of the results of practical exercise by each group. Summarize of the training results and experiences. Questions and answers. Conclusion and recommendations of the training.

- 19:00 Dinner

3. ONLINE ASSISTANCE

Online assistance will take place before the workshop and after the training, EPIRB project experts will be available for answering all the doubts and to give all the support needed.

In addition, some hand-out materials of presentations and other important papers (instructions, guidelines) will be prepared for the participants.

4. BIBLIOGRAPHY

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

- *EU Directive 2000/60/EC establishing a framework for Community action in the field of water policy (Water Framework Directive) (English/Russian);*
- *Guidance Document No 2: Identification of Water Bodies (English/Russian);*
- *Guidance Document No 9: Implementing the Geographical Information System Elements (GIS) of the Water Framework Directive (English);*
- *Guidance Document No 10: River and lakes – Typology, reference conditions and classification systems (English).*