GEF/UNDP/GWP-Med Project "Enabling Transboundary Cooperation and Integrated Water Resources Management in the Extended Drin River Basin"

Transboundary Diagnostic Analysis

Terms of Reference

www.drincorda.org

For more information, please contact

Athens,Beirut,Tunis
Web:www.gwpmed.org

Headquarters:
12,Kyrristou str.,10556
Athens,Greece
T:+30210-3247490,-3247267,F:+30210-3317127
E-mail:dimitris@gwpmed.org

Introduction - Background

The Drin Memorandum of Understanding

Coordinated action at the Drin Basin level has been absent until the development of the Shared Vision for the sustainable management of the Drin Basin and the signing of a related Memorandum of Understanding (Tirana, 25 November 2011) by the Ministers of the water and environment management competent ministries of the Drin Riparians i.e. Albania, The Former Yugoslav Republic of Macedonia, Greece, Kosovo* and Montenegro. This was the outcome of the Drin Dialogue supported by the Swedish Environmental Protection Agency and coordinated by UNECE and Global Water Partnership Mediterranean (GWP-Med).

The **ultimate goal** of the work in the Drin Basin is to reach a point in the future where the scale of management lifts from 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 in an area that is physically, culturally and historically interconnected.

The main objective of the Drin MoU is the attainment of the Shared Vision: "*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*".

The Drin MoU provides the political framework for and defines the context of cooperation among the Drin Riparians.

The Drin MoU identifies short-, medium- and long-term actions to address problems identified as affecting sustainable development in the entire Drin Basin and in one or more of its sub-basins. The preparation of an Integrated Drin Basin Management Plan is the long-term objective. To achieve that, a process called the Drin Coordinated Action was put in place, succeeding the Drin Dialogue.

The Drin Coordinated Action

While the process is on-going, a number of activities have already been implemented under the Drin Coordinated Action for the implementation of the Drin MoU.

Following the provisions of the MoU an institutional structure was established in 2012. It includes:

- The **Meeting of the Parties**.
- The **Drin Core Group** (DCG). This body is given the mandate to coordinate actions for the implementation of the MoU.
- Three **Expert Working Groups** (EWG) to assist the DCG in its work:
  - Water Framework Directive implementation EWG.
  - Monitoring and Information exchange EWG.
  - Biodiversity and Ecosystem EWG.

The **DCG Secretariat** provides technical and administrative support to the DCG; Global Water Partnership – Mediterranean (GWP-Med) serves by appointment of the Parties through the MoU as the Secretariat.

The Drin Action Plan[1] (DAP) was prepared to facilitate implementation of the Drin MoU and operationalize the Drin Coordinated Action. This is considered as an 'evolving document' and has been subject to updates and amendments in accordance with the decisions of the Meeting of the Parties to the Drin MoU and the DCG. The DCG and its Secretariat guides the implementation of the DAP. The DAP is already being implemented using resources made available by various donors active in the basin.

The GEF Drin Project

The Global Environment Facility (GEF)[2] supported Full Size Project "Enabling transboundary cooperation and integrated water resources management in the extended Drin River Basin"[3]is aligned in content, aims and objectives with the DAP and the activities under the Drin Coordinated Action.
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*. Albania, The Former Yugoslav Republic of Macedonia and Montenegro are the Project beneficiaries.

The same goal will be fostered by the GEF supported Medium Size Project "Enabling transboundary cooperation and integrated water resources management in the White Drin and the extended Drin Basin". Kosovo is the beneficiary of that Project.

The duration of the two Projects is four years.

The Projects (from herewith forward referred to as the GEF Drin Project) share the same set of activities constituting the means to achieve the goal mentioned above, through: (i) building consensus among countries on key transboundary concerns and drivers of change, including climate variability and change, reached through joint fact finding; (ii) facilitating the agreement on a shared vision and on a program of priority actions deemed necessary to achieve the vision; (iii) strengthening technical and institutional capacities.

Greece is not eligible for financing, and will use its own resources for financing activities in its part of the "extended" Drin Basin i.e. the Prespa sub-basin.

The GEF Drin Project(s) will assist in the operationalization of the institutional structure of the Drin Coordinated Action, rendering it capable of undertaking its coordination and executive role. It will also further enhance scientific knowledge in the basin to assist the Riparians to make informed decisions

[1] Approved by the 6th DCG meeting (Ohrid, 30 May 2012) and endorsed by the 1st Meeting of the Parties (Ministerial meeting in Tirana, 28 May 2013). The project is structured around six actions:

1. Enhancement of coordination mechanisms among the parties.
2. Enhancement of the knowledge basis about the Drin Basin.
3. Improvement of information exchange through the establishment of a system for regular exchange of relevant information among the competent authorities of each party.
4. Enhancement of cooperation in the field of flood risk preparedness, management and mutual support.
5. Institutional strengthening in the field of integrated water resources management.
6. Promotion of public participation and stakeholders' engagement.

[2] www.thegef.org

[3] The project proposal, endorsed by the Drin Core Group, was approved by the GEF and endorsed by the GEF CEO on 17 October 2014. The GEF Drin project is structured around five components:

- Component 1: Consolidating a common knowledge base
- Component 2: Building the foundation for multi-country cooperation
- Component 3: Institutional strengthening for Integrated River Basin Management (IRBM)
- Component 4: Demonstration of technologies and practices for IWRM and ecosystem management
- Component 5: Stakeholder Involvement, Gender Mainstreaming and Communication Strategies

for selecting priority transboundary issues to be addressed through related management options. A set of agreed measures will be developed to form a Strategic Action Plan. The systematic involvement of stakeholders, including civil society, will be continued and enhanced.

The Project is implemented by 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 is responsible for the realization of the Project. The Drin Core Group is the Steering Committee (SC) of the Project.

It will be managed by a Project Coordination Unit (PCU), based in Tirana, Albania; staff will be stationed also in Podgorica, Montenegro; Ohrid, The Former Yugoslav Republic of Macedonia; Pristina, Kosovo; and Athens, Greece.

The Transboundary Diagnostic Analysis

Preparation of the Transboundary Diagnostic Analysis

The Drin Basin comprises the transboundary sub – basins of the Drin[4] and Buna/Bojana[5] Rivers and of the Prespa, Ohrid and Skadar/Shkoder[6] Lakes. The Drin River is the "connecting body" of the "extended" Drin Basin, linking the lakes, wetlands, rivers and other aquatic habitats into a single, yet complex, ecosystem of major importance. The water bodies and their watersheds are spread in a geographical area that includes Albania, Greece, the Former Yugoslav Republic of Macedonia, Montenegro and Kosovo.

The Drin regional transboundary system is a fine example illustrating the interdependences created between different uses of water and other natural resources and management approaches. The latter, in the Drin Riparians, are diverse and often unsustainable. As a result, a set of pressures and effects - among others leading to the degradation of ecosystems and inhibiting sustainable development- are spread within and across sub-basins; there are numerous cases that an action, and its effect and sometimes impact, are found in different sub-basins and countries.

In response to the above, the Drin Riparians have committed through the Drin MoU 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*".

The ultimate goal of the work in the Drin Basin is to reach a point in the future where the scale of management lifts from single water bodies to the hydrological interconnected system of the Drin Basin, eventually leading from the sharing of waters between states and conflicting uses, to the sharing of benefits between stakeholders in an area that is physically, culturally and historically interconnected. In this regard the work in the Drin basin also contributes to the development of cooperation and mutual understanding among the Riparians.

To achieve the aforementioned goals, it is essential that the countries (i) understand the transboundary issues as well as the benefits stemming from cooperation using scientific proof and where this is not possible scientific evidence; (ii) decide which of those transboundary issues will be addressed with priority and agree on the necessary actions at the national and the transboundary level to achieve this.

The GEF Transboundary Diagnostic Analysis – Strategic Action Program (TDA – SAP; http://iwlearn.net/manuals/tda-sap-methodology/copy_of_introduction/referencemanual-all-pages) process has been developed to assist in this regard; it has been successfully tested in numerous cases around the world.

*The **Transboundary Diagnostic Analysis** (TDA) is an objective assessment that pursues the best available verified scientific and technical information to examine the state of the environment and the root causes for its degradation. The analysis is carried out in a cross-sectoral manner, focusing on transboundary problems without ignoring national concerns and priorities.*

[4] Its major tributaries are: (i) the Black Drin - the river is called Drin iZii Zi in Albania and Crn Drim in FYR Macedonia; (ii) the White Drin; the river is called Drin i Bardhë in Albania and Kosovo. In Kosovo, in Serbian language is known as Beli Drin .
[5] The River is called Buna in Albania and Bojana in Montenegro.
[6] The Lake is called Skadar in Montenegro and Shkoder in Albania.

*The **Strategic Action Program** (SAP) is a negotiated policy document which should identify policy, legal and institutional reforms and investments needed to address the priority transboundary problems. Endorsed at the highest level, it establishes clear priorities for action to resolve the priority problems that were identified in the TDA. The preparation of a SAP is a cooperative process among the countries of the region.*

The main technical role of a TDA is to identify, quantify, and set priorities for environmental problems that are transboundary in nature. In particular, the TDA aims to:

- *Identify & prioritise the transboundary problems*
- *Gather and interpret information on the environmental impacts and socio-economic consequences of each problem*
- *Analyse the immediate, underlying, and root causes for each problem, and in particular identify specific practices, sources, locations, and human activity sectors from which environmental degradation arises or threatens to arise.*

Ultimately, a TDA provides the factual basis for the formulation of a SAP but the TDA is also part of a larger facilitative process of engagement and consultation with all the key stakeholders from the initial TDA steps through to the subsequent development of alternative solutions during the formulation of the Strategic Action Programme. The TDA is a mechanism to help the participating countries to 'agree on the facts' - many conflicts are driven by perceptions and removing these can be an enormous step in itself. Furthermore, the TDA should be seen as more than just an analysis of data and information. It is a powerful process that can help create confidence among the partners involved.

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 (for example, policy, legal, institutional reforms, or investments) to resolve the priority transboundary problems identified in the TDA. A key element of the SAP is a well-defined baseline. This enables a clear distinction between actions with purely national benefits and those addressing transboundary concerns with global benefits. Another key element involves the development of institutional mechanisms at the regional and national levels for implementing the SAP and monitoring and evaluation procedures to measure effectiveness of the outcomes of the process.

GEF TDA/SAP manual (http://iwlearn.net/manuals/tda-sap-methodology/copy_of_introduction/test-1)

A comprehensive attempt to identify the transboundary issues in the Drin basin and their causes was done through the "Situation Analysis – Management of the Extended Drin Basin" (Drin Situation Analysis) that was prepared by GWP-Med and national experts in the framework of the Project Preparation Grant (PPG) phase of the GEF/UNDP Project "Enabling transboundary cooperation and integrated water resources management in the extended Drin River Basin".

The TDA methodology was used in this regard. It revised and updated the Situation Analysis prepared in 2011, by GWP-Med, and discussed in the Drin-level Tirana multi-stakeholders Workshop (25 November 2011) to provide background towards the establishment of a common understanding among competent authorities and stakeholders in the Drin Riparians regarding water resources management realities.

The Drin Situation Analysis supported the establishment of a Shared Vision for the sustainable management of the Drin Basin (Drin MoU, Tirana, 25 November 2011). It uses information generated through the TDA as well as the socioeconomic studies conducted within the GEF/UNDP "Integrated Ecosystem Management in the Prespa Lakes Basin" and of the GEF/World Bank "Lake Skadar/Shkoder Integrated Ecosystem Management" Projects.

Objective

The objective of this assignment is the preparation of the TDA for the extended Drin Basin using the information provided in the Drin Situation Analysis (see under "Preparation of the Transboundary

Diagnostic Analysis" above) as well as additional information from various sources in the Drin Basin Riparians indicated but not restricted to those referred to in "*Annex II. Sources of Information to be used for the preparation of the TDA*". The preparation of the TDA should follow -at the level possible- the EU WFD's requirements with regard to the chemical and ecological characterization of water bodies.

Approach

The TDA will be carried out to:

- Identify and assess transboundary basin management -including water and other natural resources as well as environmental management- issues.
- Assess the environmental impacts and socio-economic consequences of each issue.
- Identify the immediate and underlying causes of these issues among the social and economic sectors activities. Furthermore, the TDA should identify the related root causes/ drivers that ultimately create these issues. These could be information gaps on the existing environmental state, policy distortions, institutional and/or legal framework related deficiencies etc.

The TDA shall provide the necessary information that will enable countries to:

- Discuss and decide on the issues that will be addressed with priority.
- Negotiate and formulate a strategic programme of actions and interventions to address the causes and drivers that result in the identified issues.

In addition, the TDA shall assist in:

- Enhancing the knowledge basis of the Drin Riparians regarding the state of the natural and anthropogenic environment in the Basin.
- Preparing for the development of a Drin Basin Management Plan in the future.

The GEF TDA–SAP methodology should be used for the development of the TDA (http://iwlearn.net/manuals/tda-sap-methodology).

The TDA development should take into consideration the:

- Political realities as well as the inter-sectoral realities and perspectives at the national as well as at the Drin Basin levels.
- Social, including demographic, and economic setting and perspectives.
- Political and social structure of the countries including economic and political decision making as well as civil society arrangements.
- Existing strategies and policies at the national and international levels in the Drin Basin area.

Prescriptions of the EU Water Framework Directive in relation to the characterization of the basin and the sub-basins will be adhered to as part of the TDA development process.

The Drin Situation Analysis serves as a starting point for the development of the Drin TDA.

The TDA development will be highly participatory and strive for a balanced participation of men and women; one of the actions to ensure this is that meetings are carried out in hours that are accessible to women and that the methodology is such that everybosy have possibility to actively participate and be heard. The participatory process will ensure that the opinions of stakeholders regarding the management issues and needs in the Drin Basin are taken into consideration in the TDA preparation.

The draft TDA will be distributed for comments to the Expert Working Groups of the Drin Core Group (DCG); an advanced draft addressing the comments received by the EWGs and the stakeoholders will

be considered by the DCG for adoption.

The TDA should be proof-read and edited and include an extensive summary that will be translated in the project countries´ languages.

Scope of work

The development of the TDA will consist of several distinct phases/components. Each of the elements presented below, should be looked at/addressed, at two levels:

(i) the sub-basin level i.e. Lake Prespa, Lake Ohrid, Black Drin River, White Drin River, Drin River, Lake Skadar/Shkoder, Buna/Bojana River.

(ii) at the level of individual Riparian of each of the sub-basins mentioned above.

The phases for the TDA development are the following:

1) Review and finalisation of the structure and content of the TDA.
   A preliminary annotated list of contents has been prepared to define the structure and the content of the TDA (in a separate Document). The annotated list of contents should be revised and appropriately adjusted during (i) the initiation of the TDA preparation (ii) at a later stage after the collection and assessment of data available as per point 2.b below "*Assess the quality of available data/information, define data/information gaps, define data that should be produced through field activities and design these activities*". The revised annotated list of contents will be reviewed by the PCU.

2) Assessment of the basin for the identification of transboundary problems and issues, and the analysis (qualitative and quantitative) of impacts to the environment, water resources or the socio-economic processes. The domains to be assessed will be the following: (i) Socio-economic including Spatial Planning for marine coastal area, (ii) Biodiversity/Ecosystems, (iii) Hydrology/Hydrogeology, (iv) Pollution, (v) Institutional and Legal Setting, (vi) Nexus.

   a) Review and decide on the data/information needs in order to develop the TDA and identify and collect available data.

      In order to complete a full-fledged TDA, and reach science based agreement on the main issues of transboundary concern and drivers of change, additional knowledge to this included in the Drin Situation Analysis may be required. **An indicative list of information and data to be used is given in**

Annex I. Information and data needs for the preparation of the TDA***.*** The list is not exhaustive and should be amended as necessary.

Additional information can be acquired through the existing technical work related to basin management, fisheries management, monitoring etc.; see sources of information given in *Annex II. Sources of Information to be used for the preparation of the TDA*; additional sources of information to these listed may be used.

b) Assess the quality of available data/information, define data/information gaps, define data that should be produced through field activities and design these activities.

In the event of lack of relevant information available to the national institutions, new assessments and field activities may be necessary for the collection of data in selected scientific areas as well as in geographical areas of paramount ecological importance, or areas that have already been indicated through the Situation Analysis as problematic. In both cases the decision for new assessments as well as the extend and level of new assessments should take into consideration the available budget. Activities that may be carried out by the PCU or Consultants(cies) include the following:

i. In depth Hydrological, Hydro-geological and Environmental Assessment. This will include investigations and assessments, including the u*se of modelling tools as appropriate*, pa*rticularly in the fields listed below*:

- *Large and critical Freshwater Dependent Ecosystems.* This should entail assessment of the present state of (i) water bodies in the Drin Basin in addition to the 3 major lakes that have already been the subject of previous GEF projects as well as of on-going monitoring activities by GIZ: Lake Fierza; Debar and Globocica Reservoirs (ii) coastal ecosystems -terrestrial, freshwater and marine- in Buna/Bojana coastline and deltaic environments.
- *Karstic Waters – Conjunctive surface/groundwater management*. Karstic complexes constitute a large part of the Drin Basin. An analysis of these waters should be part of the TDA with the aim to understand their circulation patterns. Already available information and data from the DIKTAS GEF/UNDP project (see below) should be used [7].
- *Climate Variability and Change* - The countries of the Mediterranean recognize that with current projections the impact of climate change may be considerable, including increased summer temperatures and decreased annual precipitation, increased water-related extreme phenomena like floods and persistent droughts, and others. These future scenarios will have to be taken into consideration as part of the TDA.

ii. Water Uses. Knowledge of how the surface and groundwater of a basin are being, often conjunctively, used and by whom will need to be considered. This entails the description of the uses of water based on formal rights, which generally are held only by larger users (hydropower, industry, large farms etc.), and also indications of the many minor uses based on "*de minimis*" rights to abstract and use small quantities of water. The assessment of water uses will be done on the basis of available information to the countries.

[7] DIKTAS has done an extensive work in mapping the karstic geological formations, and collecting all related information regarding the hydrologic and hydro-geologic conditions; related information has been integrated in detailed maps with the use of GIS.

c) Create a database(s) of data, documents and GIS files.

d) Prepare thematic reports for each one of the following domains: (i) Socio-economic including Spatial Planning for marine coastal area; (ii) Biodiversity/Ecosystems, (iii) Hydrology/Hydrogeology, (iv) Pollution, (v) Institutional and Legal Setting; (vi) Nexus. In this regard prepare ToR for each one of the thematic reports as per Part B of the annotated list of contents. Thematic reports (i) and (ii) will be prepared with the assistance of consultants. Reports (iii) and (iv) will be prepared by the PCU. Report (v) and (vi) will be prepared by UNECE.

e) Carry out an assessment of the status of the basin as per Part B of the annotated list of contents, identify the transboundary problems and issues, and analyse (quantitative and qualitative analysis) their impacts to the environment, water resources or the socio-economic processes.

   Modelling tools (river basin modelling; pollution loads estimation per activity; possibly groundwater vulnerability) is expected to be used for the assessment. The results of the Prespa lake and watershed eutrophication model aiming at evaluating implementation options and their potential for improving water quality and the ecological health of the Lake may be used as well; UNDP may provide additional information in this regard.

f) If possible, analyse the availability of parameters specified in the EU WFD and the extent to which monitoring of parameters is currently taking place in the Drin Riparians, and define the specifications (parameters, form, frequency etc.) that will allow the exchange of EU WFD related available data as well as data developed in the future.

3) Using the outcomes of the assessment described in Point 2 above perform a causal chain analysis (http://iwlearn.net/manuals/tda-sap-methodology/development-of-the-tda/causal-chain-analysis) to identify the underlying and root causes of the transboundary issues and problems (in Point 2). A flow diagram indicating the causes and transboundary issues should be accompanied (as appropriate and if possible) by quantitative or qualitative data to substantiate the analysis.

Consultation process and approval

A consultation process for the TDA will assist in incorporating the views and knowledge of stakeholders and thus assist the TDA becoming a common basis in all four beneficiary countries on which solutions will be planned, and will include:

- Focus meetings with key stakeholders, one in each beneficiary country. These will be used to identify the perceived by the stakeholders Basin management issues and needs as well as the development opportunities at the transboundary level. The identified issues and needs shall be among the ones that the TDA will focus on. In parallel, meetings with the institutions/partners should be held to facilitate data collection.
- On-line consultation using a web-based tool. This will allow the stakeholders to provide comments on the thematic reports and TDA drafts.
- Consultation meetings with the EWGs on the thematic reports and the TDA drafts.
- Consultation meeting at the transboundary level to discuss the draft TDA. This will be also used to revisit the Basin management issues and needs as well as the development opportunities at the transboundary level perceived by the stakeholders in the light of the new information generated through the TDA. The shared vision generated through the Drin Dialogue will be revisited as well. The articulated vision, issues, needs and opportunities shall then be translated into specific objectives and criteria which will enable the assessment of various options and scenarios with regard to the interventions to be included in the Strategic Action Programme to

be negotiated among the Drin Countries. The objectives should be framed in the following four areas: economic, social, environmental and institutional.

The participatory activities mentioned above will be organized by the Project Management Unit.

As indicated, prior to presentation of the draft TDA to the stakeholders, thematic reports will be submitted and presented to the Expert Working Groups (EWG) of the DCG for comments. Each EWG (Water Framework Directive, Biodiversity and Ecosystems, Monitoring and Information Exchange), will receive the thematic reports (as basis for respective TDA chapters) that are related to its focus.

Main Outputs

1. ToR for each one of the following thematic reports: (i) Socio-economic including Spatial Planning for marine coastal area; (ii) Biodiversity/Ecosystems, (iii) Hydrology/Hydrogeology, (iv) Pollution, (v) Institutional and Legal Setting, (vi) Nexus.
2. Progress and other short reports as required (in English) for the thematic reports that will be prepared by consultants (Socio-economic including Spatial Planning for marine coastal area; Biodiversity/Ecosystems).
3. Thematic reports.
4. Draft Transboundary Diagnostic Analysis (in English and summaries in the languages of the Drin Basin countries that are beneficiaries to the GEF Drin project).
5. Database including in an organized way all raw information and data collected in the process for the development of the TDA.
6. GIS database.
7. Analysis of the availability of parameters specified in the EU WFD and the extent to which monitoring of these parameters is currently taking place in the Drin Riparians, and define the specifications (parameters, form, frequency etc.) that will allow the exchange of EU WFD related available data as well as data developed in the future (this output to be developed and delivered if possible).
8. Transboundary Diagnostic Analysis (in English and summaries in the languages of the Drin Basin countries that are beneficiaries to the GEF Drin project).

Annex I. Information and data needs for the preparation of the TDA

General notes:

- *The information listed below should be presented in interconnected attribute tables ready for GIS application, accompanied, where possible, by geo-referenced map(s) elements such as shapefiles. All graphs, charts and tables as graphical representation to support TDA text, should be prepared separately.*
- *Where trend analysis is required, data for at least 10 years' period (as a general rule) should be processed (if data are available).*
- *The data and information presented below should be collected for each one of the sub-basins of the Drin (i.e. Lake Prespa, Lake Ohrid, Black Drin River, White Drin River, Drin River, Buna/Bojana River, Lake Skadar/Shkoder).*
- *Data collected should be verified, classified, harmonized and be able to be presented on the riparian, sub –basin and Drin Basin level (as appropriate).*
- *The list below is not exhaustive.*

A. Socio-economic related information

Information below to be given per administrative unit as appropriate.

1. Key national and regional policies and strategies regarding development that affect the project area.
2. Instruments used for sustainable development in the area (economic, planning, regulatory, etc.), including possible economic incentives.
3. Administrative system and structure in the areas of interest. Administrative division units (the lowest scale applicable with respect to the official statistical aggregated data) and settlements.
4. Structure of the economy and trends including per economic activity; employment per economic activity; economic development forecasts.
5. Demographic data and related trends (e.g. settlements and migration/change in population in the different municipalities/villages).
6. Agricultural sector structure and trends including type and areal extent of cultivated crops; production (gross/per crop); use of fertilizers and herbicides/ pesticides (in terms of quantity and spatial distribution);
7. Irrigation including location and extent of existing network, capacity, trends etc.
8. Structure of the inland and marine fisheries sector and trends regarding production (including categories and quantities).
9. Water use per economic activity including trends; water use per industrial sector and important industries (monthly /annual consumption); source of water (abstraction of from public network).
10. Potable water use including trends; abstraction and consumption per administrative unit (monthly/annual); water utilities and infrastructure; related management aspects (e.g. service cover, tariff system, level of tariffs, collection rates, ownership, quality issues etc.) and water supply schemes (rural and urban).
11. Communal wastewater generation, management and trends. Collection and treatment (monthly / annual); waste water utilities and facilities including their characteristics; related management aspects (e.g. service coverage, tariff system, collection rates, ownership, etc.).
12. Communal solid waste generation, management and trends. Collection, disposal sites and treatment (monthly / annual); waste utilities and infrastructure including their characteristics; management aspects (e.g. service coverage, tariff system including, return/refund schemes, levies that produce revenues for the state, collection rates in rural and urban areas, illegal dumpsites, etc.).
13. Same as above regarding special waste streams, hazardous waste, medical waste; historical industrial waste characteristics (quantities and hazardous properties).

14. Electricity production and use (MW/Year). Electricity production schemes and facilities including hydropower facilities dams and reservoirs; installed capacities; management aspects (e.g. ownership, dam regulations, etc.).
15. Tourism sector structure and trends (number of tourists per locations/regions; number of overnight stays; number of hotels/rooms etc.).
16. Flood and water protection systems including sanitary protection zones (drinking water protected areas).
17. Information about pressures and effects (damage and/or profit) of different economic activities to the environment; impacts caused by different forms of land use in the area; impacts caused by pollution, flooding and human interference with the hydraulic system.
18. Information about pressures and effects (damage and/or profit) of economic activities to economic activities as a result of natural resources (e.g. water use) use or pollution.

B. Spatial Planning related data including data related to Management for the Buna/Bojana coastal area

1. Information about the existing spatial planning system.
   1.1. Legal framework and hierarchy of spatial planning documents.
   1.2. Spatial planning instruments existing for regulating coastal areas and water resources, e.g. EIA/SEA (including examples of its application in the area); building inspection and other similar instruments.
   1.3. Spatial/territorial planning documents in Buna/Bojana coastal area, including information on type of plan, year of its release (or preparation/adoption status), land use categories.
   1.4. Relevant spatial planning stakeholders regarding Buna/Bojana coastal area.
2. Available land use maps.
3. Information about pressures and impacts caused by different forms of land use in Buna/Bojana coastal area, including:
   3.1. Built-up areas (including ortho-photos if available);
   3.2. Information about existing urban sprawl;
   3.3. Information about current urbanisation of coastal area (in particular within 100-meter zone – if possible);
   3.4. Information about built-up areas outside the planned built-up area- including locations and spatial extend, magnitude of the phenomena, hectares, numbers of settlements, etc.;
   3.5. Information about carrying capacity of the area.
4. Planned zoning development in Buna/Bojana coastal area.
5. Data on planned infrastructure objects/facilities in relation to socio-economic aspects and trends in Buna/Bojana coastal area.

C. Biology and Ecosystems related information

1. Biological resources with special focus on surface inland waters, transitional waters and marine aquatic environment. In particular information about:
   1.1. biological elements of the **river ecosystem**: a) aquatic flora/ composition and abundance, b) benthic invertebrate fauna (macroinvertebrates)/ composition and abundance, and c) fish fauna/ composition, abundance and age structure; d) data on invasive species.
   1.2. biological elements of **transitional waters** (e.g. coastal lagoons): a) phytoplankton/ composition, abundance and biomass, b) other aquatic flora/ composition and abundance, c) benthic invertebrate fauna (macroinvertebrates)/ composition and abundance, and d) fish fauna/ composition and abundance; e) data on invasive species.
   1.3. biological elements of **coastal waters**: a) phytoplankton/ composition, abundance and biomass, b) other aquatic flora/ composition and abundance, c) benthic invertebrate fauna

(macroinvertebrates)/ composition and abundance, and d) fish fauna/ composition and abundance; e) data on invasive species.

2. Existing and planned protected area map(s) for the basin, coastal and adjacent marine areas; information on the management status including the zoning system (if available in GIS format), financing of management, implementation of legislation and enforcement of law etc.
3. Habitat map(s) for the basin, coastal and adjacent marine area including data on potential groundwater dependent ecosystems (GDE).
4. Identified NATURA 2000 sites.
5. Information and data regarding exploitation of natural resources with emphasis on fish and forest/wood (categories and quantities per month/year).
6. List of species in the basin, coastal and adjacent marine area including list of vulnerable and threatened species of national, regional and global importance (in accordance to the national legal system and IUCN categorization).
7. Information about ecosystem services (socio-economic, cultural, etc.) and potentially existing economic valuation of the ecosystems services.
8. Information about vulnerability of habitats and ecosystems in the area vis-a-vis the existing and planned economic and developmental activities.
9. Information on Ecological flows identified/established through regulations.

D. Hydrology, Hydrogeology and related information

1. Surface water bodies and groundwater bodies in the study area (including information about topography, geology, catchment size, etc.).
2. Hydro-morphological elements of the surface water bodies: a) hydrological regime, i.e. quantity and dynamics of water flow and connection to groundwater bodies; b) river continuity; and c) morphological conditions, i.e. river depth and width variation, structure and substrate of the river bed and structure of the riparian zone.
3. Transitional waters, in particular information about: a) depth variation; b) quantity, structure and substrate of the bed, and; c) structure of the intertidal zone and tidal regime including the i. freshwater flow and ii. exposure to waves.
4. Morphological information about coastal area, such as a) water depth variation; b) structure and substrate of the coastal bed, and; c) structure of the intertidal zone, as well as on the tidal regime, including the i. direction of the dominant currents and iI. exposure to waves.
5. Meteorological parameters of the Drin Basin and sub-basins, in particular: daily values of rainfall, air temperature, air humidity and barometric pressure for a period of at least five recent years (ideally the last 10 years). The data should cover the study area both in terms of geography and topography (low and high elevation).
6. Hydrologic and hydrogeological data for each sub-basin. Daily or at least monthly values of water levels and/or discharge in the available measurement points of the hydrographic network (at least one station close to the exit of the basin). Ideally data from 3 different stations along the rivers (relatively upstream, middle and downstream) for the most recent decade (or at least 3-5 years).
7. Existing monitoring stations (surface and groundwater) and characteristics.
8. Information about water abstractions in each sub-basin through pumping stations, boreholes and dams for drinking, irrigation and industrial uses (daily and/or monthly data).
9. Existing water infrastructure including the irrigation system(s) in each sub-basin.
10. Groundwater aquifers related information, in particular:
    10.1. Location and boundaries of the aquifers within the sub-basins/Basin
    10.2. Geological characteristics of the groundwater aquifers including the extent and type of geological units

10.3. Hydrogeological characteristics of the groundwater aquifers including hydraulic conductivity and porosity
10.4. Stratification characteristics of the groundwater within the groundwater aquifers
10.5. Characteristics of the superficial deposits and soils in the basin(s) from which the groundwater aquifers receive its recharge, including the thickness, porosity, hydraulic conductivity, and absorptive properties of the deposits and soils
10.6. General characteristics of the overlying strata in the basin(s) area from which the groundwater aquifers receive their recharge
10.7. Surface systems, including terrestrial ecosystems and bodies of surface water, with which the groundwater aquifers are dynamically linked
10.8. Estimates of the directions and rates of exchange of water between the groundwater bodies and associated surface systems
10.9. Long-term annual average rate of overall recharge
10.10. Chemical composition of groundwater
10.11. Piezometric levels (groundwater levels) and location of the relevant measured boreholes
10.12. Information on legal requirements and policy for water extraction, sanitary protection zones (drinking water protected areas) and monitoring

E. Water Quality related information

1. Data, regarding **river, transitional** and **coastal waters** as well as **lakes** including:
   1.1. chemical and physico-chemical elements, i.e. water temperature, dissolved oxygen, conductivity, pH, and nutrient (nitrate, nitrite, ammonium, total nitrogen, phosphate, total phosphorus) concentrations, preferably at a monthly basis. Information that should be collected in this regard include:
      - Name of monitoring stations (geo-referenced)
      - Frequency of monitoring (e.g. daily, monthly, seasonal, annual)
      - Date of monitoring
      - Parameters measured: see parameters above
      - Value of each parameter
      - Measuring unit
   1.2. *potential specific pollutants* according to the list of Annex VIII of the Water Framework Directive 2000/60/EC and on *priority substances* according to the respective list of the Directive 2013/39/EC (see parameters listed in Tables 1 and 2 in the Appendix). Information that should be collected in this regard include:
      - Name of monitoring stations (geo-referenced)
      - Frequency of monitoring (e.g. daily, monthly, seasonal, annual)
      - Date of monitoring
      - Parameters measured: see parameters listed in Tables 1 and 2 in the Appendix
      - Value of each parameter
      - Measuring unit
   1.3. Biological parameters according to the Water Framework Directive 2000/60/EC including: Algae, macrophytes, phytoplankton (lakes), invertebrates, fish, chlorophyll *a.* Information that should be collected in this regard include:
      - Name of monitoring stations (geo-referenced)
      - Frequency of monitoring (e.g. daily, monthly, seasonal, annual)
      - Date of monitoring
      - Parameters measured: see parameters above
      - Value of each parameter
      - Measuring unit

2. Information and data for **groundwater** including the:
   2.1. Pressures to which the groundwater aquifers are subject to, including point and diffuse sources of pollution and abstraction.
   2.2. Conductivity levels, the concentrations of *potential specific pollutants* according to the list of Annex VIII of the Water Framework Directive 2000/60/EC, and the concentrations of *priority substances* according to the respective list of the Directive 2013/39/EC (see parameters listed in Tables 1 and 2 in the Appendix). Information necessary in this regard include:
      - Name of monitoring stations (geo-referenced)
      - Frequency of monitoring (e.g. daily, monthly, seasonal, annual)
      - Date of monitoring
      - Parameters measured: see parameters listed in Tables 1 and 2 in the Appendix
      - Value of each parameter
      - Measuring unit
3. Information from past studies and are relevant to water quality issues with special focus on inland surface and ground waters, transitional waters and marine aquatic environment.
4. Point and non-point sources of pollution including those that exist outside the Drin Basin and influence Drin Basin coastal area. Information and data to be collected with regard to the point sources of pollution should include: type of pollution (e.g. organic pollution from municipal wastewaters or wastewaters from food industrial units, metal pollution from industrial processes, etc.); loads (daily or monthly) entering the river, lake, groundwater or directly the coastal area. In the absence of this information calculation should be done using information from the "A. Socio-economic related information" above.
5. Information on institutional and legal requirements and framework for water quality monitoring and waste water discharge.

F Institutional and Legal Aspects?

Information required will be derived from national legal/policy and other documents including ones indicated in Annex II. All source documents should be classified, coded and stored within the database.

Table 1

ANNEX VIII (WFD 2000/60/EC)

1. Organohalogen compounds and substances which may form such compounds in the aquatic environment.

2. Organophosphorous compounds.

3. Organotin compounds.

4. Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment.

5. Persistent hydrocarbons and persistent and bioaccumulable organic toxic substances.

6. Cyanides.

7. Metals and their compounds.

8. Arsenic and its compounds.

9. Biocides and plant protection products.

10. Materials in suspension.

11. Substances which contribute to eutrophication (in particular, nitrates and phosphates).

12. Substances which have an unfavourable influence on the oxygen balance (and can be measured using parameters such as BOD, COD, etc.).

Table 2

DIRECTIVE 2013/39/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 12 August 2013

DIRECTIVE 2013/39/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 12 August 2013

LIST OF PRIORITY SUBSTANCES IN THE FIELD OF WATER POLICY

Number	CAS number (1)	EU number (2)	Name of priority substance (3)	Identified as priority hazardous substance
(1)	15972-60-8	240-110-8	Alachlor	
(2)	120-12-7	204-371-1	Anthracene	X
(3)	1912-24-9	217-617-8	Atrazine	
(4)	71-43-2	200-753-7	Benzene	
(5)	not applicable	not applicable	Brominated diphenylethers	X (4)
(6)	7440-43-9	231-152-8	Cadmium and its compounds	X
(7)	85535-84-8	287-476-5	Chloroalkanes, C_{10-13}	X
(8)	470-90-6	207-432-0	Chlorfenvinphos	
(9)	2921-88-2	220-864-4	Chlorpyrifos (Chlorpyrifos-ethyl)	
(10)	107-06-2	203-458-1	1,2-dichloroethane	
(11)	75-09-2	200-838-9	Dichloromethane	
(12)	117-81-7	204-211-0	Di(2-ethylhexyl)phthalate (DEHP)	X
(13)	330-54-1	206-354-4	Diuron	
(14)	115-29-7	204-079-4	Endosulfan	X
(15)	206-44-0	205-912-4	Fluoranthene	
(16)	118-74-1	204-273-9	Hexachlorobenzene	X
(17)	87-68-3	201-765-5	Hexachlorobutadiene	X
(18)	608-73-1	210-168-9	Hexachlorocyclohexane	X
(19)	34123-59-6	251-835-4	Isoproturon	
(20)	7439-92-1	231-100-4	Lead and its compounds	
(21)	7439-97-6	231-106-7	Mercury and its compounds	X
(22)	91-20-3	202-049-5	Naphthalene	
(23)	7440-02-0	231-111-4	Nickel and its compounds	
(24)	not applicable	not applicable	Nonylphenols	X (5)
(25)	not applicable	not applicable	Octylphenols (6)	
(26)	608-93-5	210-172-0	Pentachlorobenzene	X
(27)	87-86-5	201-778-6	Pentachlorophenol	
(28)	not applicable	not applicable	Polyaromatic hydrocarbons (PAH) (7)	X
(29)	122-34-9	204-535-2	Simazine	
(30)	not applicable	not applicable	Tributyltin compounds	X (8)

Number	CAS number (1)	EU number (2)	Name of priority substance (3)	Identified as priority hazardous substance
(31)	12002-48-1	234-413-4	Trichlorobenzenes	
(32)	67-66-3	200-663-8	Trichloromethane (chloroform)	
(33)	1582-09-8	216-428-8	Trifluralin	X
(34)	115-32-2	204-082-0	Dicofol	X
(35)	1763-23-1	217-179-8	Perfluorooctane sulfonic acid and its derivatives (PFOS)	X
(36)	124495-18-7	not applicable	Quinoxyfen	X
(37)	not applicable	not applicable	Dioxins and dioxin-like compounds	X (9)
(38)	74070-46-5	277-704-1	Aclonifen	
(39)	42576-02-3	255-894-7	Bifenox	
(40)	28159-98-0	248-872-3	Cybutryne	
(41)	52315-07-8	257-842-9	Cypermethrin (10)	
(42)	62-73-7	200-547-7	Dichlorvos	
(43)	not applicable	not applicable	Hexabromocyclododecanes (HBCDD)	X (11)
(44)	76-44-8/ 1024-57-3	200-962-3/ 213-831-0	Heptachlor and heptachlor epoxide	X
(45)	886-50-0	212-950-5	Terbutryn	

(1) CAS: Chemical Abstracts Service.

(2) EU-number: European Inventory of Existing Commercial Substances (EINECS) or European List of Notified Chemical Substances (ELINCS).

(3) Where groups of substances have been selected, unless explicitly noted, typical individual representatives are defined in the context of the setting of environmental quality standards.

(4) Only Tetra, Penta, Hexa and Heptabromodiphenylether (CAS -numbers 40088-47-9, 32534-81-9, 36483-60-0, 68928-80-3, respectively).

(5) Nonylphenol (CAS 25154-52-3, EU 246-672-0) including isomers 4-nonylphenol (CAS 104-40-5, EU 203-199-4) and 4-nonylphenol (branched) (CAS 84852-15-3, EU 284-325-5).

(6) Octylphenol (CAS 1806-26-4, EU 217-302-5) including isomer 4-(1,1',3,3'-tetramethylbutyl)-phenol (CAS 140-66-9, EU 205-426-2).

(7) Including benzo(a)pyrene (CAS 50-32-8, EU 200-028-5), benzo(b)fluoranthene (CAS 205-99-2, EU 205-911-9), benzo(g,h,i)perylene (CAS 191-24-2, EU 205-883-8), benzo(k)fluoranthene (CAS 207-08-9, EU 205-916-6), indeno(1,2,3-cd)pyrene (CAS 193-39-5, EU 205-893-2) and excluding anthracene, fluoranthene and naphthalene, which are listed separately.

(8) Including tributyltin-cation (CAS 36643-28-4).

(9) This refers to the following compounds:
7 polychlorinated dibenzo-p-dioxins (PCDDs): 2,3,7,8-T4CDD (CAS 1746-01-6), 1,2,3,7,8-P5CDD (CAS 40321-76-4), 1,2,3,4,7,8-H6CDD (CAS 39227-28-6), 1,2,3,6,7,8-H6CDD (CAS 57653-85-7), 1,2,3,7,8,9-H6CDD (CAS 19408-74-3), 1,2,3,4,6,7,8-H7CDD (CAS 35822-46-9), 1,2,3,4,6,7,8,9-O8CDD (CAS 3268-87-9)
10 polychlorinated dibenzofurans (PCDFs): 2,3,7,8-T4CDF (CAS 51207-31-9), 1,2,3,7,8-P5CDF (CAS 57117-41-6), 2,3,4,7,8-P5CDF (CAS 57117-31-4), 1,2,3,4,7,8-H6CDF (CAS 70648-26-9), 1,2,3,6,7,8-H6CDF (CAS 57117-44-9), 1,2,3,7,8,9-H6CDF (CAS 72918-21-9), 2,3,4,6,7,8-H6CDF (CAS 60851-34-5), 1,2,3,4,6,7,8-H7CDF (CAS 67562-39-4), 1,2,3,4,7,8,9-H7CDF (CAS 55673-89-7), 1,2,3,4,6,7,8,9-O8CDF (CAS 39001-02-0)
12 dioxin-like polychlorinated biphenyls (PCB-DL): 3,3',4,4'-T4CB (PCB 77, CAS 32598-13-3), 3,3',4',5-T4CB (PCB 81, CAS 70362-50-4), 2,3,3',4,4'-P5CB (PCB 105, CAS 32598-14-4), 2,3,4,4',5-P5CB (PCB 114, CAS 74472-37-0), 2,3',4,4',5-P5CB (PCB 118, CAS 31508-00-6), 2,3',4,4',5'-P5CB (PCB 123, CAS 65510-44-3), 3,3',4,4',5-P5CB (PCB 126, CAS 57465-28-8), 2,3,3',4,4',5-H6CB (PCB 156, CAS 38380-08-4), 2,3,3',4,4',5'-H6CB (PCB 157, CAS 69782-90-7), 2,3',4,4',5,5'-H6CB (PCB 167, CAS 52663-72-6), 3,3',4,4',5,5'-H6CB (PCB 169, CAS 32774-16-6), 2,3,3',4,4',5,5'-H7CB (PCB 189, CAS 39635-31-9).

(10) CAS 52315-07-8 refers to an isomer mixture of cypermethrin, alpha-cypermethrin (CAS 67375-30-8), beta-cypermethrin (CAS 65731-84-2), theta-cypermethrin (CAS 71697-59-1) and zeta-cypermethrin (52315-07-8).

(11) This refers to 1,3,5,7,9,11-Hexabromocyclododecane (CAS 25637-99-4), 1,2,5,6,9,10- Hexabromocyclododecane (CAS 3194-55-6), α-Hexabromocyclododecane (CAS 134237-50-6), β-Hexabromocyclododecane (CAS 134237-51-7) and γ- Hexabromocyclododecane (CAS 134237-52-8).'.

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(32)	67-66-3	200-663-8	Trichloromethane (chloroform)	
(33)	1582-09-8	216-428-8	Trifluralin	X
(34)	115-32-2	204-082-0	Dicofol	X
(35)	1763-23-1	217-179-8	Perfluorooctane sulfonic acid and its derivatives (PFOS)	X
(36)	124495-18-7	not applicable	Quinoxyfen	X
(37)	not applicable	not applicable	Dioxins and dioxin-like compounds	X (9)
(38)	74070-46-5	277-704-1	Aclonifen	
(39)	42576-02-3	255-894-7	Bifenox	
(40)	28159-98-0	248-872-3	Cybutryne	
(41)	52315-07-8	257-842-9	Cypermethrin (10)	
(42)	62-73-7	200-547-7	Dichlorvos	
(43)	not applicable	not applicable	Hexabromocyclododecanes (HBCDD)	X (11)
(44)	76-44-8/ 1024-57-3	200-962-3/ 213-831-0	Heptachlor and heptachlor epoxide	X
(45)	886-50-0	212-950-5	Terbutryn	

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Annex II. Sources of Information to be used for the preparation of the TDA

The following should be used for the development of the TDA:

(i) Respective national legal framework, policies documents and plans

(ii) A number of on-going and future activities that have resulted or will result in the analysis of the natural system in the Drin Basin. The TDA should make use of the results of these activities and/or coordinate with these activities to make sure that overlap is minimised and synergies are maximised:

- Conservation and Sustainable Use of Biodiversity at Lakes Prespa, Ohrid and Shkodra/Skadar (CSBL) Project (on-going). In its previous phase the CSBL project resulted in the initial characterization -in accordance to the EU WFD- of the Lakes Ohrid, Skadar/Shkoder and Prespa. The results of the characterization should be used for the preparation of the TDA. The analysis of the lakes under the on-going phase should be also taken into consideration.
- Buna/Bojana Management Plan. Prepared by GWP-Med, PAP/RAC and UNESCO, the plan has prepared an initial characterization -in accordance to the EU WFD- of the Buna/Bojana basin, aquifers and coastal zone and resulted in a set of measures for the management of the area. The results of the plan should be used for the preparation of the TDA. Among the results are the harmonized between Albania and Montenegro hydro-geological maps available in digital form.
- Albanian Water Cadastre. The Cadastre, assembling the total of the available information in the country related to water resources management, will finish soon. The Technical Secretariat of the Water Council should be able to assist and make the related information available to the Project.
- Drini Basin Management Plan in Albania. The Plan is to be prepared with the support of Sida under the coordination of the World Bank; the Ministry of Agriculture, Rural Development and Water Management is the beneficiary while the Technical Secretariat of the Water Council is the responsible body, overseeing the preparation of the Plan. The ToR have been prepared and so is the inception report. The plan and more specifically the characterization of the Albanian part of the Drin Basin will be carried out in parallel with the development of the TDA. The PCU should coordinate with the Technical Secretariat of the Water Council to ensure that the:
  (i) activities for the preparation of each of the TDA and the Drini Management Plan are streamlined to avoid overlaps and duplication of effort; this includes collection of data;
  (ii) results of analysis for the preparation of each of the TDA and the Drini Management Plan inform each other;
  (iii) Technical Secretariat requests the consultant that prepares the plan, to provide information and data as necessary for the preparation of the TDA.
- The White Drin Basin Management Plan in Kosovo. The plan will be prepared with the support of Sida. The activities are expected to be initiated in 2017. The PCU should coordinate with the Kosovar Ministry of Environment and Spatial Planning to ensure that the Terms of Reference for the preparation of the TDA and the White Drini Management Plan are streamlined to avoid overlaps and duplication of effort ToR for White Drin management Plan.
- The GEF/UNDP/UNESCO Project “Protection and Sustainable Use of the Dinaric Karst Transboundary Aquifer System”. The area that was analysed for the development of the TDA of the project covers the Skadar/Shkoder sub-basin and the whole of Albania. The Ohrid and Prespa lakes basin extending beyond Albania have not been covered by the work under DIKTAS. The project resulted in harmonized between Albania and Montenegro hydro-geological maps available in digital form. Digital maps include also information about surface waters as well as about socio-economic activities.
- UNDP Prespa Lake Watershed Management Plan (WMP) in the Former Yugoslav Republic of Macedonia. The original WMP was the country’s pilot planning document prepared in

accordance with the requirements of water legislation, harmonized with the requirements of the EU Water Framework Directive. The Prespa Lake Management Plan is currently been revise/updated, with financing provided by the Swiss Agency for Development and Cooperation (SDC), in order to: a) harmonize it with the national planning cycle of EU WFD (to cover 2015 – 2021 period); b) review and report on the progress in the implementation of WMP; c) analyse monitoring data collected over the past years and incorporate them into the updated WMP; d) adapt the plan in accordance with the requirements of the newly introduced national level Water Information System; e) review and update the economic analysis as per the requirements of EU WFD.

- Deliverables from GEF project: Lake Skadar/Shkodra Integrated Ecosystem Management Project" (2008-2012), most notably data from: a) Development of a Predictive Hydrological Model for the SS-LBA b) Skadar/Shkoder lake development monitoring program and c) Lake management Strategy with National Fisheries management plans
- Additional information should be sought from the institutions in the beneficiary countries that are responsible for the water resources and environmental monitoring -the following list is not exhaustive- e.g.:
    - Environment Protection Agencies and/or Administration, of all riparian countries.
    - Line Ministries which have responsibilities in the water sector
    - Hydro-met services of all beneficiary countries;
    - Ohrid Hydro-biological Institute; Polytechnic University of Tirana/Institute of Geosciences and Energy, Water and Environment; Pristina and Peja Universities, Geological Service of Kosovo, Prespa Lake Monitoring Station running an on-going water quality monitoring programme (lake and tributaries)[8].
    - Scientific Institutions / Academia
    - Regulatory Agencies
    - Nature Conservation Institutes, and or respective universities
    - Environmental NGOs
    - Hydro-Power Generation operators
    - Statistical Offices/Agencies
    - Donor Organizations and Implementing Agencies (GIZ, KfW, UNDP, SECO, SDC, WB, EU, UNECE, SIDA... etc.)
    - Water and wastewater utility companies, and water regulatory agencies
    - Waste management companies
    - Municipalities (municipal development plans, and municipal urban plans) and their regional associations

[8] A comprehensive monitoring database has been created providing a basis for: (1) evaluating the ecological health of the lake and its tributaries and (2) tracking changes in water quality over time.

DIRECTIVE 2013/39/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 12 August 2013

LIST OF PRIORITY SUBSTANCES IN THE FIELD OF WATER POLICY

Number	CAS number (1)	EU number (2)	Name of priority substance (3)	Identified as priority hazardous substance
(1)	15972-60-8	240-110-8	Alachlor	
(2)	120-12-7	204-371-1	Anthracene	X
(3)	1912-24-9	217-617-8	Atrazine	
(4)	71-43-2	200-753-7	Benzene	
(5)	not applicable	not applicable	Brominated diphenylethers	X (4)
(6)	7440-43-9	231-152-8	Cadmium and its compounds	X
(7)	85535-84-8	287-476-5	Chloroalkanes, C_{10-13}	X
(8)	470-90-6	207-432-0	Chlorfenvinphos	
(9)	2921-88-2	220-864-4	Chlorpyrifos (Chlorpyrifos-ethyl)	
(10)	107-06-2	203-458-1	1,2-dichloroethane	
(11)	75-09-2	200-838-9	Dichloromethane	
(12)	117-81-7	204-211-0	Di(2-ethylhexyl)phthalate (DEHP)	X
(13)	330-54-1	206-354-4	Diuron	
(14)	115-29-7	204-079-4	Endosulfan	X
(15)	206-44-0	205-912-4	Fluoranthene	
(16)	118-74-1	204-273-9	Hexachlorobenzene	X
(17)	87-68-3	201-765-5	Hexachlorobutadiene	X
(18)	608-73-1	210-168-9	Hexachlorocyclohexane	X
(19)	34123-59-6	251-835-4	Isoproturon	
(20)	7439-92-1	231-100-4	Lead and its compounds	
(21)	7439-97-6	231-106-7	Mercury and its compounds	X
(22)	91-20-3	202-049-5	Naphthalene	
(23)	7440-02-0	231-111-4	Nickel and its compounds	
(24)	not applicable	not applicable	Nonylphenols	X (5)
(25)	not applicable	not applicable	Octylphenols (6)	
(26)	608-93-5	210-172-0	Pentachlorobenzene	X
(27)	87-86-5	201-778-6	Pentachlorophenol	
(28)	not applicable	not applicable	Polyaromatic hydrocarbons (PAH) (7)	X
(29)	122-34-9	204-535-2	Simazine	
(30)	not applicable	not applicable	Tributyltin compounds	X (8)

Number	CAS number (1)	EU number (2)	Name of priority substance (3)	Identified as priority hazardous substance
(31)	12002-48-1	234-413-4	Trichlorobenzenes	
(32)	67-66-3	200-663-8	Trichloromethane (chloroform)	
(33)	1582-09-8	216-428-8	Trifluralin	X
(34)	115-32-2	204-082-0	Dicofol	X
(35)	1763-23-1	217-179-8	Perfluorooctane sulfonic acid and its derivatives (PFOS)	X
(36)	124495-18-7	not applicable	Quinoxyfen	X
(37)	not applicable	not applicable	Dioxins and dioxin-like compounds	X (9)
(38)	74070-46-5	277-704-1	Aclonifen	
(39)	42576-02-3	255-894-7	Bifenox	
(40)	28159-98-0	248-872-3	Cybutryne	
(41)	52315-07-8	257-842-9	Cypermethrin (10)	
(42)	62-73-7	200-547-7	Dichlorvos	
(43)	not applicable	not applicable	Hexabromocyclododecanes (HBCDD)	X (11)
(44)	76-44-8/ 1024-57-3	200-962-3/ 213-831-0	Heptachlor and heptachlor epoxide	X
(45)	886-50-0	212-950-5	Terbutryn	

(1) CAS: Chemical Abstracts Service.

(2) EU-number: European Inventory of Existing Commercial Substances (EINECS) or European List of Notified Chemical Substances (ELINCS).

(3) Where groups of substances have been selected, unless explicitly noted, typical individual representatives are defined in the context of the setting of environmental quality standards.

(4) Only Tetra, Penta, Hexa and Heptabromodiphenylether (CAS -numbers 40088-47-9, 32534-81-9, 36483-60-0, 68928-80-3, respectively).

(5) Nonylphenol (CAS 25154-52-3, EU 246-672-0) including isomers 4-nonylphenol (CAS 104-40-5, EU 203-199-4) and 4-nonylphenol (branched) (CAS 84852-15-3, EU 284-325-5).

(6) Octylphenol (CAS 1806-26-4, EU 217-302-5) including isomer 4-(1,1',3,3'-tetramethylbutyl)-phenol (CAS 140-66-9, EU 205-426-2).

(7) Including benzo(a)pyrene (CAS 50-32-8, EU 200-028-5), benzo(b)fluoranthene (CAS 205-99-2, EU 205-911-9), benzo(g,h,i)perylene (CAS 191-24-2, EU 205-883-8), benzo(k)fluoranthene (CAS 207-08-9, EU 205-916-6), indeno(1,2,3-cd)pyrene (CAS 193-39-5, EU 205-893-2) and excluding anthracene, fluoranthene and naphthalene, which are listed separately.

(8) Including tributyltin-cation (CAS 36643-28-4).

(9) This refers to the following compounds:
7 polychlorinated dibenzo-p-dioxins (PCDDs): 2,3,7,8-T4CDD (CAS 1746-01-6), 1,2,3,7,8-P5CDD (CAS 40321-76-4), 1,2,3,4,7,8-H6CDD (CAS 39227-28-6), 1,2,3,6,7,8-H6CDD (CAS 57653-85-7), 1,2,3,7,8,9-H6CDD (CAS 19408-74-3), 1,2,3,4,6,7,8-H7CDD (CAS 35822-46-9), 1,2,3,4,6,7,8,9-O8CDD (CAS 3268-87-9)
10 polychlorinated dibenzofurans (PCDFs): 2,3,7,8-T4CDF (CAS 51207-31-9), 1,2,3,7,8-P5CDF (CAS 57117-41-6), 2,3,4,7,8-P5CDF (CAS 57117-31-4), 1,2,3,4,7,8-H6CDF (CAS 70648-26-9), 1,2,3,6,7,8-H6CDF (CAS 57117-44-9), 1,2,3,7,8,9-H6CDF (CAS 72918-21-9), 2,3,4,6,7,8-H6CDF (CAS 60851-34-5), 1,2,3,4,6,7,8-H7CDF (CAS 67562-39-4), 1,2,3,4,7,8,9-H7CDF (CAS 55673-89-7), 1,2,3,4,6,7,8,9-O8CDF (CAS 39001-02-0)
12 dioxin-like polychlorinated biphenyls (PCB-DL): 3,3',4,4'-T4CB (PCB 77, CAS 32598-13-3), 3,3',4',5-T4CB (PCB 81, CAS 70362-50-4), 2,3,3',4,4'-P5CB (PCB 105, CAS 32598-14-4), 2,3,4,4',5-P5CB (PCB 114, CAS 74472-37-0), 2,3',4,4',5-P5CB (PCB 118, CAS 31508-00-6), 2,3',4,4',5'-P5CB (PCB 123, CAS 65510-44-3), 3,3',4,4',5-P5CB (PCB 126, CAS 57465-28-8), 2,3,3',4,4',5-H6CB (PCB 156, CAS 38380-08-4), 2,3,3',4,4',5'-H6CB (PCB 157, CAS 69782-90-7), 2,3',4,4',5,5'-H6CB (PCB 167, CAS 52663-72-6), 3,3',4,4',5,5'-H6CB (PCB 169, CAS 32774-16-6), 2,3,3',4,4',5,5'-H7CB (PCB 189, CAS 39635-31-9).

(10) CAS 52315-07-8 refers to an isomer mixture of cypermethrin, alpha-cypermethrin (CAS 67375-30-8), beta-cypermethrin (CAS 65731-84-2), theta-cypermethrin (CAS 71697-59-1) and zeta-cypermethrin (52315-07-8).

(11) This refers to 1,3,5,7,9,11-Hexabromocyclododecane (CAS 25637-99-4), 1,2,5,6,9,10- Hexabromocyclododecane (CAS 3194-55-6), α-Hexabromocyclododecane (CAS 134237-50-6), β-Hexabromocyclododecane (CAS 134237-51-7) and γ- Hexabromocyclododecane (CAS 134237-52-8).'.

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(34)	115-32-2	204-082-0	Dicofol	X
(35)	1763-23-1	217-179-8	Perfluorooctane sulfonic acid and its derivatives (PFOS)	X
(36)	124495-18-7	not applicable	Quinoxyfen	X
(37)	not applicable	not applicable	Dioxins and dioxin-like compounds	X (9)
(38)	74070-46-5	277-704-1	Aclonifen	
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(41)	52315-07-8	257-842-9	Cypermethrin (10)	
(42)	62-73-7	200-547-7	Dichlorvos	
(43)	not applicable	not applicable	Hexabromocyclododecanes (HBCDD)	X (11)
(44)	76-44-8/ 1024-57-3	200-962-3/ 213-831-0	Heptachlor and heptachlor epoxide	X
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