



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



Terms of reference:
***Technical assistance to the Project
Coordination Unit for the utilization of
existing data repository and population
of the Drin Information Management
System***

In the framework of:

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

GEF Project “Enabling Transboundary Cooperation and Integrated Water
Resources Management in the Extended Drin River Basin”

The Coordinated Action for the implementation of the Memorandum of Understanding for the management of the Drin basin (Drin CORDA) is supported by the 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, the multilateral body responsible for the implementation of the Memorandum of Understanding.

Disclaimer: The document adheres to the UN rules and policies regarding the names and international status of countries and/or other geographical areas etc. 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 which are executing and implementing the Project.

For more information, please contact



Web: www.gwpmmed.org

Headquarters:

12, Kyrristou str., 10556

Athens, Greece

T: +30210-3247490, -3247267, F: +30210-3317127

E-mail: secretariat@gwpmmed.org

Introduction - Background

The Drin Memorandum of Understanding

1. 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, North Macedonia, Greece, Kosovo* and Montenegro. This was the outcome of the Drin Dialogue coordinated by the Global Water Partnership Mediterranean (GWP-Med) and UNECE.
2. 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”*.
3. 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.

The Drin Coordinated Action

4. A process called the “Drin CORDA”, Drin Coordinated Action for the implementation of the Drin MoU, was put in place after the signing of the latter.
5. 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.
6. 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.
7. An Action Plan was prepared to operationalize the Drin CORDA. This 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 action plan while its implementation is currently being supported by the Global Environment Facility¹ (GEF); see below.

The GEF Drin Project

8. The Global Environment Facility (GEF) supported Project “Enabling transboundary cooperation and integrated water resources management in the extended Drin River Basin” (GEF Drin Project)

¹ www.thegef.org

is aligned in content, aims and objectives with the Action Plan and the activities under the Drin CORDA.

9. 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, North Macedonia, Kosovo and Montenegro are the Project beneficiaries.
10. The GEF Drin project is structured around five components:
 - a. Component 1: Consolidating a common knowledge base
 - b. Component 2: Building the foundation for multi-country cooperation
 - c. Component 3: Institutional strengthening for Integrated River Basin Management (IRBM)
 - d. Component 4: Demonstration of technologies and practices for IWRM and ecosystem management
 - e. Component 5: Stakeholder Involvement, Gender Mainstreaming and Communication Strategies
11. The Project is implemented by UNDP and executed by the Global Water Partnership (GWP) through GWP-Mediterranean (GWP-Med) in cooperation with UNECE; GWP-Med is responsible for the realization of the Project. The Drin Core Group is the Steering Committee (SC) of the Project.

The Drin Transboundary Diagnostic Analysis, the database and GIS portal

12. The GEF Drin Project within its Component 1: “Consolidating a common knowledge base” carried out a Transboundary Diagnostic Analysis (TDA), in order to identify and assess transboundary basin management issues -including those related to water and other natural resources as well as environmental management- assess the environmental impacts and socio-economic consequences and, identify the immediate and underlying causes of these issues.
13. Six Thematic Reports are prepared as background for the preparation of the TDA: (i) Biodiversity and Ecosystems; (ii) Pollution; (iii) Institutional and Legal Setting; (iv) Nexus; (v) Socioeconomics and (vi) Hydrology/Hydrogeology. Data and information have been developed and or collected for the preparation of these reports. These **data and information are georeferenced** and stored in a **database** that was created for this cause.
14. Also, much of the information received and available was not used directly for the development of the thematic reports reports or stored in database – but contained **in data repository**. The latter contains various data (monitoring result source files, results from the hydrological modelling, various national datasets etc.) and is in several GB in size. The data is in various formats (manly txt, excel file, shape files) and come from various sources. As such, they do not consist a database of information that can be readily used to feed in the Drin Information Management System.

The Drin Information Management System

15. The Drin Information Management system (hereinafter: IMS developed under the GEF Drin Project component 1 (see para 10)), is prepared to enable the DCG and Project beneficiary Drin Riparians (from this point forward referred to as “beneficiary Riparians”) to collect, store and share data and information in a consistent way (Project output 3). The aim is for the IMS to be used as a) repository of data that will be collected and produced through the development of the

Transboundary Diagnostic Analysis (TDA) and b) a platform to enable joint data collection, storage and exchange, including GIS functions. The IMS will be used by and serve institutions from Albania, North Macedonia, Montenegro and Kosovo; Greece may join as well.

16. The Drin IMS is now under finalization (testing phase) and available at the www.dringis.org. It represents the tool for data collection and exchange among the Drin riparians and is already populated with baseline data from baseline database .
17. This baseline database (already available within the Din IMS) had already undergone re-structuring and error correction and is in the format and structure to fully match the IMS needs. This IMS base layers (hydrography, monitoring stations, soil use, boundaries, etc.) are prepared and linked with MS Database – so normalization, data verification and harmonization have been fully achieved (both within the IMS and baseline files).
18. This existing set of baseline data represents a nucleus of the Drin IMS content (in terms of structure and format) and should be further expanded to include all available data – including data available from extensive **data repository (see point 14)**.

The Assignment: Technical assistance to the Project Coordination Unit for the utilization of existing data repository and population of the Drin Information Management System

Objective of the assignment

19. Objective of this assignment is to: (i) appropriately structure the content of the data repository (to match the structure of the baseline database) and render it ready for populating this to the Drin IMS, (ii) populating the data to the Drin IMS

Requested Services

20. The Expert will:
 - Get familiar with the content and the structure of the IMS, methods of input and respective baseline GIS layers including created MS database.
 - Get familiar with the types and content of all files collected in **data repository**.
 - Extract/reorganise the data from the repository to fully match baseline database structure.
 - Update the existing baseline database (GIS layers and MS access database) and populate the IMS with it.

Tasks

21. To achieve the aforementioned objective and deliver the requested services the consultant will undertake the following tasks:
 - **Get familiar with the content and the structure of the IMS, methods of input and respective baseline GIS layers including respective MS Access database by:**
Understand the structure and functions of the Drin IMS (dringis.org) as well as the ways and methods to input data. Inspect and understand the contained baseline data (source files) from baseline database. The baseline database and encoder credentials for the IMS will be provided by PCU.
 - **Get familiar with and process the types and content of all files collected in data repository.**

It is expected that the content of the data repository will be checked (each file for content, source, and structure), compared with the baseline database (in order to understand its future position within the baseline database structure) with the aim to identify those data contained in the repository that can be further processed as well as the level and type of processing that is necessary for those data. The Data repository will be provided by the PCU.

- **Extract/reorganise the data from the repository to fully match existing database structure.**

It is expected that data from each usable file will be extracted/reorganised in machine-readable format (i.e. CSV, XML) in a way to be integrated and fit in the existing baseline database (either by updating or creating new tables in Ms access database or/and providing respective GIS layers. This reorganisation/extraction will start from the hydrological data (daily, monthly and yearly records to be linked with waterbodies, gauging stations etc.) and continue with the monitoring data raw files for monitoring stations (groundwater, surface water, bathing water, meteorological, etc.) and then with the other themes (biodiversity, socio-economics etc.). For each shapefile file created, metadata should be present or/and for each Ms Access table source should be identified. Error control and cleaning of the data (removing duplicates, obvious errors) should be performed at the same time.

- **Update the existing baseline data (GIS layers and MS access database) and populate the IMS with it.**

Reorganized data from the data repository would be integrated in the existing baseline dataset, following the existing structure format, and logic. This operation would contain either modification of existing datasets or creating a new one. At the end IMS should be populated with those datasets (by using bulk transfer or by hand) so it become instantly available online for IMS users.

Schedule of Activities, Deliverables and Payment

22. The consultancy will commence work on March 2021 and continue until end of May, 2021. Estimated workload is 45 man /days.

Task	Deliverables	Deadline	Payment
Hydrological data processed	Shape files and/or respective tables added in the baseline database.	2 weeks after contract	40 %
Water quality related information processed	Drin IMS updated with files	4 weeks after contract	
	Shape files and/or respective tables added in the baseline database.		
Rest of the data from thematic reports processed (socioeconomics, biodiversity, nexus)	Drin IMS updated with files	8 weeks after contract	60 %
	Shape files and/or respective tables added in the baseline database.		
	Drin IMS updated with files		

National set of data (obtained from national institutions, reports or projects) processed	Shape files and/or respective tables added in the baseline database. Drin IMS updated with files	12 weeks after contract	
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23. The payment will be subject to approval of the responsible Project Officer and the Project Coordinator following submission of defined deliverables and performance assessment.

Duration of the Contract

24. The overall duration of the contract will be 3 months.

Location and Administration

25. The consultant will work for the completion of this assignment from the location of her/his preference. Constant coordination and communication would be established with GWP-Med office in Podgorica.

Qualification and Experience

26. Academic Qualifications/Education:

Bachelor's in computer science, geographical information systems, hydrology, geography, or related discipline.

27. Required Experience:

The Consultant is required to have:

- At least assignment in configuring and securing relational databases (MS Access), Web Maps and Web Apps.
- At least one assignment in using of the GIS software.

Award criterion

Award criterion is the Most Economically Advantageous offer with criterion the lowest price for the offers satisfying the technical requirements as described in the attached document.