IMPLEMENTATION REPORT on CAPITALIZATION PLAN PREPARATION

Jaroslav Černi Institute for the Development of Water Resources (FB 10)

Lead Author/s	Compiled by Branislava B. Matic
Lead Authors Coordinator	Branislava B. Matic
Contributor/s	**LB, FB2, FB4, FB5, FB8, FB10, FB11, FB12, FB14,FB16**
Date last release	December, 2015.
State of document	**APPROVED**

Let's grow up together

The project is co-funded by the European Union, Instrument for Pre-Accession Assistance

FB Contributors, ***name and surname***	**Country and Institution**
FB 11: Arlinda Ibrahimllari,	**ALBANIA:** *Water Supply and Sewerage Association of Albania (SHUKALB)* **– FB 11**
FB 12: Admir Cerić, Sabina Hadziahmetović,	**BOSNIA AND HERZEGOVINA:** *Hydro-Engineering Institute of Civil Engineering Faculty, University of Sarajevo* **- FB 12;**
FB 6: *Bruno Kostelić, Ljiljana Dravec* **FB 8:** *Barbara Karleuša, Ivana Radman, Tamara Crnko*	**CROATIA:** *Region of Istria* - **FB 6;** *Faculty of Civil Engineering, University of Rijeka* - **FB 8;**
FB 16: *Anastasia Papadopoulou,Vasilis Kanakoudis, Stavroula Tsitsifli*	**GREECE:** *Civil Engineering Department University of Thessaly* **- FB 16**
LB: *Enrico Altran,PaoloToscano,* **FB 2:** *Daniele Nardi*	**ITALY:** *Eastern Optimal Territorial Area of Trieste (CATO)*- **LB;** *Optimal Territorial Area Authority n. 3 Central Marche – Macerata* - **FB 2;**
FB 14:*Olivera Božović, Mira Papović, Darko Kovač*	**MONTENEGRO:** *Public Utility "Vodovod i kanalizacija" Nikšić*- **FB 14**
FB 10: *Branislava Matić, Dejan Dimkić, Miodrag Milovanović*	**SERBIA:** *The Jaroslav Černi Institute for the Development of Water Resources*- **FB 10**
FB 4: *Matjaž Hvalič;* **FB 5:** *Matej Cerk, Ajda Cilenšek, Primož Banovec, Mohor Gartner, Vesna Vidmar Barbara Čenčur Curk, Petra Žvab – Rožič*	**SLOVENIA:** *Water Utility of Nova Gorica*- ***FB 4*** *University of Ljubljana (Faculty of Civil and Geodetic Engineering, Faculty of Natural Sciences and Environment)*- ***FB 5***

"This document has been produced with the financial assistance of the IPA Adriatic Cross-Border Cooperation Programme. The contents of this document are the sole responsibility of involved DRINKADRIA project partners and can under no circumstances be regarded as reflecting the position of the IPA Adriatic Cross-Border Cooperation Programme Authorities".

Table of Contents

1. INTRODUCTION

The Capitalization and sustainability activity (CS) is an important DRINKADRIA project component that would provide a genuine framework for relevant information share with significant audience (stakeholders, authorities, etc). It is noteworthy to underline that in this project capitalization of experiences or experience capitalization is two folded, e.g., national events in all countries will engage stakeholders that are identified as important for Cross- Border / Regional Water Supply System (WSS) and project inputs will serve as a ground for the protocol development.

Given the uniqueness of the DRINKADRIA project, it is realistic to expect that capitalization activities will contribute in moving from commitment to action, formalizing lesions based on experience, validate and integrate experience through the interaction with stakeholders.

The majority of the activities that proposed in DRINKADRIA application form have started in line with time frame. However, due to the some delays in partnership agreement and pre-financing, it is expected that all data and information that are not included in this report will be integrated in the Summary Report on DRINKADRIA Capitalization and Sustainability activities.

- ***SCOPE***

This report consists of 8 chapters. The first chapter is a general introduction to capitalization activities, accompanied by objectives. The second chapter contains an identification of the key processes/ issues relevant to cross border water management and water supply.

Chapter three contains the key processes/ issues for water supply addressed by the water utilities. The identification / list of relevant stakeholders involved in capitalization activities are provided in chapter 4 of this document. Chapter five contains identified capitalization procedures for relevant stakeholders.

Chapter six contains data collection and summary of other projects relevant for DRINKADRIA. In chapter seven the WP3 activities timetable is provided.

In addition, annexes included in this report provide more details and information on uniform questionnaire(s) for national events and specific national data (additional information, specific information, etc), respectfully.

- ***OBJECTIVES***

There are several objectives with same importance for full implementation of the project. In general, the main objective is to reach the goals defined in application form.

The goals of capitalization are:

- To gain insight that would improve practices and measures within the DRINKADRIA project area based on the current experience and practices analyses and constructive critical assessments that are of significance for cross-border/ regional water supply and drinking water (re)sources management;
- Involvement of the relevant stakeholders (in eight countries and at the regional, cross – border level and beyond);
- Addressing issues and problems at the different level (transboundary, national, regional, local);
- Comprehensive interlinkage with WP4 and WP5 to sustain the best possible capitalization and sustainability outputs and results within the project area and beyond given the available data, findings and WP6 – pilot actions outputs;
- Address cross-cutting issues and problems that might be considered in the protocols that have to be developed during the DRINKADRIA project implementation activities;
- Provide useful inputs for the future actions and relevant legislation and policies inputs;
- etc.

Since DRINKADRIA capitalization activities take place at the different levels the results and outputs of capitalization activities are based on a real common pool that result from different capitalization activities according to the stakeholders involved. Thus, all activities will sustain DRINKADRIA project sustainability.

Moreover, the majority of capitalization activities are organized within the commonly agreed methodological framework for activities that allow for the addressing of the specificities of different countries and pilot actions.

2. IDENTIFICATION OF KEY PROCESSES/ ISSUES RELEVANT TO CROSS BORDER WATER MANAGEMENT AND WATER SUPPLY

Majority of the countries that have Final Beneficiaries (FBs) involved in DRINKADRIA project have transboundary/cross-border water resources, and are experienced in bilateral and multilateral activities. However, the protocols that address in particular cross- border drinking water supply is and cross- border water supply issues within the project area are not developed and there is no specific legal framework at the cross – border level.

Given the nature of the document and some delay in all project activities, the feedback of stakeholders and description of the key processes and issues identified by them during the Stakeholders National Events are foreseen to be included in the Summary report on Capitalization activities. Following cross – border / regional drinking water management and supply processes and issues listed above are identified by representatives of FBs during the project preparatory activities and to great extend reflect realities cross-border/ regional drinking water supply given its complexities.

- ***KEY PROCESSES***

  Majority of the countries have transboundary water resources and cross- border water supply issues that exist or might result in the future. There are different commissions that address transboundary and cross – border water resources management at the present. In some countries there are regional water supply systems managed by the regional public companies that are established specifically for this purpose (e.g., in Serbia). The Barcelona convention (for the Protection of the Mediterranean Sea against Pollution) is signed by Bosnia and Herzegovina among the other conventions.

- ***ISSUES***

  Although the majority of countries within the DRINKADRIA project area are participate in different bilateral and multilateral commissions for transboundary water resources management there is still a gap that address cross- border WSS . In some cases it applies to the regional WSS in some countries. In addition the guideline that address protection of the cross- border/ regional WSS do not exist. Moreover, no common measures exist for the drinking water protection zones that are relevant for more than one country or region.

Although the interstate and multilateral agreements exist among some countries, some of them that would address Cross-border WSS are still pending, i.e., Bosnia and Herzegovina /Croatia, Bosnia and Herzegovina /Serbia, Bosnia and Herzegovina /Montenegro, etc.

Data and information on cross-border and regional WSS are missing, so the monitoring that would fill data gap is needed. The luck of funding is also important, given the costs associated to WSS infrastructure and its maintenance.

In addition to this general issues and processes, discussion that is more detailed is included in the following chapters.

3. IDENTIFICATION OF KEY PROCESSES/ ISSUES FOR WATER SUPPLY ADDRESSED BY THE WATER UTILITIES AND OTHER STAKEHOLDERS INVOLVED IN DRINKADRIA PROJECT

According to expertise, knowledge and skills of DRINKADRIA project FBs and LFB the key processes and issues are divided in consequent main categories.

- **Losses**
- **Quality**
- **Quantity**
- **Other**

During the First and Second Stakeholders National Events in eight countries, the uniform questionnaires are distributed to participants to get their feedbacks and inputs on key processes and issues relevant for cross – border/ cross regional drinking water supply systems. In addition to main categories of issues and problems, the following is also recognized as an significant for sustainable and efficient drinking water supply given its complexity and constrains.

- Seasonal changes in water quality and quantity, illegal connections;
- Water tariffs;
- Climate change;
- Policies & legislation framework ;
- Water utilities capacities (technical, human, etc);
- Existence/non-existence of bottom –up approach in decision making process

Since that all Stakeholders' National Events have to be finalized by the end of July 2016 summary and main outputs from DRINKADRIA project stakeholders will be included in the Summary Capitalization Report.

4. IDENTIFICATION/LIST OF RELEVANT STAKEHOLDERS INVOLVED IN THESE PROCESSES

The full list of the relevant stakeholders is available at the DRINKADRIA shared platform http://drinkadria.fgg.uni-lj.si/. The great majority of stakeholders identified by DRINKADRIA final beneficiaries are water utilities. However, given the scope of the project and the main objectives that will result in long term sustainable cross – border/ regional drinking water supply, other relevant stakeholders are designated and divided in the following categories.

- ***BILATERAL COMMISSIONS FOR WATER MANAGEMENT***

Bosnia and Herzegovina: The committee for water management of Republic of Croatia and Bosnia and Herzegovina.

In Greece, the following should be underlined:

- Memorandum of Understanding and Cooperation for Sustainable Development and Environment between the (former) Ministry and the Ministry of Environment and Physical Planning of Macedonia, signed in Skopje on 09.04.2004. This Memorandum has not been ratified by the Greek Parliament;
- Memorandum of Understanding on Environmental Protection between the Greek Republic and the Republic of Bulgaria (Law 3367/2005 169/A/6-7-2005 Gazette);
- Agreement between the Government of the Greek Republic and the Government of the Republic of Albania to establish a permanent Commission on issues of Greek and Albanian border waters (Law 3405/2005 GG 264/25-10-2005); and
- On 14 May 2010, the Ministry of Environment of Turkey and the Ministry of Environment, Energy and Climate Change of Greece signed a Joint Declaration. The Joint Declaration focuses on the cooperation for the sustainable development of the Ebro River Basin, the protection of the marine environment, the protection of biodiversity and cooperation on climate change and adapting to its effects.

In Serbia, bilateral commissions exist with Romania and Hungary. Moreover, the country is full member of International Commission for Protection of Danube River and International Sava River Basin Commission.

For Slovenia the following address bilateral/ cross –border water management issues:

- SLO-AUT KOMISIJA ZA DRAVO
- SLO-AUT KOMISIJA ZA MURO
- SLO-ITA KOMISIJA ZA VG
- SLO-HR KOMISIJA ZA VG
- SLO-MAD KOMISIJA ZA VG
- SLO-ITA-HR-CG KOMISIJA ZA JADRAN

- ***NATIONAL AUTHORITIES THAT HAVE A POWER TO ADVOCATE THE ADOPTION OF THE GUIDANCE DOCUMENTS THAT RESULT FROM WP4 AND WP5***

For this chapter, specifically subchapters 4.1-4.3 data are provided only for Bosnia and Herzegovina by FB12 – Hydro - Engineering institute of civil engineering Faculty University of Sarajevo. Given that original document is appended to this document as the second annex.

In Greece, Special Secretariat for Water, Greek Ministry of Environment, energy and climate change http://www.ypeka.gr/default.aspx?tabid=347&language=en-us, and Ministry of Public order and Citizen Protection.

Water resource management at the national level in Republic of Serbia is under the jurisdiction of the Water Directorate (Ministry of Agriculture and Environmental Protection), http://www.rdvode.gov.rs/. In addition, several other authorities at the national level should be consider in this process, e.g., Ministry for Construction, Transportation and Infrastructure.

In Montenegro, Ministry of Agriculture and Rural Development of MNE, Ministry of Sustainable Development and Tourism of MNE, etc, are authorities at national level that have power to advocate the adoption of the guidance documents.

- ***INSTITUTES FOR PUBLIC HEALTH OR OTHER RELEVANT***

As an example, in Serbia the institute for Public Health of Serbia “Dr Milan Jovanovich – Butut”, and its regional and local branches is in charge for drinking water safety for human consumption. In Montenegro, Institute for public health of Montenegro is involved in drinking water quality monitoring and reporting. In Greece, Hellenic Union of Municipal Enterprises for Water Supply and Sewerage (EDEYA) http://www.edeya.gr, is recognized as relevant for this category of stakeholders.

At the project area level, in majority of countries National Hydrometeorological services are involved in monitoring activities.

- ***PROFESSIONAL ASSOCIATIONS AND NGOS***

In Croatia, Involvement of professional and scientific societies like Croatian hydrologic society can help in discussing topics relevant for DRINKADRIA project. The conference and a round table that would address CB WRM is planed to be organized together Croatian hydrologic society next year. Serbian water pollution control society representatives participated at the first national workshop. In the future they will be included in the future capitalization activities. Further, it is planed that relevant information and outputs be presented to The International Association of Waterworks in the Danube catchment area (IAWD), ICPDR, etc. Although the before mentioned Association and Commission are focused on the Danube River Basin, they inputs and comment might be very useful for DRINKADRIA capitalization and sustainability activities. In Greece, the following professional associations and NGOs are considered as relevant stakeholders:

- MEDITERRANEAN SOS Network, http://medsos.gr/medsos/medsos-network.html;
- The Hellenic Water Association (HWA) is a non-profit association. It is the Greek Governing member of IWA (International Water Association). The Hellenic Water Association was founded in June 2012. Its principles are its non-political character and non-profit and voluntary operation. Furthermore, HWA aims to act as a think tank, support top-class research and provide high-quality service to society. The main purpose of HWA is to play a primary role to water and wastewater management from a scientific point of view;

- The ideal core of the HWA lies in the application of the best available practices and contemporary methods for water and wastewater management by a skilled integration of several scientific, technical and management disciplines;
- The ultimate goal of the HWA is to assist in the environmental awareness of the society and contribute to its sustainable growth;
- More information about the Hellenic Water Association (HWA) can be found in the respective sections of this website (http://www.hwa.gr/index.php/en);
- Hellenic Hydrotechnical Association NGO (http://eye.web.auth.gr/); and
- Greek Committee for Water Resources Management NGO (http://www.waterinfo.gr/eedyp/whatis.html).

- ***CROSS- BORDER AND CROSS – REGIONAL WATER SUPPLY SYSTEMS***

Active CB and CR WSS within the scope of DRINKADRA*		
CRO - BIH	CB WSS	Neum (Bosnia and Herzegovina) to Dubrovačko Primorje (Croatia)
CRO - BIH	CB WSS	Doljani (Bosnia and Herzegovina) to Metković (Croatia)
CRO - BIH	CB WSS	Vrgorac (Croatia) to Ljubuški (Bosnia and Herzegovina)
CRO - BIH	CB WSS	Posušje (Bosnia and Herzegovina) to Imotski (Croatia)
CRO - BIH	CB WSS	Imotski (Croatia) to Drinovačko Brdo and Puteševica (Bosnia and Herzegovina)
CRO - BIH	CB WSS	Tomislavgrad (Bosnia and Herzegovina) to Imotski (Croatia
CRO - MNG	CB WSS	Bileća Lake (Bosnia and Herzegovina) through Konavle (Croatia) to Herceg Novi (Montenegro)
SLO - CRO	CB WSS	Atomske toplice (Slovenia) to Luke poljanske (Croatia)
SLO - CRO	CB WSS	Brest (Croatia) to train station Rakitovec (Slovenia)
SLO - CRO	CB WSS	Buzet (Croatia) to Koper (Slovenia)
SLO - CRO	CB WSS	Rogaška Slatina (Slovenia) to Hum na Sutli and Zagorska sela (Croatia)
SLO - CRO	CB WSS	Ilirska Bistrica (Slovenia) to Starod (Slovenia), Šapjane (Croatia), Jelšane (Slovenia), Klana (Croatia), Mučići (Croatia), Matulji Croatia)
SLO - CRO	CB WSS	Kuželj (Croatia) to Kuželj (Slovenia)
SLO - ITA	CB WSS	Mrzlek (Slovenia) to Gorizia (Italy)
SLO - ITA	CB WSS	Albana (Italy) to Golo Brdo (Slovenia)
SLO - ITA	CB WSS	Trieste (Italy) to Sežana (Slovenia)
SLO - ITA	CB WSS	Kambreško (Slovenia) to Strada Provinciale (Italy)
ALB	CR WSS	Berat to Kucove
ITA	CR WSS	Venice region
ITA	CR WSS	Montefortino to Sarnano to Montecosaro
ITA	CR WSS	Montefortino to Sarnano to Civitanova Marche
ITA	CR WSS	Cingoli to Camerano
ITA	CR WSS	Bolognola to San Ginesio
ITA	CR WSS	Sefro to Matelica
MNG	CR WSS	Nikšič
SRB	CR WSS	Rzav (the municipalities of Arilje, Požega, Lučani, Čačak and Gornji Milanovac)
SRB	CR WSS	Kruševac
SRB	CR WSS	Ljuberđa to Niš

* **Source DRINKADRIA shared Platform**: http://drinkadria.fgg.uni-lj.si/water-supply/cross-border-water-supply-list/

- ***PROFESSIONALS INVOLVED IN PLANNING, DESIGN, CONSTRUCTION OF WSS AND WRM***

Presentation on DRINKADRIA project activities, goals, and discussions on project topics and issues with them as a part of Lifelong Learning Programs will contribute to the project results capitalization and sustainability. Moreover, the number of tools that are available on DRINKADRIA shared platform can be used by this category of stakeholders.

- ***INTERNATIONAL ORGANIZATIONS AND NETWORKS***

  - IWA
  - UNEP/MAP NGO partners
  - European Environmental Bureau (EEB)
  - Mediterranean Information Office (MIO-ECSDE)
  - European Union for Coastal Conservation (EUCC)
  - International Network for Sustainable Energy (INFORSE)
  - Climate Action Network (CAN)
  - National Network of Anna Lindh Euro-Mediterranean Foundation for the Dialogue between Cultures
  - Euro-Mediterranean Youth Platform
  - Water Footprint Network

- ***INVOLVEMENT OF STUDENTS AS A FUTURE STAKEHOLDERS***

In Croatia, at the faculty of Civil engineering (University of Rijeka) undergrad and graduate students are involved in project activities.

In Croatia, Slovenia and Serbia, several lectures that address undergrad students are dedicated to DRINKADRIA project activities and presentation on main project activities. During the World Academy of Sciences (TWAS) Science Diplomacy Workshop on Sustainable Water Management in Trieste Italy, the participants from various development countries have presentation on DRINKADRIA project activities.

- ***OTHER***

Other relevant stakeholders might include end users of the cross- border / regional WSS. Moreover, local authorities and population are significant stakeholders given the scope and objectives of DRINKADRIA project. For Greece, Decentralized Administration of Peloponnese, Western Greece and Ionian Islands and Water Directorate should not be neglected as the stakeholders relevant for capitalization and sustainability of project results. Given the delay of project start and extension for final implementation, summary activities significant for DRINKADRIA project implementation will be included in summary report on Capitalization and Sustainability.

Although the main goal of the project is to address cross – border an cross –regional drinking water supply systems, it is identified that Public Company Belgrade Waterworks and Sewerage can provide useful inputs to capitalization and sustainability given the its complexity and number of end users.

5. IDENTIFICATION OF CAPITALIZATION PROCEDURES AND TOOLS FOR RELEVANT STAKEHOLDERS

- ***WORKSHOPS AND ROUNDTABLES***

The National events for Stakeholders are foreseen to be completed in July 206, due to project start delay and some other administrative issues. Uniform questionnaires are developed to be used during the national events. More detailed information on the Questionnaires, data and inputs generated from the stakeholders during the finalized national events are provided in the separate documents, namely Reports on capitalization activities.

Total number of National events for stakeholder will reach 24 events, three per country and it is expected that number of participants will reach almost 1000 stakeholders in eight countries.

- ***CONFERENCES AND REGIONAL MEETINGS***

It is already mentioned that in Croatia the conference will be organized next year. It is expected that the conferences will be organized in some other countries during the project lifetime.

- ***WSS ASSOCIATIONS MEETINGS, OTHER***

- ***DRINKADRIA SHARED PLATFORM***

Internet based network platform (http://drinkadria.fgg.uni-lj.si/) is developed and contain information and data provided by project partners. It is regularly updated with new content and information and generates majority of outputs and results of relevance for DRINKADRIA project.

In summary shared web platform incorporate data on:

- Cross Border Water Supply Map
- Water Protection Areas Map
- Legislation & Standards
- Pricing Model
- Climate
- Water Quantity
- Water Quality
- Water Supply Contract
- Non Revenue Water Reduction DSS
- WR Surveillance
- Related Projects

- ***PROJECT CLOSING CONFERENCE***

The DRINKADRIA project closing conference will be organized at the beginning of July, 2016. It will gather relevant stakeholders and decisions makers and provide the great opportunity for participants from eight countries to exchange knowledge, skills and experience.

6. DATA COLLECTION AND SUMMARY ON OTHER RELEVANT REGIONAL PROJECTS AND /OR BAT

This is ongoing process and final list will be available on the DRINKADRIA shared platform. Each Final Beneficiary provided data and information that are significant from their point of view.

ANNEXES:

- ***QUESTIONNAIRE FOR THE FIRST NATIONAL EVENTS***
- ***QUESTIONNAIRE FOR THE SECOND NATIONAL EVENTS***
- ***NATIONAL DATA FOR ALBANIA***
- ***NATIONAL DATA FOR BOSNIA AND HERZEGOVINA***
- ***NATIONAL DATA FOR ITALY***

ANNEX 1:

the QUESTIONNAIRE for the FIRST NATIONAL STAKEHOLDERS EVENT

QUESTIONNAIRE ON CROSS BORDER /REGIONAL
WATER SUPPLY SYSTEMS AND WATER RESOURCES MANAGEMENT

The Capitalization and sustainability activity (CS) is an important project component that would provide framework for exchange of relevant information of significance for cross- border/ regional water supply systems among stakeholders, authorities, research institutions, etc.

Yours feedbacks collected during the national workshops provide valuable inputs and contribute to successful DRINAKDRIA project implementation.

Name: Surname: Institution/ Organization: (If you wish to remain anonymous, please do not fill)	

Your Institution/ Organization mission /main scope of the work:

☐ Water utility ☐ Authority : ☐ local ☐ regional ☐ national
☐ Research Organization ☐ Water Association ☐ Other (please specify):

Your activities are mainly focused on :

☐ water supply ☐ water protection ☐ education/research
☐ international cooperation ☐ financial/ legislative ☐ other, namely :

What spatial scale reflects the best your activities and tasks?
(Please use percentile estimation in a way that total amount is 100%
Example: local -55%. national -25%, other - 20%)

local _ % regional _ % national _ % international _ % other, namely : _____, _ %

What are the main water supply management issues/ problems at the present?
(Please rank them: 1 the most significant , ….. 5 the least significant, it is possible to assign the same rank to maximum two issues/problems)

☐ Losses ☐ Quantity ☐ Quality ☐ Water tariffs
☐ legislation and policy framework ☐ Lack of funding ☐ Infrastructure
☐ Capacities : ☐ institutional ☐ technical ☐ human

☐ Climate change ☐ Weak Cooperation ☐ Other, namely :

Please rank the following in terms of before mentioned issues/problems:
(Please rank them: 1 the most significant , ….. 5 the least significant, it is possible to assign the same rank to maximum two issues/problems)

LOSSES

☐ unauthorized consumption ☐ metering errors ☐ distribution network leakage
☐ distribution network leakage ☐ water supply facilities leakage
☐ other, please specify

QUANTITY

☐ increase in water use ☐ seasonal fluctuations ☐ water storage capacities
☐ changes in land use practices ☐ high consumption by other sectors (agriculture, industry, etc)
☐ Climate Change ☐ other, please specify

QUALITY

☐ point source pollution ☐ nonpoint source pollution ☐ source protection issues
☐ changes in land use practices ☐ seasonal fluctuation ☐ Climate Change
☐ other, please specify

WATER SUPPLY DISTRIBUTION CONSTRAINS

☐ inadequate network ☐ pumping stations capacities ☐ reservoirs deficiency
☐ poor maintenance of water supply distribution system ☐ ageing
☐ other, please specify

What are the main water supply management constrains in the near future (next 25- 30 years) ?
(Please rank them: 1 the most significant , ….. 5 the least significant, it is possible to assign the same rank to maximum two issues/problems)

☐ Losses ☐ Quantity ☐ Quality ☐ Water tariffs
☐ legislation and policy framework ☐ Lack of funding ☐ Infrastructure
☐ Capacities : ☐ institutional ☐ technical ☐ human
☐ Climate change ☐ Weak Cooperation ☐ Other, namely

What are the most important steps and activities that would improve water supply in terms of aforementioned issues and constrains?
(Please rank them: 1 the most significant , ….. 5 the least significant, it is possible to assign the same rank to different issues/problems)

☐ More information on climate change impacts on the water resources management and future planning;
☐ Improved knowledge of uncertainties that influence climate change adaptation measures;
☐ Improved knowledge about future water availability and future planning;
☐ Improved knowledge of land use practices impact on DWS and source protection zones definition;
☐ Improved knowledge about future water safety;
☐ Improved management practices for cross-border water supply systems;
☐ Common protocol development for the Cross- border / regional WSS and WRS management;
☐ Implementation of the priority measures for more efficient and effective WSS and WR management;
☐Reduction of the water loss and leakage real time monitoring;
☐ Modern methodologies application for the real time control of: leakage, water quality, pumps schedules, etc.
☐Development of WEB page that would improve cooperation and knowledge exchange and transfer relevant for WRM and DWS issues;
☐ Other, namely :

Do you think that some cross-cutting issues can be solved by:

(Please rank them: 1 the most significant , ….. 5 the least significant, it is possible assign the same rank to maximum two issues/problems)

☐ Policy that would address the majority of issues
☐ Separate policies that would address the majority of issues
☐ Better cooperation among different sectors
☐ Better cooperation among local and national authorities
☐ More financial resources
☐ Water tariffs
☐ Other, namely :

Please list the 3 most significant actors/ actions for improved water supply and water resources management:

What are the actions that your institution/ organization might take to improve water supply and water resources management and contribute to its sustainability?

Do you think that only state activities contribute to improved water supply: ☐ YES ☐ No If the answer is NO please list other institutional levels of significance:
Your familiarity/ knowledge with role and activities of Bilateral Commissions of significance for cross – border/ regional water supply and water resources management: ☐ Comprehensive ☐ Moderate ☐ Deficient
Your familiarity/ knowledge with role and activities of Local Authorities of significance for cross – border/ regional water supply: ☐ Comprehensive ☐ Moderate ☐ Deficient
Are there legislative frameworks (treaties, agreements, Memorandum of Understanding, etc.) that are significant for cross-border/ regional water supply systems and water resource management you are familiar with in your country/region: ☐ YES ☐ No If the answer is yes, please provide the title
Your familiarity with issues/ constrains regarding cross- border / regional water resources: ☐ Comprehensive ☐ Moderate ☐ Deficient Please provide additional comments if any:
Implementation level of River basin Management Plans at the national level: ☐ Completed ☐ Ongoing ☐ Pending Please provide additional comments if any:
Implementation level of River basin Management Plans (transboundary river basins) : ☐ Completed ☐ Ongoing ☐ Pending Please provide additional comments if any:

What are the most important topics that you would like to become more familiar regarding to cross- border /regional water supply systems and water resources management?
Do you consider this type of workshops/roundtables useful: ☐ Yes ☐ No ☐ Neutral
Additional Comments:

ANNEX 2:

the QUESTIONNAIRE for the SECOND NATIONAL STAKEHOLDERS EVENT

The Capitalization and sustainability activity (CS) is an important project component that would provide framework for exchange of relevant information of significance for cross-border/ regional water supply systems among stakeholders, authorities, research institutions, etc.
Yours feedbacks collected during the national workshops provide valuable inputs and contribute to successful DRINAKDRIA project implementation.

Name and Surname:	
Institution/organization:	
(If you wish to remain anonymous, please do not fill)	
Would you be like to be informed about common methodologies for water availability determination; estimation of climate change impact on water resources quantity and quality; WR vulnerability, risks and hazards and delineation of water protection areas ☐ Yes ☐ No ☐ Neutral	
Please rank the technical protocols with respect to their significance for cross- border/ regional DWSS *(Please rank them: **5** the most significant , ….. **1** the least significant, it is possible to assign the same rank to maximum two technical protocols*) ☐ planning ☐ design ☐ operation and maintenance ☐ financing ☐ water quality ☐ contingency management ☐governance	
Would you like to be involved in the protocols development? ☐ Yes ☐ No ☐ Neutral	
If the answer is yes, please indicate/ select the way you would like to contribute: ☐ During the drafting of protocols ☐ Review ☐ Other (please indicate):	
Your familiarity with DRINKADRIA web platform: ☐ Comprehensive ☐ Moderate ☐ Deficient Please provide additional comments if any:	
You will visit more frequent DRINKADRIA web platform: ☐ If you receive e-mails on updates ☐ If stakeholders point of view is more visible ☐Other (please describe briefly):	

Would you like to contribute in development of: ☐ DRINKADRIA brochures/ newsletters ☐ Technical Papers ☐ Other (please describe briefly):
Would you like to have better networking/ connection with stakeholders from other countries that participate in DRINKADRIA project? ☐ Yes ☐ No ☐ Neutral
Do you find this kind of workshops useful? ☐ Yes ☐ No ☐ Neutral
The Third National Event should be focused on: ☐ Legislation framework ☐ Presentation of accomplished project activities ☐ Other (please indicate):
Additional Comments:

Thank you very much your time and efforts. Respectfully, DRINKADRIA project team

ANNEX 3:

NATIONAL DATA ALBANIA

Major Stakeholders on Cross Border/Regional Water Resources Management and Water Supply

A variety of institutions, organizations and individuals have a significant role and impact in the cross-border water management and water supply in Albania and may be considered as stakeholders. All the water stakeholders can be grouped in the one of the categories: Central Government, Local Government, NGOs, Private Companies and Experts in one of the water related fields. Nevertheless the most significant stakeholders in the cross-border water supply and water resource management are the decision making and implementing institutions.

Albanian legal framework establishes the relevant bodies and institutions for management of the water resources in Central and Local level, as mentioned in the following paragraphs.

NATIONAL LEVEL

Council of Ministers, which with the proposal of National Water Council approves the National Strategy for Water Resource Management and all other water policies.

National Water Council (NWC) which is under Albania's Council of Ministers is the primary authority responsible for water resources management. The National Water Council has responsibility for: proposing legislation; managing the drainage basin plan; approving any water management plans relating to agricultural, urban planning, industrial development or other projects; establishing necessary agencies and organizational units; and approving water concessions. The Technical Secretariat is the executive agency of the National Water Council and has responsibility for: implementing national water policy and

the legal framework; creating an inventory of water resources; issuing permissions and authorizations for water use; and promoting research and development.

Technical Secretariat (TS) is described as the 'executive agency' of the NWC and is established on the basis of a decision of the Council of Ministers. It's tasks are to implement the water resources national policies as approved by the National Water Council. The role of the technical secretariat is played by the General Directorate for Water Administration housed at the Ministry of Environment, Forestry and Water Administration

Ministries, being responsible for the management of water resources in the respective sectors are: Ministry of Environment; Ministry of Agriculture, Rural Development and Water Administration; Ministry of Energy; Ministry of Transport and Infrastructure and Ministry of Health. Under the authority of these Ministries a relevant number of agencies and institutions which are using, exploiting and monitoring the various water resources are operating:

State Sanitary Inspectorate and district Public Health Departments, under the governance of Ministry of Health, are responsible for the water quality and wastewater discharge control. Through their inspectors, these institutions perform daily testing at predefined checkpoints.

General Directorate of Water Supply and Sewerage (GDWW) is a public Institution established by the Council of Ministers specializing in water infrastructure. The GDWW is responsible for providing technical support to the water and wastewater policies and creating the strategic framework of the water and wastewater sector. GDWSS is responsible for policy, strategy, investment

planning and allocations, and the monitoring and benchmarking of sector performance.

Water Regulator Authority (WRA) is a public independent institution that regulates the water supply and sewerage sector to ensure protection of the public interest and to create a transparent regulatory framework. Some of WRA responsibility include (i) licensing water and wastewater commercial entities; (ii) approving tariffs and fees for wholesale and retail water supply and wastewater services (iii) establishing performance and service standards for licensed utilities and enforcing their compliance; (iv) reporting to the Government on the situation in the water and wastewater sector based on information from the utilities; (v) organizing public hearings at the discretion of the WRE Commission Chairman; and (vi) applying administrative and monetary sanctions.

LOCAL LEVEL

River Basin Councils and River Basin Agencies are the local authorities responsible for managing the water resources in the relevant basins. The basin councils have legal personality and are depend on the Technical Secretariat of the National Water Council. As regards their composition, they are composed of officials from central and local government, being chaired by a Prefect. Most of the RBC members are water management experts or have a particular interest in water resources.

Local Governments (municipalities and communes) are defined as the responsibility body for management of Water Supply and Sewerage Utilities under the Law on Organization and Functioning of Local Government (2000). Local governments have four areas of authority: administrative, investment,

maintenance, and regulatory. While the water tariffs are based on the principle of cost recovery under the discretion of local government and within general national policies.

Water supply and Sewerage Utilities are established at local levels for providing the water supply and sewerage service. WSS utilities are designed to be financially independent entities that create water schedules and distribution plans, maintain water distribution infrastructure, set and collect fees, and resolve conflicts.

Associations and Private Companies: one of the most important associations in the water sector is the Water Supply and Sewerage Association of Albania (SHUKALB), which is one of the Final Beneficiaries of the DRINKADRIA project. SHUKALB main services are:

Organization of different capacity building events for the staff employed in the water sector.

Implementation and management of different foreign projects in the water sector.

Dissemination of the latest developments and news in the water sector.

ANNEX 4: NATIONAL DATA BOSNIA AND HERZEGOVINA

CAPITALIZATION PLAN

The First Draft

DATA PROVIDED BY PROJECT PARTNER FROM
BOSNIA AND HERZEGOVINA (FB 12)

Hydro - Engineering institute of civil engineering Faculty, University of Sarajevo.

IDENTIFICATION OF KEY PROCESSES/ ISSUES RELEVANT TO CROSS BORDER WATER MANAGEMENT AND WATER SUPPLY

- ***KEY PROCESSES***

Bosnia and Herzegovina

Cross – border water management framework for BiH is consisted of the international agreements that Bosnia and Herzegovina signed and assumed from the previous period, as well as the signed conventions and agreements covering this area.

Because of their position, internal legal arrangements and international environment, Bosnia and Herzegovina is inclined to international cooperation in the area of water management, primarily with the neighboring countries in the region. The internal organization of the country requires that the foreign policy affairs related to this sector are pursued thorough the institutions of the State of Bosnia and Herzegovina (i.e. the Ministry of Foreign Trade and Economic Relations), however, the implementation of the assumed obligations is the obligation of the entities.

Given the fact that the territories of Bosnia and Herzegovina belong to the Danube river basin and the Adriatic Sea basin, the international cooperation framework has been

established on this basis and spread through the Convention on Cooperation for the Protection and Sustainable Use of the River Danube (Danube River Protection Convention) and the Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention).
The regional cooperation between the countries gravitating to the Sava River has been defined in the Framework Agreement of the Sava River Basin, setting out:

- the establishment of the international navigation regime;
- the establishment of the sustainable water management;
- taking measures for the purpose of preventing and limiting adverse effects of water;
- Establishment of mechanisms for creating an efficient multilateral cooperation between the countries of the Sava River sub-basin.

The bilateral relations with the neighboring Republic of Croatia in the area of water management are stipulated in a separate document – the Treaty between the Government of the Republic of Croatia and the Government of Bosnia and Herzegovina on the establishment of water management relations regulating the water sector relations of common interest for the two countries based on the Convention on the protection and use of trans-boundary watercourses and international lakes (Helsinki Convention). Based on these bilateral relations, the committee for water management was established on 2006. Related cross-border water supply, there is the draft contract between B&H and Republic Croatia to regulate the rights and obligations at cross border water supply systems. Currently, this draft contract is in the adoption phase by B&H Council of ministers.
There are not yet the bilateral relations in the area of water management with the neighboring countries Republic of Serbia and Republic of Montenegro. The negotiation process between Bosnia and Herzegovina and Montenegro has started with the preparation of draft contracts to regulate water management relations. This process has not yet started with Republic of Serbia.
There is the additionally issue related cross-entity cooperation (Federation of B&H and Republic of Srpska) in water management which can also have the impact on the cross-border water management.
The Memorandum of Understanding between the Federation of Bosnia and Herzegovina and Republika Srpska regarding water issues was signed in 1998 by entity governments, recognizing the need for establishing the mechanism of inter-entity cooperation in the area of water and the need of informing the institutions of Bosnia and Herzegovina on the activities in the area of international cooperation in terms of trans-boundary watercourses. By this Memorandum, the Inter-entity Coordination Commission has been established, and its scope of work and the terms and conditions of its operation were defined. The issues that fall under the competences of the Commission include:

- international agreements on water management issues from the aspect of environmental protection;
- international watercourses;
- international projects;
- **cooperation with neighboring countries**;

- harmonization of the existing and future water regulations;
- harmonization and monitoring of the quality standards;
- harmonization and control of operations of the laboratories for water quality monitoring and watercourses categorization;
- construction and reconstruction of water management facilities at the inter-entity border line and in its proximity;
- harmonization of water management plans for the facilities intersected by the inter-entity border line;
- collection and exchange of data;
- harmonization of plans related to flood control and other extraordinary situations.

ISSUES

Bosnia and Herzegovina
The main problems realted cross-border water resources management:

- There is no common rulebook for protection of cross-border drinking water sources;
- There is no implementation of common water resources measures in cross-border area esspecialy at the protection zones of drinking water sources;
- There is no the interstate agreement (B&H/Croatia, B&H/Serbia, B&H/Montenegro) realted cross-border water supply system work;
- The is no detailled data about cross-border water supply systems;
- The regulated inter-entity relations are insufficiently effective in the cross-entity water management.

IDENTIFICATION OF KEY PROCESSES/ ISSUES FOR WATER SUPPLY ADDRESSED BY THE WATER UTILITIES

Bosnia and Herzegovina
The Adriatic region project area mostly belongs to the FB&H entity. Therefore, the folowing data are preseted mainly for FB&H.

COVERAGE

According to the Water Management Strategy for FB&H, 60% of the population has access to the public water supply system i.e. these systems cover around 1,402,962 inhabitants. About 94% of the population in urban areas has the accesses to the public water supply system while in rural areas amounts to only 20%. People not connected to

the public system take water either from systems built and operated by the communities themselves or from private wells.

- ***LOSSES***

Water losses on the territory of 20 observed municipalities in FB&H and Republic of Srpska[1] are high:

- Losses in the FBiH are in average 64%
- Losses in the RS are in average 52%
- Losses on BiH level are in average 60%.

- ***QUALITY***

Continuity in monitoring of water quality was interrupted in 1992. Organized control of surface water quality in the Federation BiH was resumed in 1995, or 2005, depending on river basin district and competent agencies. Comparison of the water quality analysis results from the period up to 1991 with the ones from 2000 is important. Namely, later analyses, although made without continuity and separately for various districts, generally display improvement in surface water quality. That is understandable because of reduced industrial activities. There is no overall system of groundwater monitoring. The quality of groundwater is monitored only in areas where water is abstracted for public water supply. Generally, all public water supply systems have, if necessary, corresponding water treatment plants. Thus the drinking water quality in most of the PUCs is good.

- ***QUANTITY***

The total balance of surface waters in the FB&H is 1046 m^3/s – trans boundary waters 376 m^3/s and inland waters 670 m^3/s. Total abstracted water quantities for water supply needs in the Federation BiH are about 261,542,143 m^3/year which for 1.4 million inhabitants covered by public water supply systems. Raw water for drinking purposes is sourced from groundwater and springs (approx. 85%), surface water (approx. 12%) and artificial reservoirs and lakes (approx. 15%). Some cities, but particularly villages are suffering from water shortages during a specific period of year, where the population has interrupted water supply. This is mostly the case in the catchment area of the rivers Cetina and Krka and in the northern part of catchment area of Bosna and Drina rivers. Water shortages prompted the construction of reservoirs. The gross specific consumption is 512 l/inhab./day[2], including households, public institutions, hospitals, small economy, industry and water losses.

- ***OTHER***

Public utility companies and water tariffs

[1] *General assessment of the water supply sector and its human development function in BiH, UNDP 2011*
[2] *Water management strategy for FBiH 2012-2020, 2011.*

Water tariffs applied in Public Utility Companies (PUCs) are not determined based on the principle of "cost recovery". The tariffs are controlled by the local government (municipalities) and kept on a "socially" acceptable level. PUCs mainly manage to cover their basic operating costs and ensure funds for basic repairs and maintenance, but usually the tariffs are not sufficient to cover investment and maintenance requirements. Most of the small water utility companies can hardly cover the basic costs of operation and maintenance (O&M) from the collected fees for water[3].
In larger municipalities, the situation is even worse and water utility companies in most of the cases cannot cover the above mentioned costs from the collected income. The poor financial situation in most of the water utility companies does not allow investments in maintenance at the level necessary for extension of life of existing facilities. Due to limited financial resources, water utility companies can only do emergency repairs of the network, which means that many maintenance needs originating from the age of infrastructure may not be fulfilled[4]. Still, the operators are doing their best to provide their services in the most efficient way, and they are generally successful in maintaining a 24-hour water supply of adequate quality. Lack of resources for water supply companies is largely due to the lack of autonomy and the dependence on municipalities, which are generally not eager to increase the tariff rates. Through history, the water price was used as an instrument for social peace and as a political weapon, and it is the same today. Inadequate organizational structure and capacities within water utility companies are also part of the problem related to lack of resources.
Data on collection efficiency obtained from 10 Water Utilities in FBiH ranges from 62-95%[5].

- ***BILATERAL COMMISSIONS FOR WATER MANAGEMENT***

Bosnia and Herzegovina
The committee for water management of Republic of Croatia and Bosnia and Herzegovina

-

- ***NATIONAL AND REGIONAL AUTHORITIES RELEVANT FOR WATER MANAGEMENT***

Bosnia and Herzegovina

The responsible bodies for water management are defined, in accordance with the competencies division defined by Constitution of BIH, i.e. administrative organization of the country:

[3] *Water management strategy for FBiH 2012-2020, 2011.*
[4] *General assessment of the water supply sector and its human development function in BiH, UNDP 2011*
[5] *Report on the review of financial reports of the „Agency for the Adriatic sea basin district, for the year 2009.*

- At the state level: Ministry of foreign affairs, Ministry of foreign trade and economic relations (domain of navigation);
- At the entity level:

Federal ministry of agriculture, water management and forestry
Federal ministry of health
Ministry of agriculture, forestry and water management of Republic of Srpska.
Ministry of health and social protection of republic of Srpska

- At the level of Brčko District:

Department for agriculture, forestry and water management of the Brčko District Government.

The following institutions are recognized as project stakeholders:

- The Federal Ministry of Agriculture, Water Management and Forestry;
- The Ministry of Agriculture, Forestry and Water Management of Republic of Srpska,
- Water Agencies in FB&H - The Water Agency for the Sava River Watershed and the Agency for the Adriatic Sea Watershed,
- Public institution "Vode Srpske"
- The Cantonal Ministries of Agriculture, Forestry, and Water Management at Hercegovina-Neretva canton, West Herzegovina canton and Canton 10
- The Municipalities at B&H/CRO cross-border project area; Čapljina, Ljubuški, Tomislavgrad, Livno, Posušje, Ljubuški, Bileća, Neum.
- The Public Utilities Company (PUC) at B&H/CRO cross-border project area: Čapljina, Ljubuški, Tomislavgrad, Livno, Posušje, Ljubuški, Bileća, Neum.

NATIONAL AUTHORITIES THAT HAVE A POWER TO ADVOCATE THE ADOPTION OF THE GUIDANCE DOCUMENTS THAT RESULT FROM WP4 AND WP5

The Federal Ministry of Agriculture, Water Management and Forestry;

The committee for water management of Republic of Croatia and Bosnia and Herzegovina

ANNEX 5:

NATIONAL DATA ITALY

WP 3 – Capitalization an sustainability

The role in WP 3, according to the project AF, can be summarized as follows:
Act. 3.1FB2, as an Authority partner in the Project, is supposed to provide input to the capitalization plan, regarding the involvement of other regional authorities and local stakeholders.

Actions implemented: Municipalities and Utilities responsible for WS management in A.ATO 3 area of interest have been involved in the Project by being assigned a contribution in order to purchase and install the foreseen equipment for the implementation of Pilot Action. A first Workshop was held in Macerata 13/12/2013, to present the Project and the specific role of A.ATO 3 and Utilities/Municipalities in the implementation of Pilot Project. Representative from 7 different Companies and 2 Municipalities took part in the workshop. Beyond Municipalities and Municipalities directly participating, the following Organization can be identified as local/regional Stakeholders to be involved:

1. River Basin District Authorities
2. Marche Region
3. ARPAM (Regional Environmental Protection Agency)
4. ASUR (Regional/Local Health Organization)
5. Regional River Basin Authority
6. Civil Protection Department
7. Provinces in Marche Region (n. 5)
8. Municipalities in ATO 3
9. Universities of Camerino, Macerata and Ancona
10. Other Utilities in ATO 3 and neighboring optimal territorial areas (CB-WSS)

Actions to be implemented: Stakeholders will be officially informed about the Project and its main goals and they will be also invited to a specific local workshop (June, 2014).

Act. 3.2A.ATO 3 will contribute to capitalization activities, getting feedback from local stakeholders and sharing Project results with them

Actions implemented: A list of local Stakeholders has been drafted, also putting in evidence specific representative persons and addresses for mailing and invitations to Project activities such as workshops, meeting, local plants visits/inspections, etc.

Actions to be implemented: Stakeholders involved will be asked to fill in the Questionnaire and they'll be kept updated about Project results, also providing further feedback.

Act. 3.3 After agreement upon a proper methodology for effective information and data collection, A.ATO 3 will contribute providing data and information about relevant projects addressing topics similar to DRINKADRIA's and relating outputs.

Actions implemented: Review of the regional project named PRISMAS Umbria (part of the interregional project asked for by the Ministry for the Environment – National Environment Protection Agency), setting up (1997-2000) a network of groundwater monitoring in Umbria Region (website: http://www.arpa.umbria.it/au/prismas/Default.htm) based on which A:ATO 3 also developed the Pilot Case proposed in WP6.

Actions to be implemented: Contribution to the establishment of a database of all relevant regional, national and transboundary projects interesting for the Adriatic region.

Act. 3.4 A.ATO 3 will provide input to the DRINKADRIA Project platform, supporting networking actions, benchmarking, sharing experiences and good practices

Actions implemented: Questionnaire about existing CB-WSS in ATO 3 has been (partially) filled in and submitted to WP5 Leader, with attached short description of the most important characteristics, available documents (agreements, contracts, etc.) and indications about infrastructures localization.

Actions to be implemented: Further documentation and available data, together with shapefiles representing the most important transboundary interconnections will be submitted as soon as possible; further investigation and assessment about administrative, economic and technical issues will also be carried out, involving Utilities and other Authorities, in order to make it possible to perform comparisons and develop standard protocols.

Let's grow up together

DRINK ADRIA

Adriatic IPA
Cross Border Cooperation 2007-2013

The project is co-funded by the European Union,
Instrument for Pre-Accession Assistance