dam Decentralized Administration
Macedonia – Thrace

2nd MANAGEMENT PLAN REVISION

for the River Basin District of Central Macedonia (EL10)

Summary

European Union
Cohesion Fund

Co-Funded by Greece and the European Union

NSRF 2014-2020
development through solidarity

HELLENIC REPUBLIC

DECENTRALIZED ADMINISTRATION OF MACEDONIA – THRACE

PROJECT: 2nd River Basin Management Plans Revisions of the three (3) River Basins Districts (RBD) of Central Macedonia (EL10), Eastern Macedonia (EL11) and Thrace (EL12) in accordance with the specifications of Directive 2000/60/EC, Section 1: "2nd River Basin Management Plan (RBMP) Revision of the River Basin District of Central Macedonia (EL10)".

JOINT VENTURE: 2ND RIVER BASIN MANAGEMENT PLANS REVISION OF THE RIVER BASIN DISTRICT OF CENTRAL MACEDONIA (EL10) ".

- NAMA ENGINEERING CONSULTANTS AND PLANNERS S.A.
- ETME PEPPAS & PARTNERS S.A.
- CONSORTIS
- SAMARAS & ASSOCIATES S.A. – ENGINEERING CONSULTANTS
- ALIKI TSAROUHI Civil Engineer- Economist
- GEORGIOS PAPANIKOLAOU - Agriculturalist

2ND RIVER BASIN MANAGEMENT PLANS (RBMP) REVISION OF THE RIVER BASIN DISTRICT OF CENTRAL MACEDONIA (EL10)

Management Plan Summary- English version

Final Edition

Government Gazette Issue (FEK) of 2ND CENTRAL MACEDONIA RIVER BASIN MANAGEMENT PLAN REVISION (EL10) : FEK A’ 70 /17.05.2024

2ND RIVER BASIN MANAGEMENT PLANS (RBMP) REVISION OF THE RIVER BASIN DISTRICT OF CENTRAL MACEDONIA

MANAGEMENT PLAN SUMMARY- ENGLISH VERSION

CONTENTS

1 INTRODUCTION – 2ND RIVER BASIN MANAGEMENT PLAN REVISION

1.1 INTRODUCTION

The water management framework is determined at the European level by the Water Framework Directive 2000/60/EC (WFD), as incorporated into the National Institutional Framework by Law 3199/2003, as amended and in force, and PD 51/ 2007. The Directive requires appropriate measures to be taken to promote the sustainable use of water, as well as to protect and/or improve the condition of surface water bodies (rivers, lakes, transitional and coastal) and groundwater through the preparation of a River Basin Management Plan (RBMP), which is reviewed every six years. The RBMP is a strategic text, in which the goals for the state of the water bodies at the level of the River Basin District (RBD) are defined and the necessary measures and actions are proposed to achieve these goals. **With its approval, the RBMP is an institutional obligation and must be taken into account by all public bodies when making decisions.**

In this context, the first RBMP of the RBD of Central Macedonia (EL10) was approved by the National Water Commission in 2013 (Government Gazette 1004/B/24.04.2013), while its 1st Revision was approved in 2017 (Government Gazette 4672/B/29.12.2017).

The Management Plans drawn up with the 2nd Management Plans Revision of the 14 River Basin Districts of the country, in accordance with the specifications of Directive 2000/60/EC, pertain to the 3rd Management Cycle (2022-2027).

The 2nd River Basin Management Plan Revision of the River Basin District of Central Macedonia (EL10), was implemented by the Decentralised Administration of Macedonia - Thrace and it was approved in 2024 (Government Gazette A 70/17.05.2024).

1.2 PREPARATION OF THE 2ND RIVER BASIN MANAGEMENT PLANS REVISION

1.2.1 Requirements of Directive 2000/60/EC and objectives of the 2nd Revision

The Directive 2000/60/EC places the protection of the aquatic environment and ecological objectives at the heart of an approach based on integrated water management at the RBD scale. For this purpose, appropriate implementation planning is required with the planning and coordination of individual actions so that the final outcome is the "good status" (or "good potential") of the water bodies.

The implementation of the Directive includes the following main components:

1. Current situation assessment and preliminary gap analysis.
2. Organization of environmental objectives.
3. Preparation of Monitoring Programs.
4. Gap analysis.
5. Preparation of the Program of Measures.
6. Preparation of the RBD Management Plan of the country.

7. Implementation of the Program of Measures.

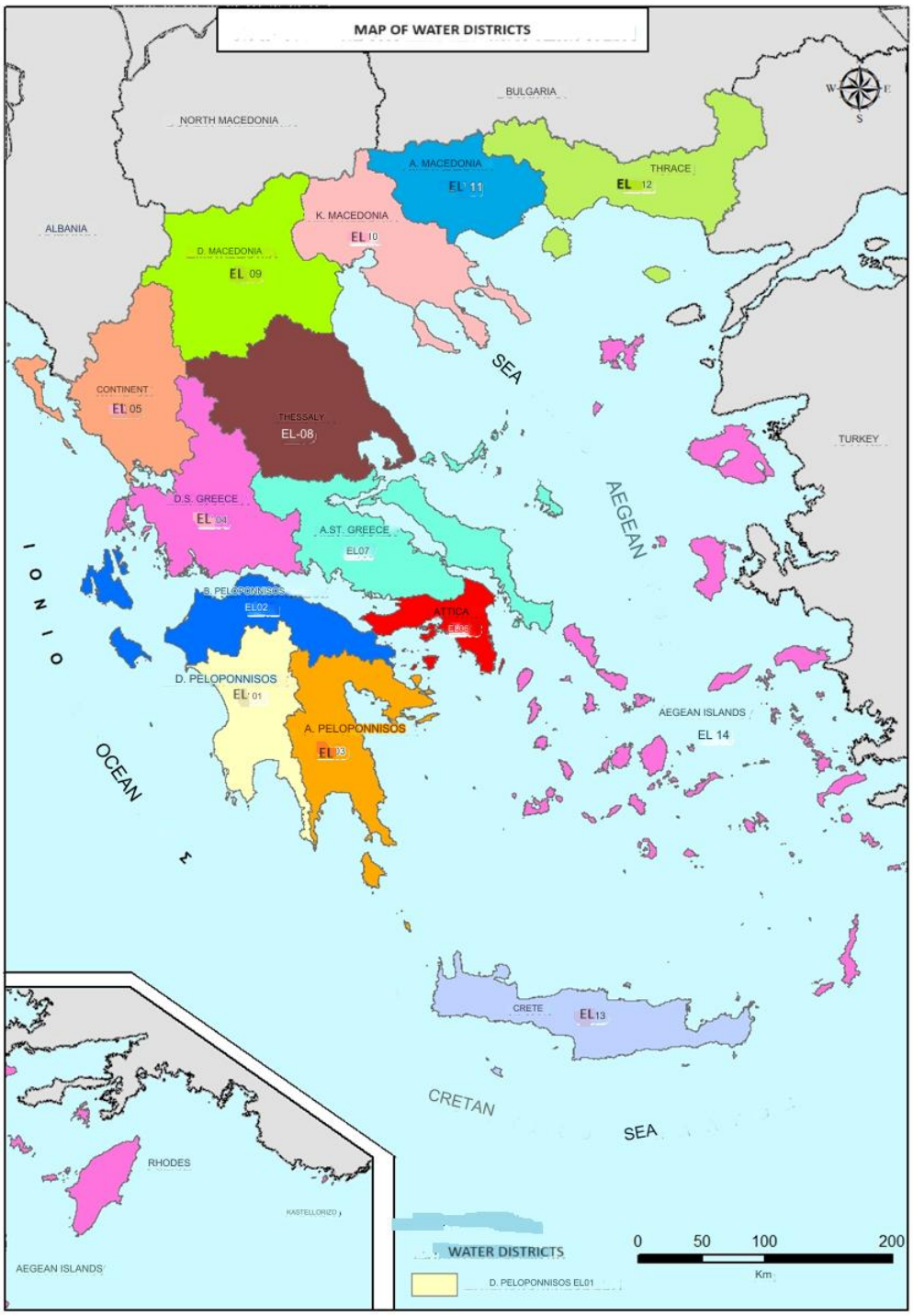
8. Evaluation of Program of Measures.

9. Public consultation, active involvement of stakeholders.

For the Central Macedonia RBD (EL10), in the context of the 2nd RBMP Revision, the following actions are being carried out:

- Revision of the identification and characterization of surface (rivers, lakes, transitional and coastal) and underground water bodies.
- Revision of the assessment/classification of the state/potential of surface (ecological, chemical), including highly modified and artificial, and underground (quantitative, qualitative) water bodies, based on the new data available from the operation of the National Water Status Monitoring Network.
- Re-evaluation of the surface water bodies that show significant hydromorphological modifications, in order to determine those that constitute highly modified water bodies (HMWB) and artificial water bodies (AWB).
- Revision and further development of the list of significant pressures, as they have been included in the 1st RBMP Revision, as well as their effects per Catchment Basin and water bodies (WB).
- Revision of the Register of Protected Areas (PA), based on new information that has emerged from the implementation of relevant Union Directives.
- Revision of the information on the planned projects/activities of water resources utilization.
- Review of the environmental objectives for all surface water bodies (SWB) and groundwater bodies (GWB), including highly modified and artificial ones.
- Assessment of progress in relation to the achievement of the environmental objectives of the WFD, as defined in the 1st RBMP Revision, and clarifications for the environmental objectives that were not achieved.
- Revision of the Strategic Plan for Addressing Water Scarcity and Drought Phenomena which was implemented during the 1st Administrative Cycle.
- Assessment of progress in relation to the achievement of the environmental objectives of the WFD, as defined in the 1st RBMP Revision, and clarifications for the environmental objectives that were not achieved.
- Review of the Programs of Basic and Supplementary Measures for the protection and restoration of water resources, as included in the 1st RBMP Revision, in accordance with Article 11 and Annex VI of the WFD (Article 12 and Annex VIII of the Decree 51/ 2007).
- Revision of the economic analysis of water uses.
- The registration of transnational collaborations and the promotion of the implementation of joint or compatible Management Plans in transboundary watersheds, according to the directions of the Competent Authority (CA).
- Preparation of the Strategic Environmental Impact Study (SEIS) to identify, describe and evaluate the environmental impacts from the implementation of the Programs of Measures and Management Plans.

- Informing the public and promoting its active participation, as well as publication and public consultation of the Draft Management Plans, in accordance with article 14 of the WFD and article 15 of the P.D. 51/2007.
- Coverage of the country's obligations in relation to the submission of the required data to the EU regarding the 2nd Revision of the RBMP, through the electronic system WISE (Water Information System for Europe), in accordance with the specifications of the European Environment Agency.
- Revision of the data as well as the results from the implementation of the Project: "Development of water resource management bodies and tools in 13 River Basin Districts of the country", which was completed by the Ministry of Development, in December 2008 as far as the part concerning River Basin Districts of Central Macedonia (EL10).
- Training of the personnel of the Contracting Authority and the competent Regional Authorities, in the objects of the deliverables



Map 1-1: River Basin Districts of Greece

1.2.2 Strategic Environmental Assessment

For the 2nd RBMP Revision of the River Basin Districts of the Country, the process of the Strategic Environmental Assessment (SEA) is being followed in accordance with the JMD with Num D. MINISTRY OF ECONOMY/EFPE/oik.107017/ 28.08.2006 for the "assessment of the environmental impacts of certain plans and programs, in compliance with the provisions of Directive 2001/42/EC"

(Government Gazette B' 1225/2006), as amended by the Num D. oik. 40238/2017 (Government Gazette 3759/B/25.10.2017), M.D. YPEN/DIPA/38181/2695/2022 (Government Gazette 1923/B` 18.4.2022) and M.D. YPEN/DIPA/94750/6235/2023 (Government Gazette 5774/B` 4.10.2023) and is valid.

The approval of the Plan and the SEA is done by a single administrative act (Act of the Council of Ministers in accordance with Law 3199/2003 as applicable) proposed by the Minister of the Environment and Energy following a proposal from the Planning Authority (GDY/YPEN), based on the "approval proposal EISP" from the Environmental Agency responsible for the environmental approval of the Plan (DIPA/YPEN) to the Planning Authority [article 7 of the YA YPECHODE/EYPE/ok.107017/2006 (Government Gazette 1225B'/5.9.2006) as amended by the Num D. oik. 40238/2017 (Government Gazette 3759/B/25.10.2017), M.D. YPEN/DIPA/38181/2695/2022 (Government Gazette 1923/B` 18.4.2022) and M.D. Ministry of Environment and Energy /DIPA/94750/6235/2023 (Government Gazette 5774/B` 4.10.2023) and is valid.

1.3 CONSULTATION PROCEDURE

1.3.1 Consultation Results and Integration

The consultation process on the 2nd RBMP Revision of the RBD of Central Macedonia (EL10) started in March 2019 and ended in December 2023 and included the following:

Phase A: In March 2019, the content of the foreseen activities for the 2nd RBMP Revision was posted on the website of the Ministry of Environment and Energy (http://wfdver.ypeka.gr/el/consultation-gr/) as well as the detailed schedule for the informing the public.

Phase B: In September 2019, data on the important issues of water resources management in each RBD were posted on the website of the Ministry of Environment & Energy, which briefly included the results of the National Water Monitoring Network for the RBD, the main pressures, the identification of the competent authorities and bodies participating in the consultation.

Phase C: In May 2023, the Draft of the 2nd River Basin Management Plan Revision of the River Basin District, as well as the Detailed Documentation, was posted on a special website of the Ministry of the Interior (http://wfdver.ypeka.gr/).

On October 30th, 2023, the scheduled Consultation Day was held in Thessaloniki on the subject of the Draft of the 2nd RBMP Revision of the Central Macedonia River Basin District (EL10) with the aim of more fully informing the public and recording opinions.

The Conference was a hybrid event, in which stakeholders and citizens were given the opportunity to attend the conference as well as to express their opinions, comments and positions online and in person. Therefore, the observations and comments of the participants could be submitted online in a live chat of the youtube and facebook platform, and with a physical presence in the room.

In summary, the changes / completions / additions included in the Final Plan and in the Detailed Documentation as a result of the consultation concern the following:

- New data presented in the Final Management Plan based on the data made available and/or points raised during the consultation.

- Reform of the final Program of Measures which includes:
    - the improvement of the description of certain measures as well as the addition of comments where deemed necessary, regarding the concretization/specification of restrictions as well as actions defined therein
    - revision of the final Program of Measures taking into account observations and comments made in the context of the consultation
    - the revision of the bodies implementing the measures.
- Revision the detailed documentation texts based on the data made available and/or points raised during the consultation.

The final Program of Measures of the Central Macedonia RBD (EL10) was formulated taking into account comments and observations received in the context of the consultation of both the specific RBD and the rest RBD of the country.

On November 21st, 2023, the Directorate of Environmental Licensing of the Ministry of Environment and Energy sent a request for an opinion to the co-competent bodies for the Strategic Study of Environmental Impacts (Ministry of Environment and Energy /DIPA/120560/7853/21-11-2023). The publication of the EIMP was announced on 21/11/2023 and by the website of the Decentralized Administration of Macedonia- Thrace (https://www.m-t.gov.gr). The EIMP of the 2nd Management Plan Revision of the River Basins of Central Macedonia (EL10) was approved on 22/03/2024 (Ministry of Environment and Energy /DIPA/106379/6990/22-03-2024).

2 DIFFERENTIATIONS IN COMPARISON WITH THE 1st RBMP REVISION

For the 2nd RBMP Revision of the country, new analytical methodologies were developed for critical aspects of the implementation of Directive 2000/60/EC.

The revision of the national methodologies was done in the context of the implementation of the 2nd RBMP Revision and concerned the following methodologies:

- Definitive formulation of a national methodology for determining the ecological flows of river water bodies.
- Revision of the analytical methodology for the analysis of anthropogenic pressures and their impacts on surface water and groundwater bodies.
- Revision of the analytical methodology formulated by the Competent Authority (AA) "Determining the "exceptions" of paragraphs 4 to 6 of Article 4 of Directive 2000/60/EC (4.4 - 4.6)", with the review of the application specifications of the exceptions of article 4.5
- Revision of the analytical methodology formulated by the AA "Determining the "exceptions" of paragraph 4.7, of article 4 of Directive 2000/60/EC
- Revision of Methodology for Classification of Ecological, Chemical and Overall Status of Surface Water Bodies

All the analytical methodologies are available on the website of the General Directorate for Water http://wfdver.ypeka.gr/.

The following table summarizes the differences found in each individual subject of the 2nd RBMP Revision in relation to the 1st RBMP Revision, based on the above and the results obtained.

Table 2-1: Main differentiations in comparison with the 1st RBMP Revision

Revised Content of RBMP/ Activity	Differentiation in comparison with the 1st RBMP Revision	Brief presentation of the results
COMPETENT AUTHORITIES	The competent authorities are amended in accordance with Law 5037/2023	The current situation is briefly presented in Paragraph 3.3.
HEAVILY MODIFIED WATER BODIES (HMWB) AND ARTIFICIAL WATER BODIES (AWB)	The HMWB that were defined under the 1st RBMP Revision are re-examined based on the new methodology and the data from the National Monitoring Network	The results are summarized in Chapter 4.3 and in the Detailed Documentation- Final Determination of Heavily Modified and Artificial Water Bodies
PRESSURES AND IMPACTS	The assessment of pressures and impacts in the revision is based on the revised common methodology developed and the latest evidence resulting from the approval of the 1st RBMP Revision.	The results are summarized in Chapter 5 and in the Analytical Documentation Text – Analysis of anthropogenic pressures and their impacts on surface and groundwater bodies
CLASSIFICATION OF THE STATUS OF SURFACE WATER BODIES	The Methodology for Classification of Ecological, Chemical and Overall Status of Surface Water Bodies was revised in the context of the 2nd RBMP Revision. During the revision, the classification of the state of the surface water bodies is implemented based on the data of the National Monitoring Network 2018-2021. For the WB that are not monitored, their status is classified by grouping based on their typology and the pressures they receive according to the revised methodology.	The results are presented in summary in Chapter 4.1 and in the Analytical Documentation Text - Characterization, typology, type-characteristic conditions, references and assessment/classification of the state/potential of all categories of surface water bodies, including highly modified and artificial water bodies.
CLASSIFICATION OF THE STATUS OF GROUNDWATER BODIES	The methodology for classifying the state of the GWBs does not differ in relation to the 1st RBMP. The classification of the GWB is based on the newest data of the national monitoring network 2018-2020, as well as any other recent data that has emerged (studies, benefits, levels, etc.).	The results are presented briefly in Chapter 4.2 and in the Analytical Documentation Text – State of Groundwater bodies.
NATIONAL MONITORING NETWORK	The 2nd RBMP Revision in relation to the 1st RBMP Revision, includes the results of the National Monitoring Network with a larger number of samples for the period 2018 – 2021. It also includes monitoring of the chemical and quantitative status of the GWB.	The data for the monitoring program used are presented in the Analytical Documentation Texts - Type-characteristic Conditions and- Status of Groundwater bodies for the Surface and Groundwater bodies network respectively.

Revised Content of RBMP/ Activity	Differentiation in comparison with the 1st RBMP Revision	Brief presentation of the results
ECONOMIC ANALYSIS OF WATER USE	For the economic analysis of water uses, specific directions of the General Directorate for Water are taken in consideration. The elements of the information system, created to assist the SSW in the supervision and monitoring of the degree of implementation of the water management policies, created after the end of the 1st revision, were used (where possible and in cases where they were considered reliable).	The results are presented in summary in Chapter 6 hereof and in the Analytical Documentation Text – Economic Analysis of Water Uses.
ENVIRONMENTAL OBJECTIVES – EXEMPTIONS	During the 2nd Revision, the determination of the environmental objectives and exceptions is based on the new methodological approaches developed in accordance with the EU guidelines (see Chapter 2.2.1 above).	The results are summarized in Chapter 7 herein and in the Analytical Documentation Text – Environmental Objectives.
PROGRAMME OF MEASURES	The program of measures as defined in this 2nd RBMP Revision was revised in relation to the 1st RBMP Revision. The differences in the program of measures in relation to the 1st RBMP Revision concern: - specialization/reformulation of measures of the 1st RBMP Revision that continue in the current management cycle - formulation of new measures to deal with the pressures faced by the WBs and to achieve the goals set - removal of measures of the 1st RBMP Revision where it was judged that their continuation in the current management cycle is not necessary	The new program of measures is briefly presented in Chapter 8 hereof and in the Detailed Documentation - Programs of Basic and Supplementary Measures.

3 RIVER BASIN DISTRICT DESCRIPTION – COMPETENT AUTHORITIES

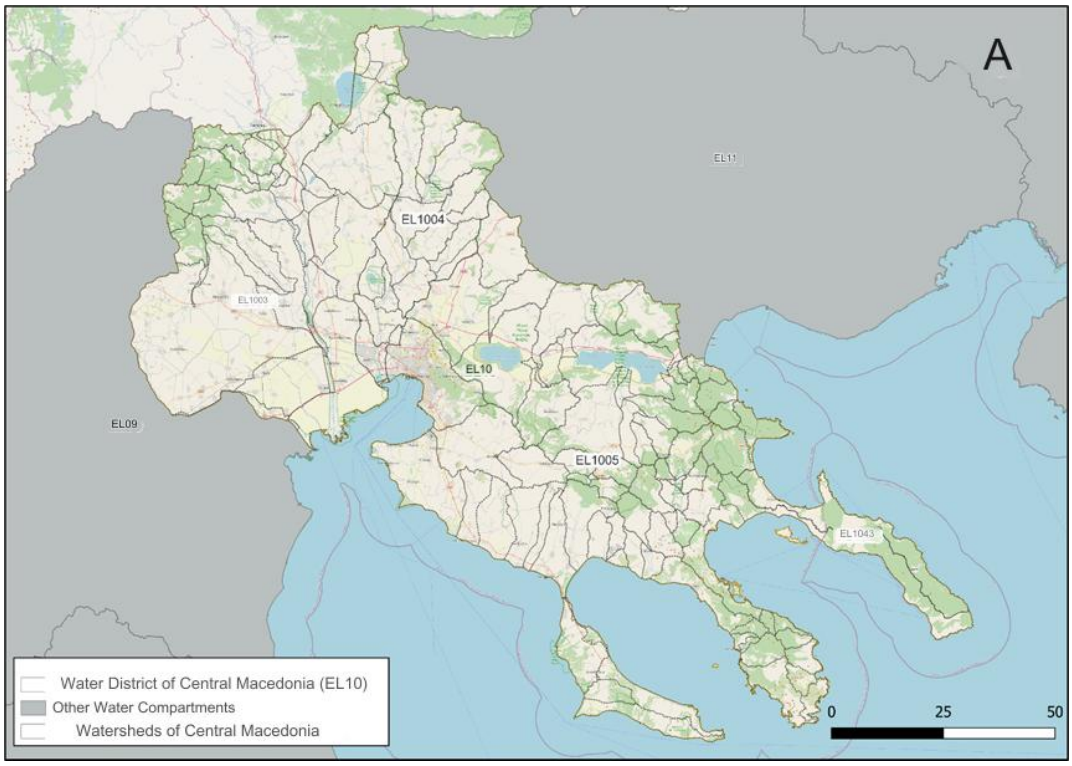
3.1 RIVER BASINS

With the decision 706/16-7-2010 (Government Gazette B' 1383 /2.9.2010 & Government Gazette B' 1572/ 28.9.2010), of the National Water Commission "on defining the River Basins of the country and defining the competent Regions for the their management and protection" and the approval decisions of the National Water Commission of the 1st RBMP, the forty-six (46) River Basins were defined, which fall under fourteen (14) River Basin Areas (corresponding to the term Water Divisions of article 3 of Presidential Decree 51/2007).

The Central Macedonia RBD (EL10) consists of the River Basin District of **Axios (EL1003)**, **Gallikos (EL1004)**, **Chalkidiki (EL1005)** and **Athos (EL1043)**.

Table 3-1: Central Macedonia River Basin District (EL10)

River Basin District	Area (km^2)
Axios (EL1003)	3.326,47
Gallikos (EL1004)	1.049,62
Chalkidiki (EL1005)	5.541,93
Athos (EL1043)	239,26
TOTAL (The coastal WB are not included, and their Area is 3.295,17 km^2)	10.157,28



Map 3-1: Borders of Central Macedonia RBD (EL10)- Watersheds

3.2 NATURAL CHARACTERISTICS

The River Basin District of Central Macedonia (EL10), with an area of 10,157.28 km2, is bounded by the Kerdylia, Vertikos, Krousia mountains and the Kerkini (Beles) mountain range to the east, Paiko mountain and the Peripheral Trench to the west and the Kerkini mountain range to the north and the border between Greece and North Macedonia. To the east it borders with the Eastern Macedonia Region (EL11) and to the west with the Western Macedonia Region (EL09).

The Central Macedonia Region (EL10) includes extensive plains, mainly in its western part, the most important of which are those of Thessaloniki, Giannitsa and Lagadas, while in its eastern part the Chalkidiki basin can be distinguished. Its morphology is mainly semi-mountainous with an average altitude of approximately 245 m, while 36% of its area has an altitude of less than 100 m and only 3% of its area has an altitude of over 800 m.

Its coasts, with a total length of 910 km, are characterized by strong relief, resulting in the formation of numerous rocky bays.

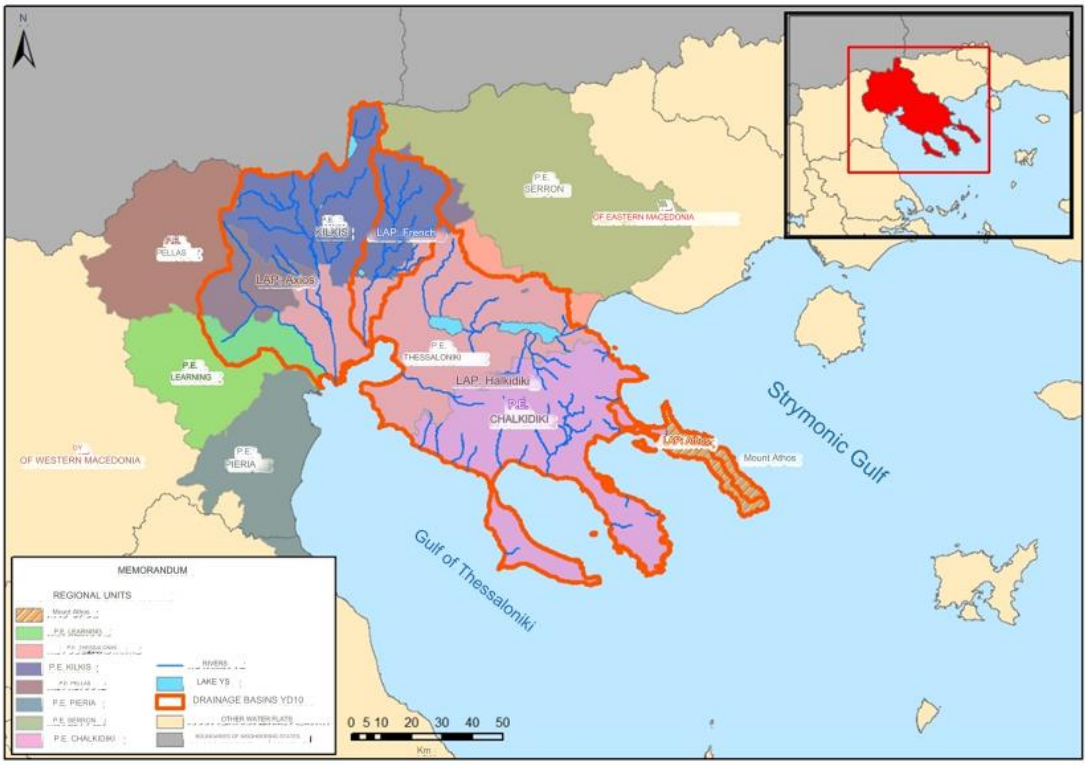
The Department is characterized by a variety of climates, such as Mediterranean in the region of Chalkidiki and the coastal areas, continental in its interior and mountainous in the high altitude areas. The average annual rainfall ranges from 400 to 800 mm, while in the mountainous parts it exceeds 1000 mm. Snowfalls are quite common during September-April. The average annual temperature ranges between 14.5°C and 17°C, with the coldest month in January and the warmest in July

3.3 HUMAN FEATURES

The Water Basin District is under the administration of Central Macedonia Region. Within its boundaries is the entire area of the Regional Units of Chalkidiki and Thessaloniki, most of the RU and Kilkis, as well as a significant part of the RU of Pella and Imathia. Also, the Central Macedonia Region (EL10) includes the Athos Mount[1].

The administrative affiliation of the Water District, according to Law 3852/4.6.2010 (Government Gazette A' 87) "New Architecture of Self-Government and Decentralized Administration- Kallikratis Program", appears in the Maps and Table below.

[1] Based on the provisions of article 105, paragraph 1 of the Constitution, Mount Athos is a self-governing part of the Greek State



Map 3-2: Water Basin District of Central Macedonia (EL10)- Administrative Division at Regional level

Map 3-3: Administrative Division of Central Macedonia (EL10) at municipal level

The following table presents the permanent population of the RBD and its distribution by RB for the years 2001, 2011 and 2021, based on the assumptions of distribution in RBD of the current revision, and the corresponding percentage changes.

Table 3-2: Permanent Population of the WD of Central Macedonia (EL10), years 2001–2011-2021 by RBD & Percentage Change

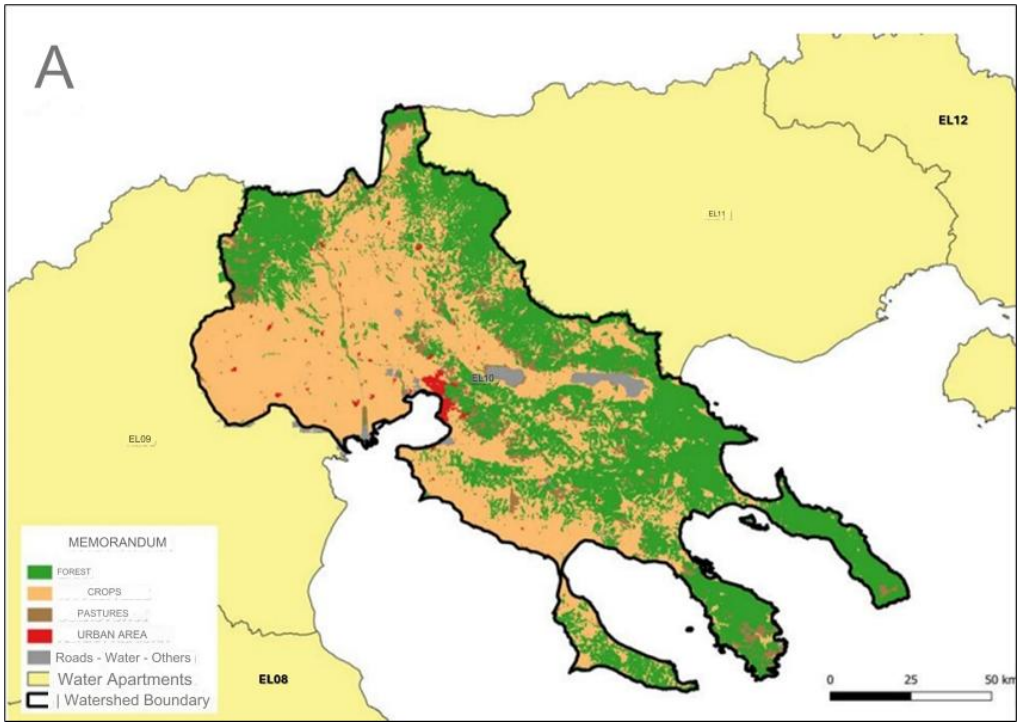
Administrative division	Permanent Population			Percentage Change	
	2001	2011	2021	2001-2011	2011-2021
RBD of Central Macedonia (EL10)	**1.387.464**	**1.413.299**	**1.368.554**	**1,86%**	**-3,17%**
Axios RB	240.370	232.680	210.202	-3,20%	-9,66%
Gallikos RB	40.664	42.648	41.094	4,88%	-3,64%
Chalkidiki RB	1.100.012	1.131.541	1.111.188	2,87%	-1,80%
Athos RB	6.417	6.430	6.070	0,20%	-5,60%

A decrease in population is observed in all the RBs in Central Macedonia, with the largest one in the RB of Athos by 9.66%. In the RBDof Central Macedonia (EL10), there is a decrease in the population, of the order of 3.17%, during the period 2011-2021.

In the RBD of Halkidiki, which also gathers the largest population of the RBD of Central Macedonia (EL10) (81% of the totalRBD) is the Urban Planning Complex of Thessaloniki (UPCTH) and its Periastic Zone, as well as the peninsulas of Kassandra and Sithonia of Chalkidiki Regional Unit. It is worth noting that while the RBD of Chalkidiki as a whole shows a population decrease (about 5.6%), there are municipalities of the Urban Planning Complex of Thessaloniki, where small increases are observed (Municipalities of Thermi, Kalamaria, Kordelio- Evosmou, Pavlou Mela, Pylaia- Hortiatis and Oreokastro). In general, the dominant trend is the decrease of the population in densely populated areas within the urban complex.

3.3.1 Land Use

The land uses of the Water District as they emerged from the Agricultural Parcel Identification System (API, 2021) of OPEKEPE are presented in the following map. 52.22% (5,304 sq. m.) of RND of Central Macedonia (EL10) consists of agricultural lands/crops. The second largest category of land is the forest and semi-natural lands, which occupy 26% (2,641 sq.) of the area of the RBD of Central Macedonia (EL10). Urban and other artificial areas (including peri-urban green spaces, transport and mines- quarries) occupy 2.25% (229 sq.m.), the areas covered by water and roads 2.53% (257 sq.m.) of the area of Central Macedonia (EL10). Finally, the remaining uses cover 2.52% (256 sq.) of the area of the Water District.



Map 3-4: Land Use in the Central Macedonia RBD (EL10)

The distribution of land uses is given in the diagram below.

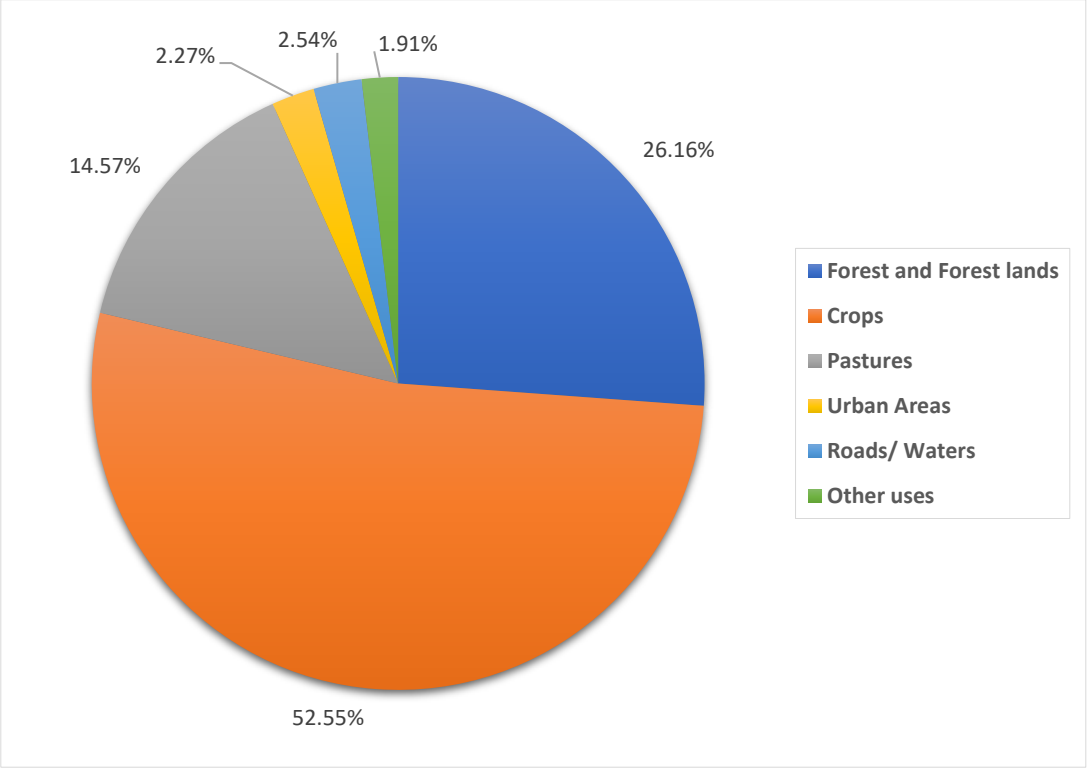


Figure 3-1: Distribution of land uses in the RBD of Central Macedonia (EL10)

3.3.2 Demand and main uses of water

The required withdrawals to cover the needs of the RD of Central Macedonia (EL10), amounts to 1,398,234,592 m^3, of which 931,999,856 m^3 (66.66%) comes from water bodies of the RD of Central Macedonia (EL10). A quantity of water equals to approximately 463,899,627 m^3 is transferred from the Aliakmonas district of EL09 to the Central Macedonia District (EL10), through the Aliakmonas-Axios Union Canal, to cover the irrigation needs of the District and the water needs of the Thessaloniki Urban Complex. A small amount of 131,223 m^3 comes from RB EL1106 (Strymonas).

Irrigation is the dominant use in Central Macedonia (EL10), followed by water supply (Figure 3-2).

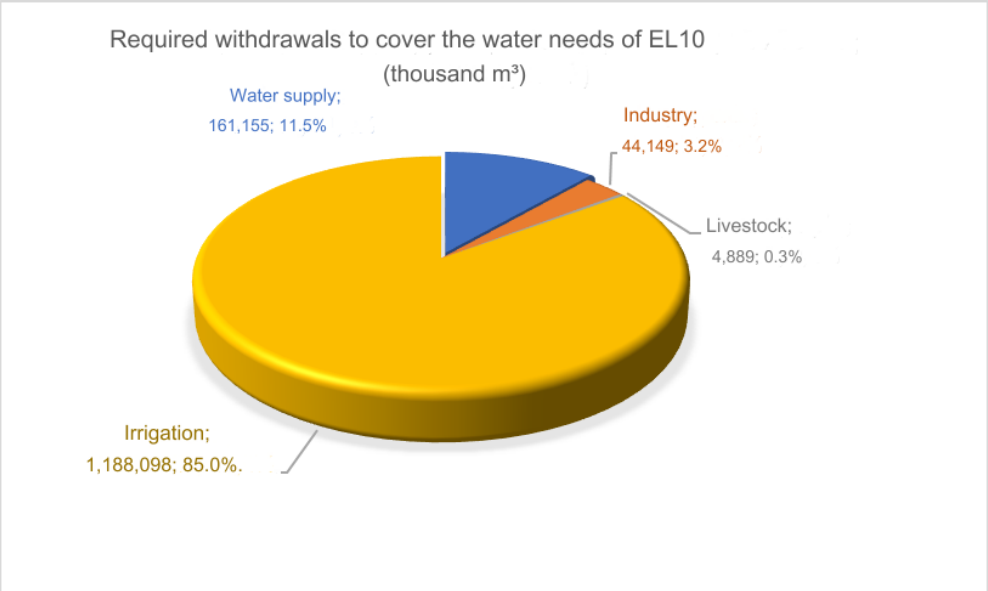


Figure 3-2: Required withdrawals to cover the water needs of the Central Macedonia Region (EL10) inside and outside the RBD

The most important demand for water in the RBD of Central Macedonia (EL10) corresponds to irrigation, which is mainly covered by surface water bodies. The total annual withdrawals from the surface systems within the RBD of Central Macedonia (EL10) to cover irrigation needs are estimated to amount to 360,407,528.7 m^3.

Of the total withdrawals, 30,430,126 m^3 come from private wells for industrial use and 389,006,635 m^3 come from private wells for irrigation.

Table 3-3: Apportionment of withdrawal into uses, from surface and ground water bodies (m^3/year)

RB		Water supply	Irrigation	Livestock Farming	Industry	Withdrawals from water bodies outside of the RBD	Total Withdrawals
EL1003 (Axios)	Surface		353.434.594			413.352.434	766.787.028
	Ground	55.608.763	283.867.013	1.501.450	22.377.189	2.203.886	365.558.300
EL1004 (Gallikos)	Surface					4.171.101	4.171.101
	Ground	4.878.479	7.740.467	747.183	7.425.322		20.842.463
EL1005 (Chalkidiki)	Surface		6.972.934			46.376.093	53.349.027
	Ground	53.115.957	122.632.825	2.637.617	8.520.524	131.223	186.987.135
EL1043 (Athos)	Surface						
	Ground	403.349	127.786	2.803	5.600		539.538
Subtotals	**Surface**		**360.407.529**			**463.899.627**	**824.307.156**
	Ground	**114.006.549**	**414.368.090**	**4.889.053**	**38.328.636**	**2.335.109**	**573.927.436**
Total		**114.006.549**	**774.775.619**	**4.889.053**	**38.328.636**	**466.234.736**	**1.398.234.592**
Of which private wells		**-**	**389.006.635**		**30.430.126**		**419.436.761**

3.3.3 Socioeconomic importance of the main water uses

Water in economic activities in every production sector is an input to the production process. In the primary sector it is particularly important for the irrigation of agricultural lands and livestock, in the secondary sector for industry, energy production and constructions mainly, while the parameters affecting domestic water use and also the tertiary sector (and mainly regarding in tourism with the increase in water and sewage needs during the tourist season) is obviously the population, permanent and seasonal, for whom water is a type of basic necessity and hygiene but also economic prosperity, which affects the uses of water for recreation, comfort, etc. (e.g. swimming pools, extensive gardens, etc.).

Therefore, the population, the prosperity indicators and the structure of the production activities, are indications on the one hand for the corresponding structure of water uses and on the other hand for the possibility of paying the consideration for the use of water by those served.

The analysis of the socio-economic importance of water uses examines the productive sectors by RB (at the level of Gross Value Added- GVA) and their correlation with water consumption. The GVA produced by the primary sector corresponds to water withdrawals for agricultural use, the GVA produced by the secondary sector corresponds to water withdrawals for industrial use while the other part of the GVA (tertiary sector and constructions) corresponds to other water withdrawals for water supply. In the Water District of Central Macedonia, for each cubic meter of withdrawal, an average of 12.24 euros is produced. Each cubic meter of abstractions for water supply produces 86.49 euros, making this use the most efficient, abstractions for industry produce 55.59 euros per cubic meter while abstractions for irrigation produce 0.61 euros per cubic meter.

The consultation was a hybrid one, in which stakeholders and citizens were given the opportunity to attend the conference as well as to express their opinions, comments and positions online and in person. Therefore, the observations and comments of the participants could be submitted online in a live chat of the youtube and facebook platform, and with a physical presence in the room.

3.4 COMPETENT AUTHORITIES

Law 3199/2003 (Government Gazette A' 280) on the Protection and Management of Water Bodies harmonizes the National Law with the provisions of the Directive 2000/60/EC and defines the competent authorities for the protection and management of Water Bodies. More specifically, regarding the competent authorities, the following applies:

- According to Article 26 of Law 5037/2023 (Government Gazette A΄ 78/28.03.2023), from March 28th, 2023, the National Water Committee means the Minister of Environment and Energy, subject to more specific provisions. The Ministry of Environment and Energy (MEE) draws up the policy for the protection and management of water and controls its implementation.

- According to article 4 of Law 3199/2003, the General Directorate for Water of the Ministry of the Environment and Energy, among other things, coordinates the services and state bodies and participates in the competent authorities of the EU for every issue related to the protection and management of water, recommends the general rules for costing and invoicing water and monitors their compliance, recommends legislative and administrative measures for the protection and management of water, monitors the quality and quantity at a national level of water in collaboration with the Water Directorates of the Decentralized Administrations and ensures the development and operation of the national network for monitoring the quality and quantity of water.

In addition, the following Ministries are involved in the implementation of Directive 2000/60/EC at the National Level: Min. of Rural Development and Food, Min. of Infrastructure and Transport, Min. of Development, Min. of National Economy and Finance, Min. of Health, Ministry of Shipping and Insular Policy, Min. Interior.

Designated competent authorities at regional level:

- The **Water Council of Decentralized Administration (W.C.D.A.),** which is recommended in each Water District that extends to the administrative boundaries of one or more Decentralized Administrations and is an instrument of social dialogue and consultation on matters of water protection and management.
- The **Water Directorates of the Decentralized Administration**, through which the responsibilities of the Decentralized Administration for the protection and management of water are exercised. The Decentralized Administration of Attica, to which the RB of the Department of Attica (EL06) falls, includes the Water Administration of Attica.

In addition, in matters of implementation of the Directive 2000/60/EC, the Municipalities of the 1st and 2nd Grade are involved at the Regional Level.

The following table provides an overview of the nature of the role played by each competent authority by thematic area in the context of water management and protection.

Table 3-4: Role of competent authority per thematic subject

Competent Authority	Main Roles												
	Analysis of pressures and impacts	Economic analysis	Surface water monitoring	Groundwater monitoring	Assessment of surface water status	Groundwater Status Assessment	RBMP preparation	ES preparation	Measures Implementation	Audience participation	Enforcement of regulations	Application coordination	Data Submission to the European Commission
General Directorate for Water of the Hellenic Ministry of Environment & Energy	M	M	M	M	M	M	M	M	M	M	M	M	M
Water Directorate of the Decentralised Administration	M	M	O	O	O	O	M	M	M	M	M	M	-
Ministry of Foreign Affairs	-	-	-	-	-	-	-	-	-	-	M	-	-
Ministry of Rural Development and Food	-	-	-	-	-	-	-	-	M	-	O	-	-
Ministry of Infrastructure and Transport	-	-	-	-	-	-	-	-	M	-	O	-	-
Ministry of Development	-	-	-	-	-	-	-	-	O	-	M	-	-
Ministry of Economy and Development	-	-	-	-	-	-	-	-	O	-	M	-	-
Ministry of Health	-	-	-	-	-	-	-	-	M	-	O	-	-
Ministry of Shipping and Island Policy	-	-	-	-	-	-	-	-	-	-	M	-	-
Ministry of Interior	-	-	-	-	-	-	-	-	O	-	M	-	-
Municipalities	-	-	-	-	-	-	-	-	M	-	O	-	-
Regions	-	-	-	-	-	-	-	-	M	-	O	-	-

M	*Main Role*
O	*Other Role*
-	*No role*

4 PRESSURES AND IMPACTS

4.1 POINT SOURCES OF POLLUTION

All point sources of pollution that produce conventional pollutants (BOD, N, P) and have been examined in the Analytical Documentation Text- Analysis of anthropogenic pressures and their effects on surface and groundwater systems, are included in this section. The list with the categories of these pressures includes: Sewage Treatment Facilities (WTP), Drainage network discharge into a natural receiver, large hotel units, Industrial units, Livestock units, Aquaculture - Fish farms, Spills from landfills.

The final annual amounts of BOD, N and P pollutant loads produced in the study area are derived from the above individual pollution sources.

Table 4-1: Total annual loads of BOD, N and P that are produced from point sources of pollution in the Central Macedonia RBD (EL10)

POINT SOURCES OF POLLUTION	BOD (tn/ year)	N (tn/ year)	P (tn/ year)
Industry	1.412,15	2.823,10	502,38
Livestock farming	527,6	554,01	66,54
Waste Disposal sites	0	0	0
Waste Water Treatment Plants (WWTP),	1.259,06	937,64	343,99
Networks that do not end in WWTP	488,04	97,61	20,33
Aquaculture- Fish farming	0	867,81	118,13
TOTAL	3.686,85	5.280,17	1.051,37
Total in surface WB	3.018,28	4.022,38	944,73
Total in the ground WB	668,57	1.257,79	106,64

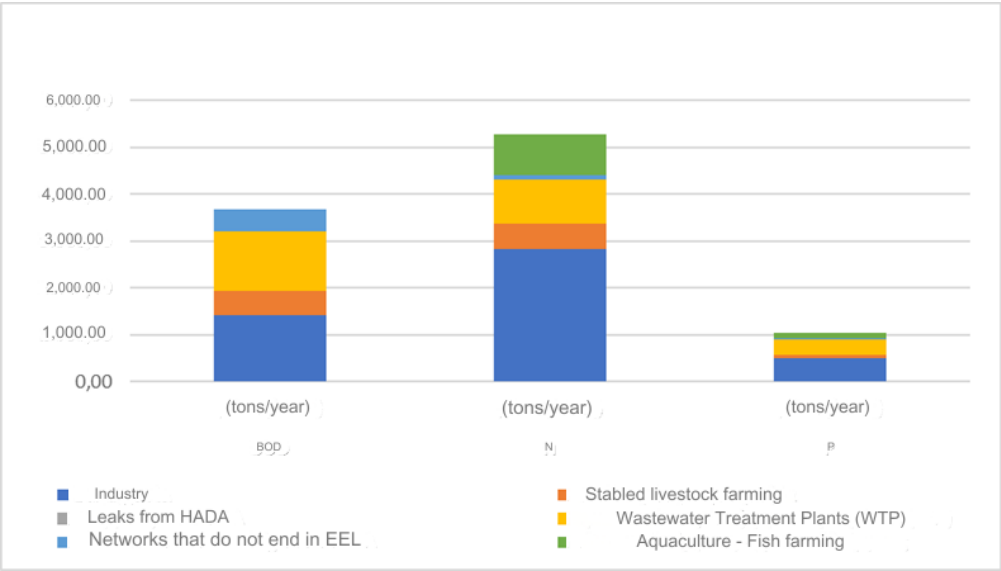


Figure 4-1: Total annual loads of BOD, N and P that are produced from point sources of pollution in the RBD of Central Macedonia (EL10)

4.2 DIFFUSED SOURCES OF POLLUTION

Diffuse sources of pollution include all sources of nutrients (BOD, N, P). The list of these pressures includes: Agriculture, Discharges not connected to sewerage network/WWTP, Farming as well as the abandoned industrial or other facilities and other diffuse sources of pollution due to atmospheric deposits as well as from natural land uses such as pastures and forests, urban areas, roads-water etc.

From the above diffuse sources of pollution derives the annual load of BOD, N and P produced that end up in the water bodies of the study area.

Table 4-2: Total annual loads of BOD, N and P that are produced from Diffuse sources of pollution in the RBD of Central Macedonia (EL10)

DIFFUSE PRESSURES	BOD (tn/ year)	N (tn/ year)	P (tn/ year)
URBAN	3.538,02	1.011,60	210,58
AGRICULTURAL	0,00	1.447,54	170,45
FARMING	85,48	69,09	6,60
OTHER SOURCES	0,00	22,28	0,12
TOTAL	3.623,50	2.550,51	387,75
Total in surface WB	3.198,22	810,42	196,33
Total in the ground WB	425,28	1.740,09	191,42

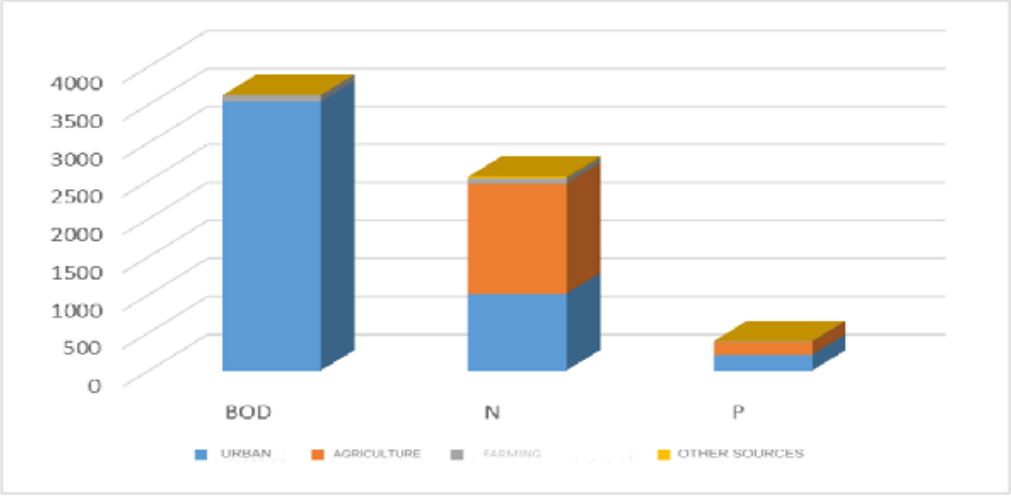


Figure 4-2: Total annual loads of BOD, N and P that are produced from Diffuse sources of pollution of the RBD of Central Macedonia (EL10)

4.3 HYDROMORPHOLOGICAL PRESSURES

Below is presented the assessment of the importance of the pressures due to hydromorphological changes that the surface water bodies of the WD of Central Macedonia (EL10) receive.

Table 4-3: Assessment of pressures on the hydromorphological characteristics of the RBD of the Central Macedonia (EL10)

WB Code	WB Name	Significance of Hydromorphological Pressures	Pressure Intensity
EL1003L000000006A	ARTIFICIAL LAKE ARTZAN	HMWB	HMWB
EL1003L0F0000001N	DOIRAN LAKE	Moderate	Moderate
EL1003R000000001N	MAVRORREMA	Good	Good
EL1003R000000002N	REMA2	Good	Good
EL1003R000000003N	XIRORREMA	Good	Good
EL1003R000400031A	LOUDIAS R.	HMWB	HMWB
EL1003R000400032A	LOUDIAS R.	HMWB	HMWB
EL1003R000400033N	XIROPOTAMOS	Good	Good
EL1003R000400034N	XIROPOTAMOS	Unassigned	Good
EL1003R000400035N	PETRORREMA	Unassigned	Good
EL1003R0F0201004H	AXIOS R. (VARDARIS)	Poor	High
EL1003R0F0202014A	VARDAROVASI S.	HMWB	HMWB
EL1003R0F0202015N	VARDAROVASI S.	Good	Good
EL1003R0F0202116N	VARDAROVASI S.	Poor	High
EL1003R0F0203005N	AXIOS R. (VARDARIS)	Good	Good
EL1003R0F0203006N	AXIOS R. (VARDARIS)	Moderate	Moderate
EL1003R0F0204017A	TAFROS	HMWB	HMWB
EL1003R0F0204018A	TAFROS	HMWB	HMWB
EL1003R0F0204019N	MPAGIALTZAS S.	Moderate	Moderate
EL1003R0F0204120A	TAFROS	HMWB	HMWB
EL1003R0F0204121N	METALLIKON S.	Good	Good
EL1003R0F0204222N	PSARORREMA	Good	Good
EL1003R0F0204223N	PSARORREMA	Good	Good
EL1003R0F0205007N	AXIOS R. (VARDARIS)	Unassigned	Good
EL1003R0F0206024N	GORGOPORIS R.	Good	Good

WB Code	WB Name	Significance of Hydromorphological Pressures	Pressure Intensity
EL1003R0F0206025N	GORGOPORIS R.	Moderate	Moderate
EL1003R0F0206026N	GORGOPORIS R.	Unassigned	Good
EL1003R0F0207008N	AXIOS R. (VARDARIS)	Good	Good
EL1003R0F0207009N	AXIOS R. (VARDARIS)	Moderate	Moderate
EL1003R0F0207010N	AXIOS R. (VARDARIS)	Unassigned	Low
EL1003R0F0208027N	KOTZA S.	Good	Low
EL1003R0F0208028N	MEGALO S.	Poor	High
EL1003R0F0208029N	MEGALO S.	Unassigned	Low
EL1003R0F0208130N	LYKOREMA	Unassigned	Low
EL1003R0F0209011N	AXIOS R. (VARDARIS)	Good	Low
EL1003R0F0209012N	AXIOS R. (VARDARIS)	Unassigned	Low
EL1003R0F0209013N	AXIOS R. (VARDARIS)	Good	Low
EL1003T0001N	AXIOS ELECTORAL SYSTEM	Poor	High
EL1004L000000005N	LAKE PIKROLIMNI	Moderate	Moderate
EL1004R000201001N	GALLIKOS R.	Poor	High
EL1004R000201002N	GALLIKOS R.	Poor	High
EL1004R000201003N	GALLIKOS R.	Good	Low
EL1004R000201004N	GALLIKOS R.	Good	Low
EL1004R000202008N	XIROPOTAMOS	Good	Low
EL1004R000202009N	XIROPOTAMOS	Good	Low
EL1004R000202110N	XIROPOTAMOS	Good	Low
EL1004R000203005N	GALLIKOS R.	Good	Low
EL1004R000204011N	MEGALO R.	Good	Low
EL1004R000204012N	MEGALO R.	Good	Low
EL1004R000204113N	MEGALO R.	Good	Low
EL1004R000205006N	GALLIKOS R.	Good	Low
EL1004R000206014N	GALLIKOS R.	Good	Low
EL1004R000206015N	GALLIKOS R.	Good	Low
EL1004R000206116N	GALLIKOS R.	Good	Low
EL1004R000207007N	SPANOS R.	Good	Low
EL1005C0001N	ELEFTERA CAPE	Unassigned	Low
EL1005C0004N	GULF OF SIGGITIKOS (CHALKIDIKI)	Unassigned	Low
EL1005C0005N	COAST OF SITHONIA	Unassigned	Low

WB Code	WB Name	Significance of Hydromorphological Pressures	Pressure Intensity
EL1005C0006N	GULF OF KASSANDRINOS (CHALKIDIKI)	Good	Low
EL1005C0007N	COAST OF KASSANDRA	Unassigned	Low
EL1005C0008A	POTIDAIA CANAL	HMWB	HMWB
EL1005C0009N	EXO THERMAIKOS GULF- KALLIKRATEIA	Good	Low
EL1005C0010N	MESA THERMAIKOS GULF - N. MICHANIONA	Good	Low
EL1005C0011H	GULF OF THESSALONIKI	Poor	High
EL1005L000000002H	MAVROUDA L.	High	High
EL1005L000000003N	VOLVI L.	Moderate	Moderate
EL1005L000000004N	KORONEIA L.	Moderate	Moderate
EL1005R000100021N	MAVROS LAKKOS	Good	Low
EL1005R000201001N	RIXIOS R.	Good	Low
EL1005R000201002N	RIXIOS R.	Unassigned	Low
EL1005R000201003N	RIXIOS R.	Good	Low
EL1005R000202010N	KERASIAS S.	Good	Low
EL1005R000203004A	DERVENI S.	HMWB	HMWB
EL1005R000203005A	DERVENI S.	HMWB	HMWB
EL1005R000204011N	ASPROPETRA	Good	Low
EL1005R000205006A	DERVENI S.	HMWB	HMWB
EL1005R000206012N	CHOLOMONTAS	Good	Low
EL1005R000206013N	CHOLOMONTAS	Good	Low
EL1005R000206014N	KOYTSIKARLI S.	Good	Low
EL1005R000206115N	VARVARAS S.	Unassigned	Low
EL1005R000206216N	CHOLOMONTAS	Good	Low
EL1005R000207007A	DERVENI S.	HMWB	HMWB
EL1005R000208017N	MEGALO	Good	Low
EL1005R000209008N	MPOGDANOU	Good	Low
EL1005R000209009N	MPOGDANOU	Good	Low
EL1005R000210018N	POTAMIA	Good	Low
EL1005R000212019N	CHORA	Good	Low
EL1005R000214020N	ARAPITSA	Good	Low
EL1005R000300022N	MPASDEKI	Good	Low

WB Code	WB Name	Significance of Hydromorphological Pressures	Pressure Intensity
EL1005R000500023N	ASPROLAKKAS	Good	Low
EL1005R000700024N	PETRENIO	Good	Low
EL1005R000900025N	K. LAKKOS	Good	Low
EL1005R001100026N	SMIXI	Good	Low
EL1005R001300027N	MYLOU	Good	Low
EL1005R001500028N	ZOGRAFITIKOS LAKKOS	Poor	High
EL1005R001700029H	ANTHEMOUS	Poor	High
EL1005R001700030N	ANTHEMOUS	Good	Low
EL1005R001900031N	REMA1	Good	Low
EL1005R002100032N	TSIGGANO	Good	Low
EL1005R002300033N	XIROLAGKAS	Moderate	Moderate
EL1005R002500034N	SALIDIKA MANDIA S.	Good	Low
EL1005R002701035N	VATONIAS	Good	Low
EL1005R002702038N	VATONIAS	Good	Low
EL1005R002703036N	VATONIAS	Unassigned	Low
EL1005R002704039N	VATONIAS	Unassigned	Low
EL1005R002704040N	VATONIAS	Good	Low
EL1005R002705037N	VATONIAS	Good	Low
EL1005R002900041N	ZAMOUNI	Good	Low
EL1005R003101042N	CHAVRIAS	Poor	High
EL1005R003102048N	KAPRINIKIA	Good	Low
EL1005R003103043H	CHAVRIAS	High	High
EL1005R003104049N	MILIADINO	Unassigned	Low
EL1005R003104050N	MILIADINO	Good	Low
EL1005R003105044N	CHAVRIAS	Good	Low
EL1005R003106051N	XINONERI	Good	Low
EL1005R003107045N	CHAVRIAS	Good	Low
EL1005R003108052N	CHAVRIAS	Good	Low
EL1005R003109046N	CHAVRIAS	Unassigned	Low
EL1005R003110053N	CHAVRIAS	Unassigned	Low
EL1005R003111047N	CHAVRIAS	Unassigned	Low
EL1005T0002N	LIMNOTHALASSA OF ANGELOHORI	Good	Low
EL1005T0003N	LIMNOTHALASSA OF ANGELOHORI	Unassigned	Low

WB Code	WB Name	Significance of Hydromorphological Pressures	Pressure Intensity
EL1043C0002N	IERISSOS GULF (CHALKIDIKI)	Good	Low
EL1043C0003N	COAST OF ATHOS	Good	Low

4.4 WATER ABSTRACTIONS

This section includes data on the total annual water abstractions for all activities and uses. The list of categories of activities and uses examined includes: Water supply, Irrigation, farming, Industrial water and other water needs and abstractions.

Below are presented the distribution of water withdrawals for the different uses within the RBD of Central Macedonia (EL10) from surface and ground waters.

Table 4-4: Total water abstractions for all uses and activities, from surface and groundwater bodies (m^3/year)

RB	Water Body code	Water supply	Irrigation	Livestock Farming	Industry	Withdrawals from water bodies outside of the RBD
EL1003	Surface	0	353.434.594	0	0	
	Ground	55.608.763	283.867.013	1.501.450	22.377.189	
EL1004	Surface	0	0	0	0	
	Ground	4.878.479	7.740.467	747.183	7.425.622	
EL1005	Surface	0	6.972.934	0	0	
	Ground	53.115.957	122.632.825	2.637.617	8.520.524	
EL1043	Surface	0	0	0	0	
	Ground	403.349	127.786	2.803	5.600	
Subtotal	Surface	**0**	**360.407.529**	**0**	**0**	**463.899.627**
	Ground	**114.006.549**	**414.368.090**	**4.889.053**	**38.328.636**	**2.335.109**
Total		**114.006.549**	**774.775.619**	**4.889.053**	**38.328.636**	**466.234.736**

4.5 OTHER PRESSURES

ther pressures considered in the context of the 2nd Revision include runoff from extractive activities (mines), desalination plants, ports - marinas - shipping, artificial enrichment of groundwater and change in groundwater level and quantity of groundwater due to underground mining or construction of large undergrounds projects.

4.6 IMPACT ASSESSMENT

4.6.1 Impacts assessment on Surface Water Bodies

Pressures Impact assessment and WB designation is based on the likelihood of failing to meet the WFD environmental objectives, taking in consideration the following information:

- The magnitude of pressure from emissions and abstractions: High (H), Moderate (M), Low (L)
- Available data and Monitoring program results
- Expert judgement, when no data is available

From the set of criteria, the WB were ranked in relation to whether or not they are likely to achieve the environmental objectives of Directive 2000/60/EC and the summary results are presented in the following table.

Table 4-5: Risk assessment of SWB failing to meet of the objectives in RBD of Central Macedonia (EL10)

	Risk Assessment Categories *								
	NR		PNR		PAR		AR		Total
WB Type	Number of WB	Percentage of WB (%)	Number of WB	Percentage of WB (%)	Number of WB	Percentage of WB (%)	Number of WB	Percentage of WB (%)	Number of WB
River WB	45	36.29%	9	7.26%	22	17.74%	28	22.58%	104
Lake WB / River HMWB – lake type (reservoirs)	0	0.00%	2	1.61%	0	0.00%	4	3.23%	6
Transitional WB	0	0.00%	0	0.00%	1	0.81%	2	1.61%	3
Coastal WB	8	6.45%	2	1.61%	1	0.81%	0	0.00%	11
Total	**53**	**42.74%**	**13**	**10.48%**	**24**	**19.35%**	**34**	**27.42%**	**124**

** Regarding the assessment of the risk of not achieving the objectives, the following categories are distinguished: at risk (AR), probably at risk (PAR), probably not at risk (PNR), not at risk (NR)*

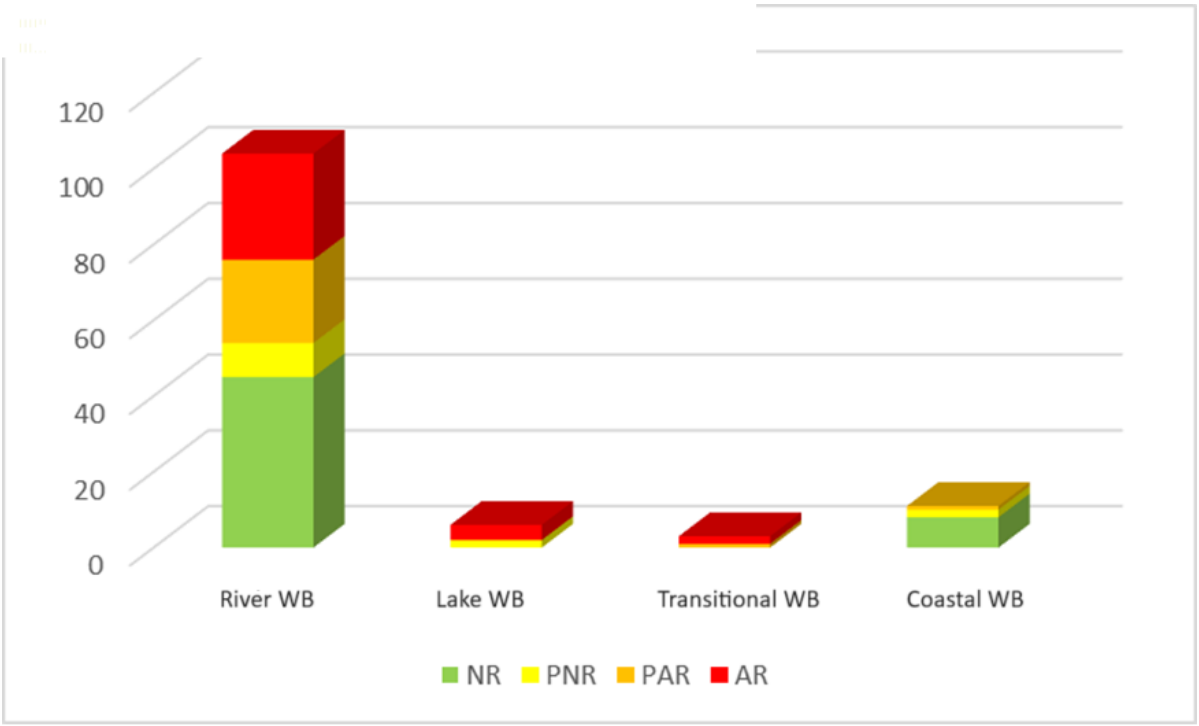


Figure 4-3: Risk assessment of SWB failing to meet the objectives in RBD of Central Macedonia (EL10)

4.6.2 Impacts assessment on Groundwater Bodies

Sources of pollution such as agriculture, animal husbandry and municipal waste are potential pressures on groundwater resources. According to the analysis carried out to quantify the pressures exerted on the surface waters, it appears that a part of the pollutant loads produced by the respective activities are inflows with the recipient being the subsoil.

As an element for quantifying the pollution that ends up in the groundwater from the above-mentioned pressures, only the database file of changes in the quality (chemical) state of the groundwater at specific monitoring locations (monitoring network) is available. Main parameters responding to the existing databases are the concentrations of nitrate, ammonia ions, chloride, conductivity and trace elements.

Table 4-6: Table of qualitative and quantitative status of groundwater bodies of the RBD of Central Macedonia (EL10)

No	Code	Name	Quantitative status	Decline water levels Trend	Chemical status	Pollutant Trend	Exceeded quality parameters
1	EL1000010	Loudia	GOOD	At one place: EL1011003	GOOD	Significant increase in NO3 in two places (EL10011003, EL10011004)	Cl, NO_3, SO_4 ,NH_4, Ni, As, Fe, Mn
2	EL1000020	Paikou	GOOD	At one place: EL10021001 (source)	GOOD	Not recorded	OXI
3	EL1000031	Axiou (a)	POOR	At 7 places	POOR	Significant increase in NO3 in two places (EL10031019, EL10031010) and Significant increase in Cl in two places (EL10031002, EL10031007)	E.C., Cl, NO_3, NH_4, Hg, As, Fe, Mn
4	EL1000032	Axiou (b)	GOOD	NO	GOOD	Significant increase in NO3 in one place (EL10031006) and significant decrease in Cl in one place (EL10031016)	NO_3
5	EL100F040	Doiranis	POOR	NO	GOOD	Significant increase in NO3 in one place (EL10041005)	NO_3, Al, Fe, Mn
6	EL1000160	Mavroneriou	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
7	EL100F230	Eastern Paikou	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
8	EL100F240	Evzonon	GOOD	Not specified, in the absence of data	GOOD	Not recorded	NO
9	EL100F250	Pontoherakleias-Metamorfosis	GOOD	Not specified, in the absence of data	GOOD	Not specified, in the absence of data	NO_3, As, Fe, Mn
10	EL100F260	Mytaka	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
11	EL1000270	Vafeiochoriou	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-

No	Code	Name	Quantitative status	Decline water levels Trend	Chemical status	Pollutant Trend	Exceeded quality parameters
12	EL100F280	Megalis Sternas	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
13	EL1000050	Gallikou	GOOD	At one place: EL10051002	GOOD	Not specified, in the absence of data	E.C., Cl, NO_3, SO_4 ,NH_4,Ni, As, Mn
14	EL1000210	Mesaiou	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
15	EL1000220	Nteve Koran	GOOD	Not specified, in the absence of data	GOOD	Not recorded	NO
16	EL1000061	Yp. Moudanion	POOR	At one place: EL10061003	POOR	Significant increase in Cl in two places (EL10061001, EL10061011) and in NO3 in one place EL10061001	E.C., Cl, NO_3, NO_2,SO_4 ,NH_4, As, Ni,Mn
17	EL1000062	Yp. Neas Triglias	GOOD	At the unique place EL10061012	GOOD	Not recorded	E.C.
18	EL1000071	Yp. Neas Koroneias	POOR	At one place: EL10071001	POOR	Significant increase in NO3 in three places (EL10071001, EL10071011, EL10071008)	NO_3, SO_4, Al, Fe, Mn
19	EL1000072	Yp. Volvis	POOR	At one place: EL10071022	GOOD	Significant increase in NO3 in one place (EL10071013)	NO_3, NH_4, Al, As, Fe, Mn
20	EL1000081	Yp. Kato Rou Anthemounta	POOR	At one place: EL10081002	GOOD	Not recorded	Mn
21	EL1000082	Yp. Galarinou-Galatistas	GOOD	NO	GOOD	Not recorded	NO
22	EL1000083	Yp. Thermis – N. Rysiou	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
23	EL1000090	Kassandras	GOOD	Not specified, in the absence of data	GOOD	Significant increase in Cl in one place (EL10091003)	E.C., Cl, Fe, Mn
24	EL1000100	Ormylias	POOR	At one place: EL10010001	POOR	Not recorded	Cl, As, Fe, Mn
25	EL1000120	Mavroudas	GOOD	Not specified, in the absence of data	GOOD	Not recorded	NO
26	EL1000131	Yp. Asprolakka	GOOD	NO	GOOD	Not recorded	NO
27	EL1000132	Yp. Kokkinolakka	GOOD	Not specified, in the absence of places	POOR	Not specified, in the absence of data	SO_4
28	EL1000140	Olympiadas	GOOD	Not specified, in the absence of data	GOOD	Not recorded	NO
29	EL1000150	Krousion–Kerdyllion	GOOD	NO	GOOD	Not recorded	As
30	EL1000180	Sithonias	GOOD	NO	GOOD	Not specified, in the absence of data	E.C., Cl, SO_4, As, Ni, Fe, Mn

No	Code	Name	Quantitative status	Decline water levels Trend	Chemical status	Pollutant Trend	Exceeded quality parameters
31	EL1000191	Yp. Skourion	GOOD	Not specified, in the absence of places	POOR	Not specified, in the absence of data	SO_4
32	EL1000192	Yp. Olympiadas	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
33	EL1000193	Yp. Cholomonta-Oraiokastrou	GOOD	Not specified, in the absence of data	GOOD	Not recorded	Mn
34	EL1000200	N. Rodon	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
35	EL1000290	Ammoulianis	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
36	EL1000300	Diaporos	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
37	EL1000170	Mount Athos	GOOD	Not specified, in the absence of places	GOOD	Not specified, in the absence of data	-
38	EL1000110	Ierissou	GOOD	Not specified, in the absence of data	GOOD	Not recorded	As

5 DESIGNATION AND CLASSIFOCATION OF THE WATER BODIES IN THE RBD

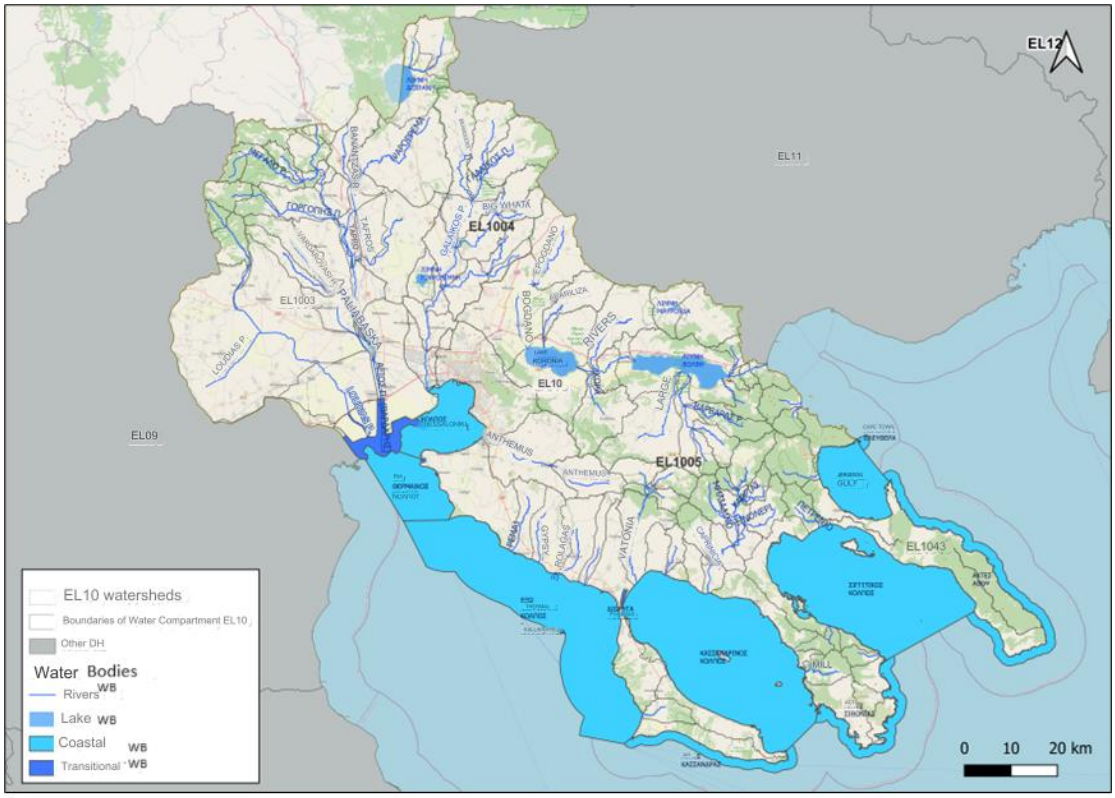
5.1 SURFACE WATER BODIES (SWB)

According to the 2nd River Basin Management Plan Revision in the Central Macedonia RBD (EL10), no changes occurred in terms of defining the RBD in relation to those that had arisen during the 1st Revision.

More specifically, in the context of the 2nd Revision, a total of **one hundred and twenty-four (124) surface water bodies** were identified in the Central Macedonia RBD (EL10), the distribution of which in the RBD is shown in the following table

Table 5-1: Number of Surface Water Bodies in the Central Macedonia RBD (EL10) for each RB

WB TYPE	RB Axios EL1003	RB Gallikos EL1004	RB Chalkidiki EL1005	RB Athos EL1043	TOTAL RB
River WB	35	16	53	-	104
Lake WB	2	1	3	-	6
Transitional WB	1	-	2	-	3
Coastal WB	-	-	9	2	11
TOTAL SURFACE WB	38	17	67	2	124



Map 5-1: Surface WB in the RBD of Central Macedonia (EL10)

In the context of the 2nd RBMP Revision, the National Monitoring Network of Surface WB was based on 50 stations, of which 36 (17 operational and 19 supervisory) are related to river WB,

7 (5 operational and 2 supervisory) to lake WS, 1 transitional WB (operational) and 6 stations (4 operational and 2 supervisory) associated with coastal WB.

The following Tables include the status and classification data of the SWB of the Central Macedonia RBD (EL10) as they emerged during the 2nd RBMP Revision.

5.1.1 River WB

The typology and classification of the state of river water bodies of the WB of Central Macedonia (EL10) is presented in the following tables. Also recorded are the differences in ecological and chemical status between the 1st RBMP and its 1st and 2nd Revisions.

Table 5-2: River water bodies and typology, according to the European Decision 2018/229/EE and the MED GIG, for every RB of the Central Macedonia (EL10) WB

No	WB Name	WB Code	Coategory **	Length (km)	Immediate Catchment Area (km^2)	Upstream Catchment area (km^2)	Mean Annual Flow (hm^3)	WB Type
Axios RB(EL1003)								
1	MAVRORREMA	EL1003R000000001N	NAT	5,97	24,66	24,66	4,16	R-M1
2	REMA2	EL1003R000000002N	NAT	3,63	11,56	95,33	16,28	R-M1
3	XIRORREMA	EL1003R000000003N	NAT	10,00	83,77	83,77	14,12	R-M1
4	LOUDIAS R.	EL1003R000400031A	AWB	21,12	187,41	1166,95	251,05	R-M3
5	LOUDIAS R.	EL1003R000400032A	AWB	41,93	887,92	979,5	217,49	R-M2
6	XIROPOTAMOS	EL1003R000400033N	NAT	10,70	6,95	91,62	27,74	R-M1
7	XIROPOTAMOS	EL1003R000400034N	NAT	12,19	61,97	84,67	24,36	R-M1
8	PETRORREMA	EL1003R000400035N	NAT	7,48	22,7	22,7	9,27	R-M1
9	AXIOS R. (VARDARIS)	EL1003R0F0201004H	HMWB	19,67	8,47	22232,51	4104,11	R-L2
A10	VARDAROVASI S.	EL1003R0F0202014A	AWB	18,09	158,62	318,5	48,65	R-M2
11	VARDAROVASI S.	EL1003R0F0202015N	NAT	19,29	60,8	60,8	9,45	R-M1
12	VARDAROVASI S.	EL1003R0F0202116N	NAT	20,87	99,05	99,05	15,97	R-M1
13	AXIOS R. (VARDARIS)	EL1003R0F0203005N	NAT	8,30	8,62	21905,57	4053,33	R-L2
14	AXIOS R. (VARDARIS)	EL1003R0F0203006N	NAT	15,00	59,34	21896,95	4053,33	R-L2
15	TAFROS	EL1003R0F0204017A	AWB	13,64	29,59	721,46	118,64	R-M2

No	WB Name	WB Code	Coategory **	Length (km)	Immediate Catchment Area (km^2)	Upstream Catchment area (km^2)	Mean Annual Flow (hm^3)	WB Type
16	TAFROS	EL1003R0F0204018A	AWB	5,39	16,27	419,86	68,23	R-M2
17	MPAGIALTZAS S.	EL1003R0F0204019N	NAT	16,67	88,53	88,53	15,95	R-M1
18	TAFROS	EL1003R0F0204120A	AWB	11,79	69,57	272	45,57	R-M2
19	METALLIKON S.	EL1003R0F0204121N	NAT	17,50	202,43	202,43	32,94	R-M2
20	PSARORREMA	EL1003R0F0204222N	NAT	1,96	27,58	315,1	48,93	R-M2
21	PSARORREMA	EL1003R0F0204223N	NAT	29,31	287,47	287,5	43,70	R-M2
22	AXIOS R. (VARDARIS)	EL1003R0F0205007N	NAT	12,82	9,08	21116,15	3924,49	R-L2
23	GORGOPORIS R.	EL1003R0F0206024N	NAT	14,42	78,81	163,07	51,36	R-M2
24	GORGOPORIS R.	EL1003R0F0206025N	NAT	8,98	36,1	84,26	33,77	R-M1
25	GORGOPORIS R.	EL1003R0F0206026N	NAT	5,00	48,15	48,15	20,75	R-M1
26	AXIOS R. (VARDARIS)	EL1003R0F0207008N	NAT	9,19	46,24	20943,99	3871,76	R-L2
27	AXIOS R. (VARDARIS)	EL1003R0F0207009N	NAT	2,50	8,17	20897,76	3862,09	R-L2
28	AXIOS R. (VARDARIS)	EL1003R0F0207010N	NAT	2,50	5,85	20889,59	3860,35	R-L2
29	KOTZA S.	EL1003R0F0208027N	NAT	7,09	10,9	140,53	51,91	R-M2
30	MEGALO S.	EL1003R0F0208028N	NAT	19,27	74,69	100,71	39,28	R-M2
31	MEGALO S.	EL1003R0F0208029N	NAT	7,48	26,03	26,03	11,02	R-M1
32	LYKOREMA	EL1003R0F0208130N	NAT	9,45	28,91	28,91	10,30	R-M1
33	AXIOS R. (VARDARIS)	EL1003R0F0209011N	NAT	6,41	49,87	20743,21	3807,29	R-L2
34	AXIOS R. (VARDARIS)	EL1003R0F0209012N	NAT	2,50	7,46	20693,34	3797,51	R-L2
35	AXIOS R. (VARDARIS)	EL1003R0F0209013N	NAT	2,52	17,39	20685,88	3796,09	R-L2
Gallikos RB (EL1004)								
36	GALLIKOS R.	EL1004R000201001N	NAT	0,79	3,08	1004,34	149,84	R-M3
37	GALLIKOS R.	EL1004R000201002N	NAT	8,40	71,44	1001,25	149,52	R-M3
38	GALLIKOS R.	EL1004R000201003N	NAT	9,19	60,13	929,8	142,44	R-M2
39	GALLIKOS R.	EL1004R000201004N	NAT	7,42	27,08	869,7	136,38	R-M2

No	WB Name	WB Code	Coategory **	Length (km)	Immediate Catchment Area (km^2)	Upstream Catchment area (km^2)	Mean Annual Flow (hm^3)	WB Type
40	XIROPOTAMOS	EL1004R000202008N	NAT	13,73	63,82	141,4	23,44	R-M5
41	XIROPOTAMOS	EL1004R000202009N	NAT	13,89	51,2	51,2	11,12	R-M1
42	XIROPOTAMOS	EL1004R000202110N	NAT	10,72	26,4	26,4	5,42	R-M1
43	GALLIKOS R.	EL1004R000203005N	NAT	11,80	71,49	701,18	109,17	R-M2
44	MEGALO R.	EL1004R000204011N	NAT	16,68	69,02	163,5	32,83	R-M2
45	MEGALO R.	EL1004R000204012N	NAT	10,40	36,09	36,09	7,84	R-M1
46	MEGALO R.	EL1004R000204113N	NAT	6,41	58,39	58,39	11,91	R-M1
47	GALLIKOS R.	EL1004R000205006N	NAT	13,52	72,55	466,19	66,12	R-M2
48	GALLIKOS R.	EL1004R000206014N	NAT	5,40	28,64	262,01	37,63	R-M2
49	GALLIKOS R.	EL1004R000206015N	NAT	16,27	93,82	93,82	12,95	R-M1
50	GALLIKOS R.	EL1004R000206116N	NAT	14,81	139,55	139,55	20,40	R-M2
51	SPANOS R.	EL1004R000207007N	NAT	24,13	131,63	131,63	18,43	R-M2
Chalkidiki RB (EL1005)								
52	MAVROS LAKKOS	EL1005R000100021N	NAT	5,57	47,38	47,38	6,17	R-M1
53	RIXIOS R.	EL1005R000201001N	NAT	4,86	30,55	1997,96	16,90	R-M3
54	RIXIOS R.	EL1005R000201002N	NAT	2,50	12,72	1967,41	8,08	R-M3
55	RIXIOS R.	EL1005R000201003N	NAT	2,50	9,75	1954,69	3,51	R-M3
56	KERASIAS S.	EL1005R000202010N	NAT	8,53	22,67	22,67	8,08	R-M1
57	DERVENI S.	EL1005R000203004A	AWB	5,38	16,08	1183,78	32,28	R-M3
58	DERVENI S.	EL1005R000203005A	AWB	7,49	38,53	1167,7	30,54	R-M5
59	ASPROPETRA	EL1005R000204011N	NAT	8,94	45,74	45,74	9,07	R-M1
60	DERVENI S.	EL1005R000205006A	AWB	0,90	4,36	988,6	11,38	R-M2
61	CHOLOMONTAS	EL1005R000206012N	NAT	8,74	16,66	214,28	35,92	R-M2
62	CHOLOMONTAS	EL1005R000206013N	NAT	6,22	45,05	124,79	20,26	R-M2
63	KOYTSIKARLI S.	EL1005R000206014N	NAT	8,82	33,29	33,29	5,61	R-M1

No	WB Name	WB Code	Coategory **	Length (km)	Immediate Catchment Area (km^2)	Upstream Catchment area (km^2)	Mean Annual Flow (hm^3)	WB Type
64	VARVARAS S.	EL1005R000206115N	NAT	19,45	72,83	72,83	13,46	R-M1
65	CHOLOMONTAS	EL1005R000206216N	NAT	10,38	46,44	46,44	8,68	R-M1
66	DERVENI S.	EL1005R000207007A	AWB	4,01	4,27	853,13	0,46	R-M2
67	MEGALO	EL1005R000208017N	NAT	22,71	205,85	205,85	26,29	R-M2
68	MPOGDANOU	EL1005R000209008N	NAT	18,40	261,65	417,8	57,42	R-M2
69	MPOGDANOU	EL1005R000209009N	NAT	21,08	156,14	156,14	25,65	R-M2
70	POTAMIA	EL1005R000210018N	NAT	21,93	140,57	140,57	14,96	R-M2
71	CHORA	EL1005R000212019N	NAT	12,73	131,11	131,11	10,44	R-M2
72	ARAPITSA	EL1005R000214020N	NAT	23,47	88,2	88,2	9,03	R-M5
73	MPASDEKI	EL1005R000300022N	NAT	3,74	29,83	29,83	4,18	R-M1
74	ASPROLAKKAS	EL1005R000500023N	NAT	9,80	92,27	92,27	13,30	R-M4
75	PETRENIO	EL1005R000700024N	NAT	9,55	50,74	50,74	9,48	R-M1
76	K. LAKKOS	EL1005R000900025N	NAT	4,45	12,15	12,15	1,05	R-M1
77	SMIXI	EL1005R001100026N	NAT	5,30	23,03	23,03	1,99	R-M1
78	MYLOU	EL1005R001300027N	NAT	11,50	49,31	49,31	4,26	R-M5
79	ZOGRAFITIKOS LAKKOS	EL1005R001500028N	NAT	6,36	43,07	43,07	6,29	R-M1
80	ANTHEMOUS	EL1005R001700029H	HMWB	18,03	223,64	316,2	19,44	R-M2
81	ANTHEMOUS	EL1005R001700030N	NAT	19,49	92,54	92,54	7,86	R-M5
82	REMA1	EL1005R001900031N	NAT	14,75	74	74	4,68	R-M5
83	TSIGGANO	EL1005R002100032N	NAT	12,31	109,19	109,19	9,07	R-M2
84	XIROLAGKAS	EL1005R002300033N	NAT	12,84	105,49	105,49	11,74	R-M2
85	SALIDIKA MANDIA S.	EL1005R002500034N	NAT	9,29	45,81	45,81	5,04	R-M5
86	VATONIAS	EL1005R002701035N	NAT	24,90	126,98	251,99	37,75	R-M2
87	VATONIAS	EL1005R002702038N	NAT	5,37	27,62	27,62	3,90	R-M1
88	VATONIAS	EL1005R002703036N	NAT	2,36	8,48	97,39	16,74	R-M1

No	WB Name	WB Code	Coategory **	Length (km)	Immediate Catchment Area (km^2)	Upstream Catchment area (km^2)	Mean Annual Flow (hm^3)	WB Type
89	VATONIAS	EL1005R002704039N	NAT	2,57	1,88	44,58	8,45	R-M1
90	VATONIAS	EL1005R002704040N	NAT	6,18	42,69	42,69	8,17	R-M1
91	VATONIAS	EL1005R002705037N	NAT	4,26	44,33	44,33	7,07	R-M1
92	ZAMOUNI	EL1005R002900041N	NAT	7,36	28,83	28,83	9,00	R-M5
93	CHAVRIAS	EL1005R003101042N	NAT	6,58	27,13	439,02	115,66	R-M2
94	KAPRINIKIA	EL1005R003102048N	NAT	13,33	53,09	53,09	9,18	R-M1
95	CHAVRIAS	EL1005R003103043H	HMWB	9,57	49,86	358,8	101,71	R-M2
96	MILIADINO	EL1005R003104049N	NAT	5,54	10,63	68,42	17,63	R-M1
97	MILIADINO	EL1005R003104050N	NAT	15,23	57,79	57,79	15,04	R-M1
98	CHAVRIAS	EL1005R003105044N	NAT	7,36	27,84	240,52	74,75	R-M2
99	XINONERI	EL1005R003106051N	NAT	10,20	65,51	65,51	18,21	R-M1
100	CHAVRIAS	EL1005R003107045N	NAT	11,51	28,13	147,17	49,82	R-M2
101	CHAVRIAS	EL1005R003108052N	NAT	10,19	29,3	29,3	10,08	R-M1
102	CHAVRIAS	EL1005R003109046N	NAT	3,67	5,68	89,75	31,93	R-M1
103	CHAVRIAS	EL1005R003110053N	NAT	4,80	14,34	14,34	5,27	R-M1
104	SMIXI	EL1005R003111047N	NAT	8,30	69,73	69,73	24,70	R-M1

*** NAT: Natural WB, HMWB: Heavily Modified WB, AWB: Artificial WB*

Table 5-3: Classification of the status of the River Water Bodies in the RBD of Central Macedonia (EL10) and differences in the status between the 1st RBMP and its 1st and 2nd Revisions

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1003R000000001N	MAVRORREMA	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1003R000000002N	REMA2	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1003R000000003N	XIRORREMA	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1003R000400031A	LOUDIAS R.	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	UNKNOWN	0	UNKNOWN	POOR	2	GOOD	0	POOR
EL1003R000400032A	LOUDIAS R.	POOR	LESS THAN GOOD	POOR	POOR	3	GOOD	3	POOR	POOR	2	GOOD	2	POOR
EL1003R000400033N	XIROPOTAMOS	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	1	GOOD	1	MODERATE
EL1003R000400034N	XIROPOTAMOS	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	MODERATE	1	GOOD	0	MODERATE
EL1003R000400035N	PETRORREMA	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1003R0F0201004H	AXIOS R. (VARDARIS)	POOR	LESS THAN GOOD	POOR	BAD	3	LESS THAN GOOD	3	BAD	POOR	2	GOOD	2	POOR
EL1003R0F0202014A	VARDAROVASI S.	UNKNOWN	UNKNOWN	UNKNOWN	POOR	3	GOOD	3	POOR	POOR	2	GOOD	2	POOR
EL1003R0F0202015N	VARDAROVASI S.	UNKNOWN	GOOD	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	1	GOOD	0	MODERATE
EL1003R0F0202116N	VARDAROVASI S.	UNKNOWN	GOOD	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	1	GOOD	1	MODERATE
EL1003R0F0203005N	AXIOS R. (VARDARIS)	POOR	LESS THAN GOOD	POOR	GOOD	1	GOOD	1	GOOD	BAD	2	GOOD	0	BAD

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1003R0F0203006N	AXIOS R. (VARDARIS)	POOR	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	POOR	0	GOOD	1	POOR
EL1003R0F0204017A	TAFROS	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	0	GOOD	1	MODERATE
EL1003R0F0204018A	TAFROS	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	0	GOOD	0	MODERATE
EL1003R0F0204019N	MPAGIALTZAS S.	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	1	GOOD	1	MODERATE
EL1003R0F0204120A	TAFROS	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	0	GOOD	1	MODERATE
EL1003R0F0204121N	METALLIKON S.	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1003R0F0204222N	PSARORREMA	UNKNOWN	UNKNOWN	UNKNOWN	POOR	3	UNKNOWN	0	UNKNOWN	GOOD	1	GOOD	1	GOOD
EL1003R0F0204223N	PSARORREMA	POOR	UNKNOWN	UNKNOWN	MODERATE	3	GOOD	3	MODERATE	POOR	2	GOOD	2	POOR
EL1003R0F0205007N	AXIOS R. (VARDARIS)	POOR	UNKNOWN	UNKNOWN	MODERATE	3	GOOD	3	MODERATE	POOR	2	GOOD	2	POOR
EL1003R0F0206024N	GORGOPORIS R.	GOOD	GOOD	GOOD	MODERATE	1	UNKNOWN	0	UNKNOWN	GOOD	1	GOOD	1	GOOD
EL1003R0F0206025N	GORGOPORIS R.	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	3	GOOD	1	GOOD
EL1003R0F0206026N	GORGOPORIS R.	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1003R0F0207008N	AXIOS R. (VARDARIS)	POOR	UNKNOWN	UNKNOWN	MODERATE	1	UNKNOWN	0	UNKNOWN	MODERATE	0	GOOD	1	MODERATE
EL1003R0F0207009N	AXIOS R. (VARDARIS)	POOR	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	3	GOOD	1	MODERATE

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1003R0F0207010N	AXIOS R. (VARDARIS)	POOR	UNKNOWN	UNKNOWN	GOOD	1	UNKNOWN	0	UNKNOWN	MODERATE	0	GOOD	1	MODERATE
EL1003R0F0208027N	KOTZA S.	MODERATE	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1003R0F0208028N	MEGALO S.	MODERATE	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	3	GOOD	1	GOOD
EL1003R0F0208029N	MEGALO S.	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1003R0F0208130N	LYKOREMA	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1003R0F0209011N	AXIOS R. (VARDARIS)	POOR	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	1	GOOD	0	MODERATE
EL1003R0F0209012N	AXIOS R. (VARDARIS)	POOR	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	2	GOOD	2	MODERATE
EL1003R0F0209013N	AXIOS R. (VARDARIS)	POOR	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	0	GOOD	1	MODERATE
EL1004R000201001N	GALLIKOS R.	POOR	LESS THAN GOOD	POOR	MODERATE	1	GOOD	1	MODERATE	MODERATE	1	GOOD	1	MODERATE
EL1004R000201002N	GALLIKOS R.	POOR	LESS THAN GOOD	POOR	POOR	3	GOOD	3	POOR	BAD	2	GOOD	2	BAD
EL1004R000201003N	GALLIKOS R.	POOR	LESS THAN GOOD	POOR	POOR	3	UNKNOWN	0	UNKNOWN	MODERATE	1	LESS THAN GOOD	0	MODERATE
EL1004R000201004N	GALLIKOS R.	POOR	LESS THAN GOOD	POOR	MODERATE	3	GOOD	3	MODERATE	MODERATE	2	GOOD	2	MODERATE

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1004R000202008N	XIROPOTAMOS	POOR	LESS THAN GOOD	POOR	POOR	3	GOOD	1	POOR	MODERATE	1	GOOD	0	MODERATE
EL1004R000202009N	XIROPOTAMOS	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	0	GOOD
EL1004R000202110N	XIROPOTAMOS	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1004R000203005N	GALLIKOS R.	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	UNKNOWN	0	UNKNOWN	MODERATE	1	LESS THAN GOOD	0	MODERATE
EL1004R000204011N	MEGALO R.	GOOD	GOOD	GOOD	POOR	3	GOOD	3	POOR	POOR	2	GOOD	2	POOR
EL1004R000204012N	MEGALO R.	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1004R000204113N	MEGALO R.	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1004R000205006N	GALLIKOS R.	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	MODERATE	1	GOOD	1	MODERATE
EL1004R000206014N	GALLIKOS R.	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1004R000206015N	GALLIKOS R.	GOOD	GOOD	GOOD	MODERATE	3	GOOD	1	MODERATE	MODERATE	3	GOOD	1	MODERATE
EL1004R000206116N	GALLIKOS R.	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1004R000207007N	SPANOS R.	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R000100021N	MAVROS LAKKOS	MODERATE	LESS THAN GOOD	MODERATE	GOOD	3	UNKNOWN	1	UNKNOWN	BAD	2	LESS THAN GOOD	2	BAD
EL1005R000201001N	RIXIOS R.	POOR	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1005R000201002N	RIXIOS R.	POOR	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R000201003N	RIXIOS R.	MODERATE	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	POOR	2	GOOD	2	POOR
EL1005R000202010N	KERASIAS S.	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R000203004A	DERVENI S.	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	0	GOOD	0	MODERATE
EL1005R000203005A	DERVENI S.	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	3	GOOD	3	MODERATE	BAD	2	GOOD	2	BAD
EL1005R000204011N	ASPROPETRA	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	1	GOOD	1	MODERATE
EL1005R000205006A	DERVENI S.	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	0	GOOD	1	MODERATE
EL1005R000206012N	CHOLOMONTAS	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	0	GOOD	2	GOOD
EL1005R000206013N	CHOLOMONTAS	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R000206014N	KOYTSIKARLI S.	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R000206115N	VARVARAS S.	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	0	GOOD
EL1005R000206216N	CHOLOMONTAS	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	1	GOOD	0	MODERATE
EL1005R000207007A	DERVENI S.	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	0	GOOD	1	MODERATE

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1005R000208017N	MEGALO	POOR	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	0	GOOD
EL1005R000209008N	MPOGDANOU	UNKNOWN	LESS THAN GOOD	UNKNOWN	POOR	3	GOOD	3	POOR	BAD	2	GOOD	2	BAD
EL1005R000209009N	MPOGDANOU	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	UNKNOWN	0	UNKNOWN	MODERATE	1	GOOD	1	MODERATE
EL1005R000210018N	POTAMIA	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R000212019N	CHORA	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R000214020N	ARAPITSA	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	3	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R000300022N	MPASDEKI	MODERATE	LESS THAN GOOD	MODERATE	MODERATE	3	UNKNOWN	1	UNKNOWN	MODERATE	3	GOOD	2	MODERATE
EL1005R000500023N	ASPROLAKKAS	GOOD	LESS THAN GOOD	MODERATE	GOOD	3	UNKNOWN	1	UNKNOWN	GOOD	2	GOOD	2	GOOD
EL1005R000700024N	PETRENIO	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R000900025N	K. LAKKOS	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R001100026N	SMIXI	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R001300027N	MYLOU	GOOD	GOOD	GOOD	MODERATE	3	GOOD	1	MODERATE	MODERATE	3	GOOD	1	MODERATE

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1005R001500028N	ZOGRAFITIKOS LAKKOS	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	MODERATE	1	GOOD	1	MODERATE
EL1005R001700029H	ANTHEMOUS	POOR	LESS THAN GOOD	POOR	BAD	3	GOOD	3	BAD	POOR	2	LESS THAN GOOD	2	POOR
EL1005R001700030N	ANTHEMOUS	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	1	GOOD	0	MODERATE
EL1005R001900031N	REMA1	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	MODERATE	1	GOOD	0	MODERATE
EL1005R002100032N	TSIGGANO	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R002300033N	XIROLAGKAS	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	UNKNOWN	0	UNKNOWN	MODERATE	1	LESS THAN GOOD	0	MODERATE
EL1005R002500034N	SALIDIKA MANDIAS.	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R002701035N	VATONIAS	UNKNOWN	UNKNOWN	UNKNOWN	MODERATE	1	UNKNOWN	0	UNKNOWN	GOOD	3	GOOD	0	GOOD
EL1005R002702038N	VATONIAS	UNKNOWN	GOOD	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R002703036N	VATONIAS	UNKNOWN	GOOD	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R002704039N	VATONIAS	UNKNOWN	GOOD	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R002704040N	VATONIAS	UNKNOWN	GOOD	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1005R002705037N	VATONIAS	UNKNOWN	GOOD	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R002900041N	ZAMOUNI	UNKNOWN	UNKNOWN	UNKNOWN	POOR	3	GOOD	1	POOR	MODERATE	1	GOOD	0	MODERATE
EL1005R003101042N	CHAVRIAS	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	BAD	2	GOOD	2	BAD
EL1005R003102048N	KAPRINIKIA	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R003103043H	CHAVRIAS	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	MODERATE	0	GOOD	0	MODERATE
EL1005R003104049N	MILIADINO	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	GOOD	1	GOOD	1	GOOD
EL1005R003104050N	MILIADINO	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	3	GOOD	1	GOOD
EL1005R003105044N	CHAVRIAS	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R003106051N	XINONERI	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R003107045N	CHAVRIAS	GOOD	GOOD	GOOD	MODERATE	1	GOOD	1	MODERATE	MODERATE	3	GOOD	1	MODERATE
EL1005R003108052N	CHAVRIAS	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R003109046N	CHAVRIAS	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R003110053N	CHAVRIAS	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD
EL1005R003111047N	VATONIAS	GOOD	GOOD	GOOD	GOOD	1	GOOD	1	GOOD	GOOD	1	GOOD	1	GOOD

*** Classification Confidence Score: «0» = Unknown, «1» = Low Confidence, «2» = Moderate Confidence, «3» = High Confidence*

5.1.2 Lake WB

The typology and classification of the state of lake water bodies of the Central Macedonia RBD (EL10) is presented in the following tables. Also recorded are the differences in ecological and chemical status between 1st RBMP and its 1st and 2nd Revisions.

Table 5-4: Lake WB and river HMWB lake type (reservoirs) with new typology for each RB of the Central Macedonia RBD (EL10)

No	WB Name	WB Code	Category**	Area(km²)	WB Type
			Axios RB (EL1003)		
1	Artificial Lake Artzan	EL1003L000000006A	AWB	1,4	Not specified
2	Doiran L.	EL1003L0F0000001N	NAT	38,87 (14,2 Hellas)	GR-SNL
			Gallikos RB (EL1004)		
3	Pikrolimni L.	EL1004L000000005N	NAT	4,27	GR-SP1
			Chalkidiki RB (EL1005)		
4	Mavrouda L.	EL1005L000000002H	HMWB	1,13	Not specified
5	Volvi L.	EL1005L000000003N	NAT	72,07	GR-DNL
6	Koroneia L.	EL1005L000000004N	NAT	48,19	GR-VSNL

***NAT: Natural WB, HMWB: Heavily Modified WB, AWB: Artificial WB*

Table 5-5: Classification of the status of the Lake Water Bodies in the RBD of Central Macedonia (EL10) and differences in the status between the 1st RBMP and its 1st and 2nd Revisions

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1005L000000004N	KORONEIA LAKE	BAD	LESS THAN GOOD	BAD	BAD	3	GOOD	3	BAD	BAD	2	GOOD	2	BAD
EL1003L000000006A	ARTIFICIAL ARTZAN LAKE	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	0	UNKNOWN	0	UNKNOWN	MODERATE	0	GOOD	0	MODERATE

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBMP	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1003L0F0000001N	DOIRAN LAKE	POOR	UNKNOWN	UNKNOWN	MODERATE	3	GOOD	3	MODERATE	MODERATE	2	LESS THAN GOOD	2	MODERATE
EL1005L000000002H	MAVROUDA LAKE	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	0	UNKNOWN	0	UNKNOWN	MODERATE	0	LESS THAN GOOD	0	MODERATE
EL1005L000000003N	VOLVI LAKE	MODERATE	LESS THAN GOOD	MODERATE	MODERATE	3	GOOD	3	MODERATE	MODERATE	2	GOOD	2	MODERATE
EL1004L000000005N	PIKROLIMNI LAKE	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	0	GOOD	3	UNKNOWN	GOOD	2	LESS THAN GOOD	2	MODERATE
*** Classification Confidence Score: «0» = Unknown, «1» = Low Confidence, «2» = Moderate Confidence, «3» = High Confidence*														

5.1.3 Transitional WB

The typology and classification of the state of transitional water bodies of the Central Macedonia RBD (EL10) is presented in the following tables. Also recorded are the differences in ecological and chemical status between 1st RBMP and its 1st and 2nd Revisions.

Table 5-6: Transitional WB for each RB of the Central Macedonia RBD (EL10)

No	WB Name	WB Code	Category**	Area(km^2)	WB Type
		Axios RB (EL1003)			
1	Axios Electoral System	EL1003T0001N	NAT	66,06	TW 2
		Chalkidiki RB (EL1005)			
2	Limnothalassa Aggelochori	EL1005T0002N	NAT	0,65	TW 1
3	Limnothalassa Agiou Mama	EL1005T0003N	NAT	2,08	TW 1

*** NAT: Natural WB, HMWB: Heavily Modified WB, AWB: Artificial WB*

Table 5-7: Classification of the status of the Transitional Water Bodies in the RBD of Central Macedonia (EL10) and differences in the status between the 1st RBMP and its 1st and 2nd Revisions

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBM	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1005T0003N	LINOTHALASSA AGIOU MAMA	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	0	UNKNOWN	0	UNKNOWN	MODERATE	0	GOOD	0	MODERATE
EL1005T0002N	LIMNOTHALASSA AGGELOCHORI	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	0	UNKNOWN	0	UNKNOWN	POOR	0	LESS THAN GOOD	0	POOR
EL1003T0001N	AXIOS ELECTORAL SYSTEM	POOR	UNKNOWN	UNKNOWN	UNKNOWN	0	GOOD	3	UNKNOWN	MODERATE	3	GOOD	2	MODERATE

*** Classification Confidence Score: «0» = Unknown, «1» = Low Confidence, «2» = Moderate Confidence, «3» = High Confidence*

5.1.4 Coastal WB

The typology and classification of the state of coastal water bodies of the Central Macedonia RBD (EL10) is presented in the following tables. Also recorded are the differences in ecological and chemical status between 1st RBMP and its 1st and 2nd Revisions.

Table 5-8: Coastal WB for each RB of the Central Macedonia RBD (EL10)

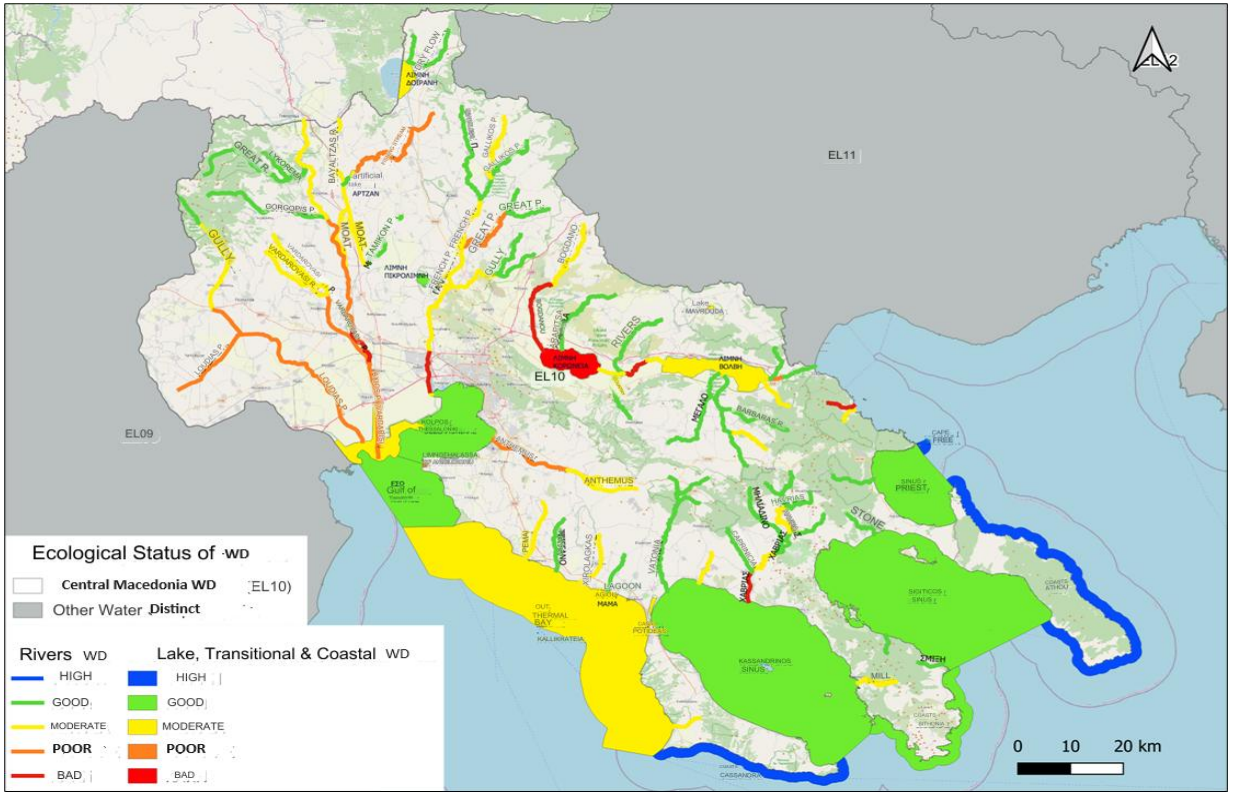
No	WB Name	WB Code	Category**	Area(km^2)
Chalkidiki RB (EL1005)				
EL1005C0008A	POTIDAIA CANAL	0,01	AWB	IIIE
EL1005C0007N	COAST OF KASSANDRA	79,13	NAT	IIIE
EL1005C0006N	GULF OF KASSANDRINOS	865,47	NAT	IIIE
EL1005C0009N	EXO THERMAIKOS GULF- KALLIKRATEIA	808,2	NAT	IIIE
EL1005C0010N	MESA THERMAIKOS GULF	177,43	NAT	IIIE
EL1005C0001N	ELEFTERA CAPE	5,49	NAT	IIIE
EL1005C0011H	GULF OF THESSALONIKI	179,94	AWB	IIIE
EL1005C0004N	GULF OF SIGGITIKOS	740,91	NAT	IIIE
EL1005C0005N	COAST OF SITHONIA	97,06	NAT	IIIE
Athos RB (EL1043)				
EL1043C0003N	ATHOS COAST	159,97	NAT	IIIE
EL1043C0002N	GULF OF IERISSOS	181,63	NAT	IIIE
** *NAT: Natural WB, HMWB: Heavily Modified WB, AWB: Artificial WB*				

Table 5-9: Classification of the status of the Coastal Water Bodies in the RBD of Central Macedonia (EL10) and differences in the status between the 1st RBMP and its 1st and 2nd Revisions

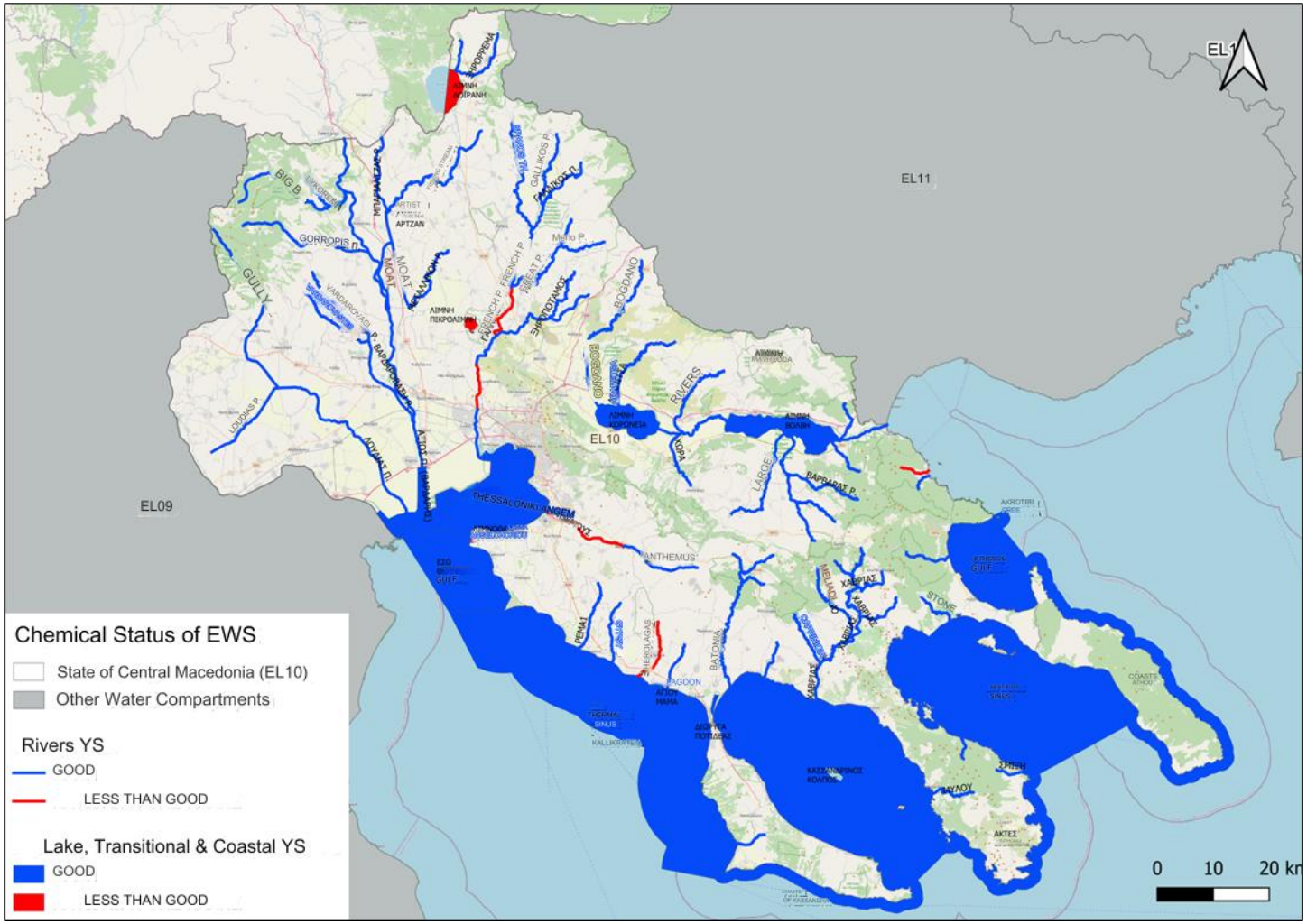
WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBM	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1005C0008A	POTIDAIA CANAL	UNKNOWN	UNKNOWN	UNKNOWN	MORE THAN GOOD	1	GOOD	1	GOOD	GOOD	0	GOOD	0	GOOD
EL1005C0007N	COAST OF KASSANDRA	HIGH	UNKNOWN	UNKNOWN	HIGH	1	GOOD	1	HIGH	HIGH	0	GOOD	0	HIGH
EL1005C0006N	GULF OF KASSANDRINOS	HIGH	UNKNOWN	UNKNOWN	GOOD	3	GOOD	3	GOOD	GOOD	3	GOOD	1	GOOD
EL1005C0009N	EXO THERMAIKOS GULF- KALLIKRATEIA	GOOD	UNKNOWN	UNKNOWN	MODERATE	1	GOOD	1	MODERATE	MODERATE	0	GOOD	0	MODERATE
EL1043C0003N	ATHOS COAST	HIGH	UNKNOWN	UNKNOWN	HIGH	1	GOOD	1	HIGH	HIGH	0	GOOD	0	HIGH
EL1005C0010N	MESA THERMAIKOS GULF	MODERATE	UNKNOWN	UNKNOWN	MODERATE	3	GOOD	3	MODERATE	GOOD	3	GOOD	2	GOOD
EL1005C0001N	ELEFTERA CAPE	HIGH	UNKNOWN	UNKNOWN	HIGH	1	GOOD	1	HIGH	HIGH	0	GOOD	0	HIGH
EL1043C0002N	GULF OF IERISSOS	HIGH	UNKNOWN	UNKNOWN	MODERATE	3	GOOD	3	MODERATE	GOOD	3	GOOD	2	GOOD
EL1005C0011H	GULF OF THESSALONIKI	MODERATE	UNKNOWN	UNKNOWN	MODERATE	3	GOOD	3	MODERATE	GOOD	3	GOOD	2	GOOD
EL1005C0004N	GULF OF SIGGITIKOS	HIGH	UNKNOWN	UNKNOWN	GOOD	3	GOOD	3	GOOD	GOOD	0	GOOD	0	GOOD

WB Code	WB Name	Ecological Status of the 1st RBMP	Chemical Status of the 1st RBM	Overall Status of the 1st RBMP	Ecological Status of the 1st Revision	Eco-classification Confidence LevEL **	Chemical Status of the 1st Revision	Chemical Classification Confidence LevEL **	Overall Status of the 1st Revision	Ecological Status / Potential of the 2nd Revision	Eco-classification Confidence LevEL **	Chemical Status 2nd Revision	Chemical Classification Confidence LevEL **	Overall Status of 2nd Revision
EL1005C0005N	COAST OF SITHONIA	HIGH	UNKNOWN	UNKNOWN	GOOD	1	GOOD	1	GOOD	GOOD	3	GOOD	1	GOOD

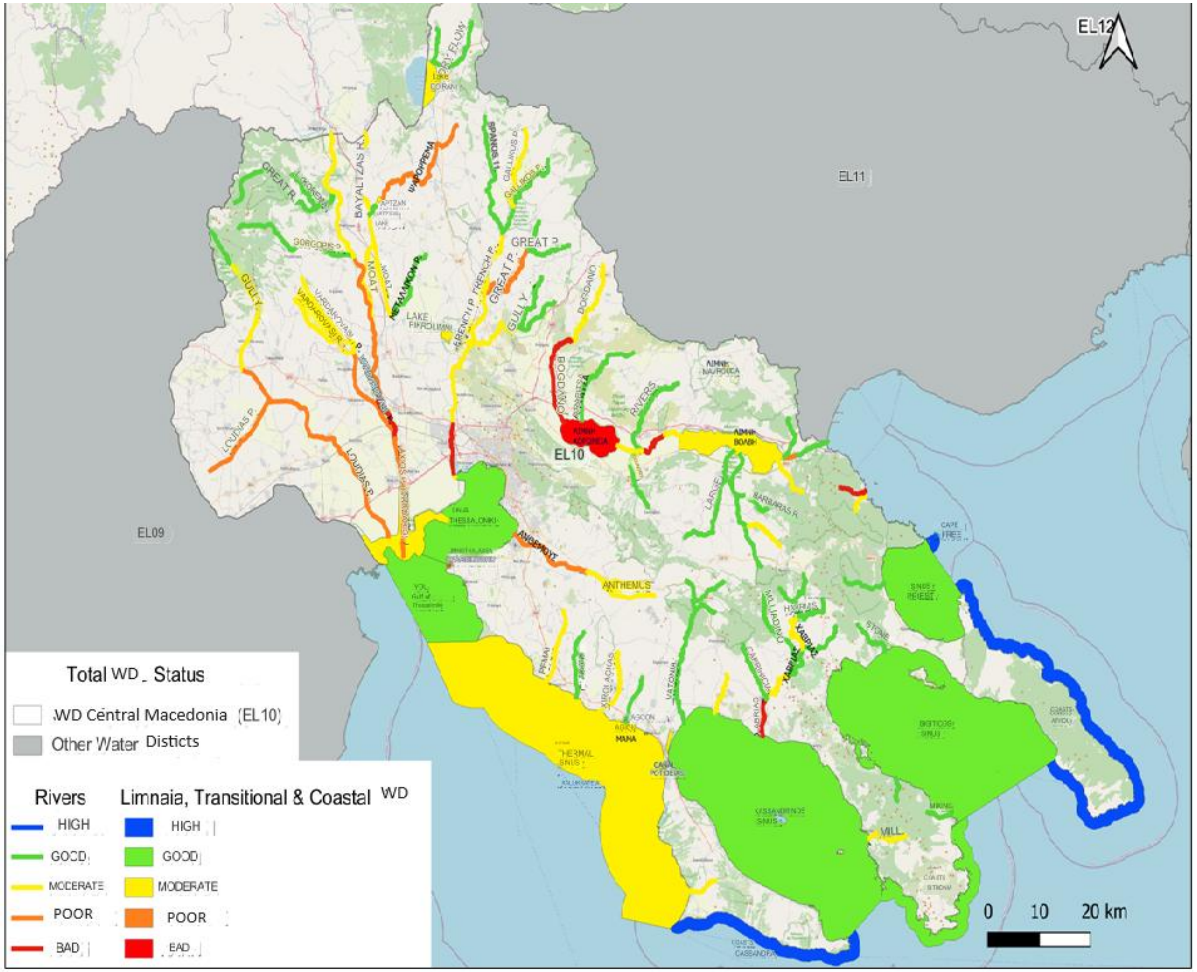
*** Classification Confidence Score: «0» = Unknown, «1» = Low Confidence, «2» = Moderate Confidence, «3» = High Confidence*



Map 5-2: Classification of the ecological status of Surface Water Bodies in the RBD of Central Macedonia (EL10)



Map 5-3: Classification of the chemical status of Surface Water Bodies in the RBD of Central Macedonia (EL10)



Map 5-4: Classification of the overall state of Surface Water Bodies in the Central Macedonia RBD (EL10)

5.2 GROUND WATER BODIES

Under the 2nd RBMP Revision of the Central Macedonia RBD (EL10) the delimitation and characterization/evaluation of the GWB that was done during the 1st Revision was reviewed.

More specifically, Under the 2nd RBMP Revision of the Central Macedonia RBD (EL10) are identified **thirty-eight (38) Ground Water Bodies**.

Table 5-10: **Ground Water Bodies of the Central Macedonia RBD (EL10) as they are presented under the 2nd RBMP Revision**

2nd RBMP Revision			
No	Code	Name	Area (Km^2)
1	EL1000010	Loudia	882,28
2	EL1000020	Paikou	256,43
3	EL1000031	Axiou (a)	920,76
4	EL1000032	Axiou (b)	361,76
5	EL100F040	Doiranis	99,92
6	EL1000050	Gallikos	529,65
7	EL1000061	Yp. Moudanion	647,53
8	EL1000062	Yp. Neas Triglias	33,79
9	EL1000071	Yp. Neas Koroneias	323,90
10	EL1000072	Yp. Volvis	495,03
11	EL1000081	Yp. Kato Rou Anthemounta	92,15
12	EL1000082	Yp. Galarinou- Galatistas	40,21
13	EL1000083	Yp. Thermis – N. Rysiou	184,47
14	EL1000090	Kassandras	350,40
15	EL1000100	Ormylias	41,94
16	EL1000110	Ierissos	2,66
17	EL1000120	Mavroudas	89,50
18	EL1000131	Yp. Asprolakka	5,18
19	EL1000132	Yp. Kokkinolakka	1,39
20	EL1000140	Olympiadas	4,33
21	EL1000150	Krousion– Kerdyllion	1380,53
22	EL1000160	Mavroneriou	24,25
23	EL1000170	Mount Athos	368,40
24	EL1000180	Sithonias	402,79
25	EL1000191	Yp. Skourion	152,22
26	EL1000192	Yp. Olympiadas	195,30
27	EL1000193	Yp. Cholomonta- Oraiokastrou	1596,78
28	EL1000200	N. Rodon	22,06
29	EL1000210	Mesaiou	14,17

2nd RBMP Revision			
30	EL1000220	Nteve Coran	28,07
31	EL100F230	Eastern Paikou	367,18
32	EL100F240	Evzonon	16,18
33	EL100F250	Pontoherakleias-Metamorfosis	99,52
34	EL100F260	Mytaka	39,20
35	EL1000270	Vafeiochoriou	37,82
36	EL100F280	Megalis Sternas	39,01
37	EL1000290	Ammoulianis	6,93
38	EL1000300	Diaporos	3,06

The status of a GWB depends on both the assessment of its chemical and quantitative status. The good chemical status of the waters indicates low or even lack of pollution, while the good quantitative status indicates non-depletion of the aquifer.

In 2nd Management Plan Revision, the National Network of Monitoring of the Ground WB, relied on a total of 119 monitoring stations, of which 74 are supervisory and 45 operational. These stations recorded both chemical and quantitative data. It should be noted that out of the total of 38 ground water bodies, 26 have monitoring stations.

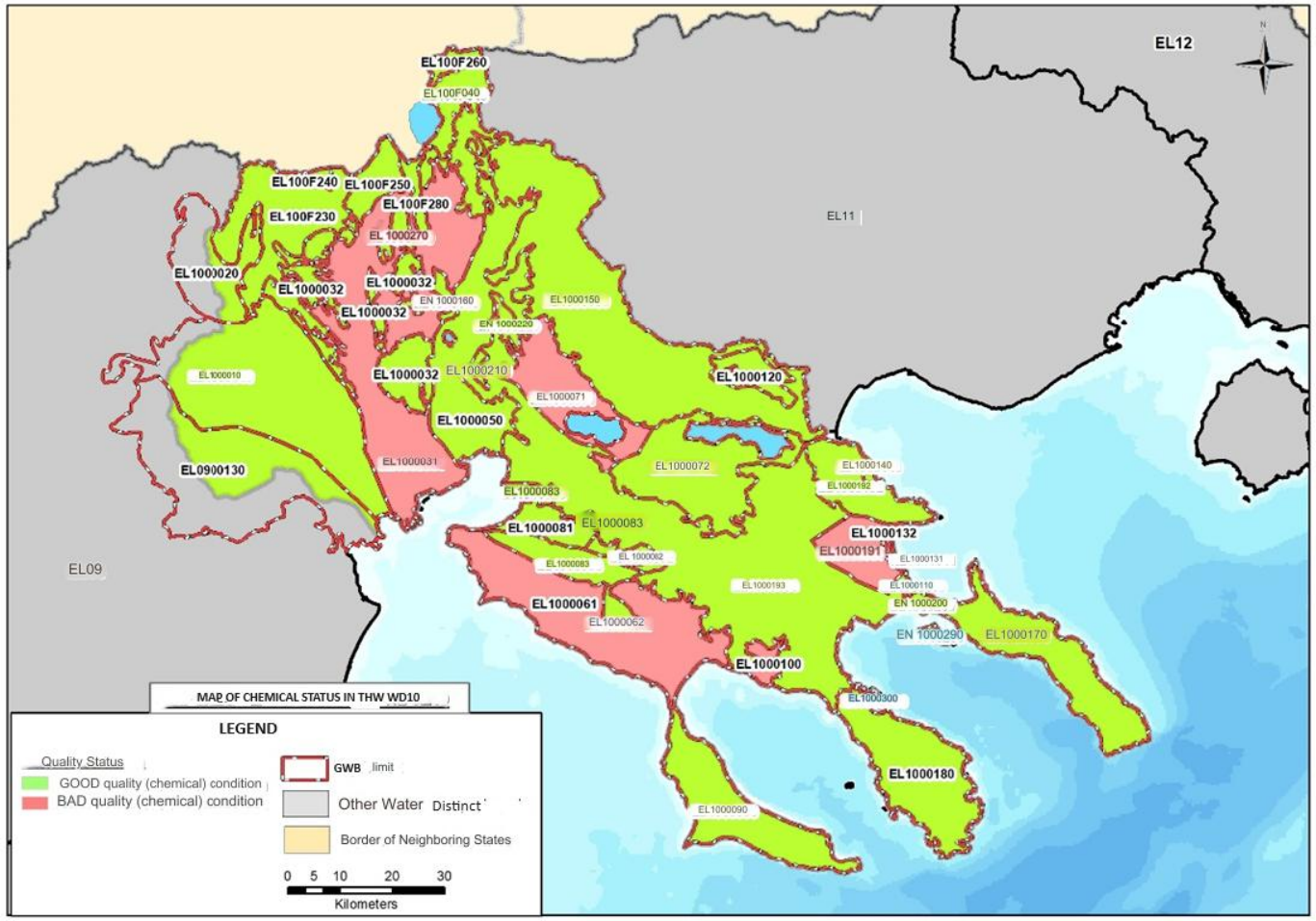
The following Tables include the status and classification data of the GWB of the Central Macedonia RBD (EL10) as they emerged during the 2nd RBMP Revision.

Table 5-11: Central Macedonia GWB (EL10)- Chemical and Quantitative status

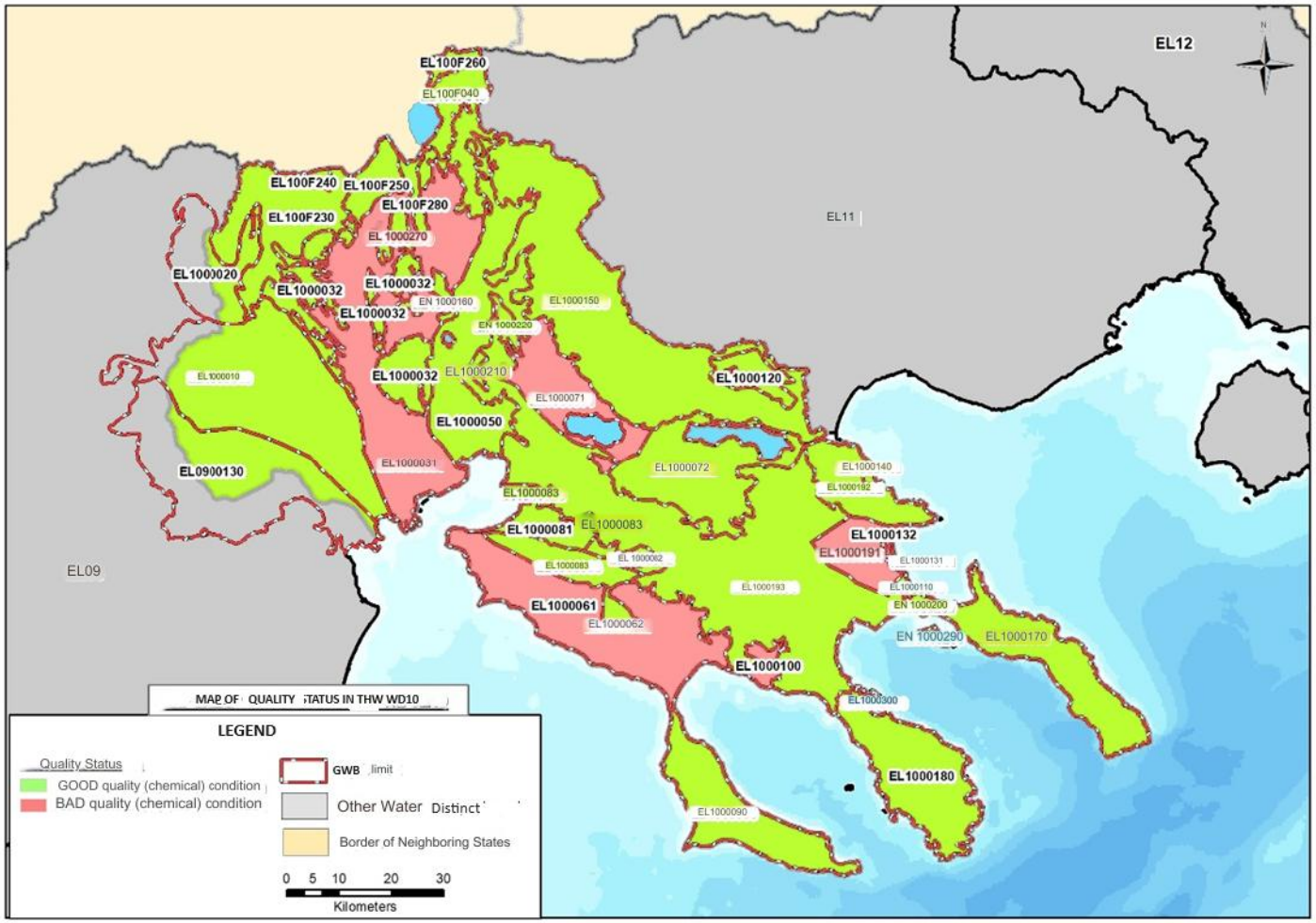
No	Code	Name	Quantitate status	Qualitative status	Exceeded quality parameters	Main pressures	Marine penetration	Protected Areas
Axios RB (EL1003)								
1	EL1000010	Loudia	GOOD	GOOD	Cl, NO_3, SO_4 NH_4, Ni, As, Fe, Mn	Agriculture, livestock farming, industry, WWTP, landfill, landfill (inactive), wastewater, extraction activities, desalination	Locally in the coastal zone (natural)	NO
2	EL1000020	Paikou	GOOD	GOOD	NO	Agriculture, livestock farming, wastewater, extraction activities	NO	YES
3	EL1000031	Axiou (a)	POOR	POOR	E.C., Cl, NO_3, NH_4, Hg, As, Fe, Mn	Agriculture, livestock farming, industry, WWTP, wastewater, extraction activities, landfill, overpumping	locally (natural and anthropogenic)	NO
4	EL1000032	Axiou (b)	GOOD	GOOD	NO_3	Agriculture, livestock farming, industry, WWTP wastewater	NO	NO
5	EL100F040	Doiranis	GOOD	POOR	NO_3, Al, Fe, Mn	Agriculture, livestock farming, wastewater, overpumping	NO	NO
6	EL1000160	Mavroneriou	GOOD	GOOD	-	Agriculture, livestock farming	NO	NO
7	EL100F230	Eastern Paikou	GOOD	GOOD	-	Agriculture, livestock farming, wastewater	NO	NO
8	EL100F240	Evzonon	GOOD	GOOD	NO	Agriculture, livestock farming	NO	NO
9	EL100F250	Pontoherakleias-Metamorfosis	GOOD	GOOD	NO_3, As, Fe, Mn	Agriculture, livestock farming, industry, wastewater	NO	NO
10	EL100F260	Mytaka	GOOD	GOOD	-	NO	NO	NO
11	EL1000270	Vafeiochoriou	GOOD	GOOD	-	Agriculture, livestock farming, extraction activities	NO	NO
12	EL100F280	Megalis Sternas	GOOD	GOOD	-	Agriculture, livestock farming, extraction activities	NO	NO
Gallikos RB (EL1004)								

No	Code	Name	Quantitate status	Qualitative status	Exceeded quality parameters	Main pressures	Marine penetration	Protected Areas
13	EL1000050	Gallikou	GOOD	GOOD	E.C., Cl, NO_3, SO_4 NH_4,Ni, As, Mn	Agriculture, livestock farming, industry, WWTP wastewater, extraction activities	Locally in the coastal zone (natural)	NO
14	EL1000210	Mesaiou	GOOD	GOOD	-	livestock farming, extraction activities	NO	NO
15	EL1000220	Nteve Koran	GOOD	GOOD	NO	Agriculture, livestock farming, extraction activities	NO	YES
Chalkidiki RB (EL1005)								
16	EL1000061	Yp. Moudanion	POOR	POOR	E.C., Cl, NO_3, NO_2,SO_4 NH_4, As, Ni,Mn	Agriculture, livestock farming, industry, WWTP, wastewater, overpumping, desalination	YES	NO
17	EL1000062	Yp. Neas Triglias	GOOD	GOOD	E.C.	Agriculture, livestock farming, wastewater, extraction activities	-	NO
18	EL1000071	Yp. Neas Koroneias	POOR	POOR	NO_3, SO_4, Al, Fe, Mn	Agriculture, livestock farming, industry, WWTP, wastewater, extraction activities	NO	NO
19	EL1000072	Yp. Volvis	GOOD	POOR	NO_3, NH_4, Al, As, Fe, Mn	Agriculture, livestock farming, wastewater, extraction activities	NO	NO
20	EL1000081	Yp. Kato Rou Anthemounta	GOOD	POOR	Mn	Agriculture, livestock farming, industry, landfill, extraction activities, desalination	Locally in the coastal zone	NO
21	EL1000082	Yp. Galarinou-Galatistas	GOOD	GOOD	NO	Agriculture, livestock farming, industry, WWTP, wastewater	NO	NO
22	EL1000083	Yp. Thermis – N. Rysiou	GOOD	GOOD	-	Agriculture, livestock farming, industry, WWTP, wastewater	NO	NO
23	EL1000090	Kassandras	GOOD	GOOD	E.C., Cl,, Fe, Mn	Agriculture, livestock farming, industry, WWTP, landfill, extraction activities, desalination	Locally in the coastal zone	NO
24	EL1000100	Ormylias	POOR	POOR	NO	Agriculture, livestock farming, WWTP, wastewater, desalination	YES	NO
25	EL1000120	Mavroudas	GOOD	GOOD	NO	Agriculture, livestock farming, industry, wastewater	NO	NO

No	Code	Name	Quantitate status	Qualitative status	Exceeded quality parameters	Main pressures	Marine penetration	Protected Areas
26	EL1000131	Yp. Asprolakka	GOOD	GOOD	NO	Agriculture, livestock farming, wastewater	NO	NO
27	EL1000132	Yp. Kokkinolakka	POOR	GOOD	-	Mining	NO	NO
28	EL1000140	Olympiadas	GOOD	GOOD	NO	Agriculture, livestock farming, wastewater, Mining	NO	NO
29	EL1000150	Krousion– Kerdyllion	GOOD	GOOD	As	Agriculture, livestock farming, industry, wastewater, landfill, extraction activities	NO	NO
30	EL1000180	Sithonias	GOOD	GOOD	E.C., Cl,, SO_4, As, Ni, Fe, Mn	Agriculture, livestock farming, WWTP, landfill (inactive), wastewater, industry, desalination	Locally in the coastal zone	NO
31	EL1000191	Yp. Skourion	POOR	GOOD	-	Mining, livestock farming, WWTP, wastewater, industry	NO	NO
32	EL1000192	Yp. Olympiadas	GOOD	GOOD	-	livestock farming, WWTP, wastewater, industry, extraction activities, mining	NO	NO
33	EL1000193	Yp. Cholomonta-Oraiokastrou	GOOD	GOOD	Mn	Agriculture, livestock farming, WWTP, landfill, wastewater, industry, extraction activities	NO	NO
34	EL1000200	N. Rodon	GOOD	GOOD	-	Agriculture, livestock farming, wastewater, industry, WWTP	NO	NO
35	EL1000290	Ammoulianis	GOOD	GOOD	-	Agriculture	NO	NO
36	EL1000300	Diaporos	GOOD	GOOD	-	NO	NO	NO
Athos RB (EL1043)								
37	EL1000170	Mount Athos	GOOD	GOOD	-	Agriculture, livestock farming, wastewater, WWTP	NO	NO
38	EL1000110	Ierissou	GOOD	GOOD	As	Agriculture, livestock farming, wastewater, WWTP	NO	NO



Map 5-5: Qualitative (Chemical) Status of the Central Macedonia GWB (EL10)



Map 5-6: Quantity Status of the Central Macedonia GWB (EL10)

The following table shows the differences in the qualitative and quantitative condition of the GWB of Central Macedonia RBD (EL10) between the 1st River Basin Management Plan, and its 1st and the 2nd Revision.

Table 5-12: Change in status between the 1st River Basin Management Plan, and its 1st and the 2nd Revision

Code	Name	1st RBMP		Code	Name	1st RBMP Revision		Code	Name	2nd RBMP Revision	
		Quantitative status	Qualitative status			Quantitative status	Qualitative status			Quantitative status	Qualitative status
GR1000010	Loudia	GOOD	GOOD	EL1000010	Loudia	GOOD	GOOD	EL1000010	Loudia	GOOD	GOOD
GR1000020	Paikou	GOOD	GOOD	EL1000020	Paikou	GOOD	GOOD	EL1000020	Paikou	GOOD	GOOD
GR1000030	Axiou	POOR	POOR	EL1000030	Axiou	POOR	POOR	EL1000031	Axiou (a)	POOR	POOR
								EL1000032	Axiou (b)	GOOD	GOOD
GR100F040	Doiranis	GOOD	POOR	EL100F040	Doiranis	GOOD	POOR	EL100F040	Doiranis	GOOD	POOR
GR1000050	Gallikou	GOOD	POOR	EL1000050	Gallikou	GOOD	POOR	EL1000050	Gallikou	GOOD	GOOD
GR1000060	Epanomis- Moudanion			EL1000060	Epanomis- Moudanion						
GR1000061	Yp. Moudanion	POOR	POOR	EL1000061	Yp. Moudanion	POOR	POOR	EL1000061	Yp. Moudanion	POOR	POOR
GR1000062	Yp. Neas Triglias	GOOD	GOOD	EL1000062	Yp. Neas Triglias	GOOD	GOOD	EL1000062	Yp. Neas Triglias	GOOD	GOOD
GR1000070	Mygdonias			EL1000070	Mygdonias						
GR1000071	Yp. Koroneias	GOOD	POOR	EL1000071	Yp. Koroneias	GOOD	POOR	EL1000071	Yp. Koroneias	POOR	POOR
GR1000072	Yp. Volvis	GOOD	POOR	EL1000072	Yp. Volvis	GOOD	POOR	EL1000072	Yp. Volvis	GOOD	POOR
GR1000080	Anthemounta			EL1000080	Anthemounta						
GR1000081	Yp. Kato Rou Anthemounta	POOR	POOR	EL1000081	Yp. Kato Rou Anthemounta	POOR	POOR	EL1000081	Yp. Kato Rou Anthemounta	GOOD	POOR

Code	Name	1st RBMP		Code	Name	1st RBMP Revision		Code	Name	2nd RBMP Revision	
		Quantitative status	Qualitative status			Quantitative status	Qualitative status			Quantitative status	Qualitative status
GR1000082	Yp. Galarinou-Galatistas	GOOD	GOOD	EL1000082	Yp. Galarinou-Galatistas	GOOD	GOOD	EL1000082	Yp. Galarinou-Galatistas	GOOD	GOOD
GR1000083	Yp. Thermis – N. Rysiou	GOOD	GOOD	EL1000083	Yp. Thermis – N. Rysiou	GOOD	GOOD	EL1000083	Yp. Thermis – N. Rysiou	GOOD	GOOD
GR1000090	Kassandras	GOOD	GOOD	EL1000090	Kassandras	GOOD	GOOD	EL1000090	Kassandras	GOOD	GOOD
GR1000100	Ormylias	POOR	POOR	EL1000100	Ormylias	POOR	POOR	EL1000100	Ormylias	POOR	POOR
GR1000110	Ierissou	GOOD	GOOD	EL1000110	Ierissou	GOOD	GOOD	EL1000110	Ierissou	GOOD	GOOD
GR1000120	Mavroudas	GOOD	GOOD	EL1000120	Mavroudas	GOOD	GOOD	EL1000120	Mavroudas	GOOD	GOOD
GR1000130	Asprolakka			EL1000130	Asprolakka						
GR1000131	Yp. Asprolakka	GOOD	GOOD	EL1000131	Yp. Asprolakka	GOOD	GOOD	EL1000131	Yp. Asprolakka	GOOD	GOOD
GR1000132	Yp. Kokkinolakka	POOR	GOOD	EL1000132	Yp. Kokkinolakka	POOR	GOOD	EL1000132	Yp. Kokkinolakka	POOR	GOOD
GR1000140	Olympiadas	GOOD	GOOD	EL1000140	Olympiadas	GOOD	GOOD	EL1000140	Olympiadas	GOOD	GOOD
GR1000150	Krousion–Kerdyllion	GOOD	GOOD	EL1000150	Krousion–Kerdyllion	GOOD	GOOD	EL1000150	Krousion–Kerdyllion	GOOD	GOOD
GR1000160	Mavroneriou	GOOD	GOOD	EL1000160	Mavroneriou	GOOD	GOOD	EL1000160	Mavroneriou	GOOD	GOOD
GR1000170	Mount Athos	GOOD	GOOD	EL1000170	Mount Athos	GOOD	GOOD	EL1000170	Mount Athos	GOOD	GOOD
GR1000180	Sithonias	GOOD	GOOD	EL1000180	Sithonias	GOOD	GOOD	EL1000180	Sithonias	GOOD	GOOD
GR1000190	Cholomonta- Oraiokastrou			EL1000190	Cholomonta- Oraiokastrou						
GR1000191	Yp. Skourion	POOR	GOOD	EL1000191	Yp. Skourion	POOR	GOOD	EL1000191	Yp. Skourion	POOR	GOOD

Code	Name	1st RBMP		Code	Name	1st RBMP Revision		Code	Name	2nd RBMP Revision	
		Quantitative status	Qualitative status			Quantitative status	Qualitative status			Quantitative status	Qualitative status
GR1000192	Yp. Olympiadas	GOOD	GOOD	EL1000192	Yp. Olympiadas	GOOD	GOOD	EL1000192	Yp. Olympiadas	GOOD	GOOD
GR1000193	Yp. Cholomonta-Oraiokastrou	GOOD	GOOD	EL1000193	Yp. Cholomonta-Oraiokastrou	GOOD	GOOD	EL1000193	Yp. Cholomonta-Oraiokastrou	GOOD	GOOD
GR1000200	N. Rodon	GOOD	GOOD	EL1000200	N. Rodon	GOOD	GOOD	EL1000200	N. Rodon	GOOD	GOOD
GR1000210	Mesaiou	GOOD	GOOD	EL1000210	Mesaiou	GOOD	GOOD	EL1000210	Mesaiou	GOOD	GOOD
GR1000220	Nteve Coran	GOOD	GOOD	EL1000220	Nteve Coran	GOOD	GOOD	EL1000220	Nteve Coran	GOOD	GOOD
GR100F230	Eastern Paikou	GOOD	GOOD	EL100F230	Eastern Paikou	GOOD	GOOD	EL100F230	Eastern Paikou	GOOD	GOOD
GR100F240	Evzonon	GOOD	GOOD	EL100F240	Evzonon	GOOD	GOOD	EL100F240	Evzonon	GOOD	GOOD
GR100F250	Pontoheraklei as-Metamorfosis	GOOD	GOOD	EL100F250	Pontoheraklei as-Metamorfosis	GOOD	GOOD	EL100F250	Pontoheraklei as-Metamorfosis	GOOD	GOOD
		-	-	EL100F260	Mytaka	GOOD	GOOD	EL100F260	Mytaka	GOOD	GOOD
GR1000270	Vafeiochoriou	GOOD	GOOD	EL1000270	Vafeiochoriou	GOOD	GOOD	EL1000270	Vafeiochoriou	GOOD	GOOD
GR100F280	Megalis Sternas	GOOD	GOOD	EL100F280	Megalis Sternas	GOOD	GOOD	EL100F280	Megalis Sternas	GOOD	GOOD
		-	-	EL1000290	Ammoulianis	GOOD	GOOD	EL1000290	Ammoulianis	GOOD	GOOD
		-	-	EL1000300	Diaporos	GOOD	GOOD	EL1000300	Diaporos	GOOD	GOOD

5.3 HEAVILY MODIFIED WATER BODIES (HMWB) AND ARTIFICIAL WATER BODIES (AWB)

In summary, during the present 2nd RBMP Revision, the same methodology as the 2nd Administrative Cycle was applied with the following improvements:

1. Data collected for projects built after 2015 and/or to be built by 2027

2. All surface water systems (SWS) were examined and all projects/uses were recorded, per criteria in a geographic information system (GIS) so that their subsequent geographic comparison with future projects was possible

3. Following a change in the EU directives, the HMWBs resulting from the construction of dams (inland reservoirs) are identified as river HMWBs of the lake type

4. The recent results of the EDP were taken into account for the final determination of the HMWB

In the context of the 2nd Revision, Special Measures are proposed to achieve the Good Ecological Potential of HMWB defined in the 2nd Revision (Deliverable Special measures to achieve the good ecological potential in HMWB) so that they can be considered in the context of the Program of Measures of the 2nd Revision.

Following the application of the HMWB and AWB determination methodology, **five (5) Heavily Modified** and **twelve (12) Artificial Water Bodies** emerged in the Central Macedonia RBD (EL10) in a total of **124 surface water bodies**.

The following tables list the water bodies that were definitively characterized as highly modified and artificial by river basin of the Central Macedonia RBD (EL10).

Table 5-13: Heavily Modified Rivers WB in the Central Macedonia RBD (EL10)

HMWB code	Name	Type	Length (km)	Area (km^2)	Designated Water Use
Axios RB (EL1003)					
EL1003R0F0201004H	AXIOS R. (VARDARIS)	R-L2	19,67	8,47	Rerouting
Chalkidiki RB (EL1005)					
EL1005R001700029H	ANTHEMOUS	R-M2	18,03	223,64	Rerouting-Settling
EL1005R003103043H	CHAVRIAS	R-M2	9,57	49,86	Settling

Table 5-14: Artificial Rivers WB in the Central Macedonia RBD (EL10)

AWB Code	Name	Type	Length (km)	Area (km^2)	Designated Water Use	AWB/HMWB
Axios RB (EL1003)						
EL1003R000400031A	LOUDIAS R.	R-M3	21,12	187,41	Drainage Giannitsa L	AWB
EL1003R000400032A	LOUDIAS R.	R-M2	41,93	887,92		AWB

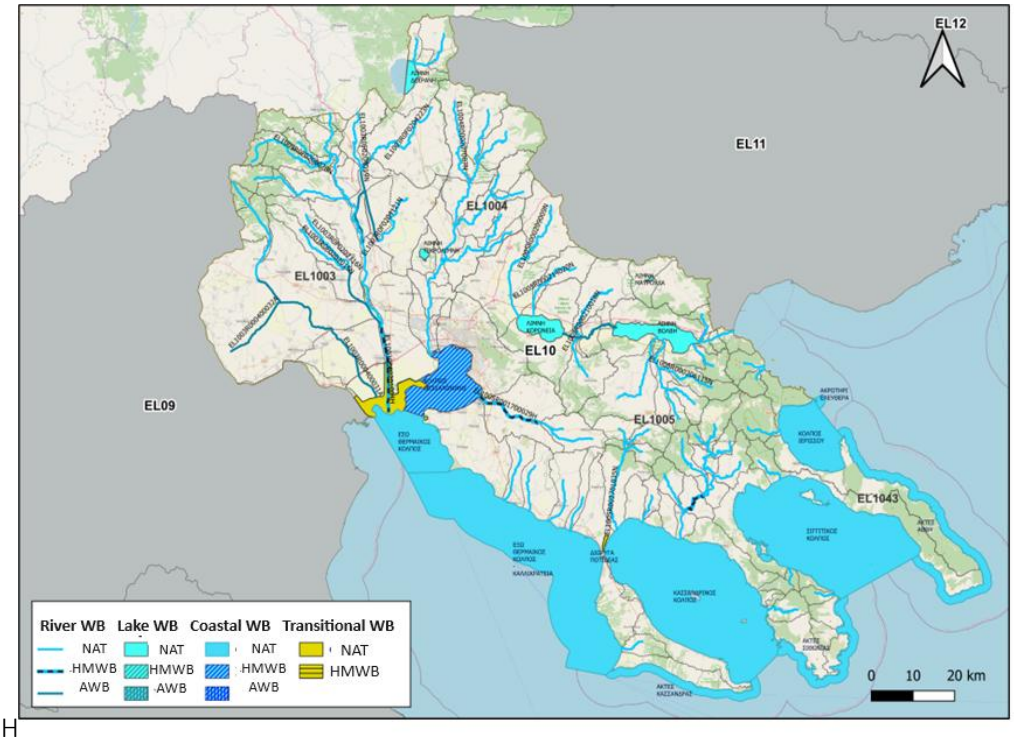
AWB Code	Name	Type	Length (km)	Area (km²)	Designated Water Use	AWB/HMWB
EL1003R0F0202014A	VARDAROVASI S.	R-M2	18,09	158,62	Gathering of runoff from the wider area	AWB
EL1003R0F0204017A	TAFROS	R-M2	13,64	29,59	Tranfer to Axios from the drainage of Artzan Lake and Amatovos	AWB
EL1003R0F0204120A	TAFROS	R-M2	11,79	69,57	Drainage Amatovos l.	AWB
EL1003R0F0204018A	TAFROS	R-M2	5,39	16,27	Drainage Artzan L	AWB
Chalikidiki RB (EL1005)						
EL1005R000203005A	DERVENI S.	R-M5	7,49	38,53	Hydraulic connection of lakes - Rehabilitation of Koroneia lake	AWB
EL1005R000203004A		R-M3	5,38	16,08		AWB
EL1005R000207007A		R-M2	4,01	4,27		AWB
EL1005R000205006A		R-M2	0,90	4,36		AWB

Table 5-15: Heavily Modified and Artificial Lakes WB and Rivers Lake-type (reservoirs) WB in the Central Macedonia RBD (EL10)

WB Code	Name	Type	Area (Km²)	AWB/HMWB	Designated Water Use
Axios RB (EL1003)					
EL1003L000000006A	Artzan artificial lake	-	1,4	AWB	Irrigation
Chalkidiki RB (EL1005)					
EL1005L000000002H	Mavrouda L.	-	1,13	HMWB	Wetland restoration

Table 5-16: Heavily Modified and Artificial Coastal WB in the Central Macedonia RBD (EL10)

WB Code	Name	Type	Area (Km²)	AWB/HMWB	Designated Water Use
Chalkidiki RB (EL1005)					
EL1005C0008A	Potidaia Canal	IIIE	0,01	AWB	Navigation
EL1005C0011H	Gulf of Thessaloniki	IIIE	179,94	HMWB	Urbanization – Transportation



H

Map 5-7: Heavily Modified and Artificial Water Bodies in the Central Macedonia RBD (EL10)

5.4 PROTECTED AREAS

The Register of Protected Areas includes, in accordance with Annex V of PD 51/2007, all the following types of areas:

a. Areas intended for the abstraction of water for human consumption, in accordance with Article 7 of PD 51/2007 (Article 7 of Directive 2000/60/EC),

b. Areas intended for the protection of aquatic species of economic importance,

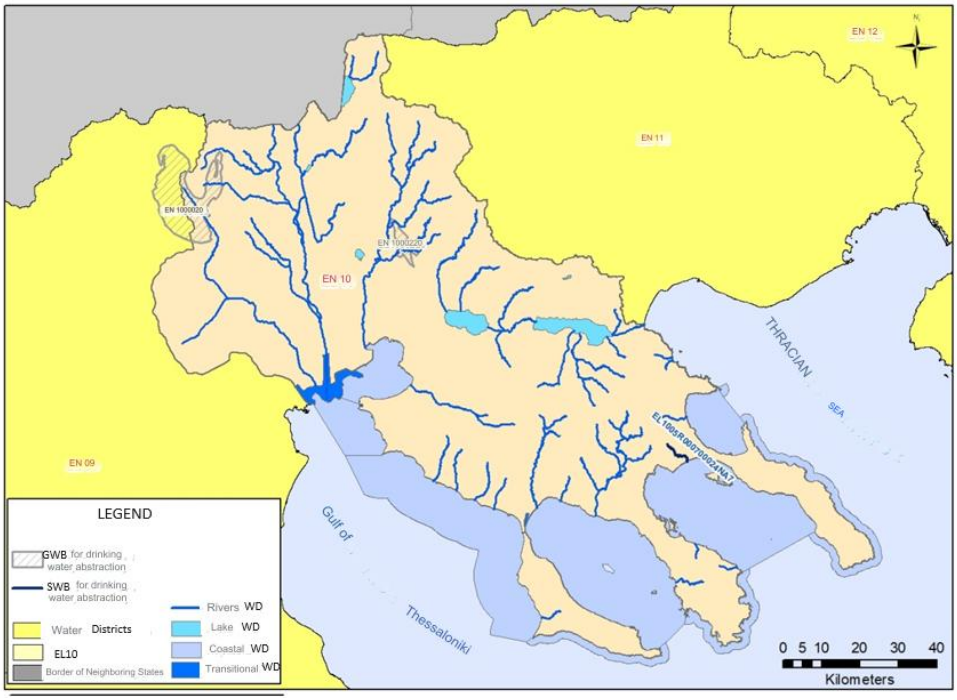
c. Water bodies designated as recreational waters, including areas designated as bathing waters,

d. Areas sensitive to the presence of nutrients, including areas designated as vulnerable zones, and areas designated as sensitive,

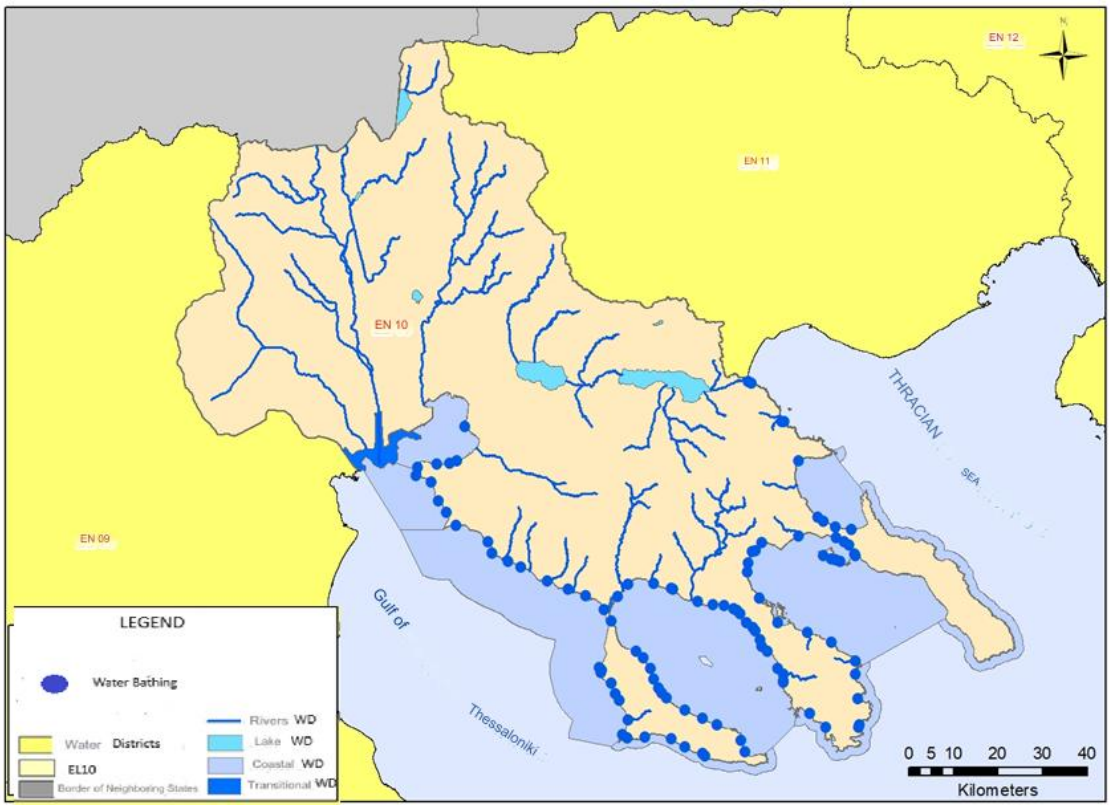
e. estimation of permanent and regulatory reserves per groundwater body based on hydraulic parameters (hydraulic conductivity, water conductivity, storage coefficient and aquifer thickness where determined) and

f. areas intended for the protection of habitats or species, when maintaining or improving the state of the waters is important for their protection, including the relevant sites of the NATURE 2000 program (NATURA 2000).

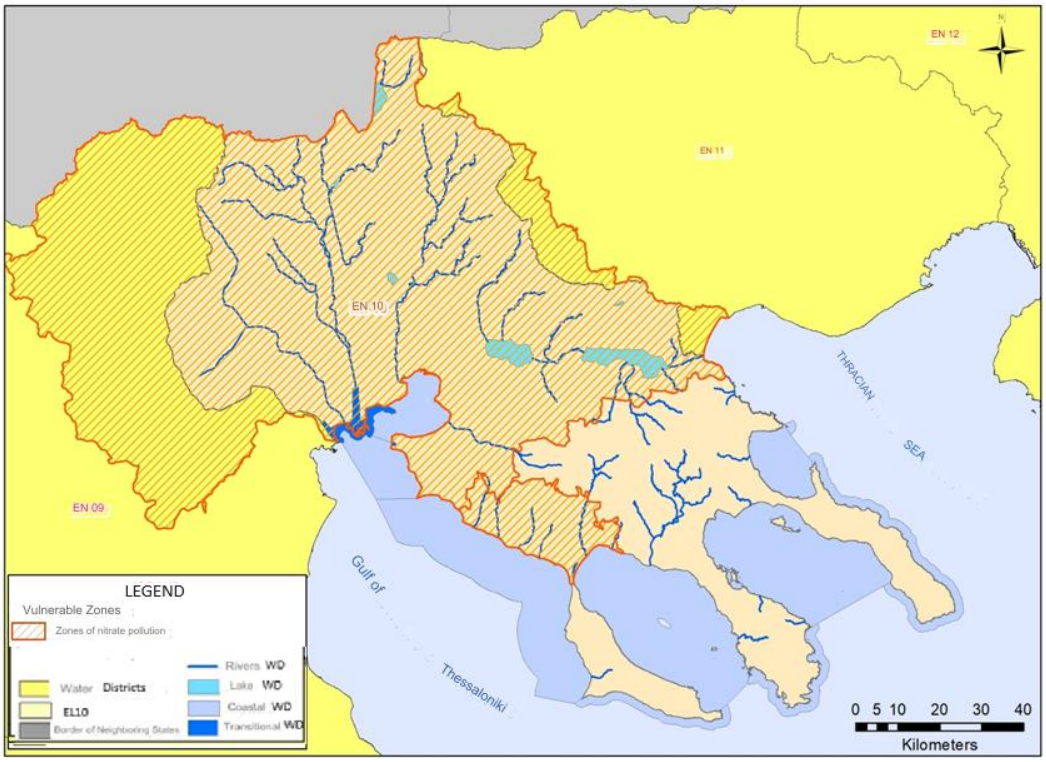
Below are presented on maps the regions of the RPA by category.



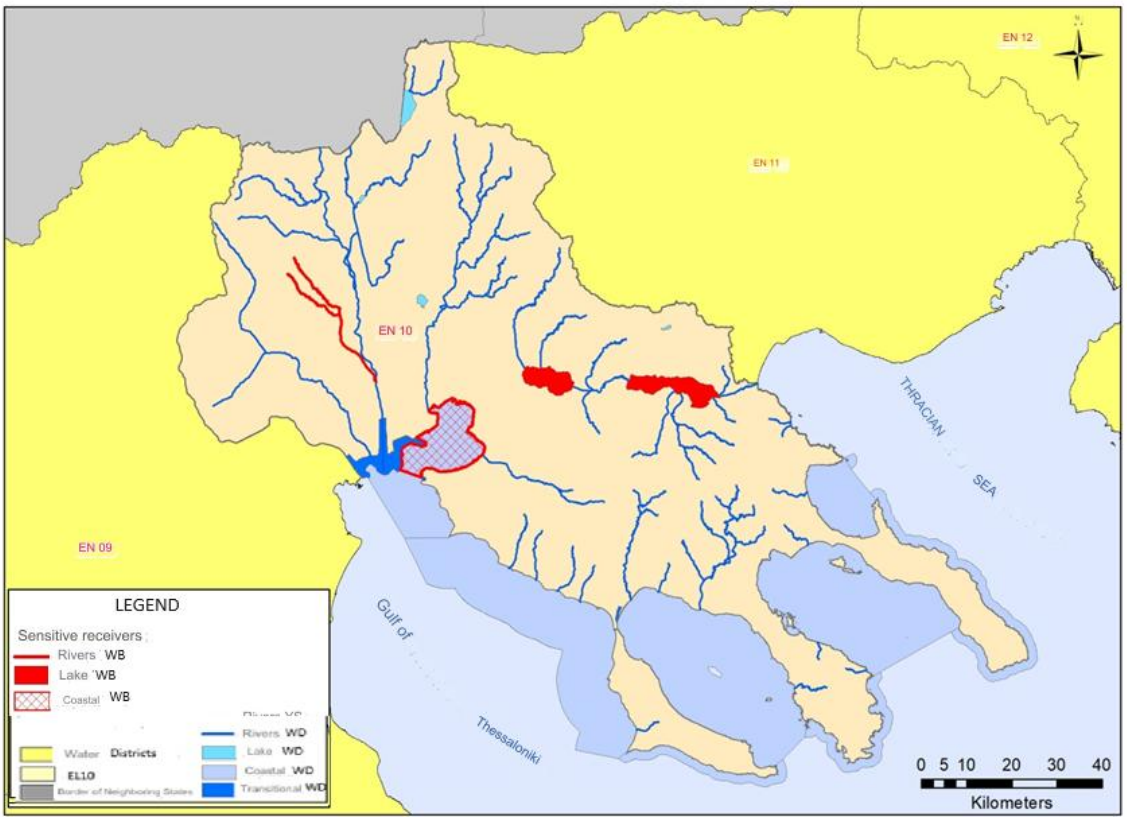
Map 5-8: Surface and Ground WB that are used or intended for water abstraction for human consumption in the WB of Central Macedonia (EL10)



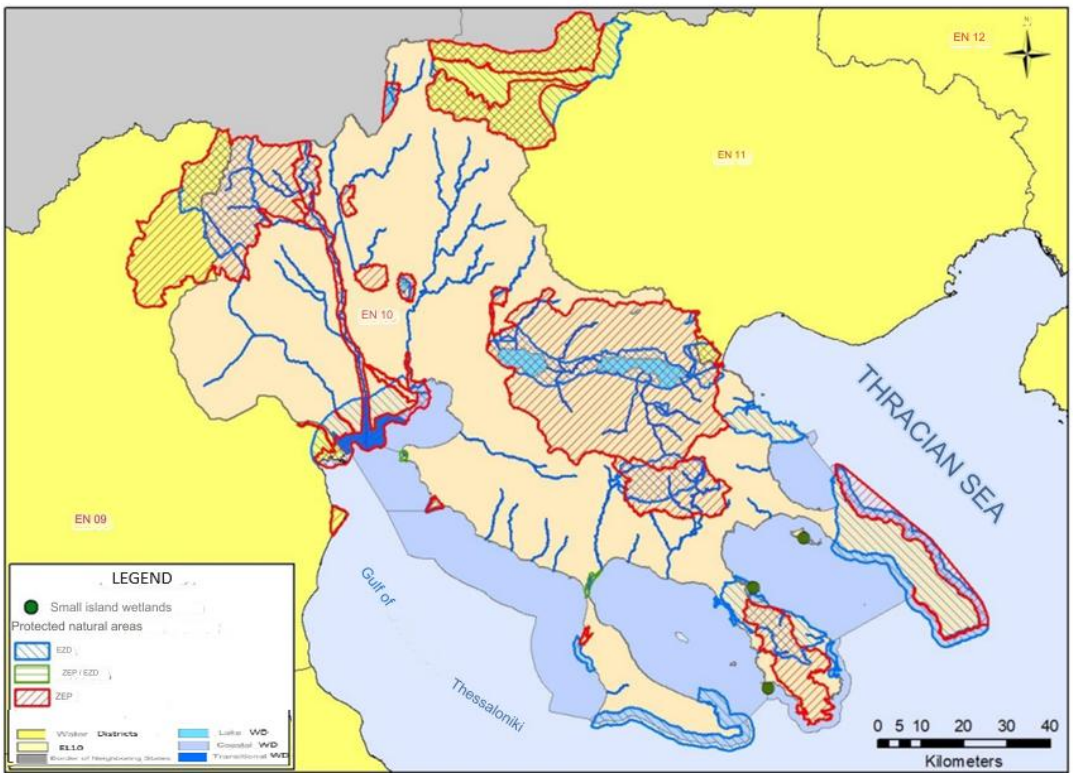
Map 5-9: Swimming Coast Protection Areas (Directive 2006/7/EC) in Central Macedonia (EL10)



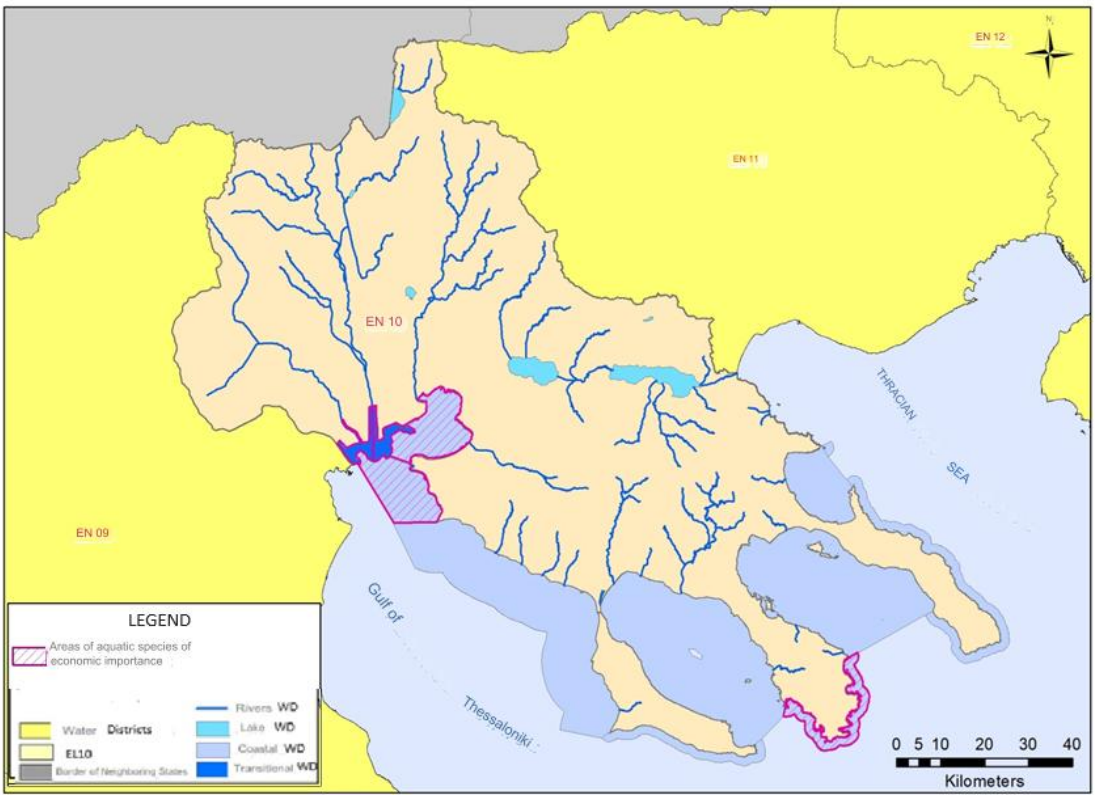
Map 5-10: Vulnerable Zones in Central Macedonia RBD (EL10)



Map 5-11: Areas sensitive to the presence of nutrients in Central Macedonia RBD (EL10)



Map 5-12: Protected Natural Areas of the Natura network and of the small island wetlands in the Central Macedonia RBD (EL10)



Map 5-13: Aquatic Species Protection Areas of Economic Importance in the Central Macedonia RBD (EL10)

6 FINANCIAL ANALYSIS OF WATER USE

The economic analysis of water uses is carried out in accordance with the current legislation and the specific directions of the General Directorate for Water.

6.1 FINANCIAL COST

The total financial cost of water supply / drainage in the Central Macedonia RBD(EL10) (not including the cost of private wells) amounts to €130.792.863. The recovery of the financial cost of water supply/sewerage of the providers for all uses, at the RBD level, amounts to 88,55%, the revenues to €111.893.450, as determined in the Analytical Documentation Text- Financial Analysis of Water Uses, based on the available data.

The diagram below shows the recovery of the financial costs in the Central Macedonia RBD (EL10) for all Rs.

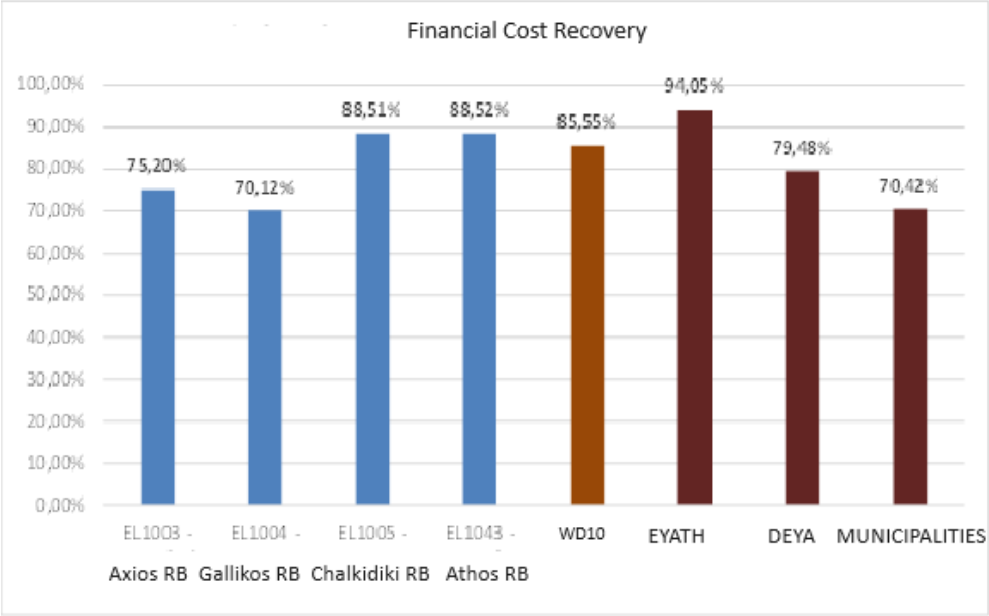


Figure 6-1: Recovery of water financial costs from water supply and sewerage service providers in Central Macedonia (EL10), 2020

From the above estimates, it can be concluded that the overall degree of financial cost recovery in Central Macedonia RBD (EL10) is quite satisfactory, mainly because the most important provider is EYATH S.A. Smaller degrees of recovery are presented by the DEYA and mainly by the Municipalities, due to their pricing policies.

The total degree of recovery depends mainly on water use, not only because it is the main use in the Water District but also because there is insufficient data to estimate the degree of recovery of other uses, partly because in the general water tariff, other uses are also included except for domestic (e.g. professional uses) as well as several times industrial use is not distinguished from other professional uses. In addition, most providers register only the total

revenue in the information system without further distinguishing between uses, and what revenue is available in their financial statements is not distinguished between uses.

In Central Macedonia RBD (EL10), industrial use is partly covered by water supply providers (through the water supply network) and partly by private boreholes.

The financial cost recovery rate (of providers) for industrial use is 74.86%. For private boreholes, it is assumed that the financial costs are recovered at a 100% level since these costs are borne by the private individuals themselves who carry out and operate their water abstractions. In the Central Macedonia RBD (EL10) the weighted average recovery rate of water for industrial use (private wells and providers) is 94.27%.

Irrigation water (unrefined / non-potable) in the Central Macedonia RBD (EL10) either comes from private boreholes or is provided by collective irrigation bodies (Local Water Improvement Organizations- TOEB) and some OTAs (Municipalities), without the mediation of OEB. G.O.E.V. Pediada Thessaloniki- Lagada transports and distributes water to the TOEB from three rivers (Aliakmona, Axios and Loudia) for the irrigation of almost all the crops of the R.U of Thessaloniki, Imathia, Pella.

The degree of recovery of the financial costs of the agricultural water providers (regardless of the origin of the water) for the Central Macedonia RBD (EL10) amounts to 57.54%, with the total financial costs amounting to €28,343,937 and the financial revenues amounting to 16,310,359 euros.

The degree of financial cost recovery of agricultural water providers is particularly low. This may happen on the one hand due to the lack of reliable data for the calculation and on the other hand because water for agricultural use is under-priced and the pricing decision is not based on financial criteria. In most cases, providers charge for water through an acre fee (usually depending on the type of crop), and in some cases an hourly fee. However, due to impossibility of counting, the charges do not reflect the actual water consumption.

For private boreholes, it is assumed that the financial costs are recovered at a 100% level since these costs are borne by the private individuals themselves who carry out and operate their water abstractions. In the Central Macedonia RBD (EL10) the weighted average recovery rate of water for agricultural use (private wells and providers) is 73.19%.

It should be noted that in the Central Macedonia RBD (EL10), agricultural water providers do not provide water for industrial use. The total water withdrawals for livestock farming amount to 4.89 hm^3, with 100% of them referring to withdrawals from ground water bodies and since the needs of livestock farming are covered by the water supply network (mainly through domestic connections), they have been taken into account in the calculations for the water supply network

6.2 ENVIRONMENTAL AND RESOURCE COST

According to the 2nd RBMP Revision, it is estimated that in the Central Macedonia RBD (EL10) the conditions exist for the calculation of environmental costs, given that there are surface WB

with an ecological and/or chemical status lower than good and groundwater WB with poor chemical state.

The environmental cost for the current period at RBD level is estimated at €1.173.529. The annual unit environmental cost at RBD level is estimated at 0,0002098 €/m^3 and is summarized in the table below.

Table 6-1: Environmental cost in the RB of Central Macedonia RBD (EL10)

RB	Annual Environmental Cost (€)	Unit Environmental Cost (€/m^3)
Axios (EL1003)	60.294	0,0000552
Gallikos (EL1004)	0	0,0000000
Chalkidiki (EL1005)	233.088	0,0008430
Athos (EL1043	0	0,0000000
Total RBD	**293.382**	**0,0002098**

The distribution of the environmental costs per use per RB in the Central Macedonia RBD (EL10) is presented in the following table.

Table 6-2: Distribution of environmental costs per water use and RB of Central Macedonia (EL10)

	Irrigation (home use)	Agricultural Use (agriculture – livestock farming)	Industry
Axios RB (EL1003)			
Annual cost per use (€)	1.224	58.026	1.044
Usage participation (%) in the total annual cost	2,0%	96,2%	1,7%
Annual unit cost (€/m^3)	0,0000552	0,0000552	0,0000552
Gallikos RB (EL1004)			
Annual cost per use (€)	0	0	0
Usage participation (%) in the total annual cost	0,0%	0,0%	0,0%
Annual unit cost (€/m^3)	0,0000000	0,0000000	0,0000000
Chalkidiki RB (EL1005)			
Annual cost per use (€)	127.405	93.548	12.135
Usage participation (%) in the total annual cost	54,7%	40,1%	5,2%
Annual unit cost (€/m^3)	0,0009674	0,0007074	0,0009674
Athos RB (EL1043)			
Annual cost per use (€)	0	0	0
Usage participation (%) in the total annual cost	0,0%	0,0%	0,0%
Annual unit cost (€/m^3)	0,0000000	0,0000000	0,0000000

In the context of the 2nd RBMP revision, based on the Supplementary Measures Program, no resource costs are calculated for the Central Macedonia RBD. It is estimated, that, for the GWB of the RBD, currently in bad quantitative status, the Basic Measures and the Horizontal Supplementary Measures are enough for achieving good quantitative status by 2027, or whenever the natural conditions allow, according to the Article 4.4 of the Directive.

7 ENVIRONMENTAL OBJECTIVES- EXEMPTIONS

Exceptions are an integral part of setting environmental targets. Sections 4.4, 4.5, 4.6 and 4.7 describe the circumstances and process by which these exceptions apply. Exceptions can range from small-scale temporary deviations from the "good standing by 2015" rule to medium- and long-term exceptions. Exceptions provided include:

- The extension of the deadline. Good status must be achieved by 2021 or at least by 2027 (Article 4.4), or after 2027 as soon as natural conditions permit.
- The achievement of less stringent goals under special conditions (article 4.5)
- Temporary downgrading in circumstances resulting from natural causes or force majeure (Article 4.6)
- New modifications to the physical characteristics of surface water bodies or changes in the level of groundwater bodies or failure to prevent degradation from excellent to good status of a surface water system, which are the result of new human sustainable development activities (Article 4.7)

The following tables summarize the state's objectives for surface and ground WB. The objectives set for the WB take into account the assessment of the state of the WB of the RBD, the efficiency of the proposed Program of Measures and the possibility given by the Directive for derogations under specific conditions.

Objectives for Surface WB

The table below summarizes the goals set for the 124 surface WB of the Central Macedonia RBD (EL10) until:

- For 63 WB, the objective is to maintain good ecological status/potential.
- For 115 WB, the goal is to maintain good chemical condition.
- For 61 SWB is the achievement of good ecological status/potential after 2027.
- For 9 SWB is the achievement of good chemical status after 2027.

Table 7-1: SWB status objectives by 2027

Objective	River WB	Lake WB	Transitional WB	Coastal WB	TOTAL WB	Percentage in relation to the total SWB
TOTAL NUMBER OF WB	**104**	**6**	**3**	**11**	**124**	
Non-degradation of good and superior ecological status/potential	52	1	0	10	63	50,81
Non-degradation of good and superior chemical status	99	3	2	11	115	92,74
Achieving good ecological status/potential *	52	5	3	1	61	49,19
Achieving good chemical status	5	3	1	0	9	7,26

Objective	River WB	Lake WB	Transitional WB	Coastal WB	TOTAL WB	Percentage in relation to the total SWB
Improvement of ecological status/potential (HMWB)	3	1	0	0	4	6,56
Subject to Article 4.4 Ecological Status	35	4	2	1	42	33,87
Subject to Article 4.4 Chemical Status	0	0	0	0	0	0
Subject to Article 4.5 Ecological Status	16	1	1	0	18	14,52
Subject to Article 4.5 Chemical Status	5	3	1	0	9	7,26
Subject to article 4.6	-					
Subject to article 4.7	1	0	0	0	1	0,81

Objectives for Ground WB

The following Table summarizes the objectives set for the 38 GWB of the Central Macedonia RBD (EL10):

- For 22 GWB and 9 Subsystems the goal is to maintain the good quantitative status.
- For 2 GWB and 5 Subsystems is to achieve good quantitative status whenever physical conditions allow after 2027.
- For 23 GWB and 9 Subsystems the goal is to maintain good chemical status.
- For 5 Subsystems and 1 GWB the goal is to achieve good chemical status whenever physical conditions allow after 2027.

Table 7-2: GWB status objectives after 2027

OBJECTIVES	NUMBER OF GWB
Non-degradation of good quantitative status	22 GWB and 9 Subsystems
Non-degradation of good chemical condition	23 GWB and 9 Subsystems
Achieving good quantitative status	2 GWB and 5 Subsystems
Achieving good chemical status	1 GWB and 5 Subsystems
Subject to article 4.4	2 GWB and 7 Subsystems
Subject to Article 4.5	0
Subject to article 4.6	0
Subject to article 4.7	2 Subsystems

Objectives for the protected areas

The main objectives for each category of protected area are defined as follows.

❖ Areas intended for abstraction of water for human consumption

The following objectives are set for the areas intended for abstraction of water for human consumption:

• The quality characteristics of the treated water for human consumption comply with the requirements of Directive 98/83/EC regarding the quality of water for human consumption.

• Ensuring adequate protection to avoid degradation of water quality in order to reduce the degree of treatment for the production of drinking water.

❖ Water bodies that have been characterized as recreational waters

The objective for recreational waters identified under the Bathing Water Directive is to protect the environment and public health during bathing, as well as to maintain, protect and improve bathing water quality.

❖ Areas sensitive to the presence of nutrients

For the zones vulnerable to nitrate pollution, the general objectives set concern:

• the reduction of water pollution originating from nitrates of agricultural origin,

• avoiding additional pollution. These goals are achieved through:

▫ defining Vulnerable Zones,

▫ the implementation of the action programs applied to those of the implementation of the action programs applied to them

▫ and the Codes of Good Agricultural Practice (GAP) that give guidelines on nitrate reduction contribute to the achievement of these goals

For Sensitive Areas, the main objective as defined in Directive 91/271/EEC is to protect the environment from the negative effects of urban wastewater discharge and waste water from certain industrial sectors.

❖ Areas designated for the protection of habitats or species

The objectives for the protection areas of the Natura 2000 Network are determined in relation to the conservation and protection objectives of the areas identified under the Habitats Directive (92/43/EC as currently valid). These objectives relate to protection and where necessary to improvement of the state of the aquatic environment to the extent necessary to achieve the conservation objectives of the natural habitats, as well as the wild flora and fauna in the Sites of Community Importance.

The objectives for the areas established in relation to the Wild Birds Directive (2009/147/EC) are to protect, or where necessary improve, the aquatic environment to such an extent that the protection objectives of the Special Protection Areas are achieved.

In cases where a protected area of the Natura 2000 network is part of a WB or when a WB falls within a Natura 2000 area, its objectives for the status of the WBI apply in addition to the requirements for the desired conservation status.

Some WB that fall into protected areas of the Natura 2000 Network have been designated as HMWB. In these cases, the goal of achieving Good Ecological Potential, which is achieved by the implementation of palliative measures to deal with hydromorphological alterations, is applied in addition to the goals for the conservation status of the area.

❖ Areas intended for the protection of aquatic species of economic importance

The objectives set concern:

- maintaining the quality of internal surface waters included in the register of protected areas in terms of the physicochemical parameters as defined in Annexes I and II of Directive 2006/44/EC44 and monitored within the framework of the National Water Status Monitoring Network,
- maintaining the quality of coastal and transitional waters that are included in the register of protected areas in terms of the parameters listed in Annex I of Directive 2006/113/EC and monitored within the framework of the National Water Status Monitoring Network.

8 PROGRAM OF MEASURES

The Program of Measures is part of the Management Plan and it is also the "mechanism" for achieving the environmental objectives set. Especially the implementation of the Program Measure should ensure:

- the prevention of deterioration, the improvement and the remediation of surface water bodies, the achievement of “Good” ecological and chemical status, and the mitigation of the pollution through the discharge and the emission of hazardous substances.
- the protection, the improvement and the remediation of groundwater bodies, the prevention of their pollution and the deterioration of their water status in order to balance between abstraction and discharge.
- the conservation of Protected Areas

The measures are divided into **Basic** and **Supplementary**.

The **Basic Measures**, according to par. 3 of Article 11 of the Directive are the minimum requirements that should be met and include:

- Measures for the implementation of EU and national legislation on water protection **(Group I).**
- Other basic measures **(Group II).** These basic measures are related to the basic principles of EU and national legislation on water management and relate to the horizontal implementation of actions in groups, usually, water bodies, with a view to achieving or maintaining good status in water.

The **Supplementary Measures** are the measures established and implemented in addition to the Basic Measures, in order to achieve the objectives, set in accordance with Article 4 of Directive 2000/60 / EC. Member States may adopt further supplementary measures with a view to additional protection or improvement of the waters covered by the Directive.

8.1 PROGRESS OF IMPLEMENTATION OF THE 1ST RBMP REVISION POM

The program of measures of the 1st RBMP Revision included 10 Basic Measures of Group I, 35 Basic Measures of Group II and 18 Supplementary Measures.

In the following tables, the number of Basic (Group II) and Supplementary Measures per category of measure, as defined in the context of the 1st RBMP Revision, is given.

Table 8-1: Number of Basic Measures (Group II) of 1st RBMP Revision per category of Actions

Measures Category	Measure No
Measures to deal with negative impacts on the state of surface water systems, especially from hydro-morphological changes	5
Measures to implement the cost recovery principle of Water Services (Article 9)	4
Measures for the protection of waters intended for human consumption (Article 7)	4
Measures to promote the efficient and sustainable use of water so as not to jeopardize the achievement of the objectives of the Directive (Article 4)	8
Measures for diffuse sources of discharges	3
Measures for priority substances and other substances	2
Measures for point & diffuse sources of discharges	1
Measures for point sources of discharges	4
Measures for the control and licensing of the artificial enrichment of the YSS	2
Control measures for surface and groundwater abstraction and surface water storage	2
Total	**35**

Table 8-2: Number of Supplementary Measures of 1st RBMP Revision per category of Actions

Measures Category	Measure No
Reconstitution and restoration of wetland areas	1
Administrative measures	2
Educational measures	2
Emission controls	5
Withdrawal control	1
Research, development and demonstration projects	4
Other Measures	2
Efficiency and reusability measures	1
Total	**18**

The progress of the implementation of the measures of the 1st RBMP Revision RBMP is directly affected by:

- The time available from the approval of the 1st RBMP Revision to today, approximately 5 years, which is relatively short for the full implementation of certain actions that require significant maturation time.
- The particularly unfavorable economic conditions prevailing in the Country, which led to limited rates of allocation of the necessary credits for the implementation of the measures.
- The available resources (human and financial) of the competent bodies for the implementation of the measures.

The following were recorded as the main problems regarding the implementation of the program of Basic and Supplementary measures:

- Financing problems
- Administrative difficulties
- Problems regarding prioritization and prioritization of measures

Table 8-3: Stage of completion of Basic Protection Measures (Group I)

Directive	Planned Actions	Implementation Bodies	Implementation Stage
Bathing Water (Directive 2006/7/EC)	BO11: Continuation of the monitoring of bathing water quality in accordance with Directive 2006/7/EC.	GSW, Decentralized Water Administrations	Implemented
	Revision of the Bathing Water Identity Register		
Protection of wild birds (Directive 2009/147/EC) and habitats (Directive 92/43/EEC)	BO21: Preparation/establishment of Management Plans for protected areas of the Natura 2000 network that are directly dependent on water, with special reference to water management issues.	Ministry of Environment and Energy, Protected Area Management Bodies	To be implemented
	BO22: Monitoring/assessment of the conservation status of water-dependent habitats and species in Natura 2000 network areas.		
Drinking Water (Directives 98/83/EC, 2015/1787/EU, Directive (EU) 2020/2184/EC	BO31: Monitoring the implementation of the Directive	Ministry of Health	Implemented
Environmental Impacts from Projects/Activities (Directives 2011/92/EU, 2014/52/EU)	BO41: Amendment of MD co. 170225/2014 (Specification of the contents of the environmental licensing files for projects and activities of Category A...) so that for specific categories of projects, which should be determined beforehand, the following are made mandatory: Pollutant emissions by category, Calculation of the effects due to pollution in the MD defined in the Management Plans and Comparison of these concentrations with the EPP. Preparation of a monitoring program and notification of results to the relevant General Directorate of Water.	Ministry of Environment and Energy	Implemented
Pollution Prevention - Control (Directive 2010/75/EU)	BO51: Maintaining a file-registry of facilities that are included in the provisions of the Directive	Decentralized administration	Not Implemented

Directive	Planned Actions	Implementation Bodies	Implementation Stage
Protection against nitrate pollution (Directives 91/676/EEC, 98/15/EC)	BO61: Implementation of the New Action Programs. The study for the drafting of Action Programs in all the Vulnerable Zones of the Country has been assigned by the MRDF to the Agricultural University and is under preparation.	Ministry of Rural Development and Food	Implemented
	BO62: Systematic monitoring of nitrate levels in water bodies that are or may be subject to nitrate pollution.	GDW, Ministry of Rural Development and Food	Implemented
Plant Protection Products (Directive 2009/128/EC, Regulation (EC) No. 1107/2009, Regulation (EU) No. 652/2014)	BO71: Rational use of plant protection products	Ministry of Rural Development and Food	Implemented
Addressing the risks of major accidents (Directive 2012/18/EE)	BO81: Maintaining a file-registry of facilities that fall under the provisions of the Directive.	Decentralized administration	Not Implemented
Sewage sludge (Directive 86/278/EEC)	BO91: JMD training regarding measures, conditions and procedures for the use of sludge originating from the treatment of domestic and urban sewage as well as certain liquid wastes, in compliance with the provisions of Directive 86/278/EEC and in replacement of JMD 80568/4225 /1991 and promoting actions related to the safe disposal of treated sludge.	Ministry of Environment and Energy	Not Implemented
Urban Wastewater Treatment (Directive 91/271/EEC)	BO101: Completion of the drainage and sewage treatment projects of the settlements that fall under the provisions of the Directive (concerns all settlements with a population of more than 2,000 equivalent inhabitants).	Region, MEWS, Municipalities	Implemented
	BO102: Strengthening actions to control the effective operation of existing wastewater treatment and drainage projects.	Region	Implemented

Table 8-4: Summary table of the progress of the completion of Basic and Supplementary Measures programs (1st RBMP Revision) in the Central Macedonia WB (EL10)

BASIC MEASURES			
Not Implemented	To be Implemented	Implemented	Total
9	5	21	35
SUPPLEMENTARY MEASURES			
Not Implemented	To be Implemented	Implemented	Total
4	2	12	18

Table 8-5: Number of Basic and Supplementary Measures (1st RBMP Revison) that have been completed per category of measure

Measure Category	EL10
Reconstitution and restoration of wetland areas	1
Administrative measures	2
Educational measures	1
Pumping checks	
Emission controls	
Withdrawal control	1
Research, development and demonstration projects	
Other Measures	2
Efficiency and reusability measures	
Measures to deal with negative effects on the state of surface water systems, especially from hydromorphological alterations	
Measures to implement the cost recovery principle of Water Services (Article 9)	3
Measures to protect water intended for human consumption (Article 7)	4
Measures to promote the efficient and sustainable use of water so as not to jeopardize the achievement of the objectives of the Directive (Article 4)	5
Measures for diffuse sources of discharges	
Measures for priority substances and other substances	
Measures for point and diffuse sources of discharges	2
Measures for point sources of discharges	1
Measures for the control and licensing of the artificial enrichment of natural resources of the RBD	
Demand management measures	
Control measures for surface and ground water abstraction and surface water storage	2
TOTAL	24

8.2 PROGRAM OF BASIC AND SUPPLEMENTARY MEASURES OF THE 2ND RBMP REVISION

8.2.1 Actions implementing EU Directives (Group I Basic Measures)

The planned actions for the implementation of EU Directives Annex VI of Directive 2000/60/EC (as amended and in force) into National law are presented in the following table.

Table 8-6: Actions for the implementation of EU Directives

DIRECTIVE	INCORPORATION IN NATIONAL LAW
Bathing water Directive (2006/7/ EC)	JMD 8600/416/E103/23.02.2009 (Government Gazette 356/B/2009) regarding the "quality and measures of bathing water management, in compliance with the provisions of Directive 2006/7/EC "regarding the management of the quality of bathing waters and the repeal of Directive 76/160/EEC", as amended by article 18 of Government Decree 145116/8.3.2011 (Government Gazette B' 354/8.3.2011) and in force.
Habitats Directive (92/43/EEC) Birds Directive (2009/147/ EC)	JMD MD 37338/1807/E103/1.9.2010 (Government Gazette 1495/B/2010) "Definition of measures and procedures for the conservation of wild poultry and their habitats, in compliance with the provisions of Directive 79/409/EEC" On the conservation of wild birds", of the European Council of April 2, 1979, as codified by the directive 2009/147/EC" and its amendment JMD MD 8353/276/E103/2012 (Government Gazette 415/B/2012). JMD 33318/3028/11.12.1998 (Government Gazette 1289/B/1998) "determination of measures and procedures for the conservation of natural habitats (habitats) as well as wild fauna and flora" and its amendment JMD MD 14849/853/E103/ 2008 (Government Gazette 645/B/2008) in compliance with the provisions of Directive 92/43/EEC "on the conservation of natural habitats as well as wild fauna and flora". Law 3937/2011 (Government Gazette 60/A/2011) "Conservation of Biodiversity and other provisions" JMD 50743/2017 (Government Gazette 4432/B/2017) "Revision of the national list of areas of the European Ecological Network Natura 2000" Law 4685/2020 (Government Gazette 92/A/2020) "Modernization of environmental legislation, incorporation into Greek legislation of Directives 2018/844 and 2019/692 of the European Parliament and of the Council and other provisions"
Drinking water (Directives 98/83/ EC, 2015/1787/ EC)	JMD D1(d)/G.P.ok.27829/15.05.2023 (Government Gazette 3525/B/2023) "Quality of water for human consumption in compliance with the provisions of Directive (EU) 2020/2184 of the European Parliament and of the Council of 16 December 2020 (L435/1, 23.12.2020)

DIRECTIVE	INCORPORATION IN NATIONAL LAW
Environmental Impact / Activities (Directives 85/337/EC, 2011/92/EC, 2014/52/EC)	Law 4014/2011 (Government Gazette 209/A/2011) "Environmental licensing of projects and activities, regulation of arbitrary in connection with the creation of an environmental balance and other provisions of the competence of the Ministry of Environment" as amended and in force. M.D. 5688/2018 (Government Gazette 988/B` 21.3.2018) "Amendment of the annexes of Law 4014/2011 (A' 209), in accordance with Article 36A of this Law, in compliance with Directive 2014/52/EU "amending Directive 2011/92/EU on the assessment of the effects of certain public and private works projects on the environment" of the European Parliament and of the Council of 16 April 2014" Law 4936/2022 (Government Gazette 105/A` 27.5.2022) "National Climate Law - Transition to climate neutrality and adaptation to climate change, urgent provisions to address the energy crisis and protect the environment"
Pollution Prevention - Control (Directives 96/61/EC, 2008/1/EC, 2010/75/EC)	MD 36060/1155/E.103/2013 (Government Gazette 1450/B/2013) "Definition of a framework of rules, measures and procedures for the comprehensive prevention and control of environmental pollution from industrial activities, in compliance with the provisions of Directive 2010/75/EU "on industrial emissions (integrated pollution prevention and control)" of the European Parliament and of the Council of 24 November 2010"

DIRECTIVE	INCORPORATION IN NATIONAL LAW
Nitrates Directive (Directive 91/676/ EC)	JMD 16190/1335/19.05.1997 (Government Gazette 519/B/1997) "Measures and conditions for the protection of waters from nitrate pollution of agricultural origin" MD co. 19652/1906/1999 (Government Gazette 1575/B/1999) "Determination of waters subject to nitrate pollution of agricultural origin- List of vulnerable zones, in accordance with paragraphs 1 and 2 respectively of article 4 of No. 16190/1335/ 1997 joint ministerial decision "Measures and conditions for the protection of waters from nitrate pollution of agricultural origin" (B 519). Amendment of articles 3, 4, 5 and 8 of this decision" as amended by MD 20419/2522/2001 (Government Gazette 1212/B/2001), MD 24838/1400/E103/2008 (Government Gazette 1132/B/2008), MD 106253/2010 (Official Gazette 1843/B/2010), MD 190126/2013 (Official Gazette 983/B/2013), MD 147070/2014 (Official Gazette 3224/B/2014) and is valid. JMD MEE/38552/265/2019 (Government Gazette 1496/B/2019) Action Program for areas that have been characterized as vulnerable zones from nitrate pollution of agricultural origin in accordance with article 2 of joint ministerial decision 19652/1906/1999 (B'1575), as in force, in compliance with Directive 91/676/EEC "on the protection of waters against nitrate pollution of agricultural origin" of the Council of December 12, 1991 of the European Communities, as amended and in force. M.D. 1848/278812/2021 (Government Gazette 4855/B` 20.10.2021) "Code of Good Agricultural Practice for the Protection of Waters from Nitrate Pollution of Agricultural Origin (Article 10§1)
Plant Protection Products (Directive 2009/128/EC, As it is amended of 2019/782/EC, Regulation (EU) No. 1107/2009, Regulation (EU) No. 652/2014)	Law 4036/27.01.2012 (Government Gazette 8/A/2012) "Availability of agricultural drugs on the market, their rational use and related provisions" as amended and in force. Law 4625/2019 (Government Gazette A 139- 31.08.2019) "Regulations of the Ministry of Infrastructure and Transport and other urgent provisions" [Article 19 includes the amendment of Annex E of Law 4036/2012 (Government Gazette 8/A/2012), in compliance with Directive (EU) 2019/782 (Articles 1 and 2 of Directive 2019/782/EU)].
Major Accidents (Seveso) Directive (2012/18/EC)	JMD 172058/2016 (Government Gazette 354/B/2016) "Definition of rules, measures and conditions for dealing with the risks of large-scale accidents in facilities or units, due to the existence of dangerous substances, in compliance with the provisions of Directive 2012/18/EU "to deal with the risks of major accidents related to dangerous substances and for the amendment and subsequent repeal of Directive 96/82/EC of the Council" of the European Parliament and the Council of July 4, 2012. Replacement of no. 12044/613/2007 (376/B/2007), as amended (Government Gazette 2259/B/2007)"

DIRECTIVE	INCORPORATION IN NATIONAL LAW
Sewage sludge (Directive 86/278/EEC, 2018/853/EU, Regulation, 2019/1010/EU)	M.D. MEE/DDA/41828/630/2023 (Government Gazette B' 2692/ 21.4.2023) "Measures, conditions and procedures for the use of treated sludge in agriculture and soil restoration- Compliance with the provisions of Council Directive 86/278/EEC of June 12, 1986 "regarding the protection of the environment and especially the soil during use of sewage treatment sludge in agriculture", as amended by Regulation (EU) 2019/1010 of the European Parliament and of the Council of June 5, 2019 and replacement of no. 80568/4225/1991 (B' 641) of joint ministerial decision"
Urban Waste Water Treatment (Directive 91/271/ EC, 98/15/ EC)	JMD 5673/400/05.03.1997 (Government Gazette 192/B/1997) "Measures and conditions for the treatment of municipal wastewater" and its amending decisions MD 19661/1982/2.8.1999 (Government Gazette 1811/B/1999), MD 48392/939/28.3.2002 (Government Gazette 405/B/2002) and MD 136843/2022 (Government Gazette B' 7215/ 31.12.2022).
Regulation (EU) No. 2020/741 on minimum requirements for water reuse	The Regulation applies when treated urban waste water is reused, in accordance with Article 12(1) of the Urban Waste Water Directive 91/271/EEC, for agricultural irrigation.

The following table presents the planned actions for the implementation of the Union and National Legislation for the protection of water.

Table 8-7: Actions for the implementation of EU Directives

DIRECTIVE	PLANNED ACTIONS	IMPLEMENTING BODIES
Bathing water Directive (2006/7/ EC)	• **BO11:** Continue to monitor the quality of bathing water in accordance with Directive 2006/7 / EC. • **BO12:** Updating the Greek Bathing Water Profiles Registry	General Directorate for Water, Directorate of Water of the Decentralized Administration
Habitats Directive (92/43/EEC) Birds Directive (2009/147/ EC)	• **BO21:** Setting /Approval Management Plans for protected areas of Natura 2000 network relating with water management issues. • **BO22:** Monitoring/Assessment of the conservation status of habitats and species directly depending on water in Natura 2000 areas.	Ministry of Environment and Energy, Protected Areas Management Bodies
Drinking water (2020/2184/EC)	• **BO31:** Monitoring of the implementation of the Directive	Ministry of Health

DIRECTIVE	PLANNED ACTIONS	IMPLEMENTING BODIES
Environmental Impact Assessment Directive 2010/75/EC)	• **BO51:** Keeping registration and records of installations that are in line with the provisions of the Directive	Decentralized administration
Nitrates Directive (91/676/ EC)	• **BO61:** Systematic monitoring of nitrate levels in WBs that are or may be subject to nitrate pollution.	General Directorate for Water, Ministry of Rural Development and Food
Plant Protection Products (Directive 2009/128/EC, Regulation (EU) No. 1107/2009, Regulation (EU) No. 652/2014)	• **BO71:** Rational use of plant protection products	Ministry of Rural Development and Food
Major Accidents (Seveso) Directive (2012/18/EC)	• **BO81:** Keeping registration and records of installations that are in line with the provisions of the Directive.	Decentralized administration
Sewage sludge (Directive 86/278/EEC)	• **BO91:** Setting up a Joint Ministerial Decision, on Measures, Conditions and Procedures for the Use of Sludge from Domestic and Urban Wastewater Treatment and Certain Wastewater, in compliance with the provisions of Directive 86/278 / EEC and in replacement of Joint Ministerial Decision 80568/4225 / 1991 and promotion of actions related to the safe disposal of treated sludge.	Ministry of Environment and Energy
Urban Waste Water Treatment (Directive 91/271/ EC, 98/15/ EC)/ Regulation (EU) No. 2020/741 on minimum requirements for water reuse	• **BO101:** Completion of sewerage and waste water treatment projects of the settlements that concerns the provisions of the Directive	Region, MEWSS, Municipalities
	• **BO102:** Strengthening actions to control the effective operation of existing wastewater treatment and drainage projects.	Region

8.2.2 Other Basic Measures (Group II)

The basic measures of Group II as formulated during the 2nd RBMP Revision are listed in the table below.

Table 8-8: Table of Basic measures (Group II) of the 2nd RBMP Revision

MEASURE CODE	MEASURE NAME	CATEGORY	ASSOCIATION WITH THE 1st RBMP	IMPLEMENTING BODIES
M10B0204	Training and expertise of all the stakeholders (Decentralized Administrations, Regions) of the National Water Committee, which deals with pricing and costing rules for water supply services	Measures to implement the cost recovery principle (Art. 9)	Continuing Measure (modification of title and description)	Ministry of Environment & Energy (General Directorate for Water)
M10B0301	Compilation / Revision of General Water Supply Plans (Masterplan)	Measures to promote the efficient and sustainable use of water so as not to jeopardize the achievement of the objectives of the Directive (Article 4)	Continuing Measure (modification of title and description)	Water service providers (MEWSS, Municipalities, etc.) / Dep. Administration (General Directorate for Water)
M10B0302	Actions to strengthen, restore, modernize water supply networks and control leaks	Measures to promote the efficient and sustainable use of water so as not to jeopardize the achievement of the objectives of the Directive (Article 4)	Continuing Measure (modification of title and description)	Water service providers (MEWSS, Municipalities, etc.) / Dep. Administration (General Directorate for Water), Ministry of Environment & Energy
M10B0303	Increasing the efficiency of water use in ground improvement infrastructure	Measures to promote the efficient and sustainable use of water so as not to jeopardize the achievement of the objectives of the Directive (Article 4)	Continuing Measure (modification of title and description)	Ministry of Rural Development & Food, NRN, PEMP, Region

MEASURE CODE	MEASURE NAME	CATEGORY	ASSOCIATION WITH THE 1st RBMP	IMPLEMENTING BODIES
M10B0304	Investments to save water on agricultural holdings	Measures to promote the efficient and sustainable use of water so as not to jeopardize the achievement of the objectives of the Directive (Article 4)	Continuing Measure	Individuals / Ministry of Rural Development and Food / Regions
M10B0305	Determination of upper limits of crop irrigation needs for private water withdrawals	Measures to promote the efficient and sustainable use of water so as not to jeopardize the achievement of the objectives of the Directive (Article 4)	Continuing Measure (modification of title and description)	Decentralized Administration (Water Directorate), Region (directorate of Rural Economy and Veterinary Medicine)
M10B0401	Definition and delimitation of zones and / or measures for the protection of water abstraction points, intended for human consumption from Ground Water Bodies	Measures to meet the requirements of Article 7 (drinking water)	Continuing Measure (modification of title and description, including the obligations of Directive 2020/2184/EU)	Water service suppliers (MEWSS, Municipalities, etc.) / Dep. Administration (General Directorate for Water), Ministry of Environment & Energy, Region
M10B0402	Protection of GWBs included in the registry of protected areas for human consumption and establishment of an institutional framework of protection	Measures to meet the requirements of Article 7 (drinking water)	Continuing Measure	Decentralized Administration (Water Directorate)
M10B0403	Protection of hydroleptic works of water intended for human consumption from Surface Water Systems	Measures to meet the requirements of Article 7 (drinking water)	Continuing Measure (modification of title and description, including the obligations of Directive 2020/2184/EU)	Water service suppliers (MEWSS, Municipalities, etc.) / Dep. Administration (General Directorate for Water), Ministry of Environment & Energy, Region

MEASURE CODE	MEASURE NAME	CATEGORY	ASSOCIATION WITH THE 1st RBMP	IMPLEMENTING BODIES
M10B0501	Restrictions, terms and conditions for the construction of hydro-absorbing groundwater abstraction projects (drillings, wells, etc.) for new uses, as well as the extension of permits for existing water uses to: a) GWB areas with poor quantitative status b) in protection zone II of water abstraction projects serving water supply networks operated by water supply service providers, c) zones of collective irrigation networks d) GWB of a coastal zone with inundation problems, widespread or local, regardless of origin	Measures to control surface and groundwater abstractions	Continuing Measure (modification of title and description)	Decentralized Administration (Water Directorate)
M10B0601	Investigating/Determining the conditions for the application of artificial enrichment of underground water systems as a means of quantitative reinforcement and quality protection of GWBs, with priority for GWBs in poor condition and dealing with salinization.	Measures to control the artificial recharge of groundwater aquifers	Continuing Measure	Region, Municipalities, Decentralized Administration (Water Directorate)
M10B0702	Modernization of national legislation on waste and industrial waste management	Measures for point source pollution	New measure to replace the M07B0702 & M07B1102	Ministry of Environment & Energy (General Directorate for Water), Regions
M10B0704	Conditions for the licensing of new / extension of existing aquaculture units	Measures for point source pollution	Continuing Measure	Ministry of Environment & Energy, Decentralized Administration, Region

MEASURE CODE	MEASURE NAME	CATEGORY	ASSOCIATION WITH THE 1st RBMP	IMPLEMENTING BODIES
M10B0705	Preparation of rules for sinkholes protection	Measures for point and diffuse source of pollution	Continuing Measure	Ministry of Environment & Energy (General Directorate for Water), Regions
M10B0801	Biological agriculture	Measures for diffuse source pollution	Continuing Measure (modification of title and description)	Ministry of Rural Development and Food (Directorate of Quality Systems, Organic Production and Geographical Indications)
M10B0803	Reduce diffuse pollution from agriculture in the Nitrate Vulnerable Zones of the Directive 91/676/EEC	Measures for diffuse source pollution	Continuing Measure (modification of title and description)	Ministry of Rural Development and Food / OPEKEPE
M10B0902	Determination of maximum water level fluctuation of reservoirs	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	Continuing Measure (modification of title and description)	Managing Authority, Decentralized Administration (Water Directorate, National Monitoring Network Operating Bodies, Protected Areas Bodies, other scientific bodies)
M10B0905	Determination of selected areas for river sediment deposits removal to meet the needs of technical projects	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	Continuing Measure (modification of title and description)	General Directorate for Water / Region / Decentralized Administration (Water Directorate)
M10B0906	Monitoring, recording and rehabilitation of coastal erosion	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	Continuing Measure	Ministry of Infrastructure, and Transport, Ministry of Navigation, Region, Decentralized Administration (Water Directorate), Municipalities, TEE

MEASURE CODE	MEASURE NAME	CATEGORY	ASSOCIATION WITH THE 1st RBMP	IMPLEMENTING BODIES
M10B0907	Measures to identify and achieve Good Ecological Potential in Highly Modified Aquatic Systems	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	New measure, following the implemented measure M07B0904 of the 1st Revision	They are defined on a case-by-case basis by the Table 10 of Annex 10 hereof.

The first body is the Implementation body. The rest are supporting bodies for the implementation of the measure

8.2.3 Assessment of the possibility of achieving good status by 2027 after the implementation of the program of basic measures

The program of basic measures is a tool for the protection and restoration of all water bodies. In order to achieve the objectives of the Management Plan, the implementation of the basic measures must be supported by supplementary measures.

Methodologically, it was chosen to propose supplementary measures:

a) To maintain the good condition of surface or ground water bodies, as well as to increase knowledge and awareness of special issues for the most rational use of water, targeted users. In this case the supplementary measures have a horizontal, general application and the affected water systems are not specified.

b) In the water bodies that are estimated that despite the implementation of the program of basic measures, they will not achieve the goal of good status by 2027, and more specifically:

- in water bodies, which, according to measurements of the qualitative and quantitative parameters or with the new methodological approach to their grouping, are in a condition inferior to good,
- in water bodies, which are in good condition, but there are clear indications, through the analysis of pressures, that they are at risk of not achieving their environmental goals.

The measures of case b) are taken into account for the calculation of the environmental cost and/or the cost of the resource, in accordance with the provisions of the national legislation as applicable.

The following Table lists the water bodies of the RBD for which it is deemed necessary to take relevant targeted supplementary measures.

Table 8-9: Water bodies in the RBD of Central Macedonia (EL10), for which it is deemed necessary to take supplementary measures

RB Code	WB Code	WB Name	Ecological Status 2nd Revision	Chemical Status 2nd Revision	Overall Status of 2nd Revision	Main pressure factors
EL1003	EL1003R000400031A	LOUDIAS R.	POOR	GOOD	POOR	Industry, Agriculture, Urban Development, Other
EL1003	EL1003R000400032A	LOUDIAS R.	POOR	GOOD	POOR	Industry, Agriculture, Urban Development, Other
EL1003	EL1003R000400033N	XIROPOTAMOS	MODERATE	GOOD	MODERATE	Energy- non-hydro energy, Transport, Industry, Agriculture, Urban Development, Forestry, Other
EL1003	EL1003R000400034N	XIROPOTAMOS	MODERATE	GOOD	MODERATE	Industry
EL1003	EL1003R0F0201004H	AXIOS R. (VARDARIS)	POOR	GOOD	POOR	Industry, Flood Protection
EL1003	EL1003R0F0202014A	VARDAROVASI S.	POOR	GOOD	POOR	Energy- non-hydro energy, Transport, Industry, Agriculture, Urban Development, Forestry, Other
EL1003	EL1003R0F0202015N	VARDAROVASI S.	MODERATE	GOOD	MODERATE	Industry
EL1003	EL1003R0F0202116N	VARDAROVASI S.	MODERATE	GOOD	MODERATE	Agriculture
EL1003	EL1003R0F0203005N	AXIOS R. (VARDARIS)	BAD	GOOD	BAD	Industry
EL1003	EL1003R0F0204017A	TAFROS	MODERATE	GOOD	MODERATE	Industry
EL1003	EL1003R0F0204018A	TAFROS	MODERATE	GOOD	MODERATE	Industry

RB Code	WB Code	WB Name	Ecological Status 2nd Revision	Chemical Status 2nd Revision	Overall Status of 2nd Revision	Main pressure factors
EL1003	EL1003R0F0204019N	MPAGIALTZAS S.	MODERATE	GOOD	MODERATE	Agriculture
EL1003	EL1003R0F0204120A	TAFROS	MODERATE	GOOD	MODERATE	Unknown reason
EL1003	EL1003R0F0204223N	PSARORREMA	POOR	GOOD	POOR	Industry
EL1003	EL1003R0F0205007N	AXIOS R. (VARDARIS)	POOR	GOOD	POOR	Unknown reason
EL1003	EL1003R0F0207008N	AXIOS R. (VARDARIS)	MODERATE	GOOD	MODERATE	Unknown reason
EL1003	EL1003R0F0207009N	AXIOS R. (VARDARIS)	MODERATE	GOOD	MODERATE	Flood Protection, Agriculture
EL1003	EL1003R0F0209011N	AXIOS R. (VARDARIS)	MODERATE	GOOD	MODERATE	Industry
EL1003	EL1003R0F0209012N	AXIOS R. (VARDARIS)	MODERATE	GOOD	MODERATE	Unknown reason
EL1004	EL1004R000201001N	GALLIKOS R.	MODERATE	GOOD	MODERATE	Flood Protection, Energy-non-hydro energy, Transport, Industry, Agriculture, Urban Development, Forestry, Other
EL1004	EL1004R000201002N	GALLIKOS R.	BAD	GOOD	BAD	Flood Protection, Industry, Agriculture, Urban Development, Forestry, Energy- non-hydro energy, Other
EL1004	EL1004R000201003N	GALLIKOS R.	MODERATE	LESS THAN GOOD	MODERATE	Industry
EL1004	EL1004R000201004N	GALLIKOS R.	MODERATE	GOOD	MODERATE	Unknown reason

RB Code	WB Code	WB Name	Ecological Status 2nd Revision	Chemical Status 2nd Revision	Overall Status of 2nd Revision	Main pressure factors
EL1004	EL1004R000202008N	XIROPOTAMOS	MODERATE	GOOD	MODERATE	Industry
EL1004	EL1004R000203005N	GALLIKOS R.	MODERATE	LESS THAN GOOD	MODERATE	Industry
EL1004	EL1004R000204011N	MEGALO R.	POOR	GOOD	POOR	Unknown reason
EL1004	EL1004R000205006N	GALLIKOS R.	MODERATE	GOOD	MODERATE	Unknown reason
EL1004	EL1004R000206015N	GALLIKOS R.	MODERATE	GOOD	MODERATE	Unknown reason
EL1005	EL1005R000100021N	MAVROS LAKKOS	BAD	LESS THAN GOOD	BAD	Industry
EL1005	EL1005R000201003N	RIXIOS R.	POOR	GOOD	POOR	Unknown reason
EL1005	EL1005R000203004A	DERVENI S.	MODERATE	GOOD	MODERATE	Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other
EL1005	EL1005R000203005A	DERVENI S.	BAD	GOOD	BAD	Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other
EL1005	EL1005R000204011N	ASPROPETRA	MODERATE	GOOD	MODERATE	Unknown reason
EL1005	EL1005R000205006A	DERVENI S.	MODERATE	GOOD	MODERATE	Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other

RB Code	WB Code	WB Name	Ecological Status 2nd Revision	Chemical Status 2nd Revision	Overall Status of 2nd Revision	Main pressure factors
EL1005	EL1005R000206216N	CHOLOMONTAS	MODERATE	GOOD	MODERATE	Unknown reason
EL1005	EL1005R000207007A	DERVENI S.	MODERATE	GOOD	MODERATE	Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other
EL1005	EL1005R000209008N	MPOGDANOU	BAD	GOOD	BAD	Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other
EL1005	EL1005R000209009N	MPOGDANOU	MODERATE	GOOD	MODERATE	Unknown reason
EL1005	EL1005R000300022N	MPASDEKI	MODERATE	GOOD	MODERATE	Urban development, Industry, Agriculture, Other
EL1005	EL1005R001300027N	MYLOU	MODERATE	GOOD	MODERATE	Unknown reason
EL1005	EL1005R001500028N	ZOGRAFITIKOS LAKKOS	MODERATE	GOOD	MODERATE	Flood Protection
EL1005	EL1005R001700029H	ANTHEMOUS	POOR	LESS THAN GOOD	POOR	Flood Protection, Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other
EL1005	EL1005R001700030N	ANTHEMOUS	MODERATE	GOOD	MODERATE	Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other

RB Code	WB Code	WB Name	Ecological Status 2nd Revision	Chemical Status 2nd Revision	Overall Status of 2nd Revision	Main pressure factors
EL1005	EL1005R001900031N	REMA1	MODERATE	GOOD	MODERATE	Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other
EL1005	EL1005R002300033N	XIROLAGKAS	MODERATE	LESS THAN GOOD	MODERATE	Industry
EL1005	EL1005R002900041N	ZAMOUNI	MODERATE	GOOD	MODERATE	Industry
EL1005	EL1005R003101042N	CHAVRIAS	BAD	GOOD	BAD	Agriculture
EL1005	EL1005R003103043H	CHAVRIAS	MODERATE	GOOD	MODERATE	Industry
EL1005	EL1005R003107045N	CHAVRIAS	MODERATE	GOOD	MODERATE	Unknown reason
EL1005	EL1005L000000004N	KORVNEIA LAKE	MODERATE	GOOD	MODERATE	Agriculture, Energy- non-hydro energy, Industry, Transport, Urban development, Forestry, Other
EL1003	EL1003L000000006A	ARTIFICIAL LAKE ARTZAN	MODERATE	GOOD	MODERATE	Agriculture
EL1003	EL1003L0F0000001N	DOIRAN LAKE	MODERATE	LESS THAN GOOD	MODERATE	Agriculture, Urban development, Other
EL1005	EL1005L000000002H	MAVROUDA LAKE	MODERATE	LESS THAN GOOD	MODERATE	Industry, Urban development, Other
EL1005	EL1005L000000003N	VOLVI LAKE	MODERATE	GOOD	MODERATE	Industry, Agriculture, Urban development, Forestry,

RB Code	WB Code	WB Name	Ecological Status 2nd Revision	Chemical Status 2nd Revision	Overall Status of 2nd Revision	Main pressure factors
						Energy- non-hydro energy, other
EL1004	EL1004L000000005N	PIKROLIMNI LAKE	GOOD	LESS THAN GOOD	MODERATE	Agriculture
EL1005	EL1005C0009N	EXO THERMAIKOS GULF-KALLIKRATEIA	MODERATE	GOOD	MODERATE	Unknown reason
EL1005	EL1005T0003N	LIMNOTHALASSA AGIOU MANA	MODERATE	GOOD	MODERATE	Unknown reason
EL1005	EL1005T0002N	LIMNOTHALASSA ANGELOHORI	POOR	LESS THAN GOOD	POOR	Industry
EL1003	EL1003T0001N	EKVOLIKO SYSTEM OF AXIOS	MODERATE	GOOD	MODERATE	Flood Protection
EL1003	EL1003R000400031A	LOUDIAS R.	POOR	GOOD	POOR	Industry, Agriculture, Urban development, Other

Table 8-10: GWB of the Central Macedonia RBD (EL10), where supplementary measures are necessary

Code	Name	Qualitive status	Quantitative status	Local trace element excesses	Significant Pressure Factor	Marine penetration	Protected areas
EL1000031	Axiou	POOR	POOR	E.C., Cl, NO_3, NH_4, Hg, As, Fe, Mn	Agriculture, livestock farming, WWTP, sewage, extraction activities, landfill, overpumping	NO	NO
EL100F040	Doiranis	GOOD	POOR	NO_3, Al, Fe, Mn	Agriculture, livestock farming, sewage, overpumping	NO	NO
EL1000061	Yp. Epanomis-Moudanion	POOR	POOR	E.C., Cl, NO_3, NO_2,SO_4 NH_4, As, Ni,Mn	Agriculture, livestock farming, WWTP, sewage, extraction activities, landfill, overpumping, salinization	In the coastal zone	NO
EL1000071	Yp. Koroneias	POOR	POOR	NO_3, SO_4, Al, Fe, Mn	Agriculture, livestock farming, industry, WWTP, sewage, extraction activities	NO	NO
EL1000072	Yp. Volvis	GOOD	POOR	NO_3, NH_4, Al, As, Fe, Mn	Agriculture, livestock farming, sewage, extraction activities	NO	NO
EL1000081	Yp. Kato Rou Anthemounta	GOOD	POOR	Mn	Agriculture, livestock farming, industry, WWTP, sewage, extraction activities salinization	Locally in the coastal zone	NO

Code	Name	Qualitive status	Quantitative status	Local trace element excesses	Significant Pressure Factor	Marine penetration	Protected areas
EL1000100	Ormylias	GOOD	POOR	NO	Agriculture, livestock farming, WWTP, sewage, salinization		NO
EL1000132	Yp. Kokkinolakka	POOR	GOOD	-	Mining	NO	NO
EL1000191	Yp. Skourion	POOR	GOOD	-	Mining, , livestock farming, WWTP, sewage, industry	NO	NO

8.2.4 Supplementary Measure

The program of supplementary measures of the 2nd RBMP Revision are presented in the following table.

Table 8-11: Table with the supplementary measures of the 2nd RBMP Revision

Code- Name of Measure	Measure Category	Association with the 1st RBMP Revision	Related WB	Implementing Bodies	Cost in €
M10Σ0201 Development of a Monitoring Programme for the implementation of the PoM of the RBMP in the RBD and provision of supporting services for the implementation of the PoM	Administrative measures	M10Σ0201	Horizontal	Decentralized Administration (Water Directorate)	100,000
M10Σ0202 Control and treatment of artesian wells	Administrative measures	M10Σ0202	Total GWB in RBD	Owner of the well, Decentralized Administration (Water Directorate)	ADMINISTRATIVE MEASURE
M10Σ0503 Sampling and analysis, of the waters, inside and outside the port of Thessaloniki	Emission controls	M10Σ0503	EL1005C0011H	Thessaliniki Port Authority/ Regions	0
M10Σ0504	Emission controls	M10Σ0504	EL1005C0010N, EL1005C0011H	NECCA (Coordinator), Decentralized	150,000

Code- Name of Measure	Measure Category	Association with the 1st RBMP Revision	Related WB	Implementing Bodies	Cost in €
Masterplan for dealing with pollution phenomena in the Gulf of Thessaloniki				Administration, Region, EYATH. S.A, ThPA, Coast Guard, Municipalities	
M10Σ0505 Determination of protection conditions for the Ormylia granular system after the completion of the construction and operation of the Havria dam	Withdrawal checks	M10Σ0505	EL1000100	Decentralized Administration (Water Directorate)/ Region	ADMINISTRATIVE MEASURE
M10Σ0701 Package of Rehabilitation Measures of the National Park of the Lakes of Koroneia - Volvi and the Macedonian Tempes, related to Directive 2000/60	Reconstitution and restoration of wetland areas	M10Σ0701	EL1005L000000004N, EL1000070	Ministry of Environment & Energy (according to Article 33 of Law 4691/2020) in accordance with the current institutional framework for the actions they have already undertaken to implement or finance, the NECCA / Ministry of Rural Development & Food, / EYD- / Decentralized Administration (Water Directorate)/ Region / Municipalities	300,000

Code- Name of Measure	Measure Category	Association with the 1st RBMP Revision	Related WB	Implementing Bodies	Cost in €
M10Σ0801 Identification and delineation of GWB areas showing poor quality status due to salinization or experiencing local salinization	Withdrawal checks	M10Σ0801	EL1000010, EL1000031, EL1000050 EL1000061, EL1000081, EL1000090 EL1000100, EL1000110, EL1000131, EL1000140, EL1000180, EL1000191 EL1000192, EL1000193, EL1000200 EL1000290, EL1000300	Decentralized Administration (Water Directorate)	700,000
M10Σ1604 Compilation of a Special Hydrogeological - Hydrochemical study for the determination of GWB or parts thereof where chemical elements with high natural background values are presented (indicatively Fe, As, Mn, B, Mg, Cl, etc.) are presented, when the	Research, development and demonstration projects	M10Σ1604	EL1000010, EL1000020, EL1000030, EL1000F40, EL1000050, EL1000060, EL1000070, EL1000081, EL1000083, EL1000130, EL1000140, EL1000150, EL1000170, EL1000190, EL100F230	Decentralized Administration (Water Directorate)/ Region/Municipalities/ DEYA	1,500,000

Code- Name of Measure	Measure Category	Association with the 1st RBMP Revision	Related WB	Implementing Bodies	Cost in €
parts in question are connected to hydroleptic projects.					
M10Σ1701 Special arrangements for the protection of the state of the GWB	Other measures	M10Σ1702	Horizontal	Decentralized Administration (Water Directorate)	ADMINISTRATIVE

9 CROSS-BORDER COOPERATION

9.1 TRANSBOUNDARY WATERS – GENERAL FRAME

Axios is a four-country river shared among Greece, Bulgaria, North Macedonia and Serbia. The total area of its catchment area is 22,250 km^2, of which 2,513 km^2 are in Greek territory. Of these, 1,636 km^2 correspond to the section before its estuary in the Thermaikos gulf and are included in the RBD of Central Macedonia (EL10), while 901 km^2 correspond to a tributary, within the RBD of Western Macedonia (EL09), in the plain of Florina (formerly Lygkos) , which contributes with the river Axios to the territory of North Macedonia. The total catchment area of Axios R. is shown in the figure below.

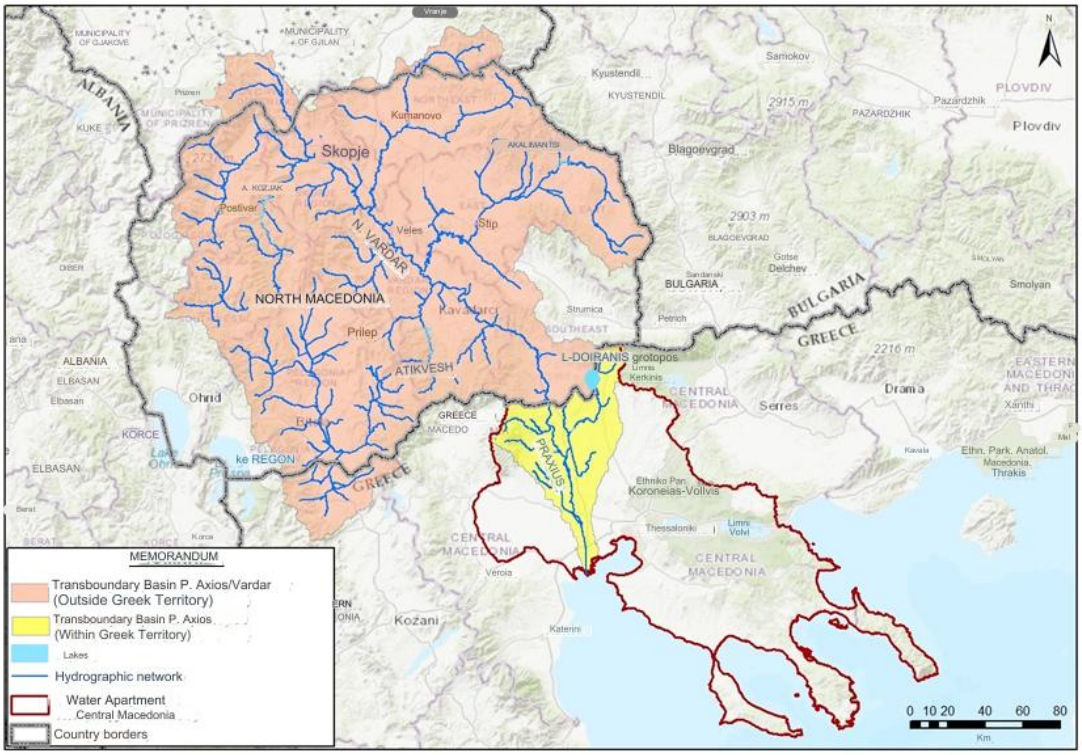


Figure 9-1: International River Basin of Axios

For the distribution of the waters of the common rivers and lakes, agreements were signed in the past, specifically in 1959 and 1970, between Greece and the former Yugoslavia.

The 1959 Agreement, which deals with water economy issues, was ratified by "Legislative Decree 4012, On the Ratification of the Agreement between the Governments of the Kingdom of Greece and the Federal People's Republic of Yugoslavia signed on June 18, 1959 on water economy issues" (Government Gazette A' 232 / 31.10.59), while in 1960 the minutes of the first session of the permanent Hellenic-Yugoslav commission on hydro-economics were ratified (Government Gazette A' 13/ 21.01.61).

The second agreement regarding the management of the Axios basin was ratified in 1972 with "Legislative Decree 1207, On the ratification of the Agreement signed in Belgrade on June 12,

1970 between the Government of the Kingdom of Greece and the Government of the Federal Socialist Republic of Yugoslavia concerning the study for the universal exploitation of the Axios river basin" (Government Gazette A' 126 / 22.07.72). The two countries proceeded to sign the Agreement for the Development of the Axios Basin on 12.06.1970 in Belgrade, with the aim of preparing a program for the overall exploitation of the Axios Basin. For this purpose, a three-country committee (Greece, Yugoslavia and UNDP) was established with the aim of submitting proposals regarding the planning of the basin's management.

Cross-border cooperation exists at the level of scientists and non-governmental organizations (NGOs). Various actions, such as awareness-raising seminars on the key issues encountered in the Axios River, have been implemented at the initiative of NGOs of both countries. At the same time, programs INTERREG/PHARE-CBC, DAC/OECD of the OECD have been implemented and are being implemented, with the aim of monitoring the water quality of the Axios, as well as the protection and management of the river with the cooperation of both countries.

The sub-basin of Lake Doirani also belongs to the Axios watershed. Lake Doirani occupies an area of approximately 39.9 km^2, of which 3/5 belong to North Macedonia and 2/5 belong to Greece. The total area of the watershed is 276.3 km^2 of which 84.5 or 31% are in North Macedonia and the remaining 191.8 or 69% in Greece.

Doirani is under the protection of international and national legal regime. It has been designated as an "Important Bird Area (IBA)" in Greece and the former Yugoslavia, while it is also included in the European Network "Nature 2000", as a Special Protected Area (SPA). In 2002, Doirani, as an Area of Special Conservation Interest (ASCI), was included in the National Emerald Network in North Macedonia.

As early as the beginning of 1953, on the basis of an "Economic Cooperation and Trade Exchange" agreement, the two governments exchanged letters aimed at resolving all issues concerning the Axios River and Lakes Prespa and Doirani.

Specific activity on the lake had been developed prior to the 1959 Agreement. In an exchange of letters in the early 1950s, a mutual obligation was undertaken to exchange technical information about the lake, as well as warning about taking any measure that might affect the state of the waters of the lake, without however requiring the consent of the two states. Based on the above, two relevant Protocols were signed for Lake Doirani, in 1956 and 1957.

The 1959 Agreement on Axios also regulates issues concerning Lake Doirani. The specificity of the lake's problems (water level, pollution), as well as its importance to fisheries, necessitated the establishment of a special sub-committee within the framework of the 1959 Commission. Its main objective was to solve the problems faced by the lake in the direction of improving fishing activity. The activity of the sub-committee led to the conclusion of a special Agreement between the two states on Lake Doirani fisheries, signed in Skopje on 24.03.1972.

At the state level, there is no recent development for the conclusion of a new interstate agreement. At the scientific level, there is cooperation between the academic community, relevant bodies and NGOs of the two countries

9.2 COOPERATION FRAMEWORK FOR CROSS-BORDER RBD

A prerequisite for the sustainable management of common water resources in cross-border areas is the cooperation and coordination of actions, with top priority the exchange of information and active participation of all interested parties.

In 1959, an Agreement was signed between Greece and Yugoslavia on water economy issues (ND 4012/1959, Official Gazette A' 232). According to article 1, a permanent Greek-Yugoslav committee for hydro-economics was established, which includes in its competence the areas of Axios, Doirani and Prespa. The said Committee met twice, in 1995 and 2002 and two minutes were signed. In 1995, the Interim Agreement between Greece and North Macedonia was signed under the auspices of the United Nations. Under the Interim Agreement, the 1959 Agreement was kept in force.

In the context of the implementation of the 1st Management Plan, meetings were held with representatives of North Macedonia with the aim of developing and cultivating a climate of cooperation between Greece and the neighboring country in matters of environmental policy.

The first meeting took place in June 2012 (07.06.2012) in Athens, where the upgrading of sectoral cooperation- and especially for environmental issues- was discussed at the level of experts of the two countries. In addition, the General Directorate for Water of the Greek Ministry of Environment, Energy and Climate Change (currently the General Directorate of Water of the Ministry of Environment and Energy) drafted and informed North Macedonia of a note regarding cooperation in specific sectors (EU Framework Directive on Water (60/2000/EC) and biodiversity protection). On the issue of water management, a proposal was submitted by the Greek side for a new meeting in May 2013.

The second meeting of experts on water and the environment took place on May 13th, 2013 in Thessaloniki, with the aim of strengthening cooperation and the exchange of know-how between the two sides regarding water resources management issues, with a particular emphasis on the management of the trans-national watersheds of Axios and Prespa. It was attended by experts from Greece and North Macedonia.

Finally, the two sides agreed on the exchange of information and know-how on water resources management issues.

On June 26th, 2014, the second bilateral meeting of experts on water and the environment between delegations of Greece and North Macedonia took place in Skopje. The meeting was held in a good atmosphere with a significant presence of North Macedonian bodies and was about cooperation for the management and protection of transboundary water resources. The meeting focused on Axios River and Doirani Lake, as well as biodiversity.

A meeting took place in Athens on December 28th, 2015, in the spirit of continuing cooperation. The two sides exchanged information on Axios, Doirani and biodiversity in accordance with EU requirements. On the Greek side, it was noted that North Macedonia's accession to the UN Economic Commission for Europe Convention on the Protection and Use of Transboundary Rivers and International Lakes will strengthen bilateral cooperation on water issues. The Greek

side also provided the other side with copies in English of the summaries of the approved management plans for Water Distincts EL09 and EL10.