

Environment and Climate Regional Accession Network (ECRAN)

Report on the Workshop on Water Framework Directive Program of Measures in Drina River Basin

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WORKSHOP REPORT Activity 2.3 REPORT ON THE WORKSHOP ON WATER FRAMEWORK DIRECTIVE PROGRAM OF MEASURES IN DRINA RIVER BASIN Podgorica, 07 – 09 October 2015





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LIST OF ABREVIA	ATIONS						
Acquis	Acquis communautaire - Community legislation						
ВАР	Best Agricultural Practice						
BAT	Best Available Techniques						
BEP	Best Environmental Practices						
BLS	Baseline Scenario						
BSC	Black Sea Commission						
B&A	Bosnia and Herzegovina						
BWD	Bathing Water Directive						
САР	Common Agricultural Policy						
CIS	Common Implementation Strategy						
DPSIR	Driver, Pressure, State, Impact and Response framework for environmental analysis						
Drina RB	Drina River Basin						
DRB	Danube River Basin						
DRBD	Danube River Basin District						
DRBMP	Danube River Basin Management Plan						
DRPC	Danube River Protection Convention						
EC	European Commission						
ECRAN	Environment and Climate Regional Accession Network Project						
EPER	European Pollutant Emission Register						
EEC	European Economic Community						
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						
IPPC	Integrated Pollution Prevention and Control						
IED	Industrial Emissions Directive						
IMPRESS	Impact pressures assessment guidance						
ктм	Key Type of Measures						
MS	Member State						
MSDF	Marine Strategy Framework Directive						
РоМ	Programme of Measures						





LIST OF ABREVIATIONS					
ND	Nitrates Directive				
NVZ	Nutrient Vulnerable Zones				
PS	Priority Substances				
PRTR	Pollutant Release and Transfer Register				
RB	River Basin				
RBD	River Basin District				
RBMP	River Basin Management Plan				
RBSP	River Basin Specific Pollutants				
RS	Republic of Srpska				
RefCond	Reference Conditions				
RR	Roof Report				
SAA	Stabilisation 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 (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 chemical status: (surface waters): Means that concentration 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 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 bio accumulate, 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, hydro morphology, physico-chemical, 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; and
- 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







II. Background/Rationale

GENERAL INFORMATION ABOUT THE TRAINING

Based on the outcomes of the 3rd Screening workshop (11-12 March 2015), specifically the methodology for drafting the Drina RBM Plan and its Program of Measures, the assistance in preparing the Program of measures continued, with the view to support the countries efforts towards the implementation of Water Framework Directive. During the 3rd Screening workshop, the participants had also investigated the needs of specific components in terms of background documents, screening templates assessments, and topics for training or workshops.

The methodology for preparing the Program of Measures (PoM) together with the packages of actions and activities needed for their implementation includes 4 phases. Phases 1 and 2 have been already implemented through the assistance and contributions of all beneficiary countries. The remaining part – phases 3 and 4 are planned to be implemented at the 5th and 6th Screening workshops to be organised in 2015. The results reached during the 3rd phase have been implemented at the 5th Screening Workshop, which is the subject of this present report, and it will continue with the 5th Screening Workshop planned 17 - 19 November 2015, to be organised in Sarajevo, BiH.

The remaining tasks of the project will be implemented in 2016. 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.

All screening workshops organised so far contributed greatly to facilitate transfer of knowledge, experiences and lessons learned through capacity building activities.

Specifically, at the 5th Screening Workshop, the participants made use of the results obtained during the 3rd and 4th screening workshops regarding the selection of the SWMIs. Further, the visions and management objectives have been agreed, and the approach for performing the pressures assessment for pollution sources – point and diffuse sources has been detailed, based on templates prepared for each of the SWMIs, for concluding emission inventories in line with EU requirements, for urban, agricultural and industrial point sources.

The Program of measures in Drina River Basin to be completed in line with phase 3 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 will make 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 response to the agreed methodology, the Drina countries prepared and presented during the first day, their proposal of measures addressing organic pollution to be included into the PoM, based on the discussed templates.

Further, in the second day, Drina countries prepared and introduced their national inputs on basic and supplementary measures addressing nutrient pollution, specifically the agricultural measures addressing nutrient pollution and measures to address hydromorphological alterations. During the last day input on measures addressing hazardous substances has been provided.

The remaining components of the methodology will cover issues such monitoring programmes, environmental objectives, derogations and exemptions, affordability, 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.

In addition, economic analysis component of the PoM has been detailed. It has been agreed with the beneficiary countries at the 3rd Screening workshop that at the 4th and 5th Screening workshops planned under Task 2.3.3, the economic analysis shall be discussed and conducted on the practical example of pilot Drina River Basin. Therefore, in relation Task 2.3.3, the focus was mainly on issues linked with the Economic analysis, preparation of the Cost effectiveness analysis and the interlinkages pressures assessment, economic analysis and the program of measures.

In addition, two case studies have been completed, presented and discussed at the 5th Screening Workshop with contributions from the beneficiary countries, consisting in formulation and presentation of examples of case studies for agricultural measures (catalogue of agricultural measures) and of the floodplain restoration benefits, based on templates prepared and distributed before the workshop.

It is planned that the economic elements of both WFD (Task 2.3.3) and MSFD (Task 2.3.4) will be assessed in synergy in one dedicated regional training workshop in spring 2016.

Specific economic elements related to the MSFD will be the focus of the MSFD workshop, planned for 27-29 October 2015.

Summary of the main topics covered

The main topics presented and discussed at the 4th Screening Workshop included:

- 1. Discussion of the third phase of the methodology for preparing the PoM, including the presentation of the concept, steps and related templates and docs, covering:
 - a. Pressures assessment
 - b. Basic (UWWTD, ND, FD) and supplementary measures addressing SWMIs
 - c. Measures addressing organic pollution, nutrients, flooding, hymo and HS
- 2. Discussion and agreement on the visions and management objectives for all 5 SWMIs
- 3. Presentation of experiences on selecting supplementary measures and implementing WFD and FD in Slovenia
- 4. Presentation and discussion of case studies on the preparation of RBMP
- 5. Economic issues for justification of derogations







- 6. Key Measures Types and Quantitative Indicators
- 7. Catalogue of agricultural measures and nutrient pollution reduction effects
- 8. Measures addressing hazardous substances in the PoM
- 9. Interlinkages hydromorphological pressures and flood defence measures in PoM
- 10. EU reporting requirements on cost of measures.
- 11. Economics aspects in the frame of the supplementary measures part of Cost Benefit analysis according to the WFD.

General Objective of the Training

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 of the Training

- To present and discuss the next steps of the methodology of preparing the Program of Measure, as the key component of the producing the Drina RBM Plan, following the logical flow of steps in line with the WFD. Further detailing of the methodology with specific concepts and actions that are needed to ensure WFD implementation considering the remaining components of the methodology;
- 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 remaining components of the methodology, 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 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 case studies for agricultural measures (catalogue of agricultural measures) and of the floodplain restoration benefits;
- 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



This Project is funded by the European Union



A project implemented by Human Dynamics Consortium 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:

- (i) 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;
- (ii) facilitates coordination of the programmes of measures and other relevant programmes within the river basin district;
- (iii) 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.

- N° 1 Economics and the Environment
- N° 2 Identification of Water Bodies
- N° 3 Analysis of Pressures and Impacts
- N° 4 Identification and Designation of Heavily Modified and Artificial Water Bodies
- N° 5 Transitional and Coastal Waters
- N° 6 Intercalibration Network and Intercalibration Exercise
- N° 7 Monitoring under the Water Framework Directive
- N° 8 Public Participation
- N° 9 Implementing the Geographical Information System Elements (GIS)
- N° 10 Rivers and Lakes Typology, Reference Conditions
- 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° 14 Guidance on the Intercalibration Process
- N° 15 Groundwater Monitoring
- N° 16 Groundwater in Drinking Water Protected Areas
- N° 17 2006/118/EC Directive on protection of groundwater
- N° 18 Groundwater Status and Trend Assessment
- N° 19 Surface water chemical monitoring
- N° 20 Exemptions to the environmental objectives
- N° 21 Guidance for reporting under the WFD
- N° 22 Updated WISE GIS guidance
- N° 23 Eutrophication Assessment
- N° 24 River Basin Management in a changing climate





- N° 25 Chemical Monitoring of Sediment and Biota
- N° 26 Risk Assessment and the Conceptual Models for Groundwater
- N° 27 Deriving Environmental Quality Standards
- N° 28 Preparation of Priority Substances Emissions Inventory
- N° 29 Floods Directive
- N° 30 Updated classification methods for intercalibration exercise
- N° 31 Ecological Flows
- N° 32 Biota Monitoring
- N° 33 Analytical Methods for Biota Monitoring

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 Workprogramme 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;
- (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.

<u>Groundwater</u>

- 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.





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- 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).

<u>Agriculture</u>

- 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 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, <u>https://circabc.europa.eu/</u> 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





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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/taiex/

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/

European Union

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



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IV. Highlights

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

Highlights Day 1

1. Drina River Basin Visions

Following the discussions at the 4th Screening Workshop, agreement was reached for the definition of the Drina River Basin, for each of the SWMI. Specifically, the agreed visions are:

Drina basin wide vision - Organic pollution

The Drina basin wide vision for organic pollution coming from urban, industrial and agro industrial sources is to reduce as much as possible emissions of untreated wastewater into the waters of the Sava and Danube River Basins, to avoid any potential adverse impact

Drina basin wide vision - Flooding

The Drina basin wide vision for flooding is to minimise risk as much as possible to the population and economy due to flooding in the Drina Basin.

Drina basin wide vision - Hydromorphological alterations

The Drina basin wide vision for hydromorphological alterations is the balanced management of past, ongoing and future structural changes of the riverine environment, to avoid any damages to the aquatic ecosystem

Drina basin wide vision - Nutrient pollution

The Drina basin wide vision for nutrients pollution is the balanced management of nutrient emissions to avoid eutrophication in the receiving water bodies

Drina basin wide vision - Hazardous substances

The Drina basin wide vision for hazardous substances pollution is no risk or threat to human health and the aquatic ecosystem of the waters in the Drina, Sava, Danube and Black Sea Basins, through the use of BAT.





2. Drina River Basin Management Objectives

For each of Drina River Basin vision, several management objectives have been proposed and agreed, as follows:

Basin Wide Management Objectives – Organic Pollution

The vision will be achieved through the implementation of the following management objectives:

- Specification of number of wastewater collecting systems (connected to respective WWTPs), which are planned to be constructed by 2021;
- Specification of number of municipal and industrial wastewater treatment plants, which are planned to be constructed by 2021 including
- Specification of treatment level (secondary or tertiary treatment);
- Specification of emission reduction targets.

Basin Wide Management Objectives – Flooding

The vision will be achieved through the implementation of the following management objectives:

- Performing the Preliminary Flood Risk Assessment for the Drina RB in order to identify areas of existing or foreseeable future potentially significant flood risk;
- Preparation of the flood hazard maps and flood risk maps to identify areas prone to flooding during events with a high, medium and low probability of occurrence, including those where occurrences of floods would be considered an extreme event;
- Development of the Drina catchment-based Flood Risk Management Plans (FRMPs) focusing on prevention, protection and preparedness, as well as setting objectives for managing the flood risk and setting out a prioritised set of measures for achieving those objectives;
- Coordinate with the WFD implementation.

Basin Wide Management Objectives – Hydromorphological alterations

The vision will be achieved through the implementation of the following management objectives:

- Construction of fish migration aids and other measures to achieve/improve river continuity in the Drina River;
- Specification of number and location of fish migration aids and other measures to achieve /improve river continuity;
- Protection, conservation and restoration of wetlands/floodplains to ensure biodiversity, flood protection and pollution reduction;
- To determine the implementation steps for restoration and reconnection of lost floodplains and wetlands along the Drina River.

Implementation of the no net-loss principle = conservation of floodplains and wetlands whenever possible – if surface areas of wetlands are converted to other uses, the total wetland resource base has to be offset through restoration and creation of other wetlands).





Basin Wide Management Objectives – Nutrients Pollution

The vision will be achieved through the implementation of the following management objectives:

- Reduction of the total amount of nutrients entering the Drina;
- Reduction of discharged nutrient loads in the Black Sea Basin to such levels, which permit the Black Sea ecosystems to recover to conditions similar to those observed in the 1960s;
- Reduction of phosphates in detergents preferably by eliminating phosphates in detergent products;
- Implementation of the management objectives described for organic pollution with additional focus on the reduction of nutrient point source emissions;
- Implementations of BEP regarding agricultural practices;
- Create baseline scenarios of nutrient input;
- Definition of basin wide, sub-basin and/or national quantitative reduction targets (i.e. for point and diffuse sources).

Basin Wide Management Objectives – Hazardous Substances Pollution

The vision will be achieved through the implementation of the following management objectives:

- Elimination/reduction of the total amount of hazardous substances entering the Drina to levels consistent with the achievement of the good chemical status by 2021;
- Implementation of Best Available Techniques and Best Environmental Practices including the further improvement of treatment efficiency, treatment level and/or substitution;
- Explore the possibility to set up quantitative reduction objectives for pesticide emission in the Drina River Basin.

3. Pressures assessment

The necessity to analyse pressures and impacts is stated in Article 5 of the WFD, which requires, for each river basin district:

- an analysis of its characteristics;
- a review of the impact of human activity on the status of surface waters and groundwater;
- an economic analysis of water use.

The WFD requires the tasks specified under Article 5 to complete by 2004. They will then be reviewed by 2013, and subsequently every 6 years (2019, 2025...). Given the overall purpose of the WFD, the analysis undertook in 2004 considered both the reference condition (2004) for each water body, and a prognosis for the period to 2015.

The review process is described in five parts.





- 1. Characterization of surface water body types;
- 2. Ecoregions and surface water body types;
- 3. Establishment of type-specific reference conditions for surface water body types;
- 4. Identification of Pressures;
- 5. Assessment of Impacts.

In the IMPRESS guidance, the DPSIR (Driver, Pressure, State, Impact, and Response) analytical framework has been adopted. The pressures and impacts assessment is a four-step process:

- 1. describing the "driving forces", especially land use, urban development, industry, agriculture and other activities which lead to pressures, without regard to their actual impacts,
- 2. identifying pressures with possible impacts on the water body and on water uses, by considering the magnitude of the pressures and the susceptibility of the water body, considering the significant pressures,
- 3. assessing the impacts resulting from the pressure, and
- 4. evaluating the likelihood of failing to meet the objective.

Driving forces (DF) are sectors of activities that may produce a series of pressures, either as point and non-point sources. As screening data, DF are quantified by aggregated data, simple to obtain, for example: number of ha of arable land, population density, etc., for a certain area.

In the IMPRESS guidance document is given a broad categorization of driving forces, which can be used as a checklist for inventory of the relevant pressures.

DIFFUSE SOURCE:

- Urban drainage (including runoff)
- Agriculture diffuse
- Forestry
- Other diffuse

POINT SOURCE:

- Waste water
- Industry
- Mining
- Contaminated land
- Agriculture point
- Waste management
- Aquaculture

The assessment of whether a pressure on a water body is significant must be based on knowledge of the pressures within the catchment area, together with some form of conceptual understanding of functioning of the water body within the catchment system. One approach of this type is to compare the magnitude of the pressure with a criterion, or threshold, relevant to the water body type.







The most usual categorization of pollution pressures is to distinguish between diffuse and point sources (see Tables 1 and 2, considering IMPRESS Guidance Document). However, the distinction between point and diffuse sources is not always clear, and may again relate to spatial scale. For example areas of contaminated land might be considered as either diffuse or point sources of pollution.

In case of diffuse pollution driving forces are usually not directly related to pressures, but pollution reaches water bodies on hydrologically driven pathways.

Activity or	Pressure	Possible change in state or impact	
Driving force			
Industrial	Effluent disposal to surface and	Toxic substances have direct effect	
(IPPC and non- IPPC)	groundwaters		
Urban activity	Effluent disposal to surface and	As above	
	groundwaters		
Landfill	Chemical fluxes in leachate	As above	
Animal burial pits	Contaminated leachate	As above	
Former land use	Contaminated land	Various	
Thermal power	Return of cooling waters cause alteration to	Elevated temperatures, reduced	
generation	thermal regime.	dissolved oxygen	
	Biocides in cooling water	Direct toxic effect on aquatic fauna.	
Dredging	Sediment disposal	Smothering of bed	
	Removal of substrate	Loss of habitat	
Fish farming	Feeding, medication, escaping	Nutrients, diseases	

Table 1. Examples of point sources pressures and their impacts.

Activity or	Pathway causing Pressure	Possible change in state or impact
Driving force		







Agriculture	Nutrient loss from agriculture by	Nutrients modify ecosystem			
	 surface runoff soil erosion artificial drainage flow leaching (includes excess fertilizers and manures and mineralization of residues) 				
	Pesticide loss by pathways	Contamination of potable water supplies			
	Sediment loss by soil, bank and riverbed erosion	Smothering of layers			
Industry discharges to the atmosphere	Deposition of compounds of nitrogen and sulphur.	Eutrophication			
Transportation	Pollutant spillages	Pollution of water bodies			
	Use of salt as de-icer	Elevated chloride concentration			
	Use of herbicides	Deposition			
	Engine exhausts				

 Table 2. Examples of diffuse sources pressures and their impacts

The WFD requires for pressures and impact assessment that data and information are collected and updated regarding the type and magnitude of significant anthropogenic pressures. The pressures relevant to the present assessment include point sources of pollution and diffuse sources of pollution.

In addition, there is a requirement to consider land use patterns (e.g. urban, industrial, agricultural, forestry) as these may be useful to indicate areas, in which specific pressures are located.

The analysis of pressures and impacts must consider how pressures would be likely to develop, prior to 2015, in ways that would place water bodies at risk of failing to achieve ecological good status if appropriate programmes of measures were not designed and implemented.





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Collected, but discharged without treatment: NOWWTP 3 (10%) arge point 3 Discharge without collection and treatm uding discharged ads (BOD₅, COD, UWWTP 1 20% Collecting system 3N rge point 1 Including discharged loads (BOD₅, COD, Ntot and Ptot) 25% 30% Inmeration A Discharge point 2 Including discharged loads (BOD₅, COD, Ntot and Ptot) 5% UWWTP 2 Collecting system IAS 3NP ed to UWWTP 2 by truck Cesspool Transpo 60% Discharge without llection and treatment

The most important categories of pressures in Drina River Basin include the point and diffuse sources of pollution, and the hydromorphological alterations.

The methodology used by the Water Management Working Group is based on the criteria for the identification of the significant point sources of pollution, for agglomerations, industry and agriculture.

There are xxx significant point sources identified at country level, in all three countries in Drina River Basin, which include agglomerations, industries and agricultural units.

The diffuse sources of pollution are specially located within the nutrient vulnerable zones, and include as well the agglomerations from rural and urban areas, fertilizers and pesticides used in agriculture.

For Drina River Basin, the pressures assessment is done for point source from agglomerations, industry and agriculture, identifying significant pressures (i.e. those that may cause an impact likely to cause a failure of an objective), as well for diffuse sources of pollution.

4. Reporting on Urban Wastewater Treatment Directive

In line with the UWWT Directive provisions it is presented a methodology for defining agglomerations. The Guidance addresses (i) the legal basis for implementing the UWWT Directive, (ii) the definition of the term Agglomeration and (iii) the approach and procedures to define Agglomerations.

Size of	Requirements				
Agglomeration	Sewer system	Treatment			
> 10,000 p.e ¹	Provided with a collecting system (Art. 3 paragraph 1)	Subject to more stringent treatment (Art. 5 paragraph 2)			
> 2,000 p.e.	Provided with a collecting system (Art. 3 paragraph 1)	Secondary or equivalent treatment according to Annex I B (Art. 4 paragraph 1, 3)			



¹ P.E. – population equivalent





< 2,000 p.e	No specific requirement	No	specific	requirements,	but	subject	to
		"app	propriate	treatment"	(Art.	7)	for
		aggl	omeration	is with an existing	g sewe	r network	(

Table 3. Summary of requirements of UWWT Directive 91/271

The term "agglomeration" is defined and interpreted in two official EU legal documents:

- Urban Wastewater Treatment Directive 91/271/EEC, Article 2.4;
- Terms and Definitions of the Urban Wastewater Treatment Directive 91/271/EEC, 16th of January 2007, Brussels, Chapter 1.

Article 2.4 of Directive 91/271/EEC defines the "agglomeration" as follows:

'Agglomeration' means an area where the population and/or economic activities are sufficiently concentrated for urban waste water to be collected and conducted to an urban waste water treatment plant or to a final discharge point"

The most important terminology in this definition is *"sufficiently concentrated"*. These terms are not legally defined in the Directive and can be understood only with the help of other technical and economic arguments. This is mostly relevant for small agglomerations or municipalities which may be close in size to one of the categories in the Directive (i.e. 2,000 p.e., 10,000 p.e.).

The Document *"Terms and Definitions of the Urban Wastewater Treatment Directive 91/271/EEC"* specifies the following:

- All urban waste water generated in the agglomeration must be collected, conducted, and treated as required by the Directive, taking into account provision for storm water overflow;
- The boundaries of an agglomeration are the borders of currently built-up areas and areas to be built up where wastewater can be collected cost effectively (high density of buildings producing wastewater);
- The total waste water load generated by an agglomeration expresses the size of an agglomeration in technical terms and is the first and main criterion for determining the waste water collection and treatment requirements;
- The existence of an agglomeration is independent from the existence of a collection system. The concept of agglomeration therefore also includes those areas which are sufficiently concentrated but where a collecting system is not yet in place;
- The boundaries of the agglomeration do not necessarily have to coincide with the limits of the collection system (only in the case of 100% connection rate);
- An agglomeration may also contain areas which are sufficiently concentrated, but where a collection system in not yet in place and/or where wastewater is managed through individual systems or other appropriate systems or collected in any other way;
- The boundaries of an agglomeration may or may not correspond to the boundaries of administrative entities;
- The boundaries of agglomerations and the generated load (person-equivalent) should take into consideration future development and should be regularly updated;
- The boundaries of an agglomeration should be defined on a case-by-case assessment;



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 The borders of an agglomeration can be determined by considering the cost-effectiveness of wastewater collection. The boundaries of an agglomeration are based on (a) the concentration of population (population density), (b) concentration of economic activity, and (c) concentration of criterion a) or a) and b) for urban wastewater to be collected and conducted;

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The generated load of <u>one</u> agglomeration served by <u>two</u> collecting systems and two WWTPs (scenario b² - n:1) <u>should not</u> be sub-divided into two drainage areas of the collection system if this lowers or delays meeting the requirements of the Directive. Therefore, the type of treatment technology selected (more stringent treatment) depends on the <u>total</u> generated load of the agglomeration.

When several distinct and physically separate agglomerations have separate collecting systems but are served by a single urban wastewater treatment plant (Scenario c - 1:n), the legal obligations under the Urban Wastewater Treatment Directive are determined by the size of each agglomeration. However, for other directives (Bathing Water or Water Framework Directive), the cumulative impact (sum of all generated loads of all agglomerations served by the wastewater treatment plant) has to be taken into consideration. As a result, the requirements (Articles 3 and 4) and respective compliance dates in the Accession Treaty are defined by each single agglomeration.

The treatment requirements (Article 5(2)) for two separate agglomerations of 6,000 p.e. each, served by one common WWTP, would have to be met in 2018 because each single agglomeration is below 10,000 p.e. However, the required treatment standard may differ, either (a) secondary treatment if the cumulative pollution load at the single discharge point has no impact on other environmental legislation³; or (b) tertiary treatment⁴ because the treatment requirements are always defined by the cumulative pollution load (p.e. of 12,000). Following this interpretation, if one agglomerations with 12,000 p.e. (compliance date of 2015 and tertiary treatment) has to be connected⁵ by a trunk sewer to an agglomeration of 3,000 p.e. (no requirement to comply in 2015), a phased approach is possible (if technically and economically justified), -treatment plant for the bigger agglomeration in a first stage (for 12,000 p.e. before 2015) and extension for 3,000 p.e. in a second stage before 2018.

5. Significant pressures

The criteria for the identification of the significant point sources for the Drina River Basin refer especially to substances mentioned in the EU Directives, such as in Annex VIII WFD, to the Urban Waste Water Treatment Directive (91/271/EEC), to the Integrated Pollution Prevention and Control Directive (96/61/EC) and to the Dangerous Substances Directive (76/464/EEC), replaced by the Directive 2006/11/EC.

The identification of significant pressures based on the application of a set of criteria is based on the type of wastewater discharges (treated or untreated) into the receivers.

⁵ Option analysis shows that a connection is the most favourable solution







² Terms and Definitions of the Urban Wastewater Treatment Directive 91/271/EEC

³ Such as the Bathing Water Directive and/or Water Framework Directive

⁴ Even if there is no impact on other environmental legislations

<u>For agglomerations</u>, according to the UWWT Directive (91/271/EEC) requirements, the significant point pressures include:

- agglomerations having more than 2000 PE, which have collection systems for wastewater, with or without wastewater treatment plants, and which discharge in water resources;
- agglomerations having unitary sewage system with insufficient capacity to collect and treat the wastewater resulted from the mixture of wastewater and rain water.

For industrial sources, the significant point pressures include:

- the installations which fall under the IPPC Directive 96/61/EC⁶ including as well the units which are registered in the EPER, with relevance to the environment and water;
- industrial units which discharge hazardous/priority substances (list I and II) above the allowable limits, according to the requirements of Directive 2006/11/EC replacing the Directive 76/464/C.E.E. concerning the pollution caused by dangerous substances discharged into aquatic ecosystem;
- other industrial units which discharge wastewater in the water resources without considering the requirements of relevant water and environmental legislation.

For agricultural sources, the significant point pressures include

- the livestock farms falling under the IPPC Directive, including those farms which are registered in the EPER, with relevance to the environment and water;
- farms which are discharging hazardous/priority substances (list I and II) above the allowable limits, according to the requirements of Directive 2006/11/EC replacing the Directive 76/464/C.E.E. concerning the pollution caused by dangerous substances discharged into aquatic ecosystem;
- other agro industrial units which represent point sources of pollution, discharging wastewater in the water resources without considering the requirements of relevant water and environmental legislation.

⁶ Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control. The Industrial Emissions Directive (IED) 2010/75/EU repeals Directive 2008/1/EC from 7 January 2014, but it retains the fundamental regulatory approaches of the IPPC Directive.







6. EU Reporting requirements on cost of measures

Article 15 of the WFD: copies of the RBMPs to be sent to the EC within 3 months of their publication.



Cost should be reported separately for:

• Measures according to Community legislation for the protection

of water (Article 10 and Annex VI (part A) of the WFD)

Other basic and supplementary measures

Highlights Day 2

7. Supplementary measures

"Supplementary measures" are those measures required in addition to the minimum requirements, in order to achieve the objectives of the WFD.

Supplementary Measures (Annex VI B of WFD)

- To be taken to achieve the objectives;
- Can be taken for a higher level of protection.

A distinction between "basic" and "supplementary" measures is made in Article 11 of the WFD.

Basic measures are those targeted to achieving the requirements set by current environmental legislation such as the UWWTD, Nitrates and Bathing Waters Directives.

This includes measures which might have already been planned, designed or implemented on the ground.

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.

Objective of the scenario analysis is to assess the need for additional interventions ("supplementary measures" according to WFD article 11.2) after basic measures have been implemented in a projection for 2021, considering changes of framework conditions, and to evaluate potentials of such supplementary measures.

The gap between the projected state of emissions and the target value (N, P) describes the need for supplementary measures.

The measures have to be identified which are ecologically effective and economically efficient, i.e. showing a favourable cost-effectiveness in order to close the gap.



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Financing of supplementary measures through a cost-effective allocation of scarce public funds.

8. Interlinkages WFD and Flood Directive

The FD includes a number of links to ensure close coordination in the two implementation processes.

The administrative units are the same for the two Directives, ie the Floods directive shall be implemented on the level of the river basin districts (which includes not just river basins and sub basins but also associated coastal areas) identified in the WFD article 3 and the competent authority responsible for the WFD shall also be responsible for the flood risk management actions.

The principles for coordination within the river basins , in particularly as river basins are shared between Member States or with third Countries are the same in the two Directives.

The implementation cycles and reporting mechanisms shall be synchronised as regards the timetables, and it is envisaged that the Member States can choose to include the flood risk management plans in the river basin managements plans required under the WFD.

The public participation and information mechanisms of the WFD shall furthermore be used, and as the key tools of the flood directive – the preliminary flood risk assessment, the flood risk maps and the flood risk management plans – shall be made available to the public.

9. Nitrates Directive

The requirements of the ND include:

- Water monitoring ;
- Identification of polluted waters;
- Identification of waters which could be affected by pollution if measures are not taken;
- Designation of Nitrates Vulnerable Zones (NVZs), review (4 years);
- Designation of NVZs not required if an AP is implemented on the whole territory;
- Establish a code of good agricultural practice (CGAP);
- CGAP to be implemented by farmers on a voluntary basis;
- Implementation of the measures of the GGAP: mandatory in NVZs;
- Measures to be included: at least those in Annex II;
- Design and implement action programmes in NVZs;
- Measures: at least those in Annex III and CGAP;
- Assess effectiveness of action programmes;
- Report on directive implementation to the EC every four years.







Highlights Day 3

10. Inventory on discharges, emissions and losses of priority substances

The establishment of an inventory on discharges, emissions and losses of priority substances is done in line with the EQS Directive, and the EC Guidance Document no 28.

The European Commission had launched in 2010 a new activity to develop guidance for the establishment of an inventory on discharges, emissions and losses of priority substances, in accordance with article 5 of EQS Directive.

Set up objectives

- make use of the guidelines in preparing national inventories on discharges, emissions and losses in accordance with article 5 of EQS Directive;
- test the guidelines for specific substances of basin wide relevance.

Approach

There will be a 2 - step approach

1) Significance analysis

The Significance analysis will be done for all substances based on data on quality monitoring, sediment biota, information on production and use pattern, etc.

The result of this analysis will provide a Qualitative assessment which will reflect the significance and related reasoning of various relevance of substances found in different countries. The information will be collected in a table

Nr	Country	Substance				Relevance	Reasoning
		Drina	Tributaries Lakes CW		Significant		
	1		Drina			yes/no relevance/	
			aspirin			don't know	
	2						

2) More in depth analysis for significant substance

This analysis will be performed in relation to the importance of various substances to the region and not from the statistical point of view.

11. The preparation of the Program of Measures

The methodology has been prepared to guide the countries efforts in developing the RBMP and related PoM, outlining the required technical issues through a set of screening templates, following the logical flow of the WFD steps.







The methodology consists of 4 phases, offering clear evidence on the topics of training the experts in Bosnia and Herzegovina, Montenegro and Republic of Serbia, to ensure the preparatory process of the Program of Measures in the selected pilot basin: Drina River Basin.

The guidance document has been updated along the ECRAN project implementation, with a new phase, based on the results of specific assessments, such as (i) the identification of transboundary issues, (ii) the Significant Management Issues, (iii) the definition of the Drina River Basin long vision for each of the identified SWMI, and (iv) the description of the respective management steps required to reach the WFD objectives.

An important component has been attached in the 3 phase related to the economic analysis and financing of the Program of Measures, in line with the WFD requirements.

The river basin management plan has an important role in reaching the precise balance between the benefits delivered by environmental improvements and the associated costs imposed on those who use the water environment.

The practical steps of preparing the PoM include:

- Pressures and impact assessment at the Drina RB level;
- Selection of Significant Water Management Issues;
- Assessment of interlinkages between specific topics and their integration;
- Definition of visions for each SWMI;
- Description of management objectives for each SWMI/vision;
- Compilation of measures in the PoM;
- Economic analysis;
- Financing of the program of measures;
- Exemptions, derogations, affordability;
- Assessment of anticipated effects to achieve the WFD objectives based on the compiled PoM, making use of scenarios of future developments.

Case studies

Case studies have been prepared and presented by countries on "Protection of groundwater against agricultural pollution" (Albania), on urban waste treatment development (Macedonia), on the implementation of agricultural measures (Kosovo^{*7}) and implementation of EQS (Serbia).

Other key points of discussion

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

⁷ 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.





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- Obligations related with the sensitive areas;
- Options to avoid UWWTD requirements for tertiary treatment in the conditions that the WFD; objectives are met and the good status is reached;
- Approaches for identification of agglomerations;
- Definition of agglomerations considering future development, specifically a higher p.e. value, to accommodate future developments;
- Issues related to affordability and the reduced ability to pay of the population against large financial burden of building wastewater treatment plants;
- Cost of preparing the RBMP;
- Responsibilities for dealing with flood risk mapping;
- Approach for identification of the visions for SWMIs and interlinkages with the national water strategy;
- The role of the implementation plans as strategic docs;
- Type of expertise needed for economic analysis and PoM benchmarking.







V. Evaluation

Workshop - Participant Eva	aluation
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	Questio	n	N°. Responses	Yes	No	Partially	Do not know
1.	Was the workshop according to the a	p carried out genda	25	25 (100)%	0 (0)%	0 (0)%	N/A
2.	Was the programme well structured?		25	24 (96)%	0 (0)%	1 (4)%	N/A
3.	Were the key issue the topics address	es related to ed?	25	25 (100)%	0 (0)%	0 (0)%	N/A
4.	Did the workshop improve your know	enable you to wledge?	25	24 (96)%	0 (0)%	1 (4)%	N/A
5.	Was enough time a questions and disc	allowed for cussions?	25	25 (100)%	20 (0)%	0 (0)%	N/A
6	How do you						
0.	assess the quality of the speakers?	Speaker/Expe 10	ert N°. Respo 186	nses Excel 100 (5	lent (53)% 83	Good Sa 8 (44)%	atisfactory Poor 3 (1)% 0 (0)%
	Questio	n	N°. Responses	Yes	No	Partially	Do not know
7.	Question Do you expect any based on the result workshop (new leg administrative app	n follow-up ts of the gislation, new proach, etc.)?	N°. Responses 25	Yes 25 (100)%	No 3 (16)%	Partially N/A	Do not know N/A
7. 8.	Question Do you expect any based on the result workshop (new leg administrative app Do you think that for assistance is needed expert mission, stu assessment mission of this workshop?	n follow-up its of the gislation, new proach, etc.)? further TAIEX ed (workshop, udy visit, n) on the topic	N°. Responses 25 25	Yes 25 (100)% 24 (96)%	No 3 (16)% 1 (4)%	Partially N/A N/A	Do not know N/A N/A
7. 8. 9.	Question Do you expect any based on the result workshop (new leg administrative app Do you think that is assistance is need expert mission, stu assessment mission of this workshop? Were you	n follow-up lts of the gislation, new proach, etc.)? further TAIEX ed (workshop, udy visit, n) on the topic	N°. Responses 25 25	Yes 25 (100)% 24 (96)%	No 3 (16)% 1 (4)%	Partially N/A N/A	Do not know N/A N/A
7. 8. 9.	Questic Do you expect any based on the resul workshop (new leg administrative app Do you think that the assistance is needed expert mission, stu assessment mission of this workshop? Were you satisfied with the logistical	n follow-up lts of the gislation, new proach, etc.)? further TAIEX ed (workshop, udy visit, n) on the topic Conference venue	N°. Responses 25 25 25 25	Yes 25 (100)% 24 (96)% 24 (96)%	No 3 (16)% 1 (4)% 0 (0)%	Partially N/A N/A 1 (4)%	Do not know N/A N/A 0 (0)%
7. 8. 9.	Questic Do you expect any based on the resul workshop (new leg administrative app Do you think that if assistance is neede expert mission, stu assessment missio of this workshop? Were you satisfied with the logistical arrangements, if	n follow-up lts of the gislation, new proach, etc.)? further TAIEX ed (workshop, udy visit, on) on the topic Conference venue Interpretation	N°. Responses 25 25 25 25 24	Yes 25 (100)% 24 (96)% 24 (96)% 21 (87)%	No 3 (16)% 1 (4)% 0 (0)% 0 (0)%	Partially N/A N/A 1 (4)% 3 (12)%	Do not know N/A N/A 0 (0)% 0 (0)%

Comments:

- I think is need to follow the same persons other workshop for Water Framework Directive Program of Measures in Drina River Basin;
- Great and very succesfull workshop;
- As allways, Michaela is the PRIMADONA!!!!!! She is the best! I hope I will be lucky in the future to get her on next projects. For the first time I met Michael Dimovski and my opinion is that he has got very wide knowledge about this matter. He was also very good, but Michaela is on the best;
- It would have been good to you propose key persons of the Member States you keep in touch so
 that we are participating teams present more workshop's such times, for me it was the first time
 that in fact this was 5-the edition. Otherwise it has been very level in all aspects and I have
 received many information regarding many issues around water and duties of the participating
 states. I personally thank you for organizing such that I consider very valuable.. Thank YOU.

















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	Questio	n	N°. Responses	Yes	No	Partially	Do not know
1.	Did you receive a information nece preparation of yo contribution?	all the ssary for the ur	3	3 (100)%	0 (0)%	0 (0)%	N/A
2.	Has the overall a workshop been a	im of the achieved?	3	3 (100)%	0 (0)%	0 (0)%	N/A
3.	Was the agenda structured?	well	3	6 (100)%	0 (0)%	0 (0)%	N/A
4.	Were the particip throughout the so workshop?	ants present cheduled	3	3 (100)%	0 (0)%	0 (0)%	N/A
5.	Was the benefici represented by the appropriate parties	ary ne cipants?	3	3 (100)%	0 (0)%	0 (0)%	N/A
6.	Did the participar take part in the d	nts actively iscussions?	3	3 (100)%	0 (0)%	0 (0)%	N/A
7.	Do you expect that the beneficiary will undertake follow-up based on the results of the workshop (new legislation, new administrative		3	3 (100)%	0 (0)%	N/A	N/A
8.	Do you think that the beneficiary needs further TAIEX assistance (workshop, expert mission, study visit, assessment mission) on the topic of this workshop?		3	6 (100)%	0 (0)%	N/A	N/A
9.	Would you be ready to participate in future TAIEX workshops?		3	3 (100)%	0 (0)%	N/A	N/A
10	If applicable						
10.	were you satisfied with the	Conference venue	3	3 (100)%	0 (0)%	0 (0)%	0 (0)%
	logistical	Interpretation	2	3 (100)%	0 (0)%	0 (0)%	0 (0)%
	arrangements?	Hotel	3	3 (100)%	0 (0)%	0 (0)%	0 (0)%

Comments:

- It was a very good workshop, with useful topics which attracted the interest of the beneficiary countries. Further assistance is needed knowing the current obligations of the involved candidate countries;
- The workshop was very well organized. Ms. Popovici encourages the participants to share experience and talk about the progress already made and future plans in their countries. Beneficiaries' representatives took active part in the workshop and had prepared information on the discussed topics. The topic of the workshop was complex, but it was very well presented including practical examples. The workshop was a valuable experience and I would be interested to participate in future TAIEX events.



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ANNEX I – Agenda

Day 1 : Wednesday, 7 October 2015

Topic: WMWG - 5th Screening Workshop on Program of Measures in Drina River Basin Pilot

Measures addressing organic pollution

Chair and Co-Chairs: Marta Moren Abat and Mihail Dimovski

Venue: Podgorica, Montenegro

Start	Finish	Торіс	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	Presentation and adoption of the agenda Introduction to the purpose of the workshop and its expected outcome
09.30	10.30	Presentation of and discussion of the results achieved during the 3 rd and the 4 th Screening workshops	Ms. Mihaela Popovici	Presentation of the approach, methodologies and the results achieved which will serve as the basis for the preparation of the PoM Method : PPP and Q&A
10:30	11:00	Coffee Break		





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11.00	12.30	Methodology (phase 3) for preparing the PoM as part of the RBM Plan and the PoM	Ms. Mihaela Popovici, All participants	Presentation of the concept for the selection of the measures addressing all prioritised SWMIs and related templates (for reporting based on the EU reporting sheets) Method : PPP and Q&A Materials provided: methodology (phase 3) and screening templates
12:30	14:00	Lunch Break		
14:00	14:30	Presentation of the national proposed measures addressing organic pollution in Drina RB	Input from countries based on reporting templates for UWWTD	Introduction of measures addressing organic pollution in the PoM for Drina RB Method : PPP and Q&A
14:30	15:00	Reporting on the UWWTD addressing organic pollution	Ms Mihaela Popovici All participants	Presentation will be focus on the UWWTD reporting requirements for implementing the UWWTD Method : PPP and Q&A
15:00	15:30	Coffee Break		
15:30	16:00	EU reporting requirements on cost of measures	Ms. Spela Petelin TAIEX Expert All participants	Discussion on EU reporting requirements on costs of measures Method : PPP and Q&A
16:00	16:30	Anticipated effects of reducing organic pollution towards meeting WFD objectives	Ms Mihaela Popovici All participants	Presentation of different scenarios including measures addressing organic pollution





Day 2 : Thursday 8 October 2015

Topic: WMWG - 4th Screening Workshop on Program of Measures in Drina River Basin Pilot

Supplementary measures. Measures addressing flooding, hydromorphological alterations and nutrient pollution

Chair: Mihaela Popovici and Mihai Dimovski

Venue: Podgorica, Montenegro

Start	Finish	Торіс	Speaker	Sub topic/Content
09.00	09.30	WFD - Supplementary measures	Ms. Mihaela Popovici All participants	Concept for selection Templates for collection of supplementary measures Method : PPP and Q&A
9:30	10:00	Supplementary measures and their effects for reaching WFD objectives in Slovenia	Ms. Spela Petelin TAIEX Expert All participants	The presentation will identify why and how the supplementary measures have been proposed, how much they cost in comparison with the basic measures, and their effects on WFD objectives Method : PPP
10:00	11:00	Implementation of Flood Directive in Slovenia	Ms. Spela Petelin TAIEX Expert All participants	The presentation will focused on the implementation of Flood Directive in Slovenia and the methodology for the assessment of benefits of the flood protection measures Method : PPP and Q&A
11:00	11:30	Coffee Break		
11:30	12:00	Interlinkages hydromorphological pressures and flood defence measures in PoM	Ms. Mihaela Popovici, All participants	Presentation of best practices Method : PPP and Q&A





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12:00	12:30	Lessons learned from the EU project Floodrisk mapping in the Danube river Basin	Ms Mihaela Popovici All participants	Presentation of the methodology, case studies, project outcomes and lessons learned Method : PPP and Q&A
12:30	14:00	Lunch Break		
14:00	15:00	Catalogue of agricultural measures and nutrient pollution reduction effects	All participants	5 minutes presentation of national inputs on basic and supplementary measures addressing nutrient pollution: agricultural measures proposed by Drina countries in the PoM
15:00	15:30	Implementation of Nitrates Directive in Romania	Ms Mihaela Popovici All participants	Measures addressing nutrient pollution – basic measures as part of the Program of Measures, in Romania Method : PPP and Q&A
15:30	16:00	Coffee Break		
16:00	17:00	Assessing the anticipated effects of agricultural measures: case studies	1 expert nominated per country to provide case studies	Case studies illustrating the concept, links between the Nitrates Directive, WFD and Common Agricultural Policy, estimation of the effects towards reaching WFD objective Method : PPP and Q&A







Day 3 : Friday 9 October, 2015

Topic: WMWG - 4th Screening Workshop on Program of Measures in Drina River Basin Pilot

Measures addressing hazardous substances pollution

Chair and Co-Chairs: Mihaela Popovici

Venue: Podgorica, Montenegro

Start	Finish	Торіс	Speaker	Sub topic/Content
08:30	09:00	Registration		
09:00	09:15	Wrap up of the key points of discussion from the first two days meeting	Ms. Mihaela Popovici, ECRAN Expert	
09:15	10:30	Environmental Quality Standard Directive addressing hazardous substances pollution	Ms Mihaela Popovici All participants	Presentation of the EU approach and the process of the development of the measures addressing hazardous substances in the PoM Method : PPP and Q&A
10:30	11:00	Coffee Break		
11:00	12:30	How to prepare inventory of emissions, discharges and losses of hazardous substances	Ms. Mihaela Popovici, ECRAN Expert	Presentation of the legal basis, guidance document, the main components of the inventory, data collection ECRAN beneficiary countries Method : PPP and Q&A
12:30	14:00	Lunch Break		





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14:00	15:00	Measures addressing hazardous substances in the PoM	Drina Countries	5 minutes presentation of national inputs on measures addressing hazardous substances pollution: proposed by Drina countries in the PoM Method : PPP and Q&A
15:00	15:30	Status of the preparation of the Program of Measures in Drina RB	Ms. Mihaela Popovici, ECRAN Expert	Information on the status of proposed measures in the joint PoM for Drina RB Method : PPP and Q&A
15:30	16:00	Coffee Break		
16:00	16:30	Next steps and conclusions	Ms. Mihaela Popovici, ECRAN Expert	Next steps and final conclusions





ANNEX II – Participants

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ANNEX III – Workshop materials (under separate cover)

Workshop materials including presentations and exercises, can be downloaded from:

http://www.ecranetwork.org/Files/Workshop Materials, 5th Screening DRB, October 2015, Podg orica.rar





