
Environment and Climate Regional Accession Network (ECRAN)

Report on the Workshop
on Water Framework
Directive: “Program of
Measures Basic and
Supplementary measures
and their anticipated
effects”

15-17 February 2016, Podgorica

ENVIRONMENT AND CLIMATE REGIONAL NETWORK FOR ACCESSION - ECRAN

WORKSHOP REPORT

Activity 2.3

WORKSHOP ON WATER FRAMEWORK DIRECTIVE

**“Program of Measures - Basic and Supplementary measures and their
anticipated effects”**

Podgorica, 15 – 17 February 2016



Contents

| | |
|--|-------------------------------------|
| Glossary of terms and definitions..... | 7 |
| I. Background/Rationale | 1 |
| General information about the training..... | 1 |
| Summary of the main topics covered | 3 |
| II. Objectives of the Training..... | 4 |
| General Objective..... | 4 |
| Specific Objectives..... | 4 |
| Expected Results..... | 5 |
| III. EU policy and legislation covered by the training | 6 |
| Useful references on practical guides or links to various WFD web sites..... | 11 |
| IV. Highlights from the Training | 12 |
| Highlights Day 1..... | 12 |
| 1. Overview of the current status of the preparation of the Program of Measures in Drina RB..... | 12 |
| 2. Program of Measures – Basic Measures | 14 |
| 3. Setting up of the environmental objectives according with WFD in Drina RB..... | 16 |
| 3.1 Key issues according to the WFD..... | 16 |
| Highlights Day 2..... | 18 |
| 4. Program of Measures – Supplementary Measures..... | 18 |
| 4.1 General approach to define supplementary measures..... | 19 |
| 4.2 Application of cost effectiveness analysis for the selected supplementary measures..... | 19 |
| 4.3 Assessment of the proposed supplementary measures | 19 |
| 4.4 Possible supplementary measures grouped by SWMIs | 20 |
| 5. Expected contribution of national water retention measures in the program of measures..... | 22 |
| 5.1 EU policy to support the NWRM realization | 22 |
| Highlights Day 3..... | 24 |
| 6. Anticipated effects of climate change adaptation | 24 |
| 7. Approach for setting up scenarios for assessing the anticipated effects of the PoM..... | 25 |
| 8. Baseline scenario and selection of the assumptions for Drina PoM..... | 26 |
| 9. Other key points of discussion | 26 |
| 10. Final Workshop Outcomes | 27 |
| V. Evaluatrion | Error! Bookmark not defined. |



ANNEX I – Agenda 33

ANNEX II – Participants..... 39

ANNEX III – Workshop materials (under separate cover) 42



| LIST OF ABBREVIATIONS | |
|-----------------------|---|
| Acquis | Acquis communautaire - Community legislation |
| B&A | Bosnia and Herzegovina |
| BAP | Best Agricultural Practice |
| BAT | Best Available Techniques |
| BEP | Best Environmental Practices |
| BLS | Baseline Scenario |
| BSC | Black Sea Commission |
| BWD | Bathing Water Directive |
| CAP | Common Agricultural Policy |
| CIS | Common Implementation Strategy |
| DPSIR | Driver, Pressure, State, Impact and Response framework for environmental analysis |
| DRB | Danube River Basin |
| DRBD | Danube River Basin District |
| DRBMP | Danube River Basin Management Plan |
| Drina RB | Drina River Basin |
| DRPC | Danube River Protection Convention |
| EC | European Commission |
| ECRAN | Environment and Climate Regional Accession Network Project |
| EEC | European Economic Community |
| EPER | European Pollutant Emission Register |
| EPRTR | European Pollutant Release and Transfer Register |
| EQS | Environmental Quality Standard |
| EQSD | Directive on Environmental Quality Standards |
| ERC | Environmental and Resource Cost |
| FASRB | Framework Agreement on the Sava River Basin |
| FBIH | Federation of Bosnia and Herzegovina |
| GES | Good Ecological Status |
| HMWB | Heavily Modified Water Body |
| HRC | Danube RBD in Croatia |
| HRJ | Adriatic RBD in Croatia |
| ICPBS | International Commission for the Protection of the Black Sea |
| ICPDR | International Commission for the Protection of the Danube River |
| IED | Industrial Emissions Directive |
| IMPRESS | Impact pressures assessment guidance |
| IPPC | Integrated Pollution Prevention and Control |
| KTM | Key Type of Measures |
| MS | Member State |
| MSDF | Marine Strategy Framework Directive |
| ND | Nitrates Directive |
| NVZ | Nutrient Vulnerable Zones |
| NWRM | National Water Retention Measures |



| LIST OF ABBREVIATIONS | |
|-----------------------|--|
| PoM | Programme of Measures |
| PRTR | Pollutant Release and Transfer Register |
| PS | Priority Substances |
| RB | River Basin |
| RBD | River Basin District |
| RBMP | River Basin Management Plan |
| RBSP | River Basin Specific Pollutants |
| RefCond | Reference Conditions |
| RR | Roof Report |
| RS | Republic of Serbia |
| RS | Republic of Srpska |
| SAA | Stabilization and Association Agreement |
| SAP | Stabilization and Association process |
| SWMI | Significant Water Management Issue |
| TAIEX | Technical Assistance and Information Exchange Office |
| UWWT | Urban Waste Water Treatment |



Glossary of terms and definitions

Best available techniques: The latest stage of development (state of the art) of processes, facilities or methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste

Best environmental practice: The application of the most appropriate combination of environmental control measures and strategies

Common Agricultural Policy (CAP): providing direct subsidies to farmers and land managers. A small part of these funds support rural development actions that mainly relate to agricultural activities, as well as forestry and environmental improvements on farmland.

Common Implementation Strategy (CIS): This strategy was agreed by the European Commission, Member States and Norway in 2001. The aim of the strategy is to provide support in the implementation of the Water Framework Directive and its daughter directives, by developing a common understanding and guidance on key elements of the Directives.

Competent Authority: An authority or authorities identified under Article 3(2) or 3(3) of the Water Framework Directive. The Competent Authority will be responsible for the application of the rules of the Directive within each river basin district lying within its territory.

Cost effective: In the context of the Water Framework Directive, it describes the least cost option for meeting an objective. For example, where there are a number of potential actions that could be implemented to achieve Good Ecological Status for a water body, Cost Effectiveness Analysis is used to compare each of the options and identify which option delivers the objective for the least overall cost.

Characterisation (of water bodies): A two-stage assessment of water bodies under the Water Framework Directive. Stage 1 identifies water bodies and describes their natural characteristics. Stage 2 assesses the pressures and impacts from human activities on the water environment. The assessment identifies those water bodies that are at risk of not achieving the environmental objectives set out in the Water Framework Directive. The results are used to prioritize both environmental monitoring and further investigations to identify those water bodies where improvement action is required

Catchment: The area from which precipitation contributes to the flow from a borehole spring, river or lake. For rivers and lakes this includes tributaries and the areas they drain.

Chemical Status (surface waters): The classification status for the surface water body. This is assessed by compliance with the environmental standards for chemicals that are listed in the Environmental Quality Standards Directive 2008/105/EC, which include priority substances, priority hazardous substances and eight other pollutants carried over from the Dangerous Substance Daughter Directives. Chemical status is recorded as good or fails. The chemical status classification for the water body, and the confidence in this (high or low), is determined by the worst test result.

Classification: Method for distinguishing the environmental condition or “status” of water bodies and putting them into one category or another.

Coastal water: surface water on the landward side of a line every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters.



Current Chemical Quality: A measure of the present chemical condition of a water body (also called Chemical Status). There are two classes of chemical status of a water body (good or fail).

Current Ecological Quality: A measure of the present ecological condition of a surface water body (also called Ecological Status). There are five classes of ecological status of surface waters (high, good, moderate, poor or bad)

Driver, Pressure, State, Impact and Response framework for environmental analysis (DPSIR): Driver: an anthropogenic activity that may have an environmental effect (e.g. agriculture, industry); Pressure: the direct effect of the driver (for example, an effect that causes a change in flow or a change in the water chemistry; State: the condition of the water body resulting from both natural and anthropogenic factors (i.e. physical, chemical and biological characteristics); Impact: the environmental effect of the pressure (e.g. fish killed, ecosystem modified); Response: the measures taken to improve the state of the water body (e.g. restricting abstraction, limiting point source discharges, developing best practice guidance for agriculture)

Diffuse sources: Sources of pollution that are not discrete and extend over a wide geographical area

Discharge: Intentional transfer of substances into water

Disproportionate cost: The determination of disproportionate cost requires a decision making procedure that assesses whether the benefits of meeting good status in a water body are outweighed by the costs.

Ecological potential: The status of a heavily modified or artificial water body measured against the maximum ecological quality it could achieve given the constraints imposed upon it by those heavily modified or artificial characteristics necessary for its use. There are five ecological potential classes for Heavily Modified Water Bodies/Artificial Water Bodies (maximum, good, moderate, poor and bad).

Ecological status: Ecological status applies to surface water bodies and is based on the following quality elements: biological quality, general chemical and physico-chemical quality, water quality with respect to specific pollutants (synthetic and non synthetic), and hydromorphological quality. There are five classes of ecological status (high, good, moderate, poor or bad). Ecological status and chemical status together define the overall surface water status of a water body.

Ecosystem: A complex set of relationships among the living resources, habitats, and residents of an area. It includes trees, plants, animals, fish, birds, microorganisms, water, soil and people. The community of organisms and their physical environment interact as an ecological unit.

Environmental impact assessment (EIA): Procedure to identify the potential impacts of a project or activity on the environment and to develop mitigation measures to reduce these to acceptable levels.

Ecosystem approach: The comprehensive integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of the marine ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity

Eutrophication: It means the enrichment of water by nutrients, especially compounds of nitrogen and/or phosphorus, causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned



Exemptions: The environmental objectives of the Water Framework Directive are set out in Article 4. These include the general objective of aiming to achieve good status in all water bodies by 2015 and the principle of preventing any further deterioration in status. There are also a number of exemptions to the general objectives that allow for less stringent objectives, extension of deadline beyond 2015 or the implementation of new projects. Common to all these exemptions are strict conditions that must be met and a justification must be included in the river basin management plan. The conditions and process in which the exemptions can be applied are set out in Article 4.4, 4.5, 4.6 and 4.7.

Groundwater: all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

Good chemical status (surface waters): Means those concentrations of chemicals in the water body do not exceed the environmental standards specified in the Environmental Quality Standards Directive 2008/105/EC. These chemicals include Priority Substances, Priority Hazardous Substances and eight other pollutants carried over from the Dangerous Substance Daughter Directives.

Good chemical status (groundwater): See chemical status (groundwater). Means the concentrations of pollutants in the groundwater body do not exceed the criteria set out in Article 3 of the Groundwater Daughter Directive (2006/118/EC).

Good ecological potential: Those surface waters which are identified as Heavily Modified Water Bodies and Artificial Water Bodies must achieve 'good ecological potential' (good potential is a recognition that changes to morphology may make good ecological status very difficult to meet). In the first cycle of river basin planning good potential may be defined in relation to the mitigation measures required to achieve it.

Good ecological status: The objective for a surface water body to have biological, structural and chemical characteristics similar to those expected under nearly undisturbed conditions.

Good status: Is a term meaning the status achieved by a surface water body when both the ecological status and its chemical status are at least good or, for groundwater, when both its quantitative status and chemical status are at good status.

Groundwater: All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

Hazardous substances: Substances or groups of substances which are toxic, persistent and liable to bioaccumulate, and other substances or groups of substances which give rise to an equivalent level of concern.

Heavily Modified Water Body: A surface water body that does not achieve good ecological status because of substantial changes to its physical character resulting from physical alterations caused by human use, and which has been designated, in accordance with criteria specified in the Water Framework Directive, as 'heavily modified'.

Inland waters: all standing or flowing water on the surface of the land, and all groundwater on the landward side of the baseline from which the breadth of territorial waters is measured.

Measure: This term is used in the Water Framework Directive and domestic legislation. It means an action which will be taken on the ground to help achieve Water Framework Directive objectives.



Mechanisms: The policy, legal and financial tools which are used to bring about actions (measures). Mechanisms include for example: legislation, economic instruments; codes of good practice; negotiated agreements; promotion of water efficiency; educational projects; research; development and demonstration projects.

Monitoring points: A location within a water body where different environmental parameters are measured, including biology, hydromorphology, physico-chemical, and priority and priority-hazardous substances for surface waters.

Objective (surface waters): Three different status objectives for each water body. These are:

- Overall status objective;
- Ecological status or potential objective;
- Chemical status objective.

These are always accompanied by a date by when the objective will be achieved.

Ecological status (or potential) objectives will be derived from the predicted outcomes for the biological elements and physico-chemical elements, plus any reasons for not achieving good ecological status (or potential) by 2015.

Chemical status objectives will be derived from the predicted outcomes for the chemical elements plus any reasons for not achieving good chemical status by 2015.

Overall status objectives will be derived from the ecological status and chemical status objectives.

Point source: Identifiable and localized point of emissions to air and discharges to water

Pressures: Human activities such as abstraction, effluent discharges or engineering works that have the potential to have adverse effects on the water environment.

Priority substances: A pollutant or group of pollutants, presenting a significant risk to or via the aquatic (surface water) environment that has been identified at Community level under Article 16 of the Water Framework Directive. They include 'priority hazardous substances'.

Pollution: The introduction by man, directly or indirectly, of substances or energy into the maritime area which results, or is likely to result, in hazards to human health, harm to living resources and marine ecosystems, damage to amenities or interference with other legitimate uses of the sea

Population equivalent is a measure of pollution representing the average organic biodegradable load per person per day: it is defined in Directive 91/271/EEC as the organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60 g of oxygen per day.

Programme of Measures: A Programme of Measures, as used in the Water Framework Directive, is a group of actions designed to improve the environment in a river basin district and meet the objectives of the Directive.

Reference conditions: The benchmark against which the effects on surface water ecosystems of human activities can be measured and reported in the relevant classification scheme. For waters not designated as heavily modified or artificial, the reference conditions are synonymous with the high ecological status class. For waters designated as heavily modified or artificial, they are synonymous with the maximum ecological potential class.



Risk: The likelihood of an outcome (usually negative) to a water body or the environment, or the potential impact of a pressure on a water body.

Risk assessment: The analysis that predicts the likelihood that a water body is at significant risk of failing to achieve one or more of the Water Framework Directive objectives.

Risk category: The numerical or descriptive category assigned to water bodies that have been risk assessed, in order to make the risk-based prioritization of water bodies for action under the Water Framework Directive more manageable.

River basin: A river basin is the area of land from which all surface run-off and spring water flows through a sequence of streams, lakes and rivers into the sea at a single river mouth, estuary or delta. It comprises one or more individual catchments.

River basin district: the area of land and sea, made up of one or more neighbouring river basins together with their associated groundwaters and coastal waters, which is identified under Article 3(1) as the main unit for management of river basins.

River Basin Management: The management and associated planning process that underpins implementation and operation of the Water Framework Directive. It is both an overarching process in terms of existing processes and also defines new sub-processes such as those for hydromorphology. The river basin management plans are plans for river basin management.

River Basin Management Plan: For each River Basin District, the Water Framework Directive requires a River Basin Management Plan to be published. These are plans that set out the environmental objectives for all the water bodies within the River Basin District and how they will be achieved. The plans will be based upon a detailed analysis of the pressures on the water bodies and an assessment of their impacts. The plans must be reviewed and updated every six years.

Surface water: inland waters, except groundwater, transitional waters and coastal waters, except in respect of chemical status, for which territorial waters are also included.

Significant Water Management Issues: This is a report on each River Basin District that highlights significant water management issues in that River Basin District which will need to be addressed to achieve environmental objectives under the Water Framework Directive.

Transitional waters: bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows.

Urban waste water means waste water from residential settlements and services which originates predominantly from the human metabolism and from household activities (domestic waste water) or a mixture of domestic waste water with waste water which is discharged from premises used for carrying on any trade or industry (industrial waste water) and/or run-off rain water;

Water body: A manageable unit of surface water, being the whole (or part) of a stream, river or canal, lake or reservoir, transitional water (estuary) or stretch of coastal water. A 'body of groundwater' is a distinct volume of groundwater within an aquifer or aquifers



I. Background/Rationale

General information about the training

The whole process of river basin management planning includes the preparation of programmes of measures at basin level for achieving the environmental objectives of the Water Framework Directive cost-effectively. The planning, implementation and evaluation of the programme of measures is an iterative process that will include several river basin management plan cycles (2021, 2027).

Basic measures include control of pollution at source through the setting of emission limit values as well as through the setting of environmental quality standards. The use of economic instruments, such as water pricing, is part of the basic measures.

The assistance in preparing the Program of Measures as part of the development of the River Basin Management Plan, in line with the Water Framework Directive continued with additional steps, based on the agreed 4 phases methodology, and related packages of actions and activities needed for their implementation. Specifically, the main focus of this Workshop was to discuss the basic and supplementary measures addressing the SWMIs and options for assessing the anticipated effects towards reaching the WFD objectives.

Phases 1 – 3 have been already implemented through the assistance and contributions of all beneficiary countries in 2015. The results reached during the 3rd phase have been implemented at the Workshop, which is the subject of this present report. The phase 4 will be further implemented in 2016 till the end of the project.

The final outcome of the first task of the Water Management Working Group, respectively the task 2.3.3 “Assistance in the development of transboundary river basin management plans” would be the draft Program of Measures or Drina River Basin, concluded through the contributions from the Drina countries but discussed and agreed by all ECRAN beneficiary countries. In addition, experiences of all beneficiary countries will be incorporated in the final report, as case studies.

For the preparation of this workshop, the participants made use of the results obtained during previous screening workshops, specifically:

- Procedures for completing the screening templates for basic measures, according to the European reporting schemes
- The approach for the identification and selection of supplementary measures
- The outline and the first draft of the PoM.

The Program of measures in Drina River Basin to be completed in line with phase 4 of the methodology will include basic and supplementary measures, addressing organic pollution, nutrient pollution, flooding, hazardous substances pollution and hydromorphological alterations. For each of these significant water management issues, the participants made use of the EC reporting sheets, following the relevant EU Directives, such as Urban Wastewater Directive, Industrial Emissions Directive, Nutrients Directive, Flood Directive, and Environmental Quality Standards Directive. Further, for addressing hydromorphological alterations, the program of measures will cover mainly measures for improving longitudinal and lateral connectivity of rivers, as suggested by the beneficiary countries. In addition, the role of national water retention measures (NWRM) has been



discussed at the workshop, and the conclusions and exemplifications on their use will be illustrated as well in the report.

The first day was dedicated to the Basic Measures.

Article 11 of the WFD sets out the type of measures - basic measures and, where necessary, supplementary measures - that must be included in the RBM Plan.

The “basic measures” include implementation of measures required the directives, such as: UWWT, Nitrates, IED, Bathing Water, Habitats, Birds, Drinking Water, Major Accidents (Seveso), EIA, Sewage Sludge, Plant Protection Products. Basic measures are those targeted to achieving the requirements set by current environmental legislation such as the UWWTD, Nitrates and Bathing Waters Directives.

Basic measures include measures which might have already been planned, designed or implemented on the ground.

Other basic measures required under Article 11(3) of the Directive must also be addressed e.g. ‘controls over the abstraction of fresh surface water and groundwater’ (Article 11(3) (e)).

In addition, during the first day the participants reviewed the approach, methodologies and the results achieved during the development of the PoM in Drina RB. Finally, the first draft of the RBMP and PoM chapters for Drina RB have been presented and discussed.

The Supplementary Measures have been examined during the 2nd day of the workshop.

There will be certain cases where full application of the ‘basic measures’ will not be enough to achieve the WFD objectives of ‘good status’. Supplementary measures are those additional measures needed on top of basic measures to achieve the WFD objectives. In case the WFD targets are not reached through basic measures, supplementary measures have to be implemented.

Therefore, additional supplementary measures will need to be identified and considered, to be identified and implemented at local level i.e. at the river basin or water body level. A detailed examination was organized about the role of national water retention measures in the program of measures.

The focus of last day of the workshop was on the discussion of the option to assess the anticipated **effects of the measures** implemented in the basin.

The workshop provided the frame for countries to discuss and agree on the list of most appropriate supplementary measures and the environmental objectives for Drina RB.

Following the suggestions of the participants at the last workshop organized on 15-17 November 2015, regarding sharing the experience of countries towards the elaboration of the River Basin Management Plan and its Program of Measures, case studies have been presented covering the following subjects:

- 1) setting up the environmental objectives for the PoM in the Drina RB;
- 2) suggestions for the list of supplementary measures from Drina countries (B&H, ME, RS);
- 3) experiences of AL, Kosovo¹, MK and TK for preparing list of supplementary measures.

¹ *This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.



Experiences from Romania have been shared on the development of the Program of measures and selection of basic and supplementary measures and the assessment of their effects towards WFD objectives.

The remaining components of the 4th phase methodology will cover issues such monitoring programmes, economic analysis, financing and issues linked to the implementation and reporting of the program of measures. These topics will represent the focus of the next planned training in 2016.

Summary of the main topics covered

The main topics presented and discussed at the Workshop included:

1) Basic and supplementary measures

1.1. Basic Measures

- (i) Progress made for the development of the PoM as part of the RBM Plan: Basic Measures
- (ii) Financial aspects for the implementation of the basic measures included in the RBMP

1.2. Supplementary Measures

- (iii) Wetlands as supplementary measures – cost and benefits within the PoM
- (iv) Supplementary measures for Drina River Basin
- (v) Integration of National Water Retention Measures in river basin management
- (vi) Linking National Water Retention Measures with EU Agricultural Policy/CAP Pillar 1

2) Latest updates in approaching cross cutting issues in the WFD implementation process at the EU level

3) Proposal for setting up the environmental objectives for Drina RB

4) Anticipated effects of the PoM in Drina River Basin

5) Anticipated effects of climate change adaptation – EU policy context

6) Approach for setting up scenarios for assessing the anticipated effects of the PoM

7) Lessons learned from Romania on:

- a. The implementation of the basic measures within the RBMP. Approach, challenges and implementation assessment;
- b. Identification and development of the environmental objectives according with WFD. Overview on specific case studies;
- c. Supplementary measures – legal basis and lessons learned from the Romanian experiences;
- d. Measures in the PoM for climate change adaptation related to the WFD.



II. Objectives of the Training

General Objective

To encourage and mobilize efforts towards WFD implementation as a key to reaching the good water status in the Drina River basin through capacity building activities, and based on countries needs and priorities.

Specific Objectives

- To make use of the results obtained during the previous screening workshops and advance with the elaboration of the Program of Measures in Drina River Basin
- To present, discuss and review the preparatory status of the PoM in Drina River Basin in relation to the pressures assessment, identification of basic and supplementary measures addressing the five SWMIs in Drina River Basin, and performing the economic analysis
- To present experiences of all beneficiary countries for selecting the basic and supplementary measures addressing the SWMIs
- To agree on the basic and supplementary measures in Drina River Basin
- To agree on the set of assumptions for preparing the scenarios for Drina River Basin
- To establish further actions in order to finalize the Drina RBM Plan
- To share information, exchange views on experience for the establishment of the environmental objectives
- To present experiences in the development of the environmental objectives at the national level, and the coordination in the transboundary and river basin context
- To agree for environmental objectives in Drina River Basin
- To present the reference and concept documents required for implementation process in the transboundary context of the Drina River Basin
- To assess the difficulties in the countries for development of the environmental objectives and to discuss the needs and possible options of support through the activities of ECRAN project, including training needs
- Facilitate dialogue among the countries on specific concepts and actions that are needed to ensure WFD implementation
- To explore any national obstacles (involvement and commitment, data and methodologies, coordination and cooperation, capacity building needs) towards implementing the WG Water tasks and identify possible solutions
- To brainstorm and discuss the activities (guidance, capacity building, and practical case studies) needed for performing the project tasks in line with WFD requirements in the Drina RB and involvement of participant countries.



Expected Results

- Improved understanding of the topics, challenges and tasks, and related responsibilities along the establishment of the environmental objectives and the development of the Program of Measures, in line with WFD;
- Exchange of experiences and knowledge significantly improved;
- Key obstacles impeding the tasks implementation and related solutions identified;
- Active involvement of the participants through the preparation of the list of basic and supplementary measures, the establishment of environmental objectives, the identification of the appropriate assumptions, and selection of scenarios for assessing the anticipated effects of the PoM;
- Guidance documents related to the WG tasks discussed and clarified.



III. EU policy and legislation covered by the training

The Water Framework Directive (WFD) 2000/60/EC

The Water Framework Directive (WFD) 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy represents the European Union directive which commits European Union member states to achieve good qualitative and quantitative status of all water bodies by 2015. The Directive aims for 'good status' for all ground and surface waters that include rivers, lakes, transitional waters, and coastal waters, in the EU.

The Directive also requires Member States to establish river basin districts and for each of these a river basin management plan. The Directive envisages a cyclical process where river basin management plans are prepared, implemented and reviewed every six years. There are four distinct elements to the river basin planning cycle: characterisation and assessment of impacts on river basin districts; environmental monitoring; the setting of environmental objectives; and the design and implementation of the programme of measures needed to achieve them.

This Framework-Directive has a number of objectives, such as preventing and reducing pollution, promoting sustainable water usage, environmental protection, improving aquatic ecosystems and mitigating the effects of floods and droughts, aiming to achieve "good ecological and chemical status" for all Community waters by 2015.

Several successive amendments and corrections (2001, 2008 and 2009), have been incorporated to the WFD.

The river basin management established under the WFD (entered into force December 2009) begins with an analysis of the characteristics of the river basin district, a review of the impact of human activity on water status, and an economic analysis of water use. Programmes to monitor water status must be established, along with programmes of measures for each river basin district in order to achieve the specified environmental objectives. Then, for each river basin district, a river basin management plan must be produced with the active involvement of all interested parties.

Finally, the specific programmes of measures must be implemented so as to achieve the objective of good status for all waters within each river basin. The first RBM plans cover the period 2009-2015. They shall be revised in 2015 and then every six years thereafter.

The River Basin Management Plan (RBMP) and the Program of Measures (PoM)

The principal component of the Water Framework Directive for each river basin district is the development of river basin management plans which will be reviewed on a six yearly basis and which set out the actions required within each river basin to achieve set environmental quality objectives.

The best model for a single system of water management is management by river basin - the natural geographical and hydrological unit - instead of according to administrative or political boundaries. While several Member States already take a river basin approach, this is at present not the case everywhere. For each river basin district - some of which will traverse national frontiers - a "river basin management plan" will need to be established and updated every six years, and this will provide the context for the co-ordination requirements identified above.



The river basin management plan (RBMP) is essentially a snapshot in time and is the subject of continual review. Essentially, the first river basin management plans finalized ended on December 2009 and represents the transition between the initial analysis carried out in 2004 and implementation of the Directive. Their 6-years updating is a refining process based on improved data and understanding and allowing for revision of the circumstances in the river basins.

The first river basin management plans have been published by the end of 2009 and summarized the quality and quantity objectives to be achieved by 2015.

The river basin management plan (RBMP) represents the main achievement tool of the WFD objectives, which is realized in 6-year cycles and consists of preparation, implementation and revision phases.

Essentially, the RBMP provides:

- 1) evidence and documentation mechanism for the information gathered including: pressures and impact assessment, environmental objectives for surface and ground waters, quality and quantity of waters, and the impact of human activity on water bodies;
- 2) facilitates coordination of the programmes of measures and other relevant programmes within the river basin district;
- 3) guarantees the main progress reporting mechanism to the EC as required by the WFD Art. 15.

Within the Water Framework Directive (WFD), the environmental objectives will be set for all water bodies. One of its main aims is that all water bodies (including rivers, lakes, coasts, estuaries and groundwater) achieve “good status” by 2015. Water bodies must also be protected to prevent any deterioration in status.

Through the gap analysis, for each water body, any possible discrepancy between its existing status and that required by the Directive is identified.

If a water body is considered unlikely to achieve its environmental objectives by 2015 (including those for protected areas and groundwater), the WFD requires that management measures to be put in place to meet the WFD goals. Individual measures and/or packages of measures for water bodies must be integrated in a co-ordinated and cost-effective programme of measures

Guidance documents

In order to address the WFD implementation challenges in a coordinated way, the Commission agreed on a number of 33 guidance documents and 10 technical reports which have been produced to assist EU Member States with an overall methodological approach, which could be adjusted to specific circumstances by each EU Member State. The Guidance documents cover many aspects of implementation, such as establishing monitoring programmes, undertaking economic analyses, engaging the public, developing classification systems, how to identify and designate heavily modified and artificial water bodies.

Guidance documents finalized are made available on CIRCA.

The most relevant guidance documents for this workshop are the following:

N° 1 – Economics and the Environment



This Project is funded by the
European Union



A project implemented by
Human Dynamics Consortium

- N° 2 – Identification of Water Bodies
- N° 3 - Analysis of Pressures and Impacts
- N° 11 - Planning Processes
- N° 12 - The Role of Wetlands in the Water Framework Directive
- N° 13 - Overall Approach to the Classification of Ecological Status and Potential
- N° 20 - Exemptions to the environmental objectives
- N° 21 - Guidance for reporting under the WFD
- N° 24 - River Basin Management in a changing climate

The most relevant EU documents in support of the WFD implementation include:

- "Common Strategy on the Implementation of the Water Framework Directive" (CIS)
- "Carrying forward the Common Implementation Strategy for the Water Framework Directive - Progress and Work Programme 2003/2004"
- "Moving to the next stage in the Common Implementation Strategy for the Water Framework Directive - Progress and Work Programme 2005/2006"
- "Improving the comparability and the quality of Water Framework Directive implementation – Progress and Work Programme 2007-2009"
- "Supporting the implementation of the first river basin management plans - Work programme 2010-2012"
- "Strengthening the implementation of EU water policy through the second river basin management plans - Work Programme 2013-2015".

The CIS is a key document, prepared in recognition that an integrated approach to river basin management throughout Europe is crucial for the successful implementation of the WFD Directive.

The purpose is to:

- (i) develop a common understanding and approach to implementation throughout the EU,
- (ii) elaborate informal technical guidance and share experiences between MS to avoid duplication of effort, and
- (iii) to support efficient application of the WFD requirements.

In addition, the Commission produced Thematic CIS information sheets which provided more information and resource material publicly available on a variety of subjects, such as: River Basin Management, Reporting and WISE, Ecological Status, Groundwater, Chemical Aspects, Flood Risk Management, Climate Change and Water, Water Scarcity and drought, Agriculture and Water, Biodiversity and water, Hydromorphology and the Economic Issues.



Other relevant EU legislation for approaching River Basin Management Plan and the Program of Measures

- Decision 2455/2001/EC of the European Parliament and of the Council of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC of water policy (WFD).
- 2005/646/EC: Commission Decision of 17 August 2005 on the establishment of a register of sites to form the intercalibration network in accordance with Directive 2000/60/EC of the European Parliament and of the Council.

Groundwater

- Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution caused by certain dangerous substances.
- Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration

Flood protection

- Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks.

Municipal urban wastewater treatment

- Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment
- 93/481/EEC: Commission Decision of 28 July 1993 concerning formats for the presentation of national programmes as foreseen by Article 17 of Council Directive 91/271/EEC.
- The Sewage Sludge Directive (86/278/EEC).

Drinking water

- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption.
- Council Directive 79/869/EEC of 9 October 1979 concerning the methods of measurement and frequencies of sampling and analysis of surface water intended for the abstraction of drinking.

Dangerous substances

- Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.
- Council Directive 86/280/EEC of 12 June 1986 on limit values and quality objectives for discharges of certain dangerous substances included in List I of the Annex to Directive 76/464/EEC.
- Directive 2006/11/EC of the European Parliament and of the Council of 15 February 2006 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.
- Council Directive 82/176/EEC of 22 March 1982 on limit values and quality objectives for mercury discharges by the chlor-alkali electrolysis industry.



- Council Directive 83/513/EEC of 26 September 1983 on limit values and quality objectives for cadmium discharges.
- Council Directive 84/491/EEC of 9 October 1984 on limit values and quality objectives for discharges of hexachlorocyclohexane.
- Council Directive 84/156/EEC of 8 March 1984 on limit values and quality objectives for mercury discharges by sectors other than the chlor-alkali electrolysis industry.

Industrial discharges

- Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control.
- Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control (Codified version).
- Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control).
- The Major Accidents (Seveso) Directive (96/82/EC).

Agriculture

- Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources
- Common Agricultural Policy

Bathing water

- Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water
- Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC

Bathing water

- Bathing Water Directive (EC, 2006)

Environmental Impact assessment

- The Environmental Impact Assessment Directive (85/337/EEC).
- Strategic Environmental Impact Assessment Directive (2001/42).



Useful references on practical guides or links to various WFD web sites

At the EC, <https://circabc.europa.eu/> provides comprehensive sources of reference documents related to WFD, Flood Directive, and other relevant policies and directives.

EU LEGISLATION, GUIDELINES AND REPORTS

WATER

http://ec.europa.eu/environment/water/water-framework/objectives/implementation_en.htm -

http://ec.europa.eu/environment/water/flood_risk/

ECRAN & RENA NETWORK

<http://www.ecranetwork.org/>

<http://www.renanetwork.org/>

TAIEX

<http://ec.europa.eu/enlargement/taieux/>

RELEVANT PROJECTS IN MEDITERRANEAN SEA AND BLACK SEA

http://ec.europa.eu/research/bioeconomy/fish/research/ocean/index_en.htm

<http://cordis.europa.eu/fp7/coordination/>

http://ec.europa.eu/maritimeaffairs/policy/marine_knowledge_2020/index_en.htm

<http://www.kg.eurocean.org/>

<http://www.devotes-project.eu/>

<http://www.perseus-net.eu/site/content.php>

<http://medsea-project.eu/>

<http://www.misisproject.eu/>

<http://www.pegasoproject.eu/>

<http://www.coconet-fp7.eu/index.php/about-coconet>

<http://www.envirogrids.net/>

<http://www.seas-era.eu/np4/homepage.html>



IV. Highlights from the Training

Reference is made to Annex I for the agenda. Below only the main elements are highlighted. The presentations are provided in Annex III.

Highlights Day 1

The first day has been dedicated to the presentation of the current status of the report regarding the River Basin Management Plan and the Program of Measures for Drina River Basin and the discussion of the list of Basic measures, to be selected and incorporated as mandatory measures in the Program of Measures.

1. Overview of the current status of the preparation of the Program of Measures in Drina RB

As the WM WG agreed to prepare a report on the River Basin Management Plan and the Program of Measures, which will include information not only to Drina River Basin, but also case studies covering the non-Drina countries, on the same topics as for the Drina countries.

The report will follow the agreed methodology, will include the contributions of all beneficiary countries, and reflect the knowledge and the experience of the participants of the WM WG which is outstanding. Considering the data gaps, some parts of the report will be more theoretical than those where real assessment and interpretation have been made.

CONTENT OF THE REPORT ON THE PROGRAM OF MEASURES IN DRINA BASIN AND CASE STUDIES FROM ECRAN BENEFICIARY COUNTRIES

The Drina RBM plan is structured as follow:

1. **Introduction**
2. **Legal basis**
3. **General description of the characteristics of the river basin district**, including a map showing the location and boundaries of the surface and ground water bodies and a further map showing the types of surface water bodies within the basin.
4. **Overview on the Significant Water Management Issues of the Drina RB**
Summary of the significant pressures and the impact of anthropogenic activity on the status of surface and ground waters, including point source pollution, diffuse pollution and related land use, the quantitative status of water including abstractions and an analysis of other impacts of human activity on water status.
5. **Identified significant pressures in the Drina RBD**
 - a. Organic pollution
 - b. Flooding
 - c. Hydromorphological alterations
 - d. Nutrient pollution
 - e. Hazardous substances pollution
 - f. Other significant issues
 - i. Groundwater



1. Groundwater quality
 2. Groundwater quantity
 - 6. Monitoring networks and ecological/chemical status**
 - 7. Environmental objectives and exemptions**
 - 8. Economic analysis of water uses**
 - 9. Drina Joint Programme of Measures**
 - a. Organic pollution**
 - i. Visions and management objective**
 - ii. JPM approach toward the management objective**
 - iii. Summary of joint measures on the basin wide scale**
 - b. Flooding**
 - i. Visions and management objective**
 - ii. JPM approach toward the management objective**
 - iii. Summary of joint measures on the basin wide scale**
 - c. Hydromorphological alterations**
 - i. Visions and management objective**
 - ii. JPM approach toward the management objective**
 - iii. Summary of joint measures on the basin wide scale**
 - d. Nutrient pollution**
 - i. Visions and management objective**
 - ii. JPM approach toward the management objective**
 - iii. Summary of joint measures on the basin wide scale**
 - e. Hazardous substances pollution**
 - i. Visions and management objective**
 - ii. JPM approach toward the management objective**
 - iii. Summary of joint measures on the basin wide scale**
 - 10. Conclusions**
 - 11. List of competent authorities.**
- Annexes**

At the meeting, agreement was reached on the outline of the report and the first chapters of the plan have been discussed.

Case studies have been prepared by all ECRAN beneficiary countries covering the following topics:

- Transboundary issues;
- Significant Water Management Issues;



- Cost recovery;
- Payments for environmental services;
- Agricultural measures;
- Supplementary measures;
- Water pricing;
- Prioritisation of measures;
- Indicators.

The list of topics for case studies will be further developed based on the developments of the remaining workshops in 2016 where the remaining chapters of the plan will be completed.

The report will include annexes which will cover the methodology of developing the program of measures and the screening templates used for covering the specific chapters of the plan.

Annexes and screening templates

- 1) Transboundary issues: template for data collection for Drina countries
- 2) SWMIs basic concept and screening template for Drina countries
- 3) Linkages SWMIs and PoM: background document for all ECRAN project beneficiaries
- 4) Monitoring programs: template for data collection from all ECRAN beneficiaries countries
- 5) SWMIs prioritization
- 6) Visions identification and agreement at 5th Screening Workshop
- 7) Management objectives identification
- 8) Pressures assessment making use of EC reporting schemes
- 9) Impact assessment
- 10) Economic analysis
- 11) Financing of measures
- 12) WFD Environmental objectives

2. Program of Measures – Basic Measures

Following the discussions at the 6th Screening Workshop, key issues in the preparation of the Program of Measures have been introduced:

The basic measures of Article 11(3)a are listed in table 4 in the WFD CIS Guidance Document 21 (page 47), and are measures under existing EU legislation.

Basic Measures required by Article 11(3)(a) - Table 4 and listed in Annex VI



Bathing Water Directive (76/160/EEC and 2006/7/EC)
 Birds Directive (79/409/EEC)
 Drinking Water Directive (80/778/EEC) as amended by Directive (98/83/EC)
 Major Accidents (Seveso) Directive (96/82/EC)
 Environmental Impact Assessment Directive (85/337/EEC)
 Sewage Sludge Directive (86/278/EEC)
 Urban Waste-water Treatment Directive (91/271/EEC)
 Plant Protection Products Directive (91/414/EEC)
 Nitrates Directive (91/676/EEC)
 Habitats Directive (92/43/EEC)
 Integrated Pollution Prevention Control Directive (96/61/EC)

The basic measures of Article 11(3) b to l are listed in table 5 in the WFD CIS Guidance Document 21 (pages 48-49). This is a list of measures that Member States are required to put in place in each RBD.

Other basic measures as required by Article 11(3)(b-l) - Table 5

- Measures for the recovery of cost of water services (Article 9)
- Measures to promote efficient and sustainable water use
- Measures for the protection of water abstracted for drinking water (Article 7) including those to reduce the level of purification required for the production of drinking water (note: these basic measures may not apply to the whole territory)
- Controls over the abstraction of fresh surface water and groundwater and impoundment of fresh surface waters including a register or registers of water abstractions and a requirement for prior authorisation of abstraction and impoundment
- Controls, including a requirement for prior authorisation of artificial recharge or augmentation of groundwater bodies.
- Requirement for prior regulation of point source discharges liable to cause pollution
- Measures to prevent or control the input of pollutants from diffuse sources liable to cause pollution.
- Measures to control any other significant adverse impact on the status of water, and in particular hydromorphological impacts.
- Prohibition of direct discharge of pollutants into groundwater
- Measures to eliminate pollution of surface waters by priority substances and to reduce pollution from other substances that would otherwise prevent the achievement of the objectives in Article 4



- Any measures required to prevent significant losses of pollutants from technical installations and to prevent and/or reduce the impact of accidental pollution incidents.

| BASIC MEASURES IDENTIFIED BY ALBANIA | |
|--|---|
| The National Action Plan for the “Reduction of the coastal zone pollution from land – based sources” | Basic measures identified, such as sewerage systems completion and building of urban wastewater treatment plants for localities Lezha and Shengjin. |

| BASIC MEASURES IDENTIFIED BY MONTENEGRO | |
|--|--|
| URBAN WASTEWATER TREATMENT DEVELOPMENT | <p>Currently, around 65% of population that lives in urban areas of the municipalities is connected to the sewerage system.</p> <p>The systems for waste water treatment are in function in Podgorica, Budva, Zabljak and Mojkovac. The waste water treatment plant in Podgorica operates the primary waste water treatment of 100.000 PE load and biological waste water treatment with the load of 55.000 PE. The waste water treatment plant in Mojkovac operates the secondary waste water treatment, and the waste water treatment plant in Budva operates the secondary waste water treatment.</p> <p>By the end of 2029, in all settlements in Montenegro of more than 2000 PE, the sanitary sewage necessary will be constructed and appropriate wastewater treatment will be provided, depending on the recipient, in accordance with the Directive 91/271/EEC concerning urban waste-water treatment. The objective will be achieved in phases, giving priority to larger agglomerations and agglomerations with vulnerable recipients and this will be implemented by 2020.</p> |

| BASIC MEASURES IDENTIFIED BY TURKEY | |
|--|--|
| Organic pollution | <p>Urban Wastewater Treatment Plants</p> <p>Separate Industries and Industrial Organized Zones Wastewater Treatment Plants</p> <p>Monitoring and Inspection of Water Quality</p> <p>Determination of Hot Spots</p> |

3. Setting up of the environmental objectives according with WFD in Drina RB

3.1 Key issues according to the WFD

Where more than one of the objectives relates to a given body of water, the most stringent shall apply (Art. 4.2), irrespective of the fact that all objectives must be achieved.



Taking into account the results of the intercalibration exercise Member States are obliged to set detailed values defining the status for each water body.

For heavily modified and artificial water bodies, Article 4.1 point (a) indent (iii) sets out "specific objectives" for these specific water bodies. In Article 4.3, strict criteria for the designation of artificial or heavily modified water bodies are described.

The assessment of "good ecological potential" includes economic considerations and it is linked to the possible mitigation measures.

It has been agreed that artificial and heavily modified water bodies do not constitute a conventional objective or exemption.

The environmental objectives can be grouped into **eight thematic areas**:

- **Water quality** (e.g. avoid the deterioration of water bodies quality; achieve water bodies good status);
- **Water quantity** (e.g. promotes demand and supply management of water according to the availability in each catchment area and ensure the integrated management of surface water sources and groundwater);
- **Risk management** and Public Water Domain valorisation (e.g. promote economic value of water resources; promote the coastal areas planning; prevent and manage risk situations and environmental, social and economic impacts);
- **Institutional and legal framework** (e.g. meet the objectives stated in national and European Community environmental protection regulations);
- **Economic and Financial Framework** (e.g. promote sustainability management models);
- **Monitoring** (e.g. Ensure the operability of monitoring networks);
- **Research and knowledge** (e.g. promote scientific research and knowledge about the natural heritage as well as monitoring species, habitats and ecosystems; ensure the existence and operation of information systems on water resources);
- **Communication and governance** (e.g. strengthen and promote institutional linkage and coordination between policies and instruments).

The environmental objectives that need to be achieved under the WFD are:

For surface water

- achievement of good ecological status and good surface water chemical status by 2015;
- achievement of good ecological potential and good surface water chemical status for heavily modified water bodies and artificial water bodies;
- prevention of deterioration from one status class to another;
- achievement of water related objectives and standards for protected areas;

The environmental objectives that need to be achieved under the WFD are:



For groundwater

- achievement of good groundwater quantitative and chemical status by 2015;
- prevention of any deterioration in status;
- reversal of any significant and sustained upward trends in pollution and prevention /limiting input of pollutants to groundwater;
- achievement of water related objectives and standards for protected areas.

The environmental objectives include:

- 1) Reaching the good water status and good chemical status and respectively of the good ecological potential and good chemical status (for modified or artificial water body) for surface water bodies
- 2) Reaching good chemical status and good quantitative status for groundwater bodies
- 3) Reaching the environmental objectives for protected areas according with the specific legislation
- 4) Non-deterioration of the surface and groundwater status.

Examples of environmental objectives in former Yugoslav Republic of Macedonia

- Avoid a further deterioration of the status of the water bodies
- Achieve a good status and a good environmental potential for all its water bodies
- A good status and environmental potential shall be achieved gradually and in line with the goals set forth by the country's Water Law
- Reduce chemical pollution
- Achieve water related protected areas objectives.

Suggestions for environmental objectives for Drina RB

- Avoidance or reduction of water pollution
- Protection and improvement of the sustainable use of groundwater with respect to its quantity and quality.
- Control of the use of the pesticide
- Ensure protection of ecosystem habitats
- Ensure sustainable water use for hydropower.

Highlights Day 2

The second day has been dedicated to the Supplementary measures, to be selected and incorporated in the Program of Measures.

4. Program of Measures – Supplementary Measures



The supplementary and additional measures of WFD Articles 11(4) and 11(5) are presented in columns 2 and 4 of table 6b in the WFD CIS Guidance Document 21 (pages 51-56). Where necessary to achieve the WFD objectives Member States need to take supplementary or additional measures on top of the compulsory basic measures.

4.1 General approach to define supplementary measures

The selection of the supplementary measures includes several steps in assessing their needs and contribution to reach the WFD objectives, as follows:

- Identification of the adverse ecological effects caused or likely to be caused by a particular modification of the water body or by a combination of modifications
- Development of an hierarchy of possible options for addressing the adverse ecological effects on the water status
- For a proposed new modification, options which prevent or avoid the impact should be explored first. In the event that an impact cannot be prevented, measures to mitigate it should be considered
- For the selected supplementary measures, a cost-effectiveness analysis should be applied

4.2 Application of cost effectiveness analysis for the selected supplementary measures

The application of the CEA is influenced by the following considerations:

- In the first River Basin Management Plan the main attention has been given to the basic measures;
- Selection of the supplementary measures is based on the identified pressures;
- Classification is based on the effect of the supplementary measures on the biological quality elements;
- Assessment is performed of the effects of the supplementary measures against the identified pressures;
- Prioritization of the measures will be performed based on the ratio cost-effectiveness;
- Review of the supplementary measures at the River Basin level concerning their impact on reaching the environmental objectives;
- Supplementary measures need to be established in synergy with the basic measures;
- Generally, the main concern areas likely to need a supplementary measures are connected with the hydromorphological alterations.

4.3 Assessment of the proposed supplementary measures

The assessment of the selected supplementary measures is relevant for assessing the anticipated effects towards WFD objectives, as contribution in addition to the implementation of the basic measures. It covers:



- The ecological improvement expected from the measure (ecological efficiency) and its contribution to achieving good ecological status or good ecological potential;
- The likelihood that the measure will deliver the expected ecological improvement;
- The length of time before the ecological improvement is expected to occur (e.g. could it deliver the improvements by 2021);
- The lifetime of the measure;
- The costs of the measure (capital and running costs);
- Any other potentially significant positive or negative impacts (e.g. energy; landscape; employment and other user interests);
- Stakeholder's involvement.

4.4 Possible supplementary measures grouped by SWMIs

Supplementary measures addressing nutrients pollution

- Promotion of Phosphate free detergents
- Reduction of the soil erosion
- Establishment of more strict standards for waste water treatment
- Changes in the discharge point to another water body (in order to not affect quality)
- Changes in agricultural practices
- Afforestation

Supplementary measures addressing organic pollution

- Waste water collection and treatment in the agglomeration less than 2000 i.e.
- Application of the stricter standards for wastewater treatment plants
- Use of biological ponds/filter for waste water treatment in rural area
- Improvement of wastewater pre-treatment inside agglomeration
- Increase the efficiency of the waste water treatment

Supplementary measures addressing hydromorphological alteration

- Ensuring lateral connectivity
- Use of the green infrastructure for flood control
- Carrying out works for longitudinal connectivity – fish passes
- Restoration of the floodplain area alongside the river
- Restoration of wetlands
- Reduction or ban of sand and gravel exploitation from the river bed
- Limitation of the hydromorphological restoration within the transport projects
- Increase the flow downstream of main dams wherever is possible.



| POSSIBLE SUPPLEMENTARY MEASURES FOR DRINA RIVER BASIN SUGGESTED BY REPUBLIC OF SERBIA | |
|--|---|
| Organic pollution | |
| | <p>Improve the sewage pipe systems condition to reduce/eliminate leakage or pollution</p> <p>Promote implementation of separate sewage systems</p> <p>Establish the best management practice for Public water companies which are going to manage agglomerations</p> <p>Define the measures for evacuation of sewage water in the settlement with less than 2000 PE, and appropriate treatment technology</p> |
| Flooding and Hydropower | |
| | <p>Explore the possibilities for wetland restoration and water retention in the basin</p> <p>Evaluate the biological minimum and ecological flow in the river, and prescribe the mechanism for its maintenance</p> |
| Priority substances and industrial effluent | |
| | <p>Implement stringent effluent criteria where is needed</p> <p>Pre-treatment</p> <p>Ensure mechanisms for emission control from the industries by independent certified laboratories</p> |
| Nutrient pollution | |
| | <p>Creation of buffer strips;</p> <p>Adequate manure storages for farms out of scope of CAP, especially in vulnerable zones;</p> <p>Investigation of the nutrient retention capacity of the existing reservoirs</p> |
| Economics | |
| | <p>Gradually increase of tariffs in the water sector;</p> <p>Implement measures for raising willingness to pay for water services</p> |
| Municipal dumpsites use as landfill and sand/gravel extraction | |
| | <p>Management of historical pollution (closing the mines)</p> <p>Removal of dumpsites and construction of new solid waste landfills</p> <p>Ensure stringent criteria/reduce/ban the sand gravel exploitation</p> |
| Educational programs and research | |
| | <p>All governance level educational programs related to raising awareness about water issues;</p> <p>Ensure performance of various research, development and demonstration projects which results are going to be used in preparation of the next Plan</p> |



| General | |
|---------|--|
| | <p>Raise the capacity and ensure reorganization of local municipalities to get involved in the process of sustainable water management</p> <p>Assess the suggested measures according to the climate change scenarios</p> <p>Establish the communication mechanisms internally and trans boundary related to various water issues</p> <p>Verification of trans boundary environmental bilateral agreement, to facilitate joint measures and activities</p> |

5. Expected contribution of national water retention measures in the program of measures

5.1 EU policy to support the NWRM realization

The NWRMs are interventions over water related ecosystems - the result of actions taken directly over soil, an aquifer, a floodplain, a forest or any other element that regulates the water cycle. The NWRMs use natural processes - functions commonly performed by nature that slow down water flows, increase infiltration rates, control storm flows, store water, reduce pollution loads.

The NWRMs might be cost-effective alternatives to be considered as part of the RBMP programs of measures. They can help meet RBMP aims as stated in the WFD, the FD, the Strategy for Water Scarcity and Droughts, climate change adaptation, sustainable urban development.

An information package "Towards Better Environmental Options in Flood Risk Management communicated by the Commission to Water Directors is highlighting the role and benefits of Natural Flood Risk Management (2011). Further, the White Paper on Adaptation to Climate Change is suggesting that "working with nature's capacity to absorb or control impacts in urban and rural areas can be a more efficient way of adapting than simply focusing on physical infrastructure (2011).

An important document is the Blueprint to safeguard Europe's water resources" (2012), stating that the NWRM implementation will improve water resource efficiency and sustainability.

The Blueprint stresses the importance of green infrastructures for reducing the impacts of floods, droughts, and land use related pressures:

- Proposes that Member States expand green infrastructures using the River Basin Management Plans that require an integrated approach to managing water resources across policy areas and sectors;
- NWRM to be supported by: The Commission developed with CIS tools for facilitating NWRM uptake in the next RBMPs and FRMPs;
- To prioritise funding of natural infrastructures and ecosystem based adaptation for the water sector in the ESIF;
- Use conditionalities, such as greening of the CAP.

Categories of NWRM are:

- water efficiency measures;



- alternative water supply sources;
- natural water retention measures.

SUPPLEMENTARY MEASURES SUGGESTED BY BOSNIA AND HERZEGOVINA

AGRICULTURAL MEASURES

| | |
|---|---|
| Prohibition periods for applying fertilizer and manure (months) | <p>Prohibition periods for applying fertilizer and manure are:</p> <ul style="list-style-type: none"> • from 01. December to 01. March – on all agricultural land regardless of the cover • from 01. May to 01. September – on all agricultural land on surface without input • from 01. May to 01. September - for applying manure on all agricultural land • from 01. November to 01. February – for applying mineral fertilizers with nitrate nitrogen on all agricultural land, exceptionally allowed applying urea on crop residue from harvest to 01. December – application of mineral fertilizers |
| Limitation of nitrogen and phosphorous application | <p>210 kg/ha (N) is allowed in first 4-year period after carried out an initial analysis of soil fertility</p> <p>170 kg/ha (N) is allowed after that period</p> |
| Area with organic production (ha) | 680 ha (in all country), about 0,03 % of total agricultural land in BiH (Study of organic production, 2012) |
| On Farm Advice/Extension Services (no of farmers trained) | Through several Projects, Agricultural Advise Service inform and educate farmers about requirements of Nitrate Directive and Codes of Good Agricultural practices |

SUPPLEMENTARY MEASURES SUGGESTED BY KOSOVO*

HYDROMORPHOLOGICAL ALTERATIONS

Complete Ministerial Decision on Water Protection Area

Proposing sites for investigative monitoring

Rivers beds and embankments maintenance including in the areas passing the cities

Ensure river flow continuity

Preserving the minimum biological flow from water abstractions upstream

Construction of the monitoring station for water flow and the monitoring point for water quality



Highlights Day 3

Last day of the workshop was focussed on the approaches to calculate anticipated effects of the program of measures, to reach the WFD objectives.

6. Anticipated effects of climate change adaptation

The EU targets for 2020 are:

- 20% cut in greenhouse gas emissions compared with 1990
- 20% of total energy consumption from renewable energy
- 20% increase in energy efficiency.

The most important actions refer to the necessity to take measures and adopt strategies to adapt to climate changes, to ensure required financial support, and the international actions.

The EU was at the forefront of international negotiations for a global climate agreement. A new global climate agreement has been finalised in 2015 and will implemented from 2020 on. This agreement is appreciated as an ambitious, comprehensive and legally binding one.

In addition the Paris Agreement has the following key elements: mitigation, transparency and global stock stake, adaptation, recognizing loss and damage, and financial support.

The participants have discussed the necessity to consider the climate change adaptation measures, to be incorporated in the program of measures.

Adaptation measures related to the water infrastructure are required in case of:

- Changes in the design capacity of drinking water, wastewater and storm water infrastructure, to face the increased intensity of storms, could overwhelm and damage infrastructure
- Sea-level rise could affect the water infrastructure, including drinking water intakes and wastewater outfalls, from sea level rise and adapt the groundwater exploitation to avoid the intrusion of saline water into coastal aquifers
- Drinking water and wastewater utilities need to take an “all hazards” approach to planning for emergencies and extreme weather events
- Vulnerable and economically deprived communities should particularly consider the risk, both for access to clean and safe water as well as for their ability to respond to emergencies during extreme events

Adaptation measures related to the drinking water infrastructure

- Improve the drinking water technology to deal with the increased growth of algae and microbes
- Tackle the issue of invasive species that can disrupt water and waste water systems.
- Consider additional treatment in case of increased storm water runoff which will wash sediment and other contaminants into drinking water sources
- Consider alternatives in case saltwater intrusion in the groundwater due to the sea level rise
- Reassess supply plans and consider alternative pricing, allocation and water conservation options for the droughts and low water periods



- Develop new plans for ensuring water supplies from reservoirs considering change in precipitation.

7. Approach for setting up scenarios for assessing the anticipated effects of the PoM

Article 5 requires that “an economic analysis of water use is undertaken for each River Basin District”, which should “take account of the long term forecasts of supply and demand for water in the RB and where necessary, to provide estimates of the volume, prices and costs associated with water services and estimates of relevant investment including forecasts of such investments”.

The business as usual scenario - will only integrate what would happen in a given river basin district without the WFD, due to:

- changes in population
- new technologies
- the implementation of water policies resulting from previous European directives
- other sector policies
- climate change, etc.

It will be important to focus on the forecasting of pressures and of key socioeconomic drivers that are likely to affect those pressures. These forecasts are translated into an assessment of their impact on water status.

In order to build the baseline scenario, it will be necessary to forecast a set of variables before assessing the impact that these changes will have in terms of pressures and water status.

Key issues when developing a Baseline Scenario

According to Annex III, it is important that:

- Forecast not only investments but other key parameters and drivers influencing water supply and demand (or more generally all significant pressures);
- Forecasts need to integrate predictable changes in past trends based on a series of assumptions concerning these changes;
- Identify variables that can be derived with a high degree of confidence and those that are uncertain;
- Build a series of alternative scenarios using alternative assumptions, particularly with respect to policy options. This will allow stressing the main (significant water management) issues in the river basin district, and discussing policy options by simulating their consistency and their long-term significance (e.g. it can be useful to compare two distinct scenarios, one where water prices and charges are kept stable and one where they increase).

Assumptions for the scenarios

For developing scenarios, the following tasks are needed:

- Develop specific underlying assumptions for the reference cases scenarios, which includes known policy changes and other adaptations to provide a robust baseline for the analysis required for developing the Program of Measures



- There are two categories of assumptions: basic and specific
- Assumptions for the BLS need to be agreed within the Drina River Basin

Ex: the development of the baseline scenarios (BLS) for assessing the organic input and reduction aims to provide a projection of the 'business as usual' policies and trends which can influence the organic pollution in the Drina River Basin.

8. Baseline scenario and selection of the assumptions for Drina PoM

The aims of the baseline scenario (BLS) for Drina RB consist of:

- Identifying whether there is a gap in water status between the projected situation and the Directive's objectives by 2027
- Identifying potential measures to bridge that gap (if there is one) and construct a cost effective programme of measures
- Making the relevant calculations necessary for taking into account the principle of cost recovery of water services, taking into account long-term forecasts of supply and demand for water in the Drina River Basin.

There are four steps in the derivation of the BLS:

1. Assessing and defining the significant activities and pressures (SWMIs in Drina);
2. Evolution of activities generating significant pressures on water bodies (industry, agriculture, urban, etc.);
3. Evaluation of net pressures;
4. Possible outputs of the baseline scenario;

Specific Assumptions Drina

The specific assumptions which will be considered for Drina Program of Measures are:

- general socio-economic indicators and variables (Population growth);
- key sector policies that influence the significant water uses identified in the river basin investigated (Agricultural policy);
- production or turnover of main economic sectors/significant water uses in the river basin;
- land planning and its effects on the spatial allocation of pressures and economic sectors;
- implementation of existing water sector regulation and directives;
- implementation of environmental policies likely to affect water (e.g. Natura 2000).

9. Other key points of discussion

In addition to the highlighted topics, other issues were raised and discussed at the meeting, including the following topics:



1. Differentiation between management objectives and measures to achieve vision;
2. Issues related to the negotiations process;
3. Derogation for other water related directives;
4. Approaches for identification of agglomerations;
5. Cost of preparing the RBMP;
6. Funding sources;
7. Climate changes, adaptation strategies;
8. Climate proof measures in the PoM;
9. Ecological flow as basic measure;
10. The role of buffer strips;
11. Wetlands as supplementary measures;
12. Synergy CAP and WFD;
13. Flood, sediments and nutrients retention potential;
14. Hydropower as a pressure in the basin.

10. Final Workshop Outcomes

Based on the discussions at the workshop, the outcomes of the training consist of the following:

- The outline and the first draft of the Drina RBM and PoM and case studies from all beneficiary countries discussed;
- Clarification on the necessity to develop case studies that would be inserted into the report on different topics, from all beneficiary countries;
- Awareness improved on the necessity to ensure a reliable and complete database;
- Information on the reporting requirements for achieving the measures to reach the WFD objectives and classification of measures in the report – not started, ongoing, completed, according to the EU reporting requirements;
- Clarity on the application of exemptions and the link with derogations and disproportionate costs;
- A bit more clear picture on the negotiations process and the requirements at the national level for transposition, harmonization and institutional and financial strengthening;
- Understanding of the options to select basic and supplementary measures and the differentiation between them.

The participants have also agreed on the future topics of discussion in the next workshops planned for 2016, dedicated to all three tasks of the Water Management Working Group.

1) on the preparation of the Program of measures for Drina river basin

- Environmental objectives
- Exemptions application



- Scenarios
- Funding options
- Climate change
- Public participation in the making decision process

2) on the Economic Analysis

- Application of Polluter Pays Principle
- Estimation of Cost of measures
- Disproportionate costs
- Affordability
- Prioritization of investments
- Water utilities
- Tariffs and charges

3) Integration WFD and the MSFD

- ICZM implementation
- Economics of the PoM analysed in synergy with the economics of the PoM under WFD.



V. Evaluation

Statistical information

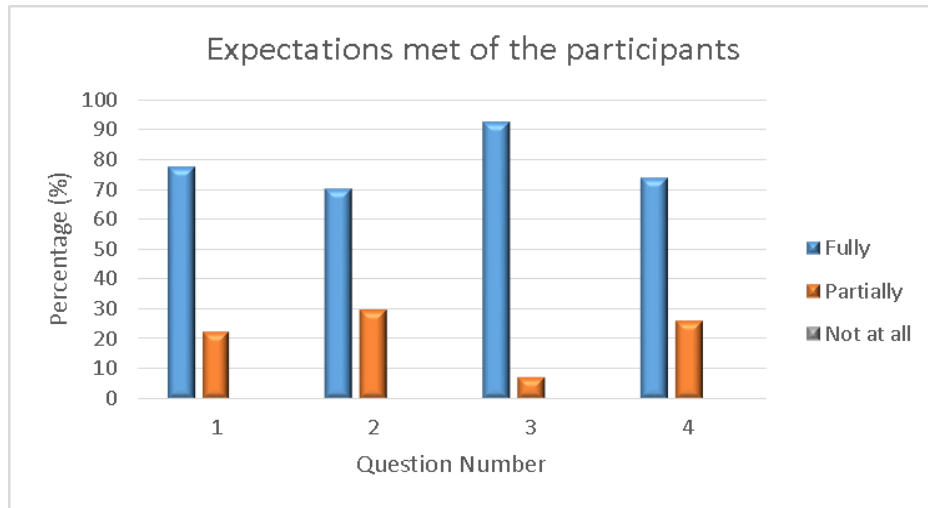
| | | |
|-----|---|---|
| 1.1 | Workshop Session | Regional Workshop WFD - Program of Measures Basic and Supplementary measures and their anticipated effects 15-17 February 2016, Podgorica, Montenegro |
| 1.2 | Facilitators name | As per agenda |
| 1.3 | Name and Surname of Participants (evaluators) optional | As per participants' list |

Your Expectations

Please indicate to what extent specific expectations were met, or not met:

| My Expectations | My expectations were met | | |
|--|--------------------------|-----------|------------|
| | Fully | Partially | Not at all |
| 1. I have Improved understanding of the topics, challenges and tasks, and related responsibilities along the establishment of the environmental objectives and the development of the Program of Measures, in line with WFD | (78%) | (22%) | |
| 2. Significantly improved exchange of experiences and knowledge | (70%) | (30%) | |
| 3. Active involvement of the participants through the preparation of the list of basic and supplementary measures, the establishment of environmental objectives, the identification of the appropriate assumptions, and selection of scenarios for assessing the anticipated effects of the PoM | (93%) | (7%) | |
| 4. Guidance documents related to the WG tasks were discussed and clarified | (74%) | (26%) | |



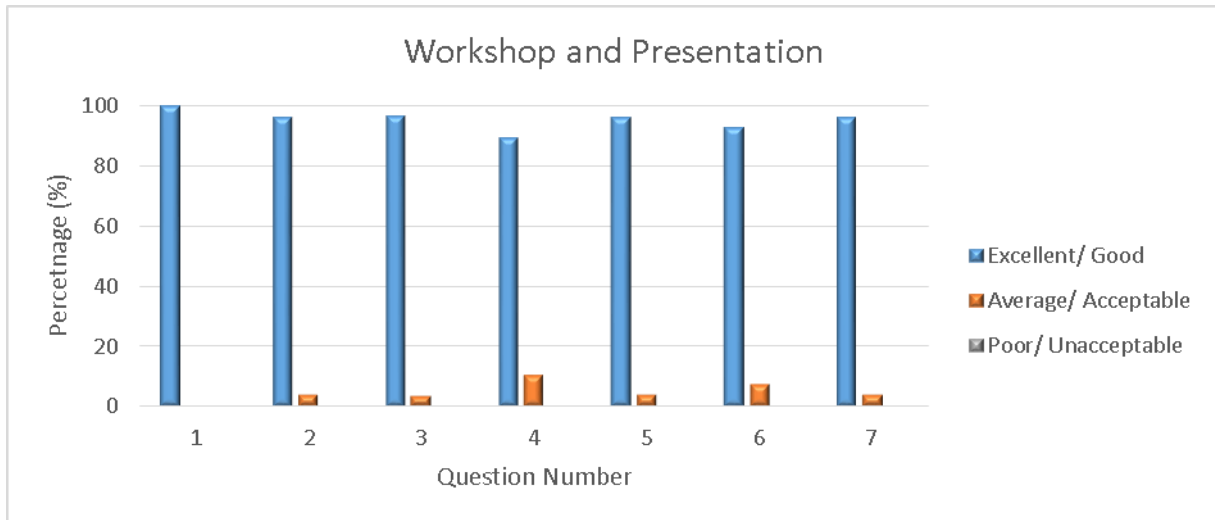


Workshop and Presentation

Please rate the following statements in respect of this training module:

| Aspect of Workshop | Excellent | Good | Average | Acceptable | Poor | Unacceptable |
|--|-----------------------|-----------|----------|------------|------|--------------|
| 1. The workshop achieved the objectives set | (69%) | (31%) | | | | |
| 2. The quality of the workshop was of a high standard | (81%) | (15%) | (4%) | | | |
| 3. The content of the workshop was well suited to my level of understanding and experience | (66%) | (39%) | (3%) | | | |
| 4. The practical work was relevant and informative | (69%) | (21%) | | | | |
| 5. The workshop was interactive | (68%) | (29%) | (3%) | | | |
| 6. Facilitators were well prepared and knowledgeable on the subject matter | (68%) | (14%) | (4%) | (4%) | | |
| 7. The duration of this workshop was neither too long nor too short | (71%) | (25%) | (4%) | | | |
| 8. The logistical arrangements (venue, refreshments, equipment) were satisfactory | (69%) | (28%) | (3%) | | | |
| 9. Attending this workshop was time well spent | (76%) | (21%) | (3%) | | | |





Comments and suggestions

I have the following comment and/or suggestions in addition to questions already answered:

Workshop Sessions:

- Organisation and topics of the workshop were very useful for the everyday work in my country;
- Good.

Facilitators:

- Ok;
- They were well prepared.

Workshop level and content:

- Everything was in time and place;
- High level;
- The quality of this workshop was of a high standart.and;
- Everything was god.

ANNEX I – Agenda

Day 1 : Tuesday, 15 February 2016

Topic: WM WG – Workshop: “Basic and supplementary measures and their anticipated effects in Drina River Basin” – Basic Measures

Chair and Co-Chairs: Mihail Dimovski and Mihaela Popovici

Venue: Podgorica, Montenegro

| Start | Finish | Topic | Speaker | Sub topic/Content |
|--------------|--------------|--|---|---|
| 08:30 | 09:00 | Registration | | |
| 09.00 | 09.15 | Welcome and opening | Welcome and opening Ms. Marta Moren Abat, European Commission, DG Environment Mr. Mihail Dimovski (ECRAN Team Leader) | Address by EC Address by ECRAN |
| 09.15 | 09.30 | Introduction of the Agenda of the workshop | Ms. Mihaela Popovici, ECRAN Expert | Introduction to the purpose of the workshop and its expected outcome Presentation and adoption of the agenda |
| 09.30 | 10.30 | Presentation and discussion of the results achieved in 2015 related to the WFD/PoM workshops | Ms. Mihaela Popovici | 1) Presentation of the approach, methodologies and the results achieved to be further used in the finalization of the PoM 2) Overview of the RBMP and PoM chapters for Drina RB Method : PPP and Q&A |
| 10:30 | 11:00 | Coffee Break | | |
| 11.00 | 12.30 | Progress made for the development of the PoM as part of the RBM Plan: Basic Measures | Ms. Mihaela Popovici, All participants | 1) Status of inputs from Drina countries (B&H, ME, RS) for list of <u>basic measures</u> 2) Experiences of AL, Kosovo*, MK and TK for <u>pressures assessment, list of basic measures, economic analysis</u> |



| | | | | |
|--------------|--------------|---|--|---|
| | | | | Method : Countries presentations and Q&A |
| 12:30 | 14:00 | Lunch Break | | |
| 14:00 | 15:00 | Implementation of the basic measures within the RBMP. Approach, challenges and implementation assessment. Romanian experience | Mr. Gheorghe Constantin Head of Water Department, Ministry of Environment Romania TAIEX expert | Lessons learned from Romanian experience in the development of the Basin Management Plans 1 st (2009) and 2 nd (2015) cycles. Method : PPP and Q&A |
| 15:00 | 15:30 | Latest updates in approaching cross cutting issues in the WFD implementation process at the EU level | Mr. Gheorghe Constantin TAIEX expert All participants | Presentation of the most recent developments in approaching cross cutting issues at EU level Method : PPP and Q&A |
| 15:30 | 16:00 | Coffee Break | | |
| 16:00 | 16:30 | Identification and development of the environmental objectives according with WFD. Overview on specific case studies | Mr. Cristian Rusu TAIEX expert All participants | The presentation will introduce Romanian concept and approach concerning the establishment of the environmental objectives for the RBMP Method : PPP and Q&A |
| 16.30 | 17.00 | Financial aspects for the implementation of the basic measures included in the RBMP | Mr. Gheorghe Constantin TAIEX expert All participants | The presentation will introduce Romanian experience dealing with the financial aspects of the RBMP Method : PPP and Q&A |
| 17:00 | 17:30 | Proposal for setting up the environmental objectives for Drina RB | National experts from Drina countries | 1) Countries suggestions for <u>setting up the environmental objectives</u> for the PoM in the Drina RB 2) <u>Agreement</u> for the |



| | | | | |
|--|--|--|--|--|
| | | | | environmental objectives for Drina RB Method : PPP and Q&A |
|--|--|--|--|--|

Day 2 : Tuesday 16 February, 2016

| <p>Topic: WMWG - Workshop: “Basic and supplementary measures and their anticipated effects in Drina River Basin” – <u>Supplementary Measures</u></p> <p>Chair: Mihaela Popovici and Gheorghe Constantin</p> <p>Venue: Podgorica, Montenegro</p> | | | | |
|--|--------|--|---|---|
| Start | Finish | Topic | Speaker | Sub topic/Content |
| 09.00 | 09.30 | Supplementary measures – legal basis and lessons learned from the Romanian experiences | Mr. Gheorghe Constantin TAIEX expert All participants | Presentation of the concept and the categories of supplementary measures of the PoM and policy considerations Method : PPP and Q&A |
| 9:30 | 10:00 | Water as a cross cutting issue | Ms. Mihaela Popovici All participants | Presentation of cross cutting and cross linked issues between water and agriculture, climate changes, priority substances, energy, regional policy and implication for PoM implementation Method : PPP and discussions |
| 10:00 | 10:30 | Integration of National Water Retention Measures in river basin management | Ms. Mihaela Popovici All participants | Presentation of the importance of the natural water retention measures in river basin management, challenges, benefits and EU policy context Method : PPP and Q&A |
| 10:30 | 11:00 | Linking National Water Retention Measures with EU Agricultural | Ms. Mihaela Popovici All participants | Presentation of the linkages between the natural water retention measures and sustainable agriculture practices, policy recommendations Method : PPP and Q&A |



| | | | | |
|--------------|--------------|---|--|--|
| | | Policy/CAP Pillar 1 | | |
| 11:00 | 11:30 | Coffee Break | | |
| 11:30 | 12:00 | Differences, similarities and choices in selecting and assessment of the supplementary measures in the PoM in Romania | Mr. Cristian Rusu TAIEX expert All participants | Supplementary measures –lessons learned from the Romanian experiences for the two RBMP cycles Method : PPT and Q&A |
| 12:00 | 12:30 | Progress made for the development of the PoM as part of the RBM Plan: <u>Supplementary Measures</u> | Ms. Mihaela Popovici All participants | 1) Status of inputs from Drina countries (B&H, ME, RS) for list of <u>supplementary measures</u> 2) Experiences of AL, Kosovo*, MK and TK for preparing list of <u>supplementary measures</u> Method : Countries presentations and Q&A |
| 12:30 | 14:00 | Lunch Break | | |
| 14:00 | 15:00 | Wetlands as supplementary measures – cost and benefits within the PoM | Ms. Mihaela Popovici All participants | Analytical review of using wetlands in the PoM and lessons learned Method : PPP and Q&A |
| 15:00 | 15:30 | Development of the supplementary measures within Danube RBMP. | Mr. Gheorghe Constantin, TAIEX Expert All participants | Presentation of supplementary measures considered in the development of the Joint Program of Measures in the Danube river Basin Method : PPP and Q&A |
| 15:30 | 16:00 | Coffee Break | | |
| 16:00 | 17:00 | Supplementary measures for Drina River Basin | Ms. Mihaela Popovici, ECRAN Expert All participants | <u>Round table discussion</u> to reach consensus on the most relevant supplementary measures to be selected for the PoM in Drina River Basin Method : Round table |



Day 3 : Wednesday 17 February, 2016

Topic: WMWG - Workshop: “Basic and supplementary measures and their anticipated effects in Drina River Basin” – Anticipated effects of the PoM in Drina River Basin

Chair and Co-Chairs: Mihaela Popovici and Gheorghe Constantin

Venue: Podgorica, Montenegro

| Start | Finish | Topic | Speaker | Sub topic/Content |
|--------------|--------------|---|---|---|
| 08:30 | 09:00 | Registration | | |
| 09:00 | 09:30 | Wrap up of the key points of discussion from the first two days meeting | Ms. Mihaela Popovici, ECRAN Expert | |
| 09:30 | 10:30 | Anticipated effects of climate change adaptation – EU policy context | Gheorghe Constantin TAIEX Expert All participants | Presentation of background, policy context, political, institutional and financial barriers Method : PPP and Q&A |
| 10:30 | 11:00 | Coffee Break | | |
| 11:00 | 12:30 | Measures for climate change adaptation related to the WFD: lessons learned from Romanian projects | Mr. Cristian Rusu TAIEX expert All participants | Presentation from the results of climate changes adaptation strategies projects in Romania Method : PPP and Q&A |
| 12:30 | 14:00 | Lunch Break | | |
| 14:00 | 15:00 | Approach for setting up scenarios for assessing the anticipated effects of the PoM | Ms. Mihaela Popovici All participants | Method : PPP and Q&A |



| | | | | |
|--------------|--------------|--|---|--|
| 15:00 | 15:30 | Baseline scenario and selection of the assumptions for Drina PoM | Ms. Mihaela Popovici, ECRAN Expert | Presentation of a set of possible assumptions and a set of scenarios for Drina PoM Method : PPP and Q&A |
| 15:30 | 16:00 | <i>Coffee Break</i> | | |
| 16.00 | 16.30 | Presentation of the templates for the support of the development of the Drina RBMP | Ms. Mihaela Popovici, ECRAN Expert All participants | This presentation will summarize the experience gained during this project and will provide a framework to support the countries at the national and international RB |
| 16:30 | 17:00 | Next steps and conclusions | Ms. Mihaela Popovici, ECRAN Expert | |



ANNEX II – Participants

| First Name | Family Name | Institution Name | Country | Email |
|------------|-------------|--|---------------------------------------|--|
| Albert | Lenja | Technical Secretariat of National Water Council | Albania | albert.lenja@stkku.gov.al |
| Dorina | Capuni | Ishem-Erzen River Basin Agency | Albania | dorial_20@yahoo.com |
| Ermela | Kraja | Technical Secretariat of National Water Council | Albania | ermela.kraja@stkku.gov.al |
| Ilda | Cela | Ministry of Agriculture | Albania | ilda.cela@moe.gov.al |
| Viola | Saliaga | Technical Secretariat of National Water Council | Albania | vjola.saliaga@stkku.gov.al |
| Adnan | Topalović | Sava River Watershed Agency Sarajevo | Bosnia and Herzegovina | topalovic@voda.ba |
| Aleksandra | Kovačević | Public institution "Waters of Srpska" | Bosnia and Herzegovina | akovacevic@vodors.org |
| Marinko | Antunović | Agency for watershed of Adriatic Sea Mostar | Bosnia and Herzegovina | mantunovic@jadran.ba |
| Mirko | Šarac | Agency for watershed of Adriatic Sea Mostar | Bosnia and Herzegovina | jsliv-03@voda.tel.net.ba ; msarac@jadran.ba |
| Nenad | Djukic | Ministry of Agriculture, Forestry and Water Management | Bosnia and Herzegovina | n.djukic@mps.vladars.net |
| Salih | Krnjić | Sava River Watershed Agency Sarajevo | Bosnia and Herzegovina | krnjic@voda.ba |
| Vesna | Obradović | Public institution "Waters of Srpska" | Bosnia and Herzegovina | vsofilj@vodors.org |
| Kasam | Zeqiri | Ministry of Environment and Physical Planning | former Yugoslav Republic of Macedonia | kasamzeqiri@gmail.com |
| Nedjadi | Idrizi | Hydrometeorological Administration | former Yugoslav | xhiki_01@hotmail.com |



| First Name | Family Name | Institution Name | Country | Email |
|------------|---------------------|--|---------------------------------------|--|
| | | | Republic of Macedonia | |
| Radmila | Bojkovska Spirovska | Hydrometeorological Administration | former Yugoslav Republic of Macedonia | rbojkovska@meteo.gov.mk |
| Gani | Berisha | Ministry of Environment and Spatial Planning | Kosovo* | gani.berisha@rks-gov.net |
| Manduha | Gojani | Ministry of Environment and Spatial Planning | Kosovo* | manduha.gojani@rks-gov.net |
| Merita | Mehmeti | Ministry of Environment and Spatial Planning | Kosovo* | merita.r.mehmeti@rks-gov.net |
| Osman | Fetoshi | Ministry of Environment and Spatial Planning | Kosovo* | osman.fetoshi@rks-gov.net |
| Zymer | Mrasori | Ministry of Environment and Spatial Planning | Kosovo* | zymer.mrasori@rks-gov.net |
| Ana | Lješević | Water Directorate | Montenegro | ana.ljesevic@uzv.gov.me |
| Dragana | Đukić | Ministry of Agriculture and rural Development | Montenegro | dragana.djukic@mpr.gov.me |
| Milo | Radović | Ministry of Agriculture and rural Development | Montenegro | milo.radovic@mpr.gov.me |
| Momčilo | Blagojević | Ministry of Agriculture and rural Development | Montenegro | momcilo.blagojevic@mpr.gov.me |
| Zorica | Đuranović | Ministry of Agriculture and rural Development | Montenegro | zorica.djuranovic@mpr.gov.me |
| Dobriła | Kujundzic | Ministry of Agriculture and Environmental Protection | Serbia | dobriła.kujundzic@minpolj.gov.rs |



| First Name | Family Name | Institution Name | Country | Email |
|------------|----------------|--|---------|--|
| Dusanka | Stanojević | Ministry of Agriculture and Environmental Protection | Serbia | dusanka.stanojevic@eko.minpolj.gov.rs |
| Jovana | Raseta | PWMC "Srbijavode" | Serbia | jovana.raseta@srbijavode.rs |
| Tina | Savić | Ministry of Agriculture and Environmental Protection | Serbia | tina.savic@eko.minpolj.gov.rs |
| Vesna | Kahrimanovic | Ministry of Agriculture and Environmental Protection | Serbia | vesna.kahrimanovic@eko.minpolj.gov.rs |
| Zoran | Stojanovic | Serbian Environment Protection Agency | Serbia | zoran.stojanovic@sepa.gov.rs |
| Bahar | Sel | Ministry of Forestry and Water Affairs Turkey | Turkey | bfehim@ormansu.gov.tr |
| Saliha | Degirmencioglu | Ministry of Forestry and Water Affairs Turkey | Turkey | sdegirmencioglu@ormansu.gov.tr |
| Cristian | Rusu | National Administration for Romanian Waters | Romania | Cristian.rusu@rowater.ro |
| Gheorghe | Constantin | Ministry of Environment, Waters and Forests | Romania | Gheorghe.constantin@mmediu.ro |
| Mihaela | Popovici | ECRAN | Austria | mihaela_popovici@yahoo.com |
| Mihail | Dimovski | ECRAN | Hungary | dimovski.mihail@gmail.com |
| Masa | Stojsavljevic | ECRAN | Serbia | masa.stojsavljevic@humandynamics.org |



ANNEX III – Workshop materials (under separate cover)

Workshop materials including presentations and case studies can be downloaded from:

http://www.ecranetwork.org/Files/Workshop_Presentations_WFD_Measures_February_2016_Podgorica.zip



This Project is funded by the
European Union



A project implemented by
Human Dynamics Consortium