



Enabling
& Transboundary Cooperation
& Integrated Water Resources Management
in the extended **DRIN RIVER BASIN**



DRIN BASIN

STRATEGIC ACTION PROGRAMME

In the framework of:
Memorandum of Understanding
for the Management of the Extended
Transboundary Drin Basin

The Coordinated Action for the implementation of the Memorandum of Understanding for the Management of the Extended Transboundary Drin Basin (Drin CORDA) is supported by the Global Environment Facility (GEF) Drin Project. The latter is implemented by the United Nations Development Programme (UNDP) and executed by the Global Water Partnership (GWP) through GWP-Mediterranean (GWP-Med), in cooperation with the United Nations Economic Commission for Europe (UNECE). GWP-Med serves as the Secretariat of the Drin Core Group (DCG), the multilateral body responsible for the implementation of the Memorandum of Understanding.

Disclaimer: *The document adheres to the United Nations rules and policies regarding the names and international status of countries and/or other geographical areas. The use of characterizations, names, maps or other geographical statements in this document in no way implies any political view or positions of the Parties that are executing and implementing the Project.*

The Drin SAP was developed with technical input from and the coordination of: Martin Bloxham, Peter Whalley and Dimitris Faloutsos.

THE DRIN STRATEGIC ACTION PROGRAMME WAS ENDORSED BY MINISTERS AND HIGH-LEVEL REPRESENTATIVES OF THE DRIN RIPARIANS DURING AN ON-LINE CEREMONY ON 24 APRIL 2020 



Scan the QR code
to watch the signing
ceremony

For more information, please contact



Web: www.gwpmed.org

Head Office:
12, Kyristou str., 10556
Athens, Greece
T: +30 210 32 47 490

TABLE OF CONTENTS

FOREWORD TO THE DRIN BASIN STRATEGIC ACTION PROGRAMME	4
1. INTRODUCTION	10
1.1 The Drin Basin	10
1.2 Drin Coordinated Action – a history	12
1.3 GEF Drin Project	14
2. STEPS TOWARDS PREPARING THE STRATEGIC ACTION PROGRAMME	16
2.1 TDA/SAP methodology	16
2.2 Drin Basin TDA approach	16
2.3 Drin Basin SAP approach	20
3. KEY MANAGEMENT PRINCIPLES FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAMME	24
4. THE DRIN BASIN STRATEGIC ACTION PROGRAMME	26
4.1 Transboundary problems	26
4.2 Long-term vision	26
4.3 Goals to achieve the long-term vision and objectives to meet the goals	27
5. THE DRIN BASIN SAP IMPLEMENTATION ARRANGEMENTS	34
5.1 Overview	34
5.2 Nexus and SAP implementation	34
6. MONITORING AND EVALUATION	36
ANNEX 1. SAP ACTION MATRICES	38
ANNEX 2. ACRONYMS AND ABBREVIATIONS	130

FOREWORD TO THE DRIN BASIN STRATEGIC ACTION PROGRAMME

Action at the Drin Basin level was uncoordinated until the development of the Shared Vision for the Sustainable Management of the Drin Basin and the signing of a related Memorandum of Understanding (MoU – 25 November 2011, Tirana) by water and environment ministers of the Drin Riparians (Albania, Greece, Kosovo,¹ Montenegro and North Macedonia). The objective of the MoU is to deliver the agreed shared vision, to “promote joint action for the coordinated integrated management of the shared water resources in the Drin Basin, as a means to safeguard and restore to the extent possible the ecosystems and the services they provide, and to promote sustainable development across the Drin Basin.”

Under the Coordinated Action for the implementation of the Memorandum of Understanding for the Management of the Extended Transboundary Drin Basin (Drin CORDA) process, the United Nations Development Programme (UNDP) and Global Water Partnership – Mediterranean (GWP-Med) initiated the Global Environment Facility (GEF) financed project ‘Enabling transboundary cooperation and integrated water resources management in the Extended Drin River Basin’ to facilitate the implementation of the MoU. This has been undertaken through a GEF inspired mechanism of developing a Transboundary Diagnostic Analysis (to understand the transboundary problems affecting water/environment in the basin) and a Strategic Action Programme (that

presents the agreed strategy and actions to address the transboundary problems) known as a TDA/SAP process.

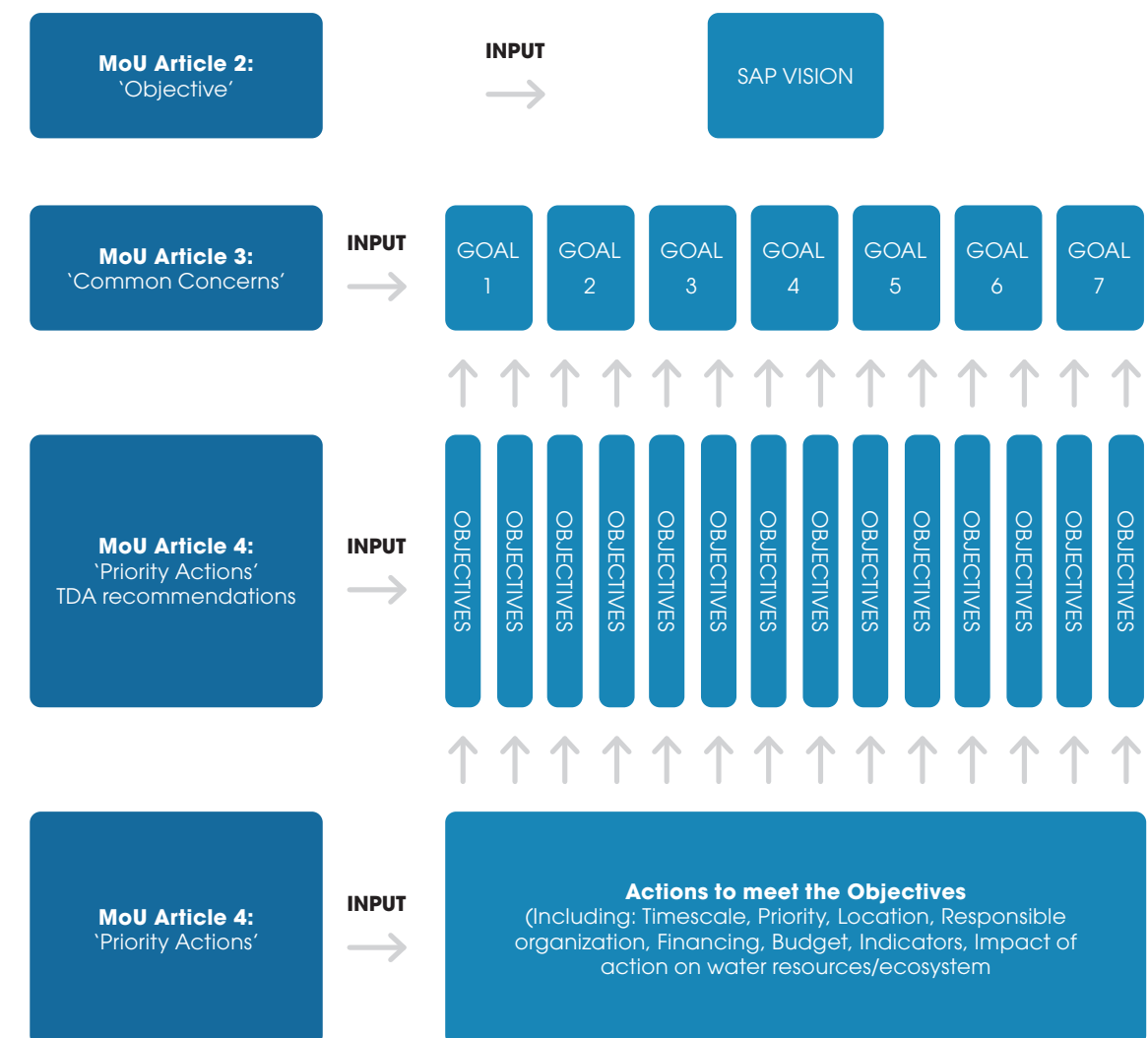
The Drin TDA adopted – to the extent allowed by the availability of information and data – a source-to-sea approach to analyse the causes and impacts of transboundary problems in the Drin Basin through the preparation of detailed thematic reports that characterized the basin and extensive regional and Riparian consultation processes. The TDA identified four **Transboundary Problems**:

- Deterioration of **Water Quality**
- Natural and Regulated Variability of **Hydrological Regime**
- **Biodiversity** Degradation
- Variability of **Sediment Transport Regime**

Each of these problems is likely to be exacerbated by **climate variability and change**. All actions proposed by this SAP to address the four problems will have climate considerations included through the adoption of climate resilient/no-regrets approaches.

The Drin MoU presents a clear vision and identified seven ‘common concerns’ within the basin which are reaffirmed in the SAP as ‘goals’ to be achieved through the implementation of specific objectives and management actions.

The key components of the SAP



In delivering the TDA and the SAP the Riparians and the region have been provided, by the GEF Drin project, with significant data, information and analysis to assist with meeting the ambition of the EU Association Agreements to meet EU water directives and implement the United Nations Economic Commission for Europe (UNECE) Water Convention.

Management Actions responding to these **Objectives, Goals** and the causes of the **transboundary problems** to deliver the **Vision** are presented in detailed action tables (annex 1) to facilitate future SAP implementation. To monitor progress towards achieving

the **Goals and Objectives**, all proposed management actions presented in annex 1 include process indicators and time-related targets, of which the latter should be updated at the start of action implementation. Environmental Quality Indicators and Stress Reduction Indicators will be also developed – adopted by the DCG – and used in this regard (see also section 6 Monitoring and Evaluation).

The seven MoU common concerns (SAP **Goals**) and the **Objectives** to meet the goals are as follows:

¹ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

GOAL 1

Improving access to comprehensive data and adequate information to fully understand the current state of the environment and the water resources and the hydrologic system (including surface, underground and coastal waters) as well as ecosystems of the Drin Basin.

OBJECTIVE 1

Establishment and implementation of monitoring programmes (water quality, hydrological/hydrogeological, sediment transport, biodiversity) for coordinated action among Riparians for the management of the Extended Drin Basin by 2030

OBJECTIVE 2

Enhancement and development of Riparian and regional data and information systems (water quality, hydrological/hydrogeological, sediment transport, biodiversity) for coordinated action among Riparians for the management of the Extended Drin Basin by 2030

GOAL 2

Establish conditions for the sustainable use of water and its supported ecosystems.

OBJECTIVE 1

Establishment of a knowledge base on water resources and ecosystems for informed decision-making by 2025

OBJECTIVE 2

Strengthening mechanisms and policies to support management of water resources and ecosystems by 2030

OBJECTIVE 3

Implementation of local, Riparian and regional actions to promote sustainable water use and ensure ecosystem functioning and resilience by 2030

OBJECTIVE 4

Improvement of capacities and increased awareness to promote sustainable water use and ensure ecosystem functioning and resilience by 2030

GOAL 3

Develop cooperation measures to minimize risks of disasters due to extreme natural phenomena and climate change by 2030.

OBJECTIVE 1

Improved coordinated management among Riparians for flood risks by 2030

OBJECTIVE 2

Improved coordinated management among Riparians for drought risks by 2030

GOAL 4

Improve management and appropriate disposal of solid wastes.

OBJECTIVE 1

Reduction in and enhancement of the management of municipal solid wastes to achieve desired targets by 2030

GOAL 5

Decrease nutrient pollution deriving from untreated or poorly treated wastewater discharges and unsustainable agricultural practices.

OBJECTIVE 1

Reduction of untreated wastewater discharge from urban areas by 2030

OBJECTIVE 2

Reduction of nutrient pollution deriving from unsustainable agricultural practices by 2030

GOAL 6

Decrease pollution from hazardous substances such as heavy metals and pesticides.

OBJECTIVE 1

Reduction of heavy metal and pesticide pollution from industry, mining and agriculture by 2030

GOAL 7

Minimize effects of hydromorphologic interventions that alter the nature of the hydrologic system and the supported ecosystems, resulting in their deterioration.

OBJECTIVE 1

Minimize the effects of hydromorphological interventions from Hydropower Plants by 2030

OBJECTIVE 2

Minimize the effects of other hydromorphological interventions including gravel extraction by 2030



1. INTRODUCTION

The GEF/UNDP/GWP-Med Project 'Enabling transboundary cooperation and integrated water resources management in the Extended Drin River Basin' (GEF Drin Project) was implemented to support Albania, North Macedonia, Kosovo² and Montenegro in implementing the Drin MoU, hence addressing the transboundary environmental problems in the Basin. This has been undertaken by strengthening the transboundary institutional settings, improving the capacities and knowledge level and developing a Transboundary Diagnostic Analysis (TDA) with the ambition of developing an agreed Strategic Action Programme (SAP) that would identify interventions that are needed to address the causes of the transboundary problems identified in the TDA.

1.1 The Drin Basin

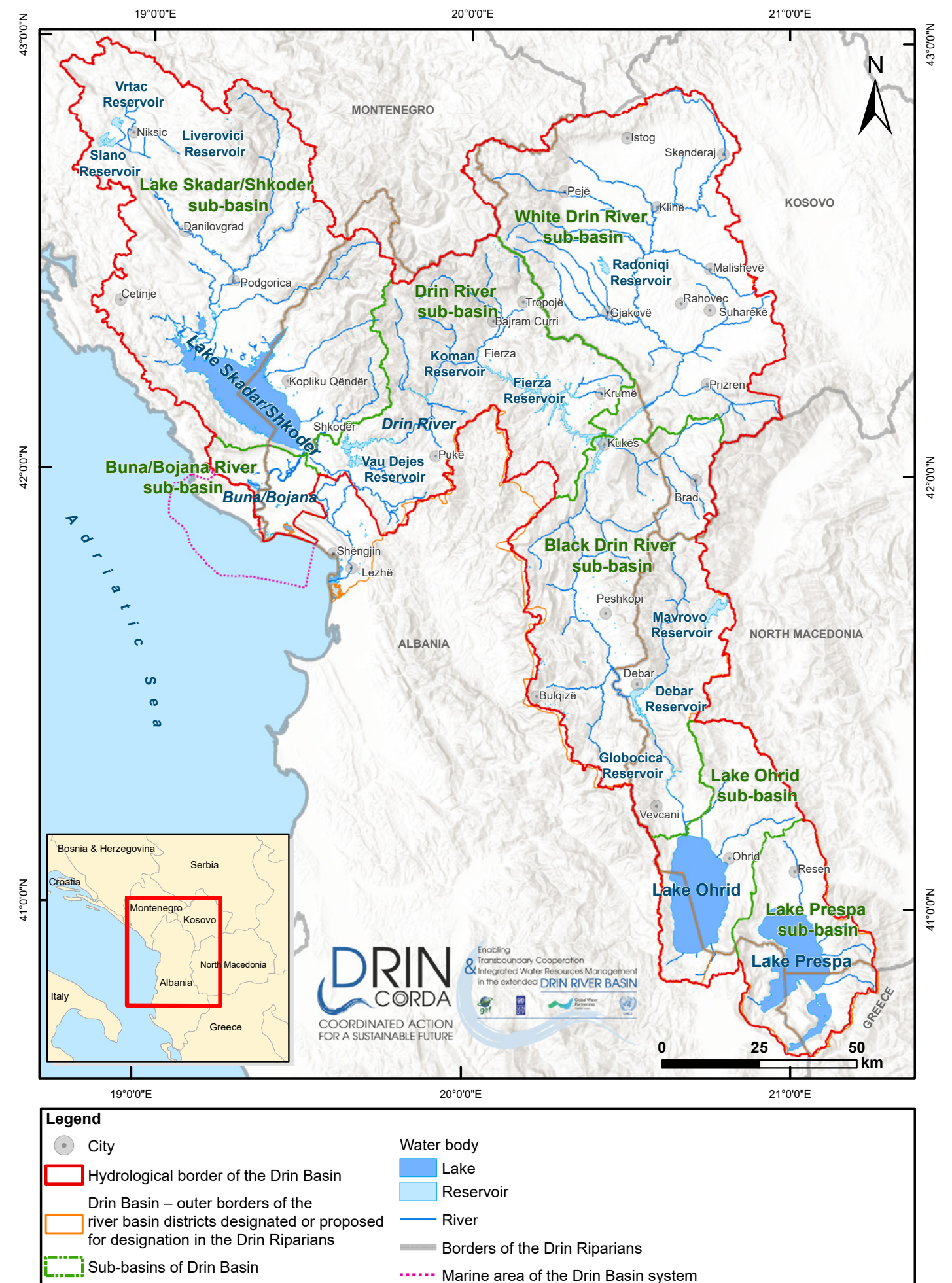
The extended Drin Basin sits in the south-east of the Balkan Peninsula with water bodies and their watersheds spreading across Albania, Greece, Montenegro, North Macedonia and Kosovo. It comprises the sub-basins of the Black Drin, ³ White Drin, ⁴ Drin, and Buna/Bojana ⁵ Rivers, of the Prespa, Ohrid and Skadar/Shkodër ⁶ lakes, and the adjacent coastal and marine area.

Lake Prespa is the starting point when following the water flow towards the Adriatic Sea. Prespa comprises two

lakes linked by a small channel, with regulated water flow, which traverses the alluvial isthmus that separates them. Micro Prespa is shared by Greece and Albania, and Macro Prespa is shared by Albania, Greece and North Macedonia.

Water flows through underground karst cavities from Prespa to Lake Ohrid. Shared by Albania and North Macedonia, Ohrid is the largest lake in terms of water volume in South-East Europe. As the only surface outflow of Lake Ohrid, the Black Drin flows north through North Macedonia. Its main tributary is the Radika River. It forms the border with Albania for some kilometres, before entering the country between the cities of Debar and Peshkopi. The White Drin rises in Kosovo and flows into Albania, where it meets the Black Drin, near the city of Kukës, to form the Drin River.

Flowing westward through Albania, one branch of the Drin joins the Buna/Bojana River approximately 1 km from where the latter flows from Lake Skadar/Shkodër near the city of Shkodra in Albania. Shared by Albania and Montenegro, Lake Skadar/Shkodër is the largest lake in terms of surface in South-East Europe. The largest river flowing into the lake is the Morača, which passes through Podgorica, the capital of Montenegro.



- This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.
- The river is called Drin i Zi in Albania and Crn Drim in North Macedonia.
- The river is called Drini i Bardhë in Albania and Kosovo.
- The river is called Buna in Albania and Bojana in Montenegro.
- The lake is called Skadar in Montenegro and Shkodër in Albania.

The Buna/Bojana River drains Lake Skadar/Shkodër and flows into the Adriatic Sea. Its lower part (23 km) forms part of the Albania–Montenegro border. The other arm of the Drin (the older one) discharges its limited flow directly into the Adriatic Sea, south of the city of Shkodra, near the city of Lezhë.

A number of aquifers exist, often with complex groundwater–surface–water interaction and interdependency. There are five large reservoirs used for hydropower production and more than 110 irrigation reservoirs.

With its extensive water resources (the third greatest river discharge into the European Mediterranean, after the Po and Rhone), this complex system provides a wealth of services to the Riparians that share the basin: energy supply, recreation and tourism, fisheries, water supply for irrigation and domestic uses, sustenance of unique endemic biodiversity, and livelihoods. The basin is home to over 1.61 million people, living in over 1,450 settlements.

The aforementioned water bodies, including their tributaries, smaller natural and artificial lakes, the groundwater system, and the marine area, together form the complex hydrological system of the Drin Basin.

1.2 Drin Coordinated Action – a history

Action at the Drin Basin level was uncoordinated until the development of the Strategic Shared Vision for the Sustainable Management of the Drin Basin and the signing of a related Memorandum of Understanding (MoU – 25 November 2011, Tirana) by water and environment ministers of the Drin Riparians (Albania, Greece, Kosovo, North Macedonia and Montenegro).

This was an outcome of the Drin Dialogue, coordinated by the Drin Riparians with the support of GWP-Med and the United Nations Economic Commission for Europe (UNECE).

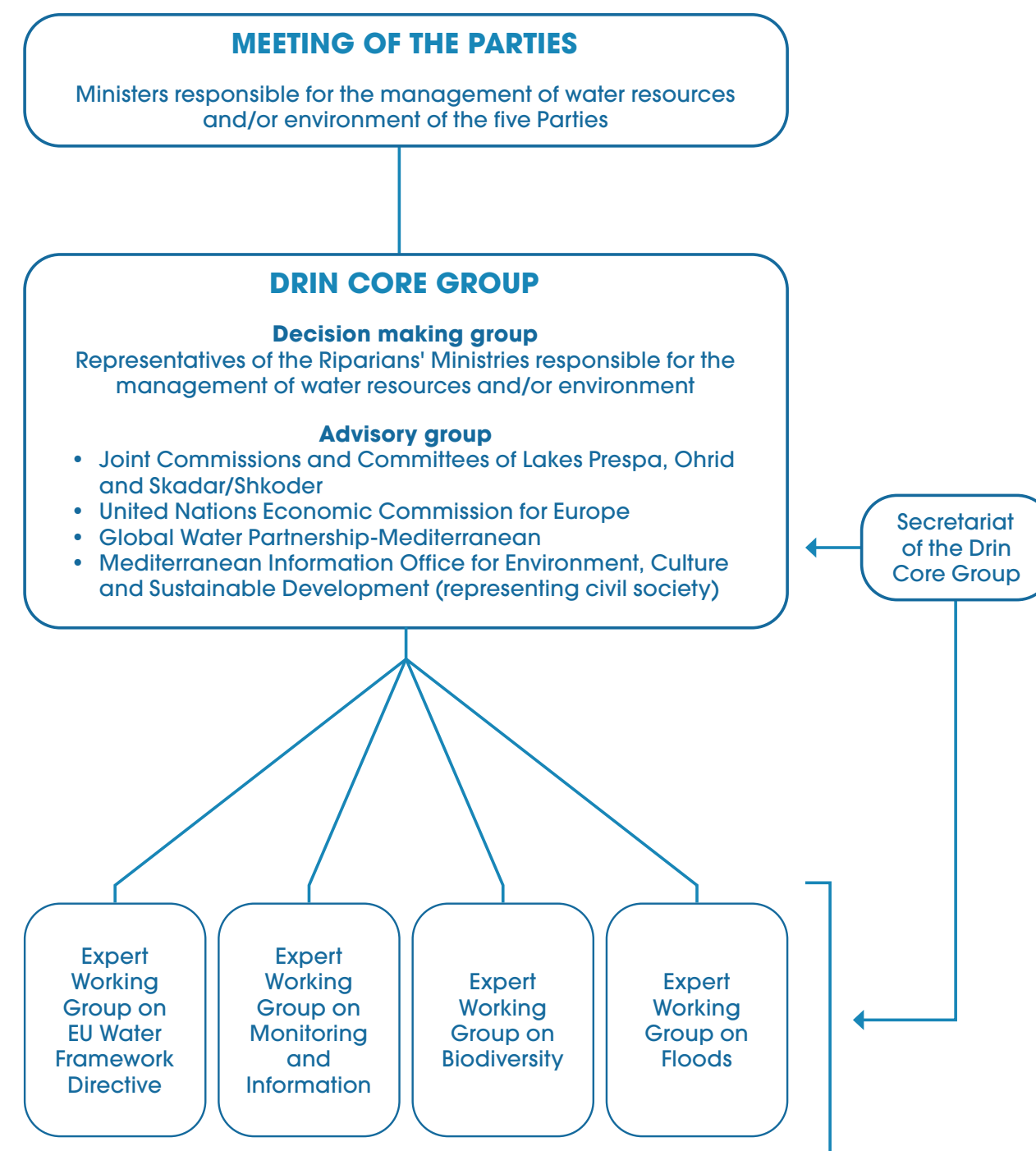
The ultimate goal of the work in the Drin Basin is to reach a point in the future where management extends beyond single water bodies to the hydrological interconnected system of the Drin Basin, eventually leading from the sharing of waters among Riparians and conflicting uses, to the sharing of benefits among stakeholders.

A process referred to as the '**Drin CORDA**' (Drin Coordinated Action for the implementation of the Drin MoU) was established. Following the provisions of the Drin MoU, an institutional structure was established, including:

- The **Meeting of the Parties**.
- The **Drin Core Group** (DCG), comprising officially appointed representatives of the line ministries of the Drin Riparians. This body has the mandate to coordinate actions for the implementation of the MoU.
- Four **Expert Working Groups** (EWGs) to assist the DCG in its work:
 - › Water Framework Directive Implementation Expert Working Group.
 - › Monitoring and Information Exchange Expert Working Group.
 - › Biodiversity and Ecosystems Expert Working Group.
 - › Floods Expert Working Group.

The **DCG Secretariat** provides technical and administrative support to the DCG. GWP-Med serves as the Secretariat by appointment of the Parties through the MoU.

Institutional structure of the Drin CORDA



1.3 GEF Drin Project

The aims, objectives and content of the GEF Drin Project are aligned with the Drin MoU.

The objective of the project is to “promote joint management of the shared water resources of the transboundary Drin River Basin, including coordination mechanisms among the various sub-basin joint commissions and committees”, and implement this across Albania, Kosovo, North Macedonia and Montenegro. Greece, as an EU member state does not receive support from the GEF.

The GEF Drin Project has five components:

- **Component 1:** Consolidating a common knowledge base
- **Component 2:** Building the foundation for multi-riparian cooperation
- **Component 3:** Institutional strengthening for integrated river basin management
- **Component 4:** Demonstration of technologies and practices for IWRM and ecosystem management
- **Component 5:** Stakeholder involvement, gender mainstreaming, and communication strategies.

The project is implemented by UNDP and executed by the Global Water Partnership (GWP) through GWP-Med in cooperation with the UNECE. The DCG acts as the Steering Committee of the project.



2. STEPS TOWARDS PREPARING THE STRATEGIC ACTION PROGRAMME

2.1 TDA/SAP methodology

The Transboundary Diagnostic Analysis/ Strategic Action Programme (TDA/ SAP) approach is a highly collaborative process that has proven to be a major strategic planning tool for GEF International Waters Projects over the last 20 years.⁷

The main technical role of a TDA is to identify, quantify and set priorities for environmental problems that are transboundary in nature. Consequently, a TDA provides the factual basis for the formulation of a SAP.

The SAP is a negotiated policy document that should be endorsed at the highest level of all relevant sectors of government. It establishes clear priorities for action to resolve the priority transboundary problems identified in the TDA. Another key element involves the development of institutional mechanisms at the regional and Riparian levels for implementing the SAP and monitoring and evaluation procedures to measure the effectiveness of the outcomes of the process.

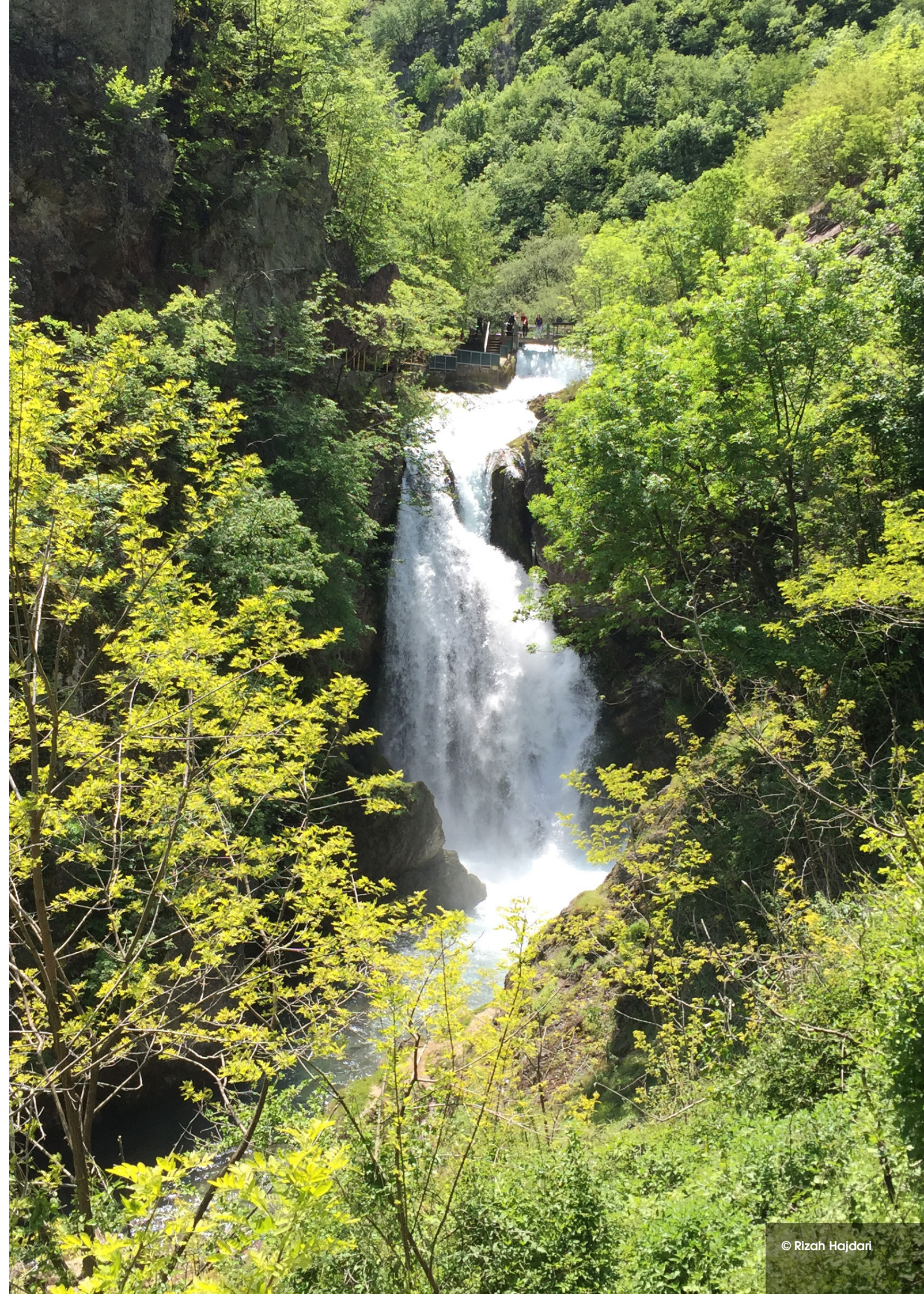
The engagement of stakeholders is a key element in the TDA/SAP process, from the initial TDA development steps to the subsequent development of alternative solutions during the formulation of the SAP.

2.2 Drin Basin TDA approach

The Drin TDA follows current GEF best practice advice on TDA⁸ development. The development and drafting process of the Drin Basin TDA was carried out between July 2016 and December 2018. A list of workshops and activities undertaken during its development are presented in the following table.

⁷ IW:LEARN TDA/SAP Methodology and training Course (2013).

⁸ As detailed in the GEF/ IW:LEARN TDA/SAP Manual <https://iwlearn.net/manuals/tda-sap-methodology>.



Events and activities undertaken for the development of the Drin TDA

Time	Location	Meeting	Topic
Project life	All Drin Riparians	DCG and EWG meetings / twice per year	The TDA table of contents was adopted. At each consecutive meeting, TDA development progress was discussed, specific thematic reports were presented to the DCG/EWG members and the reports were reviewed/approved.
Project life	All Drin Riparians	Individual meetings with representatives of the relevant institutions: Ministers, Directors of Departments, Heads of Agencies, etc.	Introduction of the project (the TDA was part of introduction), investigation of opportunities for cooperation; presentation of developments; receiving guidance on issues related to the development of the TDA ensuring compatibility with national priorities, especially the implementation of the EU Water Framework Directive.
Oct–Nov 2016	Six cities covering all Drin sub-basins	Focus Group meetings	Among others: identified the perceived key management issues and problems at the sub-basin and basin levels as well as their causes and impacts from the stakeholders’ perspective.
Mar 2017	Tirana	Meeting with Riparian experts from all Drin Riparians	Coordination and preparation of the thematic reports.
Nov 2017	Podgorica	Stakeholders Conference	The stakeholders were presented with key findings from the process of developing the thematic reports on the Transboundary Diagnostic Analysis (TDA) and provided input. Focus was placed on socio-economic, biodiversity and institutional and legal setting thematic reports as well as the main findings of the TDA and the Casual Chain Analysis.
Nov 2018	Ohrid	Stakeholders Conference	The stakeholders were presented with key findings from the process of developing the Transboundary Diagnostic Analysis (TDA) and provided input. Focus was placed on pollution and hydrology thematic reports as well as the main findings of the TDA and the Casual Chain Analysis.

Time	Location	Meeting	Topic
Dec 2018	Athens	CCA-SAP Workshop	Local and International experts participated in the preparation of the Thematic Reports, reviewed the Casual Chain Analysis and prepared a first set of interventions to address the transboundary issues identified.

To analyse the system, the source-to-sea approach⁹ has been adopted, to the extent allowed by the information available on transitional waters and the marine area. The boundaries of the Drin Basin area are defined considering the natural characteristics of the area and the local conditions; the area consists of the natural elements comprising the catchment, aquifers, transitional waters, coastal waters and the coastal zone/marine area.

The TDA provided necessary information that enabled Drin Riparians to discuss and identify priority transboundary problems and their causes, which inform the formulation of the actions included in the SAP. In addition, the TDA assists in enhancing the knowledge basis of the Drin Riparians regarding the state of the natural and anthropogenic environment in the basin, developing the building blocks of a Drin Basin Management Plan in accordance with the EU Water Framework Directive, should the Riparians decide to develop such a plan in the future.

The ‘Situation Analysis: Management of the Extended Drin Basin’ (Drin Situation Analysis) served as a starting point for the Drin TDA.

The TDA is the core document, that synthesizes the findings of basin-wide Thematic Reports, undertaken at three levels: Sub-basin level; Riparian level within each sub-basin; and the Drin Basin:

- Thematic Report on Socio-economics
- Thematic Report on Institutional and Legal Setting
- Thematic Report on Biodiversity and Ecosystems
- Thematic Report on the Hydrology and Hydrogeology
- Thematic Report on Pollution and Water Quality
- Thematic Report on the Nexus¹⁰

⁹ A source-to-sea approach consolidates analysis, planning, policymaking, and decision-making across sectors and scales. It considers the entire social, ecological and economic system, from the land area that is drained by a river system to the coastal area and even the open ocean it flows into (Source: <http://stapgef.org/sites/default/files/publications/S2SBrief.pdf>). A source-to-sea system includes the land area that is drained by a river system or systems, its lakes and tributaries (the river basin), connected aquifers and downstream recipients including deltas and estuaries, coastlines and near-shore waters, the adjoining sea and continental shelf as well as the open ocean. Water, sediment, pollutants, biota, materials and ecosystem services key flows connect the sub-systems in the source-to-sea continuum and their geographies.

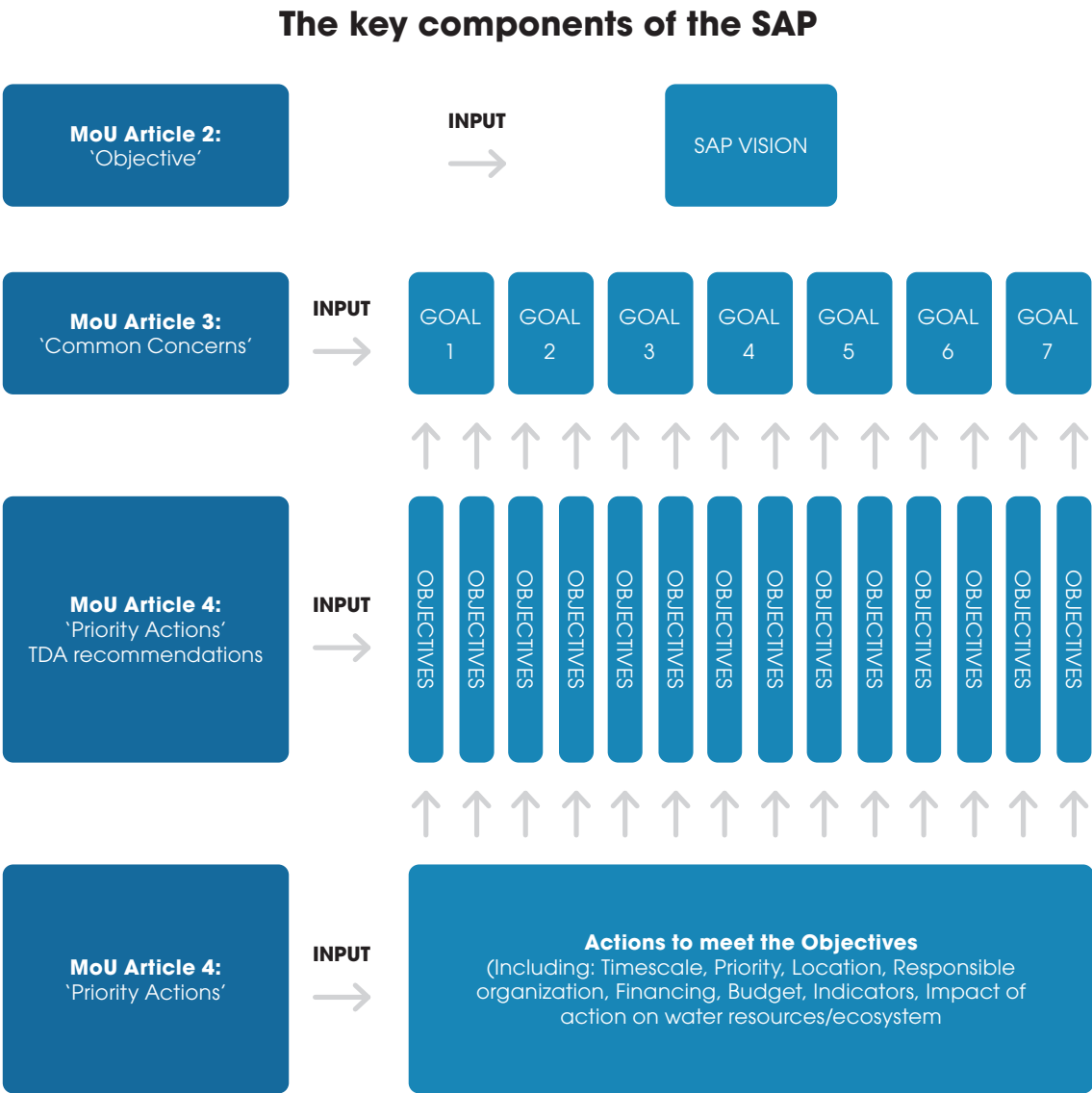
¹⁰ The nexus assessment/approach looks into the interlinkages and trade-offs among the sectors of water, land, energy and environment aiming to identify solutions that will foster not only water and environment security, but also energy and food security. In other words, the nexus assessment has no bias towards a specific sector and is multi-centric by definition.

In addition, a Stakeholders Analysis was used to map the stakeholders, analyse their characteristics and capture their views regarding the issues impacting the basin. The TDA document and the associated thematic reports are 'living documents' that will be periodically revised and are intended to serve as a baseline against which future progress is measured.

2.3 Drin Basin SAP approach

The SAP was developed through a series of inputs from experts from the Drin Riparians, international experts, the PCU and ultimately, representatives of key stakeholder groups.

The Drin Basin SAP draws on the Drin MoU. The Drin MoU presented a clear vision (titled 'Objective') and identified seven 'common concerns' within the basins which are reaffirmed in the SAP as '**Goals**' to be achieved through the implementation of specific **Objectives**. For each Objective, a series of **Management Actions** are detailed which include: timescale; priority; location; responsible organization; financing; budget; indicators; impact of action on water resources/ecosystem. The key components of the SAP and the linkages with the Drin MoU are shown in the diagram below:



SAP DEVELOPMENT AND ADOPTION: INPUTS AND MILESTONES



A **first draft of the SAP** is developed using the **TDA** and the extensive details provided in the **thematic reports**
 › **December 2018**

First technical meeting with the experts from the Drin Riparians, involved in the preparation of the TDA thematic reports, to develop an initial list of management actions
 › **4-5 December 2018, Athens, Greece**

Six focus group meetings, engaging 173 stakeholder representatives in total (77 women and 96 men) to review, comment and validate the SAP's goals, objectives and initial list of management actions. The meetings were held on:
 › **12 March 2019, Tirana, Albania**
 › **13 March 2019, Shkodra, Albania**
 › **14 March 2019, Podgorica, Montenegro**
 › **19 March 2019, Peja, Kosovo**
 › **20 March 2019, Skopje, North Macedonia**
 › **21 March 2019, Pogradec, Albania**

Online ceremony for the signing of the Joint Statement for the endorsement of the SAP by Ministers and High level representatives of the Drin Riparians
 › **24 April 2020**



Scan the QR code to watch the signing ceremony

Stakeholders Conference to present and consult on the final draft of the SAP
 › **30-31 January 2020, Tirana, Albania**

Official consultation process in the Drin Riparians on the final draft of the SAP
 › **November 2019 to January 2020**

DCG meetings to review, comment, negotiate and agree on the final draft of the SAP:
 › **30 May 2019, Pristina, Kosovo**
 › **9 October 2019, Podgorica, Montenegro**
 › **12 November 2019 and 18 November 2019, online**

Meeting of the EWGs of the DCG to review and revise the draft SAP
 › **29 May 2019, Pristina**

Second technical meeting with experts from the Drin Riparians, involved in the preparation of the TDA thematic reports, to refine the SAP's objectives and further develop the management actions
 › **23-24 April 2019, Tirana**

Meetings with representatives of line Ministries in each Drin Riparian to review, comment and validate the SAP's goals, objectives and initial list of management actions
 › **12-21 March 2019**

3. KEY MANAGEMENT PRINCIPLES FOR THE IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAMME

The Riparians of the Drin Basin share a common desire for cooperation including transboundary coordinated actions in the Drin Basin for the benefit of present and future generations clearly described in the Drin MoU. They recognize their roles and responsibilities in conserving the global value of the resources in the Drin Basin.

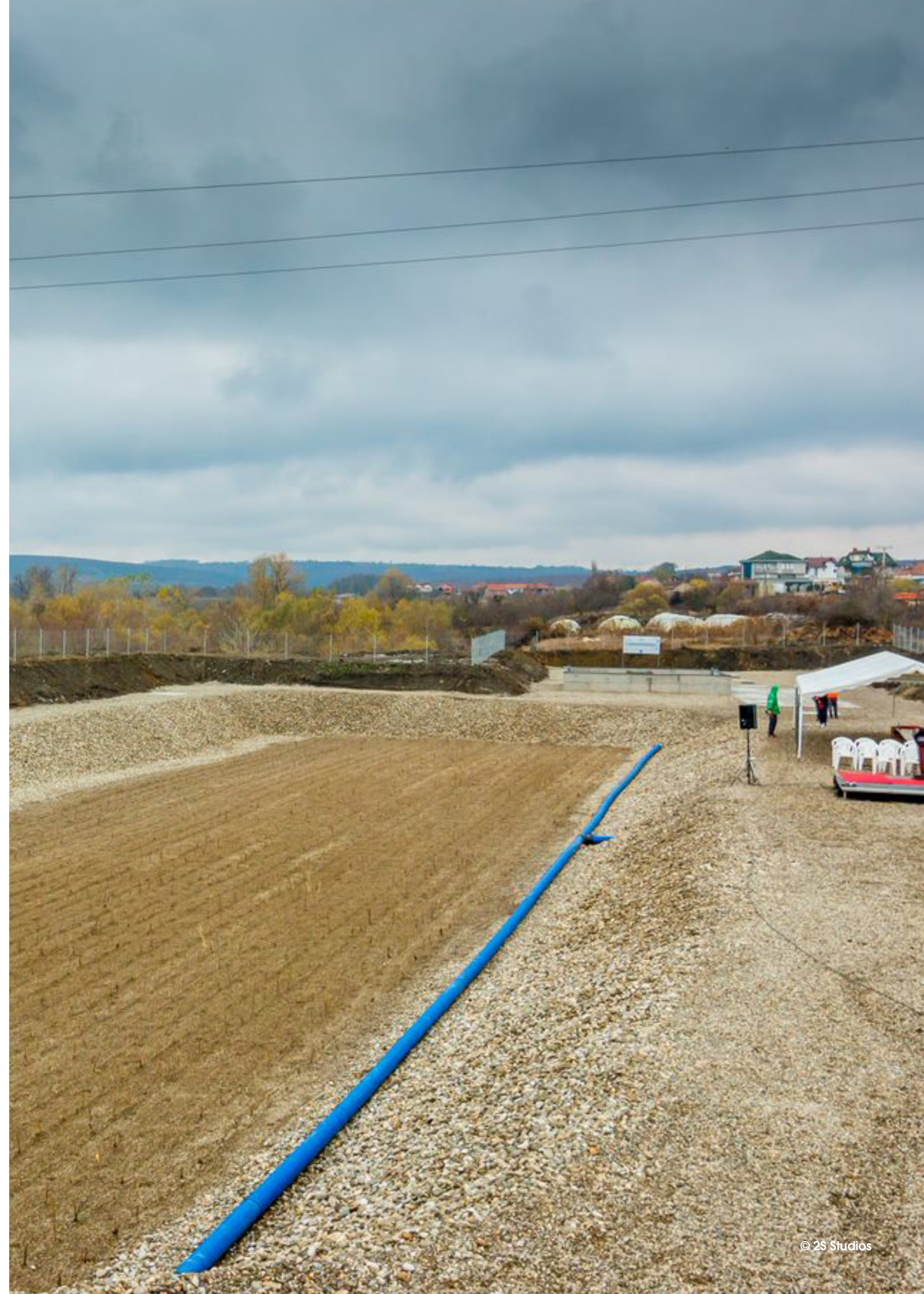
The DCG decided in its seventeenth ordinary meeting (May 2019, Pristina) to initiate actions to enable the Riparians to agree on the form and mandate of an institutional setting to succeed the Drin MoU and DCG responding to the advanced level of coordination necessary for the implementation of the SAP.

Through the EU Accession process and the adoption of the EU acquis, the Riparians have committed to the management of water bodies in accordance with the principles provided by the EU Water Framework Directive, the EU Flood Risks Directive and the Marine Strategy Framework Directive (MSFD). The implementation of these directives will also benefit the Riparians implementing and reporting of Sustainable Development Goal (SDG) targets.

Greece intends to implement the Strategic Action Programme in a way that this is compatible with the EU acquis and the Agreement on the Protection and Sustainable Development of the Prespa Park Area.

Greece is willing to facilitate the other Riparians by providing advice and knowhow regarding the implementation of the European Directives as necessary for the implementation of the SAP.

By implementing climate change resilient actions, it will be ensured that people and ecosystems best adapt to climate changing conditions. The Riparians that are Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) are committed to sustainable management of shared waters and cooperation in managing the Drin Basin.



4. THE DRIN BASIN STRATEGIC ACTION PROGRAMME

4.1 Transboundary problems

The TDA identified four key transboundary problems each exacerbated by the impacts from climate variability and change. The key transboundary problems are:

- Deterioration of **Water Quality**
- Natural and Regulated Variability of **Hydrological Regime**
- **Biodiversity** Degradation
- Disturbance of the natural **Sediment Transport** regime

The TDA undertook a Causal Chain Analysis that identified causes related to the inadequacy of infrastructure, policies and enforcement. The conclusions have directed the process of identifying management actions in the SAP that will address the causes of the transboundary problems.

4.2 Long-term vision

The Riparians reaffirm the objective of the 2011 MoU for the Drin Basin, as the long-term over-arching vision being a clear representation of the characteristics desired for the future environment. The long-term vision is a political objective to be achieved within a 10-15 years timeframe and aspires to inspire the peoples of the Drin Basin and their leaders.

THE VISION OF THE DRIN RIPARIANS

"The Parties, through their Ministers and their representatives, commit to promote joint action for the coordinated integrated management of the shared water resources in the Drin Basin, as a means to safeguard and restore to the extent possible the ecosystems and the services they provide, and to promote sustainable development across the Drin Basin."

Memorandum of Understanding for the Management of the Extended Transboundary Drin Basin, 2011

4.3 Goals to achieve the long-term vision and objectives to meet the goals

The Riparians have reaffirmed the MoU's 'Common Concerns for sustainable development of the Drin Basin' as seven High-level Long-term Goals to achieve the vision and reduce the impact of each transboundary problem.

A number of specific, measurable, time delineated Objectives have been developed under each Goal. These along with the Goals are presented below. Management Actions responding to these Objectives are presented in detailed SAP action tables (annex 1) to facilitate future SAP implementation.



© 2S Studios

GOAL 1

Improving access to comprehensive data and adequate information to fully understand the current state of the environment and the water resources and the hydrologic system (including surface, underground and coastal waters) as well as ecosystems of the Drin Basin.

OBJECTIVE 1

Establishment and implementation of monitoring programmes (water quality, hydrological/hydrogeological, sediment transport, biodiversity) for coordinated action among Riparians for the management of the Extended Drin Basin by 2030

SUB-OBJECTIVE 1.1

Preparation and development of monitoring programmes for coordinated action for the management of the Extended Drin Basin by 2025

SUB-OBJECTIVE 1.2

Implementation of monitoring programmes for coordinated action for the management of the Extended Drin Basin by 2030

SUB-OBJECTIVE 1.3

Delivery of a joint monitoring protocol for coordinated action for the management of the Extended Drin Basin by 2030

OBJECTIVE 2

Enhancement and development of Riparian and regional data and information systems (water quality, hydrological/hydrogeological, sediment transport, biodiversity) for coordinated action among Riparians for the management of the Extended Drin Basin by 2030

SUB-OBJECTIVE 2.1

Preparation and development of an information management system for coordinated action for the management of the Extended Drin Basin by 2025

SUB-OBJECTIVE 2.2

Implementation of an information management system for coordinated action for the management of the Extended Drin Basin by 2030

GOAL 2

Establish conditions for the sustainable use of water and its supported ecosystems.

OBJECTIVE 1

Establishment of a knowledge base on water resources and ecosystems for informed decision-making by 2025

SUB OBJECTIVE 1.1

Establish a knowledge base on water quality for informed decision-making by 2025

SUB-OBJECTIVE 1.2

Establish a knowledge base on the hydrological/hydrogeological regime for informed decision-making by 2025

SUB-OBJECTIVE 1.3

Establish a knowledge base on biodiversity for informed decision-making by 2025

SUB-OBJECTIVE 1.4

Establish a knowledge base on sediment transport for informed decision-making by 2025

SUB-OBJECTIVE 1.5

Establish a knowledge base on sectoral developments and intersectoral impacts by 2025

SUB-OBJECTIVE 1.6

Establish a knowledge base on economic instruments by 2025

OBJECTIVE 2

Strengthening mechanisms and policies to support management of water resources and ecosystems by 2030

SUB-OBJECTIVE 2.1

Strengthening regional governance and policies in the Extended Drin Basin by 2025

SUB-OBJECTIVE 2.2
Strengthening governance and policies on water quality management by 2025
SUB-OBJECTIVE 2.3
Strengthening governance and policies on hydrological/hydrogeological management by 2025
SUB-OBJECTIVE 2.4
Strengthening governance and policies on biodiversity management by 2025
SUB-OBJECTIVE 2.5
Strengthening governance and policies on sediment management by 2025
SUB-OBJECTIVE 2.6
Strengthening intersectoral governance and policy coherence by 2025
OBJECTIVE 3
Implementation of local, Riparian and regional actions to promote sustainable water use and ensure ecosystem functioning and resilience by 2030
OBJECTIVE 4
Improvement of capacities and increased awareness to promote sustainable water use and ensure ecosystem functioning and resilience by 2030

GOAL 3
Develop cooperation measures to minimize risks of disasters due to extreme natural phenomena and climate change by 2030.
OBJECTIVE 1
Improved coordinated management among Riparians for flood risks by 2030
OBJECTIVE 2
Improved coordinated management among Riparians for drought risks by 2030
GOAL 4
Improve management and appropriate disposal of solid wastes.
OBJECTIVE 1
Reduction in and enhancement of the management of municipal solid wastes to achieve desired targets by 2030
GOAL 5
Decrease nutrient pollution deriving from untreated or poorly treated wastewater discharges and unsustainable agricultural practices.
OBJECTIVE 1
Reduction of untreated wastewater discharge from urban areas by 2030
OBJECTIVE 2
Reduction of nutrient pollution deriving from unsustainable agricultural practices by 2030

GOAL 6

Decrease pollution from hazardous substances such as heavy metals and pesticides.

OBJECTIVE 1

Reduction of heavy metal and pesticide pollution from industry, mining and agriculture by 2030

GOAL 7

Minimize effects of hydromorphologic interventions that alter the nature of the hydrologic system and the supported ecosystems, resulting in their deterioration.

OBJECTIVE 1

Minimize the effects of hydromorphological interventions from HPP by 2030

OBJECTIVE 2

Minimize the effects of other hydromorphological interventions including gravel extraction by 2030



5. THE DRIN BASIN SAP IMPLEMENTATION ARRANGEMENTS

5.1 Overview

The implementation of the SAP will be monitored at the regional level by the institutional structure established through the Drin MoU. The implementation plan for the SAP will integrate actions closely with Riparian action plans/strategies in the Drin Riparians.

5.2 Nexus and SAP implementation

The nexus analysis and recommendations provide beneficial guidance for the implementation of the SAP by analysing the interlinkages between sectoral developments and the basin's resources and their evolution in the future, hence increasing the awareness of intersectoral dynamics that are (or can be) triggered by strategic decisions taken 'out of the basin area', notably in the field of energy and agriculture, and improving the capacity of policy makers to account for them in the management of the Drin Basin.

Phase I of the nexus analysis included the identification of nexus issues of priority i.e. the role of hydropower operators in flood management, forest and biomass and agricultural development, and a qualitative assessment, for each of the priority issues, of linkages/benefits/trade-offs, among the nexus sectors. Phase II of the nexus analysis is to follow and will consist of the quantitative assessment of selected key linkages/benefits/trade-offs.



Himantopus himantopus
© Thomas Vlachogianni/MIO-ECSDE

6. MONITORING AND EVALUATION

The development and execution of a Monitoring and Evaluation (M&E) Plan is an essential component for the implementation of the Drin Basin SAP and will be composed of two elements:

(a) Frequent monitoring of progress in the implementation of the Programme's Goals, Objectives and Actions; and

(b) Periodic evaluation of the Programme's performance in terms of outputs produced and outcomes achieved, as well the cost-effectiveness of the actions.

To ensure that SAP implementation can be effectively monitored and evaluated, it is essential that early on in the SAP implementation phase, a full baseline is established for all indicators that will be used to measure progress during the implementation phase.

The following three types of M&E indicators for SAP implementation are typically used under GEF-co-funded projects.¹¹

- **Process indicators**

Strategic actions under the SAP are directed towards addressing the root causes of the transboundary problems identified in the TDA. It is likely that it will take considerable time before structural changes become reflected in measurable reductions of stress in the Drin Basin or in measurable changes in environmental and socio-economic conditions. Consequently, process indicators will be reflective

of the progress being made towards implementing actions and activities required for such purposes.

- **Stress reduction indicators**

Stress reduction indicators will typically reflect how direct causes of socio-economic or ecosystem stress have been reduced or eliminated.

- **Environmental status indicators**

Environmental status indicators will track progress towards achieving the Drin Basin SAP Goals and Objectives.

Process indicators have been developed and included in the SAP Action Matrices given in annex 1. The two other sets of indicators to monitor and evaluate SAP implementation i.e. *stress reduction indicators* and *socio-economic and environmental status indicators*, will be developed for, and adopted by, the DCG.

¹¹ For more detailed information on the three key GEF indicators for monitoring and evaluation of progress and results in International Waters projects, please refer to: http://wlearn.net/publications/misc/duda_indicator.pdf/view.



ANNEX 1. SAP ACTION MATRICES

Introduction

The process for the development of the list of SAP actions is presented in the 'Drin Basin SAP approach' section (page 20).

The SAP presents the proposed Management Actions under each of the SAP goals and related time-bound objective. **The seven SAP goals are linked and actions in one goal contribute and inform other actions and goals.**

The SAP Action Matrices presented below are laid out with the following headings:

1. Specific Actions: A brief description of given management actions¹² with the focus on addressing the causes of the transboundary problems.

2. Timescale: The timescale has been set as years from the approval and signing of the Drin SAP.

3. Priority: The priority column identifies those actions that are high, medium or low priority. Low priority does not suggest the Action is unimportant, merely that other Actions need to be considered first.

4. Location: The location column identifies where in the Drin Basin the action is likely to take place. Many actions are basin-wide and include all the Riparians. Others are either Riparian, sub-basin or location specific.

5. Responsible Riparian's organizations/authorities: This column identifies the organizations

responsible for the Action. These include local, Riparian basin-wide and international organizations.

6. Financing: This column outlines potential funding sources (e.g. Riparian, EU, development banks).

7. Budget: This column outlines very approximate costs: L – Low <100,000 euro; M – Moderate 100,000–1,000,000 euro; and H – High >1,000,000 euro.

8. Indicators: The indicators presented aim to measure progress towards implementation of the actions.

9. Impact of action on water resources/ ecosystem (at transboundary level): This notes the 'type' of indicator (process stress reduction or status) and the expected beneficial ecosystem impacts resulting from the action.

¹² More information on the background to the proposed riparian actions (e.g. sub-basin details, potential priority locations, riparian specific policy changes) at the local/sub-basin level are identified in the Thematic Reports and Riparian Action Plans/Strategies.



GOAL 1									
Improving access to comprehensive data and adequate information to fully understand the current state of the environment and the water resources and the hydrologic system (including surface, underground and coastal waters) as well as ecosystems of the Drin Basin ¹³									
OBJECTIVE 1									
Establishment and implementation of monitoring programmes (water quality, hydrological/hydrogeological, sediment transport, biodiversity) for coordinated action among Riparians for the management of the Extended Drin Basin by 2030									
	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 1.1: Preparation and development of monitoring programmes for coordinated action for the management of the Extended Drin Basin by 2025									
1.	a) Preparation of a study to assess: ¹⁴ (i) existing monitoring programmes and capacities at the Riparian level; and (ii) required needs and procedures for the Riparians to perform monitoring in the Drin Basin at the transboundary level, in accordance with EU directives and strategic guidance from the Water Convention: <ul style="list-style-type: none">monitoring sites and parameters, including parameters identified¹⁵ with a potential for accidental releasefrequency of monitoringmethodologies and protocolsequipmentopportunities for shared analytical/laboratory capabilities across Riparianstraining requirementsquality assurance and quality control proceduresfinancing requirements.	< 5 years	H	All Riparians – Drin sub-basins	Monitoring and Information Exchange EWG Water Framework Directive Implementation EWG (assisted by small work groups from institutions in each Riparian responsible for monitoring and research) DCG	EU (e.g. Instrument for Pre-Accession Assistance – IPA) Riparian budgets GEF	M	Assessment study identifying the need for monitoring, equipment, training and related cooperation/ synergy opportunities, etc. Adoption of the recommendations for transboundary monitoring by the DCG and Riparian ministries	P (process) Study will lead to harmonized monitoring meeting Water Framework Directive requirements for basin-wide monitoring that is consistent with guidance from the Water Convention
	b) Development of recommendations for all Riparians based on the results of the study to perform monitoring in the Drin Basin at the national level, in accordance with EU directives and strategic guidance from the Water Convention.								

¹³ The implementation of the actions under this goal will make use (and lead to the improvement) of the thematic reports of the Drin TDA, the Drin Information System and the Drin Database.

¹⁴ Outputs of action 1 under goal 3, objective 1 will be used to prepare the study.

¹⁵ Hazardous sites with the risk of accidental release identified under action 1, goal 2, sub-objective 1.1.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
2.	Agreement on the Drin transboundary monitoring programme: a) Agreement on transboundary monitoring programme locations building on national networks included in Riparian monitoring programmes. ¹⁶ b) Agreement on transboundary monitoring programme requirements and procedures. c) Preparation of joint monitoring guidelines for Riparians based on international guidance and standards for implementing monitoring protocols.	< 5 years	H	All Riparians – Drin sub-basins	Water Framework Directive competent authority from each Riparian Monitoring and Information Exchange EWG Water Framework Directive Implementation EWG (assisted by representatives of relevant scientific/ research/legal institutions) DCG	Riparian budgets EU GEF	L	Document indicating agreement on transboundary monitoring stations Agreed list of monitoring parameters and protocols Guidelines prepared and agreed	P (process) Agreed transboundary monitoring programme for the Drin Basin
3.	Development of a programme to assess levels of main pollutants to complement national and transboundary monitoring programmes using: (i) remote sensing; (ii) pollution models ¹⁷ /machine learning: (a) Identification and establishment of cooperation with international partners. (b) Preparation of a needs assessment (training, equipment, etc.) and feasibility study. (c) Development of the programme. (d) Training of staff members of authorities responsible for monitoring (workshops, internships, etc.). (e) Implementation of the programme.	< 5 years	M	All Riparians – Drin sub-basins	Water Framework Directive competent authority from each Riparian Monitoring and Information Exchange EWG Water Framework Directive Implementation EWG (assisted by representatives of relevant scientific/ research/legal institutions) DCG Possible partners: European Commission /Joint Research Centre, the World Bank	Riparian budgets GEF	M	Programme established Programme is operational Number of staff members trained	P (process) Improved management information on the main pollutants in the Drin Basin

¹⁶ Building also on the results of projects that have addressed monitoring, for example, the Drin project for surface and groundwater, GIZ projects, etc.
¹⁷ The Drin Pollution Model developed under the Pilot activity “Preparation of a wastewater management decision support tool” of the GEF Drin project will be used as basis.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 1.2: Implementation of monitoring programmes for coordinated action for the management of the Extended Drin Basin by 2030									
1.	Designation of appropriate authorities responsible for the implementation of the transboundary monitoring programme based on decisions made by each Riparian following Riparian-level procedures.	< 5 years	H	All Riparians	Institutions ¹⁸ in each Riparian responsible for the management of the Drin Basin at the transboundary level	National budgets	L	Decision taken by each Riparian	P (process) Clear responsibilities and accountability in all Riparians about the implementation of the transboundary monitoring programme to strengthen governance and management
2.	Purchasing, operation and maintenance of equipment: a) Purchase of any additional necessary equipment identified by an assessment study. b) Operation and maintenance of sampling, sample handling and laboratory equipment.	< 5 years	H	All Riparians	Institutions/ laboratories ¹⁹ in each Riparian responsible for the implementation of the Drin monitoring programme Hydropower operators	Riparian budgets EU Investment banks Hydropower operators	H M	Relevant equipment purchased Data provided meet Riparian and regional needs	P (process) Riparians have equipped laboratories to provide harmonized data
3.	Recruitment and training of staff (in support of action 4 below): a) Engagement of new staff (human resources) in the Riparians. b) Development and delivery of training for existing and new staff: <ul style="list-style-type: none">sampling and measurement skillslaboratory methodsdata collection, AQC, etc.data managementreporting to relevant EU directives.	< 5 years	H	All Riparians	Institutions/ laboratories ²⁰ in each Riparian responsible for the implementation of the Drin monitoring programme	Riparian budgets EU GEF	M	Staff trained Training material available for new staff	P (process) Riparians have trained experts providing harmonized data

¹⁸ Officially designated by the competent ministries or other authorities.
¹⁹ Officially designated by the competent ministries or other authorities.
²⁰ Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
4.	Implementation of Riparian and Drin transboundary monitoring programmes for: <ul style="list-style-type: none">• surface water (rivers, lakes and coastal fresh water, and marine waters) and groundwater related to water quality, hydrological/hydrogeological conditions (linked with hydrological monitoring in goal 3)• sediment transport• biodiversity.	< 5 years	H	All Riparians – Drin sub-basins	Institutions/ laboratories ²¹ in each Riparian responsible for the implementation of the Drin monitoring programme DGC and pertinent EWGs	Riparian budgets EU GEF	M	Monitoring implemented	P (process) Harmonized monitoring meeting Water Framework Directive requirements and refining management responses to transboundary problems
5.	Establishment of joint biodiversity-related monitoring programmes in areas that are protected and adjacent (across Riparian borders): establishment of joint technical groups by the Riparians agreement on the content of joint monitoring programmes implementation of the joint programmes.	5–10 years	H	Protected areas in the Drin sub-basins	Institutions/ laboratories ²² in each Riparian responsible for the implementation of the Drin monitoring programme DCG and its pertinent EWGs	Riparian budgets	L	Report(s) from joint monitoring exercise	P (process) Harmonization of sampling and analytical methods demonstrated between Riparians
Sub-Objective 1.3: Delivery of a joint monitoring protocol for coordinated action for the management of the Extended Drin Basin by 2030									
1.	Development of accreditation schemes and intercalibration exercises: <ul style="list-style-type: none">• review of current best practices (e.g. EU, international)• investigation into shared analytical facilities in the region• accreditation of laboratories (e.g. ISO 17025)• establishment of intercalibration programmes at transboundary areas.	5–10 years	H	All Riparians	Institutions/ laboratories ²³ in each Riparian responsible for the implementation of the Drin monitoring programme DCG and its pertinent EWGs	Riparian budgets EU (e.g. IPA) GEF	M	Laboratories accredited Results from intercalibration	P (process) All laboratories providing data for Drin monitoring have accredited quality increasing DCG confidence in information
2.	Organization of joint cross-border monitoring exercises on water quality (physicochemical and/or hydrobiological) in selected locations every five years (or more frequent if needed).	5–10 years	H	All Riparians – Drin sub-basins	Institutions/ laboratories ²⁴ in each Riparian responsible for the implementation of the Drin monitoring programme DCG and its pertinent EWGs	Riparian budgets	L	Report from joint exercise	P (process) Harmonization of sampling and analytical methods demonstrated between Riparians

²¹ Officially designated by the competent ministries or other authorities.
²² Officially designated by the competent ministries or other authorities.
²³ Officially designated by the competent ministries or other authorities.
²⁴ Officially designated by the competent ministries or other authorities.

OBJECTIVE 2

Enhancement and development of Riparian and regional data and information systems (water quality, hydrological/hydrogeological, sediment transport, biodiversity) for coordinated action for the management of the Extended Drin Basin by 2030

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 2.1: Preparation and development of an information management system for coordinated action for the management of the Extended Drin Basin by 2025									
1.	Identification of the status of existing relevant Riparian information management systems (IMS) and analysis of historical Drin data for incorporation in the IMS: <ul style="list-style-type: none">review of existing IMS systemsanalysis of historical datapreparation of a report and key recommendations for implementation.	< 10 years	M	All Riparians	Riparian authorities Monitoring and Information Exchange EWG DCG	Riparian budgets EU GEF	L	Technical report agreed	P (process) Historic data provide a baseline for future management actions
2.	Support for the development of a Drin Basin IMS: <ul style="list-style-type: none">definition of Drin data management requirements (building on Drin project activities)agreement on data-processing procedures and exchange formats at the regional levelagreement on IMS specification, design and operation (building on the Drin project activities, the Drin Information System and existing Riparian systems)preparation of a feasibility study to develop and test data exchange mechanisms/procedures among Riparians.	< 5 years	H	All Riparians	Ministries of the environment and other relevant institutions related to data management ²⁵ Monitoring and Information Exchange EWG DCG	Riparian budgets EU Adaptation Fund/UNDP project GEF	M	Data management specifications Agreed data protocols Signed agreements Tested approaches for data exchanges	P (process) Harmonized approaches on IMS assist basin management

25 Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 2.2: Implementation of an information management system for coordinated action for the management of the Extended Drin Basin by 2030									
1.	Recruitment and training of staff: a) Engagement of new staff (human resources) in the Riparians. b) Development and delivery of IMS training for existing and new staff, including: <ul style="list-style-type: none">data collection, AQC, etc.management of datareporting to relevant EU Directives	< 5 years	M	All Riparians	Ministries of the environment and other relevant institutions related to data management ²⁶	Riparian budgets GEF	L	Number of trained IMS staff in each Riparian	P (process) Harmonized approaches on IMS assist basin management
2.	Implementation of Drin Basin IMS: <ul style="list-style-type: none">digitization of historic data on monitoring in Drin Riparians related to Drin Basindevelopment, operation and maintenance of Transboundary Drin Basin Information Management System.	< 5 years	H	All Riparians	Data management institutions within each Riparian ²⁷ Monitoring and Information Exchange EWG DCG	Riparian budgets EU Development partners GEF	M	Digital files of historic data with data available Data available for the regional IMS Operational regional IMS	P (process) Historic data used as a baseline and available in IMS for basin governance

²⁶ Officially designated by the competent ministries or other authorities.

²⁷ Officially designated by the competent ministries or other authorities.



GOAL 2									
Establish conditions for the sustainable use of water and its supported ecosystems									
OBJECTIVE 1									
Establishment of a knowledge base on water resources and ecosystems for informed decision-making by 2025									
	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 1.1: Establish a knowledge base on water quality for informed decision-making by 2025									
1.	<p>Development of updated Riparian level/sub-basin water quality pollution risk maps and inventory of hotspots (regarding hazardous substances, heavy metals, pesticides, etc.) to inform policymaking and accidental release monitoring/warning, and to guide necessary managerial action:</p> <ul style="list-style-type: none">• review of existing surface and groundwater risk maps• completion of research• analysis of data• identification of potential sites for early warning of accidental release• preparation of a report, including recommendations of priority actions to be undertaken with an assessment of the cost of these actions²⁸ and protocols to be followed in the event of accidental release to alert downstream Riparians.	< 10 years	M	All Riparians – Drin sub-basins	Line ministries and institutes ²⁹	Riparian budgets EU GEF	M	Pollution risk maps developed and accepted	P (process) Pollution maps help Riparian authorities prioritize management actions to reduce pollution

²⁸ Preliminary research and a report will determine recommended priority actions, costs, locations, etc.

²⁹ Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
2.	<p>Identification of vulnerable areas in accordance with EU directives (e.g. the Water Framework Directive, Habitats Directive, Nitrates Directive, Urban Wastewater Treatment Directive) to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none">• review of existing data relating to sensitive areas in accordance with the EU directives• completion of fieldwork• analysis of data• preparation of a report, including recommendations of priority actions to be undertaken with an assessment of the cost of these actions.³⁰	< 5 years	H	<p>All Riparians – Drin sub-basins</p> <p>Priority in Zeta plain, Montenegro (Skadar/Shkodër sub-basin)</p>	Ministry of the environment in each Riparian	<p>Riparian budgets</p> <p>EU</p>	L	Sensitive areas identified in all Riparians	<p>P (process)</p> <p>Identification of sensitive areas to assist Riparians in prioritizing management actions and future reports to the EU</p>
3.	<p>Improvement of the understanding of the effects of nutrient pollution in priority areas of ecological importance to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none">• identification of priority nutrient vulnerable zones (using input from action 2 (above))• review of existing data on nutrient pollution in priority nutrient vulnerable areas of ecological importance• completion of research in priority areas• analysis of data• preparation of a report, including recommendations in terms of priority actions to be undertaken with an assessment of the cost of these actions.³¹	< 10 years	M	<p>Sub-basins of the Prespa, Ohrid and Skadar/Shkodër lakes</p> <p>Additional priority areas, to be identified</p>	Competent Riparian authorities with responsibility for nutrient pollution	<p>Riparian budgets</p> <p>EU</p> <p>GEF</p>	M	Technical reports on the effects of an excessive nutrient load to the priority areas	<p>P (process)</p> <p>Information to assist the development of management actions to reduce nutrient pollution</p>
4.	<p>Identification of vulnerable drinking water sources to inform the establishment of drinking water protection zones:</p> <p>review of existing data on vulnerable drinking water sources</p> <p>analysis of data and preparation of a report, including recommendations on the establishment of drinking water protection zones with an assessment of the cost of these actions.³²</p>	< 5 years	H	All Riparians – Drin sub-basins	Responsible institution for health protection/ drinking water providers/inspectors ³³	<p>Riparian budgets</p> <p>EU</p>	L	Report on the vulnerability of the main drinking water abstraction sites and recommendations on protection zones	<p>P (process)</p> <p>Improved management actions in protecting drinking water sources</p>

³⁰ Preliminary research and a report will determine recommended priority actions, costs, locations, etc.

³¹ Preliminary research and a report will determine recommended priority actions, costs, locations, etc.

³² Preliminary research and a report will determine recommended priority actions, costs, locations, etc.

³³ Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 1.2: Establish a knowledge base on the hydrological/hydrogeological regime for informed decision-making by 2025									
1.	Development of an updated Drin Basin hydrogeological map including identification of groundwater flows in transboundary aquifers and associated surface-water bodies of the Drin Basin: <ul style="list-style-type: none">review of existing datacompletion of research into identifying groundwater flowspreparation of a report on the delineation of the Drin transboundary aquifers.	< 10 years	H	All Riparians Transboundary aquifers Prespa and Ohrid lakes (further investigation of hydrological linkages)	Hydrogeological institutes ³⁴ Water Framework Directive competent authorities DCG	Riparian budgets EU	M	Technical reports	P (process) Improved management actions through improved knowledge of hydrogeology
2.	Updating and increasing precision of water balance prepared through the GEF Drin Project using additional data from hydropower companies: <ul style="list-style-type: none">agreement with hydropower companies on the exchange of available datausage of operational dams' data (e.g. outflow of water per day) in available hydrological tools and models to increase their accuracy and precisionupdate the water balance.	< 5 years	H	All Riparians – Drin Basin	Hydropower companies of Albania and North Macedonia DCG and pertinent EWGs	Riparian budgets EU Development partners Adaptation Fund/UNDP project GEF	L	Hydrological models Technical reports	P (process) Improved models will assist water users and basin management authorities with overall water resources planning, management and implementation of drought actions
3.	Determination of water stress under different climate change and developmental scenarios for the Drin sub-basins (update related work under the GEF Drin Project; use outputs of action 2 above): <ul style="list-style-type: none">review of existing climate change scenariosreview of existing data on water uses/demand per sector, including agriculture, industry, energy, domestic, etc. (update related work under the GEF Drin Project)completion of research into water stress under climate change scenarios using hydrological modelspreparation of a report and recommendations in relation to water use per sub-basin and sector.	< 5 years	H	All Riparians	Relevant Riparian authorities DCG	Riparian budgets EU Adaptation Fund/UNDP project GIZ GEF	L	Technical reports and data	P (process) Improved understanding of the impacts of climate variability and change on water resources allows authorities to adjust sectoral economic planning and development

34 Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
4.	<p>Estimation of seawater intrusion risks under different climate change scenarios to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none">review of existing data/studies and completion of further research on seawater intrusion riskspreparation of a report and key recommendations for policymaking, law drafting and managerial actions.	< 10 years	M	Coastal area of Drin	Ministries with responsibility for surface/groundwater for drinking/ agriculture	Riparian budgets EU GEF	L	Technical report	<p>P (process)</p> <p>Coastal authorities have information on groundwater seawater intrusion risks to guide management plans in the region</p>
Sub-Objective 1.3: Establish a knowledge base on biodiversity for informed decision-making by 2025									
1.	<p>Determination of the status and trends of Drin Basin biodiversity (key habitats and species, including fish stocks in lakes and rivers, the distribution and effects of aquatic invasive species in the transboundary lakes, condition of coastal/marine ecosystems and marine fisheries, distribution of Natura 2000 sites within the basin, etc.) to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none">joint study on the status and trends of key habitats and species in the Drin Basin through the review of existing biodiversity data (including habitats and species) and field assessmentsassessment study report and management-related recommendations.	< 10 years	M	<p>Protected areas or areas considered for protection in all Riparians</p> <p>Drin Basin</p> <p>Lakes (Ohrid, Prespa and Skadar/Shkodër lakes)</p> <p>Drin coastal areas</p>	<p>Universities/research institutes</p> <p>Environmental agencies³⁵</p> <p>Ministries of the environment, fisheries and agriculture</p> <p>Protected area management authorities</p> <p>Biodiversity and Ecosystems EWG</p> <p>DCG</p>	<p>Riparian budgets</p> <p>Internationally-funded research projects</p> <p>GIZ</p> <p>EU</p> <p>GEF</p>	M	<p>Technical reports</p> <p>Improved understanding of the biodiversity status in the basin area</p>	<p>P (process)</p> <p>Riparian decision makers have information on Drin Basin biodiversity and trends to use for policymaking in the fields of environmental protection and economic development</p>
2.	<p>Estimation of the value of ecosystem services to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none">identification of areas of focuscompletion of research into mapping and valuation of ecosystem services taking into consideration existing studies and workpreparation of a report and key recommendations on ecosystem management based on the findings.	5–10 years	M	Protected areas or areas considered for protection in all Riparians	<p>Ministries of the environment</p> <p>Universities/research institutes³⁶</p> <p>Biodiversity and Ecosystems EWG</p> <p>DCG</p>	<p>Riparian budgets</p> <p>EU</p> <p>World Wide Fund for Nature (WWF)</p> <p>International Union for Conservation of Nature (IUCN)</p> <p>GEF</p>	M	<p>Maps and reports on ecosystem services and valuation</p> <p>Improved understanding of ecosystem services</p>	<p>P (process)</p> <p>Ecosystem services and value in the Drin Basin available to guide decision makers</p>

35 Officially designated by the competent ministries or other authorities.

36 Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
3.	Assessment of acceptable ecological flows across the Drin Basin: <ul style="list-style-type: none">review of existing studies and work for the assessment of acceptable ecological flows across the basinpreparation of a report and key recommendationsassessment of acceptable ecological flows in the Drin Basin.³⁷	< 5 years	H	All Riparians – Drin sub-basins	Ministries of the environment and water resources management	Riparian budgets EU	M	Report available	P (process) Minimum ecological flows established in the Drin Basin to guide decision makers on water demand and use
4.	Assessment on the need, potential and location for Marine Protected Areas (MPAs) in the exclusive economic zone (EEZ) of the coastal Riparians: <ul style="list-style-type: none">identification of areas of studycompletion of a joint studypreparation of a report and key recommendations on the establishment of MPAs.	< 5 years	L	Albania, Montenegro Locations to be determined based on the study	Competent authorities/ministries for MPAs	Riparian budgets EU	M	Report available	P (process) Coastal Riparians have information on MPA location, need and potential
Sub-Objective 1.4: Establish a knowledge base on sediment transport for informed decision-making by 2025									
1.	Identification of the impacts of hydromorphological interventions (including related to agriculture, industry, tourism and forestry management practices) on sediment transport and actions to address these: <ul style="list-style-type: none">review of existing datadevelopment of sediment transport modelpreparation of a report and key recommendations for policymaking, law drafting and management actions.	< 5 years	H	All Riparians – Drin sub-basins	Ministries and organizations with responsibility for hydromorphological alterations (including Water Framework Directive competent authorities, environment ministries, hydropower plant operators, tourism) ³⁸	Riparian budgets EU	L	Technical report, sediment and transport model Accepted recommendations (by DCG)	P (process) Models available to guide decision makers on hydromorphological issues related to sediment transport, which will benefit hydropower plant operators, farmers, gravel extraction, etc.

³⁷ See action 2 on water balance in goal 2, sub-objective 1.2.
³⁸ Officially designated by the competent ministries or other authorities.



	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
2.	<p>Update of coastal erosion trends making use of outputs of action 1 and quantification of the effect of the sediment balance on coastal erosion / deposition processes to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none"> • identification of areas of study • completion of research into the effect of the sediment balance on coastal erosion/deposition processes, taking into consideration existing studies and work • preparation of a report and key recommendations for policymaking, law drafting and management actions. 	< 10 years	M	Albania, Montenegro	<p>Geological institutions</p> <p>Hydrometeorological institutions³⁹</p> <p>Ministries/authorities responsible for the environment, water and agriculture/ forestry and maritime affairs</p>	<p>Riparian budgets</p> <p>International partners</p> <p>GEF</p>	L	Technical report and recommendations	<p>P (process)</p> <p>Improved management of coastal regions and planning of economic activities in coastal and marine areas</p>
3.	<p>Identification of standards and areas for the exploitation of riverbed material extraction to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none"> • review of existing data/studies • development of criteria and standards for extraction • mapping of areas meeting the standards • recommendations for implementation of a monitoring programme • preparation of a report and key recommendations for policymaking and law drafting. 	< 10 years	M	All Riparians – Drin sub-basins	<p>Ministries of the environment and water administration</p> <p>Authorities enforcing gravel extraction</p> <p>Private companies engaged in extraction</p>	<p>National resources</p> <p>Authorities</p> <p>Operators, geological surveys (data, expertise), river basin/regional authorities, municipalities, EU regional operational programmes</p>	L	Potential areas for gravel extraction identified and recommendations accepted	<p>P (process)</p> <p>Riparian authorities have information to designate areas for gravel extraction</p> <p>Reduced ecosystem damage from riverbed material extraction</p>
4.	<p>Identification of erosion hotspots to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none"> • review of existing data/studies • identification of areas of study • completion of further research on erosion hotspots • preparation of a report and key recommendations for policymaking, law drafting and management actions to minimize erosion. 	< 5 years	H	All Riparians – Drin sub-basins	<p>Geological institutions</p> <p>Hydrometeorological institutions</p> <p>Ministries of the environment, agriculture/forestry and water authority</p>	<p>Riparian budgets</p> <p>International, including EU</p> <p>Contributions from hydropower plant operators</p> <p>Research projects</p>	L	Technical report	<p>P (process)</p> <p>Information available at the basin level to guide measures to minimize erosion</p>

³⁹ Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 1.5: Establish a knowledge base on sectoral developments and intersectoral impacts by 2025									
1.	<p>Assessment of the carrying capacity of the Drin Basin in terms of renewable energy (hydropower and non-hydropower) production to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none">review of existing data/studies and completion of research into energy development in the basinpreparation of a report and key recommendations for policymaking and law drafting.	< 5 years	H	All Riparians – Drin sub-basins	<p>DCG</p> <p>University/research institutes</p> <p>Hydrometeorological institutions⁴⁰</p> <p>Ministries of the environment and energy</p>	Development partners	L	<p>Intersectoral meetings completed</p> <p>Technical report</p>	<p>P (process)</p> <p>Riparian ministries (energy, water, etc.) have information for the sustainable energy production from renewables</p>
2.	<p>Development of a basin-level climate-related vulnerability assessment for key sectors (energy, agriculture, forestry, industry, urban areas, etc.):⁴¹</p> <ul style="list-style-type: none">review of existing data/studies and completion of further research on climate-related vulnerability in the basin (e.g. establishing emission limit values under different hydrological conditions; water quantity in the energy sector)preparation of a report and key recommendations.	5–10 years	M	All Riparians	<p>Relevant Riparian authorities</p> <p>DCG</p>	<p>Riparian budgets</p> <p>EU</p> <p>Adaptation Fund/UNDP project</p> <p>GIZ (including academic research projects)</p> <p>GEF</p>	M	Technical report and data	<p>P (process)</p> <p>Riparian authorities and the DCG have information to guide sectors with climate-related decisions</p>
3.	<p>Improved understanding of the impacts of pesticides in the Drin Basin from current agricultural practices to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none">review of existing data on the impacts of pesticidesidentification of areas of focuscompletion of research in areas of focusanalysis of datapreparation of report and recommendations.	< 5 years	H	All Riparians – Drin sub-basins, priority in areas with intensive agriculture in the White Drin, Prespa, Ohrid, Black Drin, Zeta valley, Buna/ Bojana area	Ministries and authorities with responsibility for priority substances	<p>Riparian budgets</p> <p>EU</p>	L–M	Report and recommendations	<p>P (process)</p> <p>Research informs authorities on pesticide management</p>

⁴⁰ Officially designated by the competent ministries or other authorities.

⁴¹ The outputs of action 3 under goal 2, sub-objective 1.2, will be used as input for this action.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 1.6: Establish a knowledge base on economic instruments by 2025									
1.	<p>Identification of potential disincentives in the form of economic instruments (charges, taxes, subsidies, etc.) for untreated urban and industrial wastewater discharges to inform policymaking and guide necessary managerial action:</p> <ul style="list-style-type: none">review of existing data/studies and completion of further research on the use of economic instruments on wastewater discharges, taking into consideration the pollution related and socio-economic realities in the Drinpreparation of a report and key recommendations for introduction and enforcement of the economic instruments.⁴²	5–10 years	M	All Riparians Protected areas and important areas identified in studies under sub-objective 1.1	Riparian water / environment industries, economy ministries ⁴³ Water utilities	Riparian budgets EU GEF	L	New regulations/ economic instruments identified	P (process) Riparians aware of the opportunities and benefits from the use of economic instruments in the basin
2.	<p>Assessment of existing incentives and subsidies to identify those that have an effect on ecosystems (both positive and negative) and the services provided, and identification of necessary reforms:</p> <ul style="list-style-type: none">review of existing data/studies and completion of further research on incentives and subsidies that impact biodiversitypreparation of a report and key recommended Riparian-level reforms.	5–10 years	M	All Riparians	Ministries of the economy, energy, finance, agriculture and the environment Environmental agencies University/research institutes designated by the competent ministries or other authorities	Riparian budgets Development partners	L	Technical reports on economic incentives Recommendations for policy change	P (process) Riparians aware of the current impacts from subsidies

⁴² Links with actions on urban wastewater treatment works and associated legislation with respect to EU directives on wastewater.

⁴³ Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
3.	<p>Identification of market-based solutions and measures to reduce illegal forest exploitation:</p> <ul style="list-style-type: none">• implementation of feasibility studies on the introduction of sustainable alternative heating fuels (e.g. pellets, briquettes) and energy efficiency measures for households, businesses and public organizations that currently use firewood as a primary heating source• identify options for establishing cooperation with developmental and commercial banks for the development of microcredit options/ soft loans for households, businesses and public organizations to shift to alternative heating fuels (e.g. pellets, briquettes) and implement energy efficiency measures• preparation of a report and key recommendations for the establishment of financing options (e.g. subsidies, soft loans) to promote identified measures that will result in reduced demand for energy and firewood• identification of commercial banks to provide microcredit/soft loans.	< 5 years	H	<p>All Riparians</p> <p>Protected areas and important areas identified in studies under 1.1</p>	<p>Ministries of energy and the economy</p> <p>Development banks</p> <p>Commercial banks</p> <p>DCG</p>	<p>Development partners, including banks</p> <p>Riparian budgets (co-financing)</p>	L-M	<p>Policy recommendations for the wood energy sector</p> <p>Financing options to implement recommendations, and implementation of recommendations</p>	<p>P (process)</p> <p>Riparians aware of economic measures to minimize destructive forestry practices</p>



© 2S Studios

OBJECTIVE 2									
Strengthening mechanisms and policies to support management of water resources and ecosystems by 2030									
	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 2.1: Strengthening regional governance and policies in the Extended Drin Basin by 2025									
1.	<p>Signing an international agreement for the management of the Drin Basin, including the establishment of a Joint Commission:</p> <ul style="list-style-type: none">• review of institutional and legal options• preparation of a feasibility study, including proposal for the definition of roles and responsibilities, operational rules, rules of procedure, administrative rules, etc., as well as financing• preparation of legal text and negotiation among Riparians• signing of the agreement to be forwarded for ratification by the parliaments of the Riparians.	< 2 years	H	All Riparians	Governments of the Drin Riparians DCG	Riparian budgets EU GEF	M	Feasibility report Agreed plan to implement formation of body Terms of Reference for functions Legal text for international agreement	P (process) Drin Basin management through a regional Commission
2.	<p>Development and implementation of river basin management plans (RBMPs):⁴⁴</p> <ul style="list-style-type: none">• support the development and implementation of RBMPs in each of the Riparians for Drin sub-basins extending into their territory (in accordance with EU directives) in cases where these do not exist• development of RBMPs for transboundary sub-basins• streamlining RBMP of transboundary sub-basins into national RBMPs• development of an international Drin RBMPs (in accordance with EU directives and incorporating nexus considerations).	< 5 years	H	All Riparians	Governments of Drin Riparians DCG	Riparian budgets EU GEF	M	RBMPs prepared at the Riparian level RBMPs prepared at the transboundary sub-basin level International RBMP agreed	P (process) Riparians have Water Framework Directive compliant RBMPs to guide the management of Drin Basin in each Riparian and at the transboundary (international) level SR (stress reduction) ES (ecosystem status) RBMPs will have a positive effect at the extended Drin Basin level
3.	<p>Application of the Sendai⁴⁵ Framework for Disaster Risk Reduction at the transboundary level:</p> <ul style="list-style-type: none">• review of Sendai Framework implications for the Riparians• implementation of the Sendai Framework in the Riparians.	5–10 years	M	All Riparians – Drin sub-basins	Competent ministries from Riparians with input to the Sendai Framework at the transboundary level	Riparian budgets	L	International agreement, technical report and adopted regulation	P (process) Riparians apply the Sendai Framework to reduce transboundary risks of disasters

44 Building on experiences from the Lake Ohrid RBMP development and based on information in Riparian RBMPs and TDA thematic reports.

45 <https://www.unisdr.org/we/coordinate/sendai-framework>.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
Sub-Objective 2.2: Strengthening governance and policies on water quality management by 2025									
1.	Implementation of specific policy strengthening actions on water quality management identified for each Riparian in the TDA. ⁴⁶	< 10 years	H	All Riparians	Responsible authorities	National budgets	M	Updated institutions and policies on water management implemented	P (process) Riparians have improved institutional and legal arrangements
2.	Establishment of pollution classification schemes (biological, chemical and physicochemical): ⁴⁷ <ul style="list-style-type: none">review of existing pollution classification schemesestablishment of reference sitesdevelopment of classification schemes for parameters for which ecological/chemical quality limits do not exist in the Water Framework Directive.	5–10 years	M	All Riparians – Drin sub-basins	Responsible institution for monitoring ⁴⁸ DCG	National budgets EU	L	Scheme developed and in use	P (process) Riparians develop harmonized pollution classification schemes to address pollution sources
3.	Implementation of EU water-related directives in all Riparians in accordance with existing national laws and strategies, and consistent with the EU acquis.	10–20 years	H	All Riparians	Ministries responsible for EU water directives/competent authorities	National budgets EU	H	Directives implemented	P (process) SR (stress reduction) ES (ecosystem status) Implementation of directives lead to meeting agreed standards that will improve ecosystem conditions
Sub-Objective 2.3: Strengthening governance and policies on hydrological/hydrogeological management by 2025									
1.	Establishment of a dialogue between the hydropower companies, other relevant authorities and the DCG/Drin Commission with regard to operation procedures of the dams to improve flow regulation and minimize negative effects: ⁴⁹ <ul style="list-style-type: none">feasibility study to assess the scope and level of cooperationpreparation and negotiation of an agreement document.	< 5 years	M	Drin River, dams	Hydrometeorological and related institutions ⁵⁰ Ministries of water, energy, the economy Hydropower plant operators DCG	Riparian budgets EU Austrian Development Agency (nexus) Hydropower plant operators	L	Report on model outputs Improvement options defined	P (process) Initiation of discussions between DCG, hydropower plant operators and authorities concerned with key flow regulation issues

⁴⁶ Identified in the Thematic Report on Institutional and Legal Setting.

⁴⁷ Contributing to the implementation of action 2 under sub-objective 2.1 regarding the development of basin management plans at the Riparian level.

⁴⁸ Officially designated by the competent ministries or other authorities.

⁴⁹ The outputs of action 1 under goal 7, objective 1 is a prerequisite for this action.

⁵⁰ Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
2.	<p>Establishment of regulations/economic instruments for full cost recovery of water services and water use in the Drin transboundary sub-basins and basin.⁵¹</p> <p>Completion of an economic analysis of water use in accordance with the EU Water Framework Directive to enable full cost recovery of water services and water use:</p> <ul style="list-style-type: none">• preparation of a report and key recommendations• development of a billing and environmental taxation system for water use (agricultural, domestic wastewater, industrial).	5–10 years	H	All Riparians	Line ministries Water service utilities	Riparian budgets EU, KFW, European Bank for Reconstruction and Development (EBRD), World Bank, GEF	M	New regulations/ economic instruments in place	P (process) Establishing regulations for full cost recovery will provide resources for further protection of ecosystem services
Sub-Objective 2.4: Strengthening governance and policies on biodiversity management by 2025									
1.	<p>Establishment of harmonized fishery regulations and improved monitoring of compliance for commercial fisheries in transboundary lakes:</p> <ul style="list-style-type: none">• agreement on harmonized regulations among Riparians in each transboundary lake (regulations will be lake specific, including species available to catch, duration of fishing bans, equipment that can be used, types of fishing nets, sizes of net openings, etc.)• establishment of training programmes for authorities responsible for monitoring and enforcement of regulations• enforcement of regulations and implementation of monitoring of commercial fishes.	< 5 years	H	Prespa, Skadar/ Shkodër and Ohrid lakes	Authorities responsible for fisheries Ministry of the environment Protected area management authorities EWGs	Riparian budgets EU	L	Fishery regulations Monitoring of fishing Training programmes Number of people trained	P (process) Leading to harmonized fish management across Drin Basin to better conserve/protect fish stocks
2.	Assessment of the state of commercial fish populations and agreement of fishing quota among Riparians in each transboundary lake.	< 10 years	H	Prespa, Skadar/ Shkodër and Ohrid lakes	Authorities responsible for fisheries Ministry of the environment Protected area management authorities	Riparian budgets EU	L	Agreements on commercial species fishing quota	P (process) SR (stress reduction) Decreased pressure on commercial fish stocks; decreased pressure on biodiversity

⁵¹ Contributing to the implementation of action 2 under goal 2, sub-objective 2.1 regarding the development of basin management plans.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
3.	Establishment of common approaches to monitoring of logging in forests including enforcement of regulations: <ul style="list-style-type: none"> perform needs assessment train relevant personnel improve statistics on wood energy and related forest degradation. 	5–10 years	M	All Riparians – Drin sub-basins	Authorities responsible for agriculture/forestry inspection services Forestry agencies Protected area management authorities	Riparian budgets EU	L	Training programmes Number of people trained Number of inspections Monitoring of forest status improved	P (process) Better monitoring will allow for improved management and enforcement of regulations
4.	Harmonization of the zoning system in areas that are protected and adjacent (across Riparian borders): <ul style="list-style-type: none"> establishment of joint technical groups by the Riparians joint research to fill in potential knowledge gaps agreement on the harmonized zoning system and related regulations, including on enforcement measures and monitoring of compliance. 	< 5 years	H	Areas that are protected and adjacent (across Riparian borders)	Protected area management authorities Ministries of the environment Agencies (for the environment, water, forests, tourism)	Riparian budgets EU Bilateral donor projects	L	Map of harmonized zones Zoning implemented	P (process) Improved harmonization of protected areas in the Drin Basin
Sub-Objective 2.5: Strengthening governance and policies on sediment management by 2025									
1.	Definition of economic instruments (taxes/concession fees) to regulate sand and gravel exploitation from riverbeds: <ul style="list-style-type: none"> preparation of a study to define the recommended economic instruments, means and processes for their implementation in identified hotspots. 	< 10 years	L	All Riparians	Line ministries (environment, industry)	Riparian funding Development partners	L	Report on legal basis and economic instruments and adopted regulations New/updated policies implemented	P (process) SR (stress reduction) Studies inform Riparians on possible economic instruments/locations Implementation of regulations will assist in reducing ecosystem pressures
Sub-Objective 2.6: Strengthening intersectoral governance and policy coherence by 2025									
1.	Implementation of a nexus multisectoral dialogue supported through the establishment of a related dialogue platform functioning as advisory body for the DCG, involving energy, water, agroforestry and environment sectors to: <ul style="list-style-type: none"> inform the development of RBMPs identify and prioritize issues that require a collective response coordinated across sectors propose and coordinate synergic actions. 	< 5 years	H	All Riparians	DCG All nexus-relevant ministries	Riparian budgets Development partners		Dialogue meetings Nexus assessment reports on different issues of priority Nexus solutions/interventions identified and applied	P (process) Intersectoral discussions will assist with Riparian and DCG management of the Drin Basin

OBJECTIVE 3

Implementation of local, Riparian and regional actions to promote sustainable water use and ensure ecosystem functioning and resilience by 2030

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
1.	<p>Minimization of the effect of phosphorus from detergents through the voluntary uptake of a phosphorus ban at the municipal level including:</p> <ul style="list-style-type: none"> assessment of monitoring data identification of areas for pilot action implementation pilot action for voluntary uptake of a phosphorus ban at the municipal level implementation and assessment of results of pilot activities development of policy measures and action plans for interested municipalities in all Riparians to upscale the pilot action and perform capacity-building for the implementation of the action plans, including the enforcement of a phosphorous detergent ban. 	< 10 years	H	<p>Identified hotspots/ sensitive ecological areas for pilot actions</p> <p>Lumbardi Peje</p> <p>Interested municipalities in all Riparians for enforcement of ban</p>	Ministries of the environment and trade/the economy	<p>Riparian budgets</p> <p>EU</p> <p>GEF</p>	L	<p>Phosphorus-free detergents used on a voluntary basis at the municipal level</p> <p>Only phosphorus-free detergents available on the market</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Riparians have necessary technical and policy information to reduce phosphorus in detergents</p> <p>Pilots implemented to reduce phosphorus in wastewater discharges in the Drin Basin</p>
2.	<p>Application of irrigation practices to improve water and energy consumption efficiency through pilot demonstration, small grants and microcredit programmes:</p> <ul style="list-style-type: none"> identification of test sites based on agreed criteria identification of techniques to test (e.g. information technology (IT) informed irrigation, drip irrigation, solar pumps, metering) implementation and assessment of results of pilot activities development of a feasibility study on investments for scaling up the pilot action, indicating among others, areas, technical specifications and cost identification of options for establishing cooperation with developmental and commercial banks to develop microcredit options/soft loans development of a feasibility study including regarding the form and conditions of microcredit schemes establishment of a small grants scheme for farmers to acquire necessary equipment for scaling up the pilot, including the process and criteria for participating in the scheme, selection of beneficiaries, reporting and monitoring, etc. implementation of the small grants programme, possibly with the parallel implementation of a microcredit programme implemented by developmental/commercial banks. 	< 10 years	L	<p>White Drin, Prespa, Ohrid, Black Drin, Zeta valley, the Buna/ Bojana area</p>	<p>Riparian/local authorities with responsibility for irrigation</p> <p>Ministries of water</p>	<p>Riparian budgets</p> <p>EU</p> <p>GEF</p>	M	<p>Report on a preliminary assessment</p> <p>Pilot interventions on smart irrigation</p> <p>Financing options to scaling up of pilots identified and implemented</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Riparians have the necessary technical information to reduce irrigation water demand</p> <p>Implementation of new water and energy consumption efficient irrigation techniques</p>

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
3.	<p>Supporting the use of Best Agricultural Practices (BAP)⁵² (e.g. buffer strips, crop rotation, application of fertilizers, no-till, use of cover crops) to prevent erosion and enhance soil conservation through training, pilot interventions, small grants and microcredit programmes, including:</p> <ul style="list-style-type: none">assessment for the identification of priority areas,⁵³ BAP actions and interventions for each areaimplementation of pilot actions and assessment of resultsdevelopment of a feasibility study on investments for scaling up the pilot action, indicating among others, areas, technical specifications and costidentification of options for establishing cooperation with developmental and commercial banks to develop microcredit options/soft loansdevelopment of a feasibility study including of the form and conditions of the microcredit schemes(vocational) training courses for farmers in priority areas on BAP including the development of training courses and materials and implementation of training coursesdevelopment of a small grants scheme on a BAP implementation programme (for the necessary investments, etc.) including processes and criteria for participating in the programme, the selection of beneficiaries, reporting and monitoring, etc.implementation of the small grants programme, possibly with the parallel implementation of a microcredit programme by developmental/ commercial banks.	< 10 years	M	To be determined among areas in the White Drin, Prespa and Ohrid lakes, the Black Drin, Zeta valley and the Buna/ Bojana area	Local and Riparian authorities responsible for agriculture	Riparian budgets EU GEF	M	Locations identified, pilot case confirmed, farmers trained Implementation of pilots Financing options to scaling up of pilots identified and implemented Monitoring data demonstrates erosion, reduction and enhancement of soil conservation	P (process) SR (stress reduction) ES (ecosystem status) Farmers and agricultural authorities have an improved understanding of BAP options for the basin. Implementation of pilots reduce soil erosion Monitoring of emissions/ ecosystems enables improvements to be reported
4.	<p>Pilot study on metering water use (abstraction and use):</p> <ul style="list-style-type: none">identification/mapping of illegal abstraction pointspreparation of a register of water abstractionsdevelopment of recommendationsimplementation of pilot meteringassessment of effectiveness and recommendations for upscaling.	< 10 years	L	All Riparians – Drin sub-basins	Authorities responsible for water resources management	Riparian budgets EU	M	Registry of water abstraction Report on metering approaches in the Riparians Implementation of pilot metering of water use Assessment reports on results with recommendations for upscaling	P (process) SR (stress reduction) Improved understanding of the benefits of metering Reduced water consumption as result of pilot metering

⁵² See also the following BAP-related actions: action 2 under goal 5, objective 2, and action 3 under goal 6, objective 1.
⁵³ See maps A1 and A2 on nitrogen and phosphorous load source apportionment in the Thematic Report on Pollution and Water Quality.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
5.	Implementation of mitigation measures to protect drinking water sources: <ul style="list-style-type: none"> establishment of protection zones and programme of protection measures support for implementation of direct (i.e. fencing) and indirect protection measures (monitoring and enforcement of protection in zones which can influence the abstraction site). 	< 10 years	M	All Riparians – Drin sub-basins	Responsible institutions for health protection/drinking water providers/inspectors	Riparian budgets	M	Number of priority abstraction sites supported through the development of protection zones and the implementation of prescribed protection measures	SR (stress reduction) Improved protection measures for drinking water sources implemented
6.	Rehabilitation/extension of water supply systems for urban and rural areas, following an initial review to identify locations/priorities. Enhancing existing and installing new water treatment works as required.	10–20 years	M	All Riparians (locations to be identified)	Ministries responsible for water supply infrastructure	Riparian budgets EU	H	Percentage of population with high quality drinking water	SR (stress reduction) Reduced losses of water from leakage Socio-economic benefits of clean water to populations
7.	Pilot interventions for reducing forest fire risks: <ul style="list-style-type: none"> study to identify priority areas, actions and interventions for each area implementation of pilot actions and assessment of results development of a feasibility study on investments for scaling up the pilot actions, indicating among others, areas, technical specifications and cost. 	< 10 years	M	Locations identified through the study	Ministries of agriculture/forestry Inspection services Forestry agencies Protected area management authorities	Riparian budgets	L–M	Study report Interventions Pilots implemented Feasibility study Hectares of forests protected Biodiversity protected	P (process) SR (stress reduction) ES (ecosystem status) Improved understanding of forest fires/locations Pilots will reduce the risk of forest fires Reduced forest fires benefit the forest ecosystem and reduce soil erosion resulting from destroyed fires
8.	Restoration actions to ensure river continuity, including bank naturalization, restoring wetlands connectivity, etc.: <ul style="list-style-type: none"> study to identify priority areas, actions and interventions for each area implementation of pilot actions and assessment of results development of a feasibility study on investments for scaling up the implementation of related actions, indicating among others, areas, technical specifications and cost. (building on experiences from other river restoration work in South-East Europe and including outputs from the GEF DYNA⁵⁴ project involving Montenegro) 	< 10 years	M	Initial sites to be considered include Montenegro (lower Morača River), Kosovo (outside Peja town)	Competent Riparian ministries and authorities	Riparian budgets EU GEF	M	Feasibility study Restoration activities Hectares of wetlands restored Kilometres of riverbanks restored	P (process) SR (stress reduction) ES (ecosystem status) Riparians' understanding of options/locations for restoration improved Increased biodiversity, reduced stress to ecosystems, e.g. from wetland restoration pilots Improved ecosystem status from restoration

54 Danube River Basin Hydromorphology and River Restoration.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
9.	<p>Evaluation of approaches for the control of aquatic invasive species in transboundary lakes:</p> <ul style="list-style-type: none"> assessment and identification of priority locations and interventions/pilot actions implementation of pilot actions and assessment of results development of studies on management approaches/instruments/measures for controlling invasive species implementation of approaches/instruments/measures. 	5–10 years	M–L	Prespa, Skadar/ Shkodër and Ohrid lakes	Competent Riparian authorities	Riparian budgets EU GEF	L–M	<p>Pilots</p> <p>Assessment of results</p> <p>Management instruments identified and implemented</p>	<p>P (process)</p> <p>SR (stress reduction) ES (ecosystem status)</p> <p>Increased knowledge on issues associated with invasive species</p> <p>Implementing target pilots will reduce stress from invasive species</p> <p>Monitoring will highlight improvements to biodiversity (reduced invasive species)</p>
10.	<p>Construction of fish ladders at priority locations:</p> <ul style="list-style-type: none"> study on the identification of priority locations, interventions (e.g. cost/benefit for each location and a feasibility plan) construction of fish ladders at selected priority areas and assessment of results development of a feasibility study on investments for scaling up the implementation of related actions, indicating among others, areas, technical specifications and cost. 	10–20 years	L	Large dams in Albania and North Macedonia	Hydropower plant operators Ministries of the environment University/research institutes	Riparian budgets EU Hydropower plant operators	H	<p>Agreement to implement fish ladders</p> <p>Fish ladders constructed</p>	<p>P (process)</p> <p>SR (stress reduction) ES (ecosystem status)</p> <p>Studies identify options for fish ladders</p> <p>Constructed ladders reduce pressures from hydropower dams to fish movement</p> <p>Ecosystem status improvements demonstrated from monitoring data</p>
11.	<p>Reduction of impacts from aquaculture activities:</p> <ul style="list-style-type: none"> study on aquaculture and ecosystem impacts implementation of pilot activities to reduce pollution impacts report and recommendations for upscaling initiation of upscaling/replication of actions. 	10–20 years	M	Sites to be identified by study	Ministries responsible for aquaculture	Riparian budgets Private sector	M	<p>Percentage of aquaculture produced in low impact sites</p>	<p>SR (stress reduction)</p> <p>Reducing pollution and other ecosystem impacts from aquaculture</p>

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
12.	<p>Establishment of business incubators and small grants programmes matched by microcredit programmes, for environmentally friendly SME-business activities:</p> <ul style="list-style-type: none">• identification of options for establishing cooperation with developmental and commercial banks to develop microcredit options/soft loans and organizations specialized in providing services for business development• development of a feasibility study including on the form and conditions of microcredit schemes• development of a feasibility study on the establishment of incubators• development of a small grants programme (for necessary investments, etc.), including process and criteria for participating in the programme, selection of beneficiaries, reporting and monitoring, etc.• implementation of the small grants programme with the parallel implementation of a microcredit programme implemented by developmental/ commercial banks.	< 10 years	M	Prespa, Skadar/ Shkodër and Ohrid lakes and the Buna/ Bojana area	DCG	Riparian budgets EU GEF	M	<p>Reports with recommendations</p> <p>Financing options to implement recommendations, and implementation of recommendations</p>	<p>ES (ecosystem/socio- economic status)</p> <p>Ecosystem status and socio-economic status improvements through the operation of environmentally friendly SME-business</p>
13.	<p>Implementation of erosion control measures (e.g. reforestation, nature-based solutions, sustainable tillage and irrigation systems) in priority areas: ⁵⁵</p> <ul style="list-style-type: none">• preparation of a study to identify erosion management measures in identified hotspots for testing and upscaling• agreement on priority areas⁵⁶ and identification of appropriate measures• implementation of identified measures (infrastructure and/or non-infrastructure)• evaluation of the results• development of a feasibility study on investments for scaling up the implementation of related action, indicating, among others, areas, technical specifications and cost.	< 10 years	H	<p>All Riparians</p> <p>Priority on Ohrid and Skadar/ Shkodër lakes</p>	<p>Line ministries for water and water directorates</p> <p>Municipalities</p> <p>Ministries and organizations⁵⁷ involved with erosion and lake management, possibly forestry (subject to measures)</p>	Riparian budgets EU GEF	H	<p>Number of priority areas with mitigation measures implemented</p> <p>Technical reports on measures and measures implemented</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Studies will lead to management prioritization of locations for preliminary actions</p> <p>Implementation of actions will reduce erosion at selected sites</p>

⁵⁵ With links to actions within goal 2, sub-objective 1.4.
⁵⁶ Selection among those identified through sub-objective 1.4.
⁵⁷ Officially designated by the competent ministries or other authorities.



OBJECTIVE 4

Improvement of capacities and increased awareness to promote sustainable water use and ensure ecosystem functioning and resilience by 2030

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
1.	Preparation of summary reports for decision makers to raise awareness on priority transboundary environmental problems, including on the impacts of climate change on different socio-economic sectors.	< 5 years	H	All Riparians – Drin sub-basins	DCG	GEF	L	Reports published and distributed	P (process) Decision makers have increased awareness on transboundary issues and impacts
2.	Environmental awareness-raising campaigns and training programmes for schools on Drin transboundary management issues and water/ environment management: <ul style="list-style-type: none"> development of awareness-raising material and campaigns agreed among Riparians, as well as training curriculum and materials delivery of awareness campaigns and training development of monitoring programmes and assessment of results. 	< 10 years	H	Schools in the Drin Basin	Ministries of the environment and education DCG	Riparian budgets Development partners (GIZ, UNDP, EU) EU research programmes	L-M	Awareness- raising material: curriculum and training courses and material for schools	P (process) Students and their families have raised awareness on the transboundary problems and solutions
3.	Awareness-raising campaigns and training workshops on water/environmental management for local level authorities, local/regional water companies, etc: <ul style="list-style-type: none"> agreement with local level authorities, local/ regional water companies development of awareness-raising material and campaigns as well as training curriculum and materials delivery of awareness campaigns and training development of monitoring programmes and assessment of results. 	< 5 years	H	Municipalities within the basin	Environmental agencies and ministries Universities/research institutes ⁵⁸	Riparian budgets Development partners (GIZ, UNDP, EU)	L-M	Seminars/ awareness- raising Briefing documents	P (process) Stakeholders informed on water/ environment management
4.	Awareness-raising campaign on BAP (including nutrient management) with farmers' associations: <ul style="list-style-type: none"> agreement with farmers' associations development of awareness-raising material delivery of awareness campaigns for target audiences in all Riparians assessment of effectiveness. 	< 5 years	M	Focus on specific crops in agricultural areas in the White Drin, Prespa and Ohrid lakes, the Black Drin, Zeta valley and the Buna/Bojana area	Agriculture authorities (ministries, institutes, extension services) Farmers associations	Riparian budgets Development Partners (USAID, EU, GEF) Riparian financing	L	Delivery of awareness- raising campaigns	P (process) Stakeholders informed on water/the environment/farm management

⁵⁸ Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
5.	<p>Awareness-raising campaigns and training programmes on sustainable fisheries for fishers on transboundary lakes:</p> <ul style="list-style-type: none"> • agreement with fishers' associations • development of awareness-raising material and campaigns as well as training curriculum and materials • delivery of awareness campaigns and training • development of programme monitoring and an assessment of results. 	< 5 years	M	Skadar/Shkodër, Ohrid and Prespa lakes and marine/ coastal areas in Albania and Montenegro	Relevant local and Riparian authorities	Riparian budgets EU GEF	L	Delivery of awareness-raising campaigns and targeted training programmes	<p>P (process)</p> <p>Stakeholders informed and trained on water/the environment/fisheries management</p>
6.	<p>Awareness-raising campaigns and training programmes targeting small hydropower plant operators on the environment, water and energy:</p> <ul style="list-style-type: none"> • development of awareness-raising material and campaigns as well as training curriculum and materials • delivery of awareness campaigns and training • development of programme monitoring and an assessment of results. 	< 5 years	M	Dam operators	Ministries of energy and the environment Hydropower plant operators	Riparian budgets Hydropower plant operators EU	L	Delivery of awareness-raising campaigns and targeted training programmes	<p>P (process)</p> <p>Stakeholders informed and trained on water/environment management</p>
7.	<p>Awareness-raising campaigns to reduce littering and reduce plastic waste:</p> <ul style="list-style-type: none"> • stakeholder analysis to identify target groups • development of awareness-raising materials and campaigns • delivery of material campaigns to target audience in all Riparians • assessment of effectiveness. 	< 10 years	H	All Riparians, especially in touristic areas of Ohrid and Buna/ Bojana, Velipoje	Local and Riparian authorities Public education institutes and civil society groups	Riparian budgets	L	<p>Delivery of awareness-raising campaigns</p> <p>Reduced litter in touristic areas,</p> <p>increased waste disposal containers in target locations</p>	<p>P (process)</p> <p>ES (ecosystem status)</p> <p>Stakeholders informed on plastic waste management</p> <p>Monitoring of reduced plastic waste in environment</p>
8.	<p>Vocational training courses for the establishment of environmentally friendly SME business activities:⁵⁹</p> <ul style="list-style-type: none"> • stakeholder analysis to identify target groups • study to identify vocations that have higher chances of financial sustainability in different parts of the basin • development of curriculum/training courses and materials • implementation of vocational training courses • assessment of effectiveness. 	< 10 years	M	Local communities within transboundary protected areas in the Drin Basin	Vocational training centres, universities DCG Local authorities Professional chambers and associations	Riparian budgets International partners (WWF, GIZ, etc.) Private business GEF	L	<p>Number of vocational training programmes</p> <p>Number of participants</p> <p>Number of business initiated</p>	<p>P (process)</p> <p>Stakeholders have training on appropriate biodiversity issues relating to different activities</p>

⁵⁹ For example, nature tourism-related activities (beekeeping, sustainable forestry, non-conventional water resources management, etc.).

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
9.	<p>Capacity-building of institutions with regard to the Industrial Emissions Directive and Seveso Directive to ensure more effective enforcement of legislation, including training and internships to ministries of European countries:</p> <ul style="list-style-type: none">• stakeholder analysis to identify target groups• development of capacity-building materials• delivery of training to target audiences in all Riparians• assessment of effectiveness.	< 10 years	M	All Riparians – Drin sub-basins	Line ministries and environmental agencies and inspectorates ⁶⁰	Riparian budgets EU	L	<p>Capacity- building material</p> <p>Number of trainings</p> <p>Number of participants</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Stakeholders receive training on the Seveso Directive</p> <p>Reports on enforcement indicate reduced stress from relevant industry</p>



⁶⁰ Officially designated by the competent ministries or other authorities.

GOAL 3

Develop cooperation measures to minimize risks of disasters due to extreme natural phenomena and climate change by 2030

OBJECTIVE 1

Improved coordinated management among Riparians for flood risks by 2030⁶¹

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
1.	Preparation of a unified and optimized basin-scale assessment of monitoring needs to strengthen hydrometric monitoring networks in the Riparians.	< 5 years	H	All Riparians – Drin sub-basins	Hydromet institutes	Riparian budgets Adaptation Fund/UNDP project	H	Functional hydrometeorological network	P (process) Agreed monitoring programme will inform Riparians and the DCG on hydrological parameters
2.	Introduction of river basin modelling tools and technologies for strategic flood risk assessments based on the EU Floods Directive risk assessment, flood risk mapping and flood management plans: (a) Development of tools or adaptation of existing tools. (b) Preparation of a study to identify flood risk hotspots.	< 5 years	H	All Riparians – Drin sub-basins	Relevant Riparian authorities DCG	Riparian budgets Adaptation Fund/UNDP project EU	M	Use of tools Flood risk hotspots identified, technical report Operational tool and software	P (process) Improved awareness of flood risk hotspots Tools available for management
3.	Development of a geographic information system (GIS)-based vulnerability, loss and damages assessment tool and database established to record, analyse and predict flood events and associated losses.	< 5 years	H	All Riparians – Drin sub-basins	TBD	Riparian budgets Adaptation Fund/UNDP project	H	GIS database established	P (process) Agreed GIS-based tools will inform Riparians and the DCG on flood impacts
4.	Implementation of a Drin Basin flood risk management policy framework and improved long-term cooperation on flood risk management.	< 5years	H	All Riparians – Drin sub-basins	TBD	Riparian budgets Adaptation Fund/UNDP project	H	Riparian established policy frameworks	P (process) Implementation of a basin-wide flood risk policy

⁶¹ Financing of activities under this objective for Albania, Montenegro and North Macedonia has been secured to a great extent through the Adaptation Fund project “Integrated climate-resilient transboundary flood risk management in the Drin River basin in the Western Balkans” (implemented by UNDP and co-executed by UNDP and GWP-Med). Kosovo is not beneficiary to this project.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
5.	Strengthening of regional and Riparian institutions (including meteorological and hydrological sectors) by training in climate-resilient flood risk management, clarifying responsibilities and strengthening coordination.	< 5years	H	All Riparians – Drin sub-basins	TBD	Riparian budgets Adaptation Fund/UNDP project	H	Functional Riparian and sub-Riparian institutions strengthened	P (process) Capacity-building to enable the agreed monitoring programme to be implemented, which will inform Riparians and the DCG on hydrological issues, including flood risk management
6.	Development of a Drin Basin integrated climate change adaptation and flood risk management strategy and plan.	< 5years	H	All Riparians – Drin sub-basins	TBD	Riparian budgets Adaptation Fund/UNDP project	H	Climate change adaptation and flood risk management strategy and plan developed for the basin	P (process) Agreed basin-wide plan including climate change adaptation within a flood risk strategy
7.	Introduction of an appraisal-led design for structural and non-structural measures using climate risk information and cost-benefit appraisal methods; application of methods for the detailed design of prioritized structural and non-structural measures for the Riparians, including mapping of high-value forests (for flood protection, biodiversity, biomass), forest uses, flood protection and reforestation potential.	< 5years	H	All Riparians – Drin sub-basins	TBD	Riparian budgets Adaptation Fund/UNDP project	H	Appraisal methods accepted	P (process) Agreed structural design considerations to respond to climate change in the Drin Basin Maps available for targeting flood protection
8.	Construction/rehabilitation of structural risk reduction measures in prioritized areas (identified through action 7).	< 5years	H	All Riparians – Drin sub-basins Including in Albania, in the Drin, Buna and Shkodra areas Construction of flood protection on the Drini i Lezhës, Black Drin	TBD	Riparian budgets Adaptation Fund/UNDP project EU	H	Number of measures constructed Hectares protected (anticipated 12,000 ha in the Albania part)	SR (stress reduction) Implementation of flood risk measures

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
9.	Strengthening community resilience to flooding through the participatory design and implementation of non-structural community-based resilience, adaptation and awareness measures.	< 5years	H	All Riparians – Drin sub-basins	TBD	Riparian budgets Adaptation Fund/UNDP project	H	Number of communities/ individuals (male/ female) involved	SR (stress reduction) Implementation of flood risk measures at community level P (process) Guidance for nature-based solutions approaches to flood protection
10.	Evaluation and implementation of nature-based solutions to reduce flooding: <ul style="list-style-type: none">• preparation of a study on nature-based solutions (including improved vegetation cover) to identify measures and areas for pilot implementation• implementation of pilots and assessment of results• report with policy recommendations• feasibility study on investments for nature-based solutions indicating, among others, areas, technical specifications and cost• implementation of nature-based solutions.	<5 years	H	Areas where flood risk is high Priority in the Buna/Bojana and Skadar/ Shkodër sub-basins and the Struga area in North Macedonia	Competent authorities depending on the measures DCG	Riparian budgets EU	H	Number of pilots implemented Number of nature-based solutions financed	SR (stress reduction) ES (ecosystem/socio-economic status) Pilot implementation to reduce socio-economic damage from floods

OBJECTIVE 2

Improve coordinated management among Riparians for drought risks by 2030

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
1.	<p>Introduction of river basin modelling tools and technologies for drought forecasting:</p> <p>(a) Development of tools or adaptation of existing tools for drought forecasting (e.g. 3–6 months) – including the use of for example, GEF Flood and Drought Management Tools.</p> <p>(b) Preparation of a study to identify drought hotspots.</p>	< 5 years	H	All Riparians - Drin Sub-basins	Competent Riparian authorities DCG	Riparian budgets Adaptation Fund/UNDP project EU	M	Use of tools Drought hotspots identified, technical report Operational tools and software	P (process) Improved knowledge on drought hotspots Tools available for management
2.	<p>Evaluation and implementation of nature-based solutions to increase groundwater replenishment:</p> <ul style="list-style-type: none">• preparation of a study on nature-based solutions to identify measures and areas for pilot implementation to increase groundwater replenishment• implementation of pilots and assessment of results• report with policy recommendations• feasibility study on investments for nature-based solutions indicating among others, areas, technical specifications and cost• implementation of nature-based solutions.	< 5 years	H	All Riparians - Drin Sub-basins	Competent authorities depending on the measures DCG	Riparian budgets EU	H	Number of pilots implemented Number of nature-based solutions financed	SR (stress reduction) ES (ecosystem/socio-economic status) Pilot implementation to improve groundwater replenishment

GOAL 4									
Improve management and appropriate disposal of solid wastes									
OBJECTIVE 1									
Reduction in and enhancement of the management of municipal solid wastes to achieve desired targets by 2030									
	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
1.	<p>Assessment of interventions at the Riparian/ local level to manage municipal solid waste, including reuse and energy recovery in accordance with the EU waste policy:</p> <ul style="list-style-type: none">• identification of priority locations and interventions• recommendations for action in selected priority areas• implementation of actions and interventions• assessment of the results• report with policy recommendations• feasibility study on investments for scaling up the pilot interventions, indicating among others, areas, technical specifications and cost.	< 10 years	M	<p>All Riparians, priority on the cities in the White Drin Basin (Svraka and Lendovice disposal sites), Skodra and Nikshic in the upper Zeta plain</p>	Local and Riparian authorities with solid waste responsibilities (collection and disposal)	Riparian budgets EU	M	<p>Report with recommendations and feasibility studies</p> <p>Implemented actions on solid waste</p> <p>Upscaling plans accepted</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Local waste authorities/waste operators informed on means to improve solid waste collection</p> <p>Implementation of pilots and upscaling reduces the amount of uncollected solid waste</p>
2.	<p>Assessment of the feasibility of closing existing dumpsites with high risk to pollute groundwater:</p> <ul style="list-style-type: none">• identification of priority locations• review and assessment of existing data on dumpsites• preparation of report(s) including key recommendations on dumpsites to work with and actions to undertake• development of a feasibility study⁶² on investments for closing identified priority dumpsites, including technical specifications and costs involved.	< 5 years	M	Identification of sites based on hazard maps	Local municipalities	Riparian budgets EU	L	Report	<p>P (process)</p> <p>Authorities have information on priority dumpsites to close</p>

⁶² To inform the basin-wide action to address contaminated/hazardous waste sites addressed in goal 6, objective 1.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
3.	<p>Implementation of recommendations (action 2 above) on closing inappropriate dumpsites across the Drin Basin and implementation of efficient waste collection and management procedures:</p> <ul style="list-style-type: none"> • investments in dumpsite closure • investments in municipal waste collection • construction of waste-sorting facilities • construction of waste incinerators • construction of modern dumpsites meeting national and international best practices. 	< 15 years	H	Sites to be identified by above study	Local municipalities, Riparian authorities	Riparian budgets EU	H	<p>Reduced unregulated waste disposal</p> <p>Improved waste separation</p>	<p>SR (stress reduction)</p> <p>Elimination of unregulated/ inappropriate waste disposal sites</p>
4.	<p>Supporting the development of national licencing, monitoring and reporting systems for municipal solid waste:</p> <ul style="list-style-type: none"> • analysis of the licencing, monitoring and reporting systems, including the identification of priority municipalities and recommendations for actions • pilot implementation of recommendations in at least one priority municipality per Riparian • report with an assessment of results and recommendations for policymaking and law drafting. 	< 10 years	M	All Riparians	Competent ministries for waste management Municipalities DCG	Riparian budgets	L	<p>Analyses conducted</p> <p>Number of municipalities where support is provided to develop the licencing, monitoring and reporting system</p>	<p>P (process)</p> <p>Local authorities have access to approaches on monitoring and licencing</p>
5.	<p>Assessment of interventions at the Riparian and local levels on plastic reuse, recycling and reduction based on socio-economic conditions (including use of economic instruments). Assessment⁶³ and identification of priority locations and actions:</p> <ul style="list-style-type: none"> • implementation of pilot actions and assessment of results • report with policy recommendations • feasibility study on investments for scaling up the pilot actions, indicating among others, areas, technical specifications and cost. 	< 10 years	M	All Riparians	Competent Riparian ministries/authorities with solid waste, environment and water responsibilities	Riparian budgets	M	<p>Regulation/ economic instruments recommended</p> <p>Pilot actions completed</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Authorities informed on options to reduce plastic waste</p> <p>Pilots reduce plastic waste</p>

⁶³ To take into account current considerations, including circular economy and the 5Rs (refuse, reduce, reuse, repurpose, recycle).

GOAL 5

Decrease nutrient pollution deriving from untreated or poorly treated wastewater discharges and unsustainable agricultural practices

OBJECTIVE 1

Reduction of untreated wastewater discharge from urban areas by 2030

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
1.	<p>Identification and costing of interventions for sewerage networks and wastewater treatment plants in compliance with the EU Urban Waste Water Treatment Directive:</p> <ul style="list-style-type: none">• preparation of an assessment regarding wastewater management in small, medium and large settlements, leading to prioritized investment lists based on the pressures assessment developed through the GEF Drin Project updated by appropriate modelling• report and recommendations, including on financing sources• development of main designs for upgrade/construction of sewerage in the priority areas• implementation of sewerage upgrade /construction in the priority areas.	10–20 years	H	All Riparians – Drin Sub- basins	Ministries of the environment and urban planning Municipalities	This action is addressed under Riparian– EU agreements	H	Report and recommended road map for compliance with EU directives	<p>P (process)</p> <p>SR (stress reduction)</p> <p>The report will guide Riparian authorities in prioritizing sewerage networks in need of upgrade or replacement</p> <p>Construction or upgrade of sewerage networks will reduce stress from multiple household discharges</p>
2.	Construction of new (or upgrading of existing) wastewater treatment plants in all settlements above 2,000 population equivalent in accordance with the Urban Waste Water Treatment Directive, or in settlements below 2,000 population equivalent when assessments show significant impact to the water resources and dependent ecosystems.	< 20 years	H	All Riparians, priority on Prizren, Shkodër, Podgorica, Gjakova Ohrid/ Struga and Peja	Ministries of the environment Municipalities	This action is addressed under Riparian– EU agreements	H	Report of compliance	<p>SR (stress reduction)</p> <p>ES (ecosystem status)</p> <p>Constructed wastewater treatment plants will reduce nutrients and biological oxygen demand (BOD) stress on the environment (70 percent reduction in phosphorus)</p> <p>Lowered nutrients/BOD pollution will improve ecosystem status as reported through monitoring systems</p>

OBJECTIVE 2

Reduction of nutrient pollution deriving from unsustainable agricultural practices by 2030

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
1.	<p>Enforcement of existing regulations on agricultural nutrient pollution (point and diffuse), including monitoring of compliance:</p> <ul style="list-style-type: none"> develop a needs assessment capacity development for inspectors and enforcement officers. 	< 10 years	H	All Riparians – locations identified in sub-basins where pollution is noted in a thematic report	Ministries of agriculture and the environment	Riparian budgets EU GEF	L	<p>Number of enforcement officers trained</p> <p>Number of enforcement actions</p> <p>Improved law/regulation enforcement</p>	<p>P (process)</p> <p>Training of enforcement officers</p> <p>Recommendations for BAP implementation will target worst farms</p>
2.	<p>Support the use of BAP to reduce impacts from nutrient pollution through training, pilot interventions, small grants and microcredit programmes, including:</p> <ul style="list-style-type: none"> development of a study assessing fertilizer use in the Drin Basin (including quantification) to identify priority areas (taking into consideration pollution monitoring results) implementation of pilot actions in priority areas and assessment of results development of a feasibility study on investments for scaling up the pilot action, indicating among others, areas, technical specifications and cost identification of options for establishing cooperation with developmental and commercial banks to develop microcredit options/soft loans preparation of a feasibility study including on the form and conditions of the microcredit schemes training courses for farmers in priority areas on BAP development of small grants for BAP implementation programmes (for the necessary investments, etc.), including the process and criteria for participating in the programme, selection of beneficiaries, reporting and monitoring, etc. implementation of the small grants programme, possibly with the parallel implementation of a microcredit programme by developmental/ commercial banks. 	< 10 years	H	All Riparians – agricultural areas in the White Drin, Prespa and Ohrid lakes, the Black Drin, Zeta valley and Buna/Bojana area	Ministries of agriculture and the environment Agricultural cooperatives	Riparian budgets Development partners EU GEF	M	<p>Locations identified, pilot cases confirmed, farmers trained</p> <p>Pilots implemented</p> <p>Financing options to scaling up of pilots identified and implemented</p>	<p>SR (stress reduction)</p> <p>BAP implementation will reduce nutrients from selected farms</p>

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
3.	<p>Evaluation of recycling of agricultural drainage water, including the capture of excess water drained from fields, storage of drained water in ponds or ditches and the use of stored water for irrigation:</p> <ul style="list-style-type: none">• assessment and identification of priority locations and interventions• implementation of interventions• assessment of the results• report with policy recommendations, law drafting and management actions• feasibility study on investments for scaling up the pilot action, indicating, among others, areas, technical specifications and cost.	< 20 years	L	Initially in Kosovo in the Toplluha sub-basin	Competent agriculture and water authorities	Riparian budgets	L	<p>Report on the efficiency and possible impacts of the collection and reuse of drainage water including recommendations</p> <p>Financing options to implement recommendations, and implementation of recommendations</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Prioritization report will guide authorities on specific farms/ locations</p> <p>Implementation of pilots reduce water required for irrigation and the release of nutrients</p>
4.	<p>Evaluation of the applicability of nature-based solutions to reduce impacts from nutrient pollution:</p> <ul style="list-style-type: none">• assessment and identification of priority locations and interventions• recommendations for action in selected priority areas• implementation of actions and interventions• assessment of the results• report with policy recommendations, law drafting and management actions• feasibility study on investments for scaling up the pilot action, indicating among others, areas, technical specifications and cost.	5–10 years	M	Agricultural areas in the White Drin, Prespa and Ohrid lakes, the Black Drin, Zeta valley and the Buna/Bojana area	Competent authorities	Riparian budgets EU GEF	M	<p>Report on benefits and application of nature-based solutions to reduce nutrients</p>	<p>P (process)</p> <p>Guidance documents for applying nature-based solutions</p>



GOAL 6

Decrease pollution from hazardous substances such as heavy metals and pesticides

OBJECTIVE 1

Reduction of heavy metal and pesticide pollution from industry, mining and agriculture by 2030

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
1.	<p>Improved monitoring of industrial and heavy metals emissions:</p> <p>regional study on hazardous waste management and emissions from industrial sites</p> <p>recommendations for strengthening the monitoring and management of industrial wastewater</p> <p>introduction of routine monitoring on industrial wastewater</p> <p>awareness-raising for industrial sites on the dangers of heavy metals in industrial wastewater and the means to control it.</p>	< 10 years	H	<p>All Riparians at industrial/mining locations</p> <p>Priority areas based on information in the TDA Thematic Report on Pollution and Water Quality</p>	Ministries of water, the environment and industry	<p>Riparian budgets</p> <p>EU</p> <p>GEF</p>	M	Regional study developed	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Management actions guided by improved information from emissions monitoring</p> <p>Guidance provided to industry will increase awareness of issues and potential means to reduce discharges of heavy metals</p>
2.	<p>Progressively transpose into national laws and enforcement of regulations to fully apply the Industrial Emissions Directive (2010/75/EU) and the Seveso Directive:</p> <ul style="list-style-type: none">capacity-building for enforcement officerssupport to develop national Integrated Pollution Prevention and Control registerssupport to the national monitoring and reporting processesawareness-raising of best environmental practices (BEP) for industryrecommendation on applying BEP to specific industry/sectorspilot of BEP (for example the Transfer of Environmentally Sound Technologies (TEST) of the United Nations Industrial Development Organization (UNIDO) in targeted industries/mines.	< 5 years	H	<p>All Riparians at industrial/mining locations</p> <p>Priority areas based on information in the TDA Thematic Report on Pollution and Water Quality</p>	Ministries of water, the environment and industry	<p>Riparian budgets</p> <p>EU</p> <p>GEF</p>	M	<p>Number of enforcement officers trained</p> <p>Awareness/briefing documents for targeted industries/mines</p> <p>Number of national registers supported</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Training support responsible authorities</p> <p>Pilots result in reduced pollution from selected sites</p>

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
3.	<p>Support the use of BAP for the sustainable use of pesticides through training, pilot interventions, small grants and microcredit programmes, including:</p> <ul style="list-style-type: none">• implementation of pilot actions and assessment of results• development of a feasibility study on investments for scaling up the pilot action, indicating among others, areas, technical specifications and cost• identification of options for establishing cooperation with developmental and commercial banks to develop microcredit options/soft loans• preparation of a feasibility study including on the form and conditions of the microcredit schemes• (vocational) training courses for farmers in priority areas on BAP• development of a small grants for BAP implementation programme (for the necessary investments, etc.), including the process and criteria for participating in the programme, selection of beneficiaries, reporting and monitoring, etc.• implementation of the small grants programme possibly with the parallel implementation of a microcredit programme by developmental/ commercial banks.	< 5 years	H	<p>Agricultural areas in the White Drin, Prespa and Ohrid lakes, the Black Drin, Zeta valley and the Buna/Bojana area</p> <p>TDA Thematic Report on Pollution and Water Quality to guide the selection of priority areas</p>	Agriculture authorities /extension services ⁶⁴	<p>Riparian budgets</p> <p>EU</p> <p>GEF</p>	M	<p>Locations identified, pilot cases confirmed, farmers trained</p> <p>Implementation of pilots</p> <p>Financing options to scaling up of pilots identified and implemented</p>	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Awareness and training material will improve farmers understanding of the use, storage and problems of pesticides</p> <p>Reduced use of pesticides through the implementation of BAP</p>
4.	<p>Improved enforcement of existing regulations on pesticide management (including pesticide registration, compliance monitoring and enforcement):</p> <ul style="list-style-type: none">• needs assessment• capacity-building for inspectors and enforcement officers• recommendation on applying BAP to specific agricultural practices (input into action above).	< 5 years	H	<p>Agricultural areas in the White Drin, Prespa and Ohrid lakes, the Black Drin, Zeta valley and the Buna/Bojana area</p>	<p>Agriculture and industry ministries extension services⁶⁵</p>	<p>National budgets</p> <p>EU</p>	L	<p>Reports</p> <p>Number of enforcement officers trained</p> <p>Recommendations adopted at the Riparian level</p>	<p>P (process)</p> <p>Trained officers guide farmers and extension officers on BAP regarding pesticides</p>

⁶⁴ Officially designated by the competent ministries or other authorities.

⁶⁵ Officially designated by the competent ministries or other authorities.

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
5.	Rehabilitation of contaminated sites from industrial and mining operations in the Drin Basin (hazardous waste): <ul style="list-style-type: none"> preparation of a feasibility study⁶⁶ identification, mapping and prioritization of contaminated sites development of a main design for the rehabilitation of priority sites implementation of rehabilitation/remediation measures for priority sites (including the development of new sites for contaminated waste) assessment of effectiveness and recommendations. 	10–20 years	H	All Riparians, prioritized based on hazard maps (from the Thematic Report on Pollution and Water Quality, including map A6)	Ministries and competent authorities for mines, the environment and water	Riparian budgets EU	H	Report, hazard maps Number of contaminated sites remediated/rehabilitated	P (process) SR (stress reduction) Feasibility study provides information on locations and specific processes for remediation Measures for priority sites reduce environmental pollution from heavy metals
6.	Testing of the establishment of a system that monitors environmental permits for exploitation of mining: <ul style="list-style-type: none"> assessment and identification of priority locations in Albania implementation of a pilot study assessment of effectiveness and recommendations for policymaking and law drafting. 	< 5 years	M	Initially to test approach in Albania	Environmental agency in Albania Ministry of Tourism and Environment	Riparian budgets EU	L	Report on monitoring of environmental permits	P (process) Reports and pilot monitoring of permits inform Riparian authorities on best approaches
7.	Closure of mines that are exhausted or highly polluting, including remediation of sites <ul style="list-style-type: none"> study to identify/prioritize mines for closure recommendations on mines to close with cost estimates for the remediation of sites implementation of mine closure/remediation programme. 	10–20 years	M	Sites in Albania, Kosovo, North Macedonia to be identified through the study Ohrid Lake	Ministries of the environment or economy	Riparian budgets Private sector (mine operators)	H	Number of mining sites remediated	SR (stress reduction) Reduced mine waste pollution
8.	Development of port reception facilities to treat contaminated bilge water and wastewater from vessels <ul style="list-style-type: none"> study to identify the scope of port reception facilities, including relevant policies/legislation to be implemented/enforced with regard to shipping waste recommendations with costs/locations to construct facilities construction and operation of facilities. 	> 10 years	M	Sites in Albania, including in the Skadar, Komani and Fierza lakes and in Montenegro	Authorities for transport, the environment and waste disposal	Riparian budgets EU Private sector	H	Number of port reception facilities constructed/ quantity of waste treated per year	SR (stress reduction) Reduced pollution from shipping (illegal discharge of untreated bilge water, etc.)

⁶⁶ Building on the basin-wide study on all waste sites in goal 4, objective 1.

GOAL 7

Minimize effects of hydromorphologic interventions that alter the nature of the hydrologic system and the supported ecosystems, resulting in their deterioration

OBJECTIVE 1

Minimize the effects of hydromorphological interventions from HPP by 2030

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ecosystem (at the transboundary level)
1.	<p>Update of the hydrometeorological forecasting information system to include specialized information from dam operators regarding water management (inflows/outflows):</p> <ul style="list-style-type: none">• identification of information needed by dam operators• adaptation of hydrological models for dam management• testing model for improving dam operation• report and recommendations.	< 5 years	H	Large dams in Albania, Montenegro and North Macedonia	<p>Hydrometeorological or related institutions⁶⁷</p> <p>Ministries of water, energy, the economy</p>	<p>Riparian budgets</p> <p>EU</p> <p>Adaptation Fund/UNDP project, hydropower plant operators</p>	M	Publication of the forecast	<p>P (process)</p> <p>Better information /forecast for hydropower plant operators and for Riparians’ other water use requirements</p>
2.	<p>Evaluation of scenarios for the operation of dams to support sustainable basin management, contribute in the reduction of flood risks and maximize energy production:⁶⁸</p> <ul style="list-style-type: none">• identification of scenarios, including those considering different levels of cooperation/ coordination among hydropower plants for the operation of the dams• testing of the scenarios using hydrologic and energy models• assessment of results and recommendations on the level of coordination, including operation rules for each one of the dams under different scenarios• identification of compensation schemes for hydropower plants to be used for utilizing the dams as a flood mitigation mechanism.	< 5 years	H	Albania and North Macedonia	Hydropower companies of Albania and North Macedonia	<p>Austrian Development Agency</p> <p>GEF</p>	L	<p>Hydrological models</p> <p>Energy models</p> <p>Technical reports</p> <p>Agreed compensation schemes for hydropower plant operators</p>	<p>P (process)</p> <p>Reports and recommendations provide information to assist discussions between the DCG and hydropower plant operators for the optimization of dam operations in relation to ecosystem service demands, flood reduction and energy production</p>

⁶⁷ Officially designated by the competent ministries or other authorities.

⁶⁸ To be used for the implementation of action 1 under goal 2, sub-objective 2.3.

OBJECTIVE 2

Minimize the effects of other hydromorphological interventions including gravel extraction by 2030⁶⁹

	Specific actions	Timescale (years from signing SAP)	Priority	Location	Responsible organization/ authority in each Drin Riparian	Financing	Budget	Indicators	Impact of action on water resources/ ecosystem (at the transboundary level)
1.	<p>Evaluation of options for beach sediment management at coastal sites where deposition and/or erosion is occurring and resulting in the loss of beach, and sedimentation management in the Buna /Bojana delta:</p> <ul style="list-style-type: none">• preparation of feasibility studies• recommendations on means and financing to mitigate problems for priority restoration actions in coastal areas• implementation of pilots to restore the sediment balance• assessment of results and recommendation on policymaking, law drafting and priority action.	< 10 years	M	Coastal area (Buna /Bojana delta)	Competent authorities (including tourism) and municipalities	Riparian budgets Albania and Montenegro (e.g. water and coastal management authorities) EU GEF	M	Studies for pilot interventions completed	<p>P (process)</p> <p>SR (stress reduction)</p> <p>Reports with recommendations to guide restoration actions on coasts for local authorities</p> <p>Pilots demonstrate the efficacy of actions with recommendations for replication to other parts of coast</p>
2.	<p>Application of lessons learned and recommendations for restoring beach sediments at all sites identified in the study, including the construction of beach stabilization structures.</p>	< 20 years	M	Coastal area (Buna /Bojana delta)	Relevant authorities (including tourism) and municipalities	Riparian budgets EU Private sector (tourist resorts)	H	Percentage of beaches protected/ restored	<p>SR (stress reduction)</p> <p>Beaches restored, stabilized and protected from excess loss</p>
3.	<p>Improvement in the control and enforcement of sand and gravel extraction from riverbeds:</p> <ul style="list-style-type: none">• perform needs assessment on requirements to improve roles and responsibilities of operators and enforcement officers• train relevant extraction company staff• train enforcement officers on issues associated with gravel extraction• report on changes and improvements detected within five years.	< 10 years	M	Drin sub-basins in Albania, Kosovo, Montenegro and North Macedonia	Ministries and organizations ⁷⁰ responsible for/ involved in erosion and extraction, water administrations, environment permit authorities	Riparian budgets	L	<p>Reports on actions taken at the Riparian level to control gravel extraction</p> <p>Inspectors trained</p>	<p>P (process)</p> <p>Trained operators within gravel extraction companies and trained permit enforcement officers are better equipped to minimize ecological damage associated with gravel extraction</p>

⁶⁹ Actions under goals 1 and 2 contribute significantly to achieving this objective.

⁷⁰ Officially designated by the competent ministries or other authorities.

ANNEX 2. ACRONYMS AND ABBREVIATIONS

BAP	Best Agricultural Practices
BEP	Best Environmental Practices
BOD	Biological Oxygen Demand
CCA	Causal Chain Analysis
DCG	Drin Core Group
Drin CORDA	Drin Coordinated Action for the implementation of the Drin MoU
EBRD	European Bank for Reconstruction and Development
EEZ	Exclusive Economic Zone
EWG	Expert Working Group
EU	European Union
GEF	Global Environment Facility
GIZ	Gesellschaft Für Internationale Zusammenarbeit
GWP	Global Water Partnership
GWP-Med	Global Water Partnership – Mediterranean
IMS	Information Management System
IW:LEARN	International Waters Learning Exchange and Resource Network
IWRM	Integrated Water Resources Management
MoU	Memorandum of Understanding
MPA	Marine Protected Areas
PCU	Project Coordination Unit
RBMP	River Basin Management Plans
SAP	Strategic Action Programme
SDG	Sustainable Development Goal
TDA	Transboundary Diagnostic Analysis
TEST	Transfer of Environmentally Sound Technologies
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNIDO	United Nations Industrial Development Organization

Shared among Albania, Greece, Kosovo, Montenegro and North Macedonia, the Drin Basin provides water resources for drinking, energy, fishing and agriculture, biodiversity, tourism and industry, benefiting 1.6 million residents.
© 2S Studios



