ΑΠΟΚΕΝΤΡΩΜΕΝΗ ΔΙΟΙΚΗΣΗ
Ηπείρου - Δυτικής Μακεδονίας

2nd UPDATE OF RIVER BASIN MANAGEMENT PLANS

River Basin District of Epirus (EL05)

Summary

European Union
Cohesion Fund

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HELLENIC REPUBLIC

DECENTRALISED ADMINISTRATION OF EPIRUS - WESTERN MACEDONIA

2nd UPDATE OF THE RIVER BASIN MANAGEMENT PLAN OF THE RIVER BASIN DISTRICT OF EPIRUS (EL05)

PROJECT: 2nd UPDATE OF RIVER BASIN MANAGEMENT PLANS OF TWO (2) RIVER BASIN DISTRICTS OF EPIRUS (EL05) AND WESTERN MACEDONIA (EL09) IN ACCORDANCE WITH THE REQUIREMENTS OF DIRECTIVE 2000/60/EC - SECTION 2 "2nd UPDATE OF THE RIVER BASIN MANAGEMENT PLAN OF THE RIVER BASIN DISTRICT OF EPIRUS (EL05)"

J/V SECOND UPDATE OF THE RIVER BASIN MANAGEMENT PLAN OF EPIRUS : G. KARAVOKYRIS & ASSOCIATES CONSULTANTS ENGINEERS S.A. - PERLEROS VAS. of KON/NOS - ENVECO S.A. - EMVIS S.A.

Summary

Government Gazette of the Approval of the 2nd Update of the River Basin Management Plan of the River Basin District of Epirus (EL05): GG A' 71 /17.05.2024

2nd UPDATE OF THE RIVER BASIN MANAGEMENT PLAN OF THE RIVER BASIN DISTRICT OF EPIRUS (EL05)

Summary of the final Revised Management Plan in English

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ABBREVIATIONS

AR	At Risk
AWB	Artificial Water Body/bodies
BTM	Basic Type of Measure
CWB	Coastal Water Body/Bodies
D.A.	Decentralized Administration
Directive	Water Framework Directive (2000/60/EC)
EC	European Community
EEC	European Economic Community
EQR	Ecological Quality Ratio
EQS	Environmental Quality Standards
EU	European Union
GD	Guidance Document
GDNEW	General Directorate of natural Environment and Water
GIG	Geographical Intercalibration Group (
GOLR	General Organization of Land Reclamation
GWB	Groundwater Body/bodies
GWD	General Directorate of Water
HMWB	Heavily Modified Water Body/ bodies
JMD	Joint Ministerial Decree
KTM	Key Type Measure
LWB	Lake Water Body/Bodies
MAC	Maximum Acceptable Concentrations
MD	Ministerial Decree
MED-GIG	Geographical Group for the Mediterranean Ecoregion Calibration
MoE	Ministry of Environment & Energy
MEWSS	Municipal Enterprise for Water Supply and Sewerage
NR	Not at Risk
NWMN	National Water Monitoring Network
PAR	Probably At Risk
PD	Presidential Decree

PNR	Probably Not at Risk
RB	River Basin
RBD	River Basin District
RBMP	River Basin Management Plan
RWB	River Water Body/Bodies
SAC	Special Areas of Censervation
SCI	Site of Community Importance
SPA	Special Protection Area
SWB	Surface Water Body/bodies
TWB	Transitional Water Body/Bodies
WB	Water body/bodies
WFD	Water Framework Directive
WG ECOSTAT	Working Group on the Ecological Status
WISE	Water Information System of Europe

1 INTRODUCTION - 2nd UPDATE OF THE RIVER BASIN MANAGEMENT PLAN

1.1 Introduction

The River Basin Management Plans of the country's river basins are reviewed and updated every six years. By Decision No. 1005/2013 (Government Gazette 2292 B / 13-09-2013) of the National Water Committee , the 1st RBMP of the examined River Basin District (1st management Plan 2009-2015) was approved and by Decision No. 907/29.12.2017 (Government Gazette B 4664/29.12.2017) of the National Water Committee, the 1st Update of the RBMP of RBD Epirus (2nd management Plan 2016-2021) was approved.

The 2nd Update of the River Basin Management Plan of the River Basin District of Epirus has significant changes and improvements since the 1st Update:

- It is based on the use of data for the period 2016-2021 of the National Water Monitoring Network (NWMN), as well as the annual water status assessment reports that are developed within the framework of its operation.
- The 2nd Update is being prepared at the same time as the Flood Risk Management Plans in accordance with the Directive 2007/60/EC and synergy of actions and a program of measures has been achieved.
- The 2nd Update is being prepared at the same time as the Special Environmental Assessments (SEAs) for the network of Natura 2000 sites within the boundaries of the Basin District of interest and synergy of actions and a program of measures has been achieved for those studies that are under public consultation.
- The 2nd Update takes into account the programs of measures to achieve good environmental status of the country's marine waters in accordance with the Directive 2008/56/EC and synergy between actions and a program of measures has been achieved.
- The 2nd Update took into account the National Strategy for Adaptation to Climate Change and incorporated into the program of measures sub-actions of the National Strategy for Adaptation to Climate Change.
- It takes into account the results of actions and activities that have been implemented to date in the context of increasing knowledge about the status of waters and the pressures on them, as well as the actions implemented to fill the gaps identified in the 1st Update of the RBMP.
- The results of the assessment of natural water balances (hydrological resources) using the latest data up to 2020 and the use of models (updating water resources management systems and tools).
- The results of the implementation of the measure "Establishment of a Registry of pollution sources (emissions, discharges and spills)" of the 1st Update of the RBMP.
- The results of the implementation of the measure "Special measures for achieving Good Ecological Potential in HMWB" of the 1ης Update of the RBMP.
- It supports the active participation of the public through the possibility of live streaming of the consultation days of the RBMPs.

- It takes into account the new requirements resulting from the guidance documents for the implementation of Directive 2000/60/EC adopted by the EU.
- It takes into account the results of the Evaluation Report of the 1st Update of the RBMPs by the competent services of the European Commission which was implemented as part of the European Parliament's briefing on the implementation of the Directive and is available on the EU's website, as well as any EU recommendations for the preparation of the 2nd Update of the RBMPs, such as the warning letter "EU PILOT 9895 (2021): Deficiencies identified in the evaluation of the second RBMPs".

http://ec.europa.eu/environment/water/water-framework/facts figures/guidance docs en.htm.

It takes into account the new and/or updated analytical methodologies for critical aspects of the implementation of Directive 2000/60 EC, as presented below (Chapter 2.1) and are available on the relevant website of the Special Secretariat for Water http://wfdver.ypeka.gr/.

The 2nd Update was prepared simultaneously for all 14 River Basin Districts of the country and homogeneity has been achieved in the individual methodologies and in the proposed programs of measures (basic and supplementary).

1.2 Consultation process

The consultation process on the 2nd Update of the River Basin Management Plan of the River Basin District of Epirus started in November 2019 and was completed in December 2023 and included the following:

-In March 2019, the scope of the planned work of the 2nd Update of the RBMP was posted on the website of the Ministry of Environment (http://wfdver.ypeka.gr/el/consultation-gr/), as well as the detailed timetable for the consultation of the public.

-In September 2019, information on the significant water resources management issues in each RBD was posted on the website of the Ministry of Environment and Natural Resources, including a summary of the results of the National Water Network for monitoring the water status of the country's water resources for the River Basin District, the main pressures, the identification and listing of the competent authorities and stakeholders involved in the consultation process.

-In May 2023, the Draft 2nd Update of the River Basin Management Plan of the River Basin District of Epirus, as well as a questionnaire, was posted on the website of the Ministry of Environment and Natural Resources. This phase also included the publication of the Strategic Environmental Impact Assessment.

2 DIFFERENTIATIONS IN COMPARISON TO THE APPROVED 1st UPDATE OF THE RIVER BASIN MANAGEMENT PLAN

2.1 Analytical Methodologies for the Implementation of the Key Elements of Directive 2000/60/EC

New and/or updated analytical methodologies for critical aspects of the implementation of Directive 2000/60/EC have been developed for the needs of the 2nd Update of the RBMP of Epirus, as listed below:

- Establishment of a national methodology for the determination of the ecological flow of river water bodies, in accordance with the implementation of the relevant measure of the 1st Update of the RBMPs.
- Establishment of a " Registry of Pollution Sources" in accordance with the implementation of the relevant measure of the 1st Update of the RBMPs .
- Establishment of a "National Library" of measures to address and mitigate the impacts of hydromorphological alterations in Heavily Modified Water Bodies (HMWB) and identification of measures to achieve Good Ecological Potential (GEP) in accordance with the implementation of the relevant measure of the 1st Update of the RBMPs.
- Updating the analytical methodology for the analysis of anthropogenic pressures and their impacts on surface and groundwater systems.
- Updating the analytical methodology for the identification of the "exemptions" of paragraphs 4 to 6 of Article 4 of Directive 2000/60/EC (4.4 - 4.6), by reviewing the specifications for the implementation of the exemptions of Article 4.5.
- Update of the analytical methodology "Identification of the "exceptions" of paragraph 4.7 of Article 4 of Directive 2000/60/EC.
- Update of the methodology for the "Assessment of the status of all categories of Surface Water Bodies"

All the detailed methodologies used in the preparation of the 2nd Update of the RBMP for all the River Basin Districts of the country are available on the website of the Directorate General of Water http://wfdver.ypeka.gr/.

2.2 Progress in implementing the measures

During the 1st Update, thirty-six (36) Basic Measures (Group II) were adopted in the River Basin District of Epirus, fall into nine categories. In addition to the Basic Measures, twenty-nine (29) Supplementary Measures have been adopted in the River Basin District of Epirus, fall into nine categories.

The progress in implementing the Key and Supplementary Measures of the Program of Measures of the 1st Update of the RBMP is presented in the table below.

Table 2.2-1: Summary of progress in the implementation of the Key and Supplementary Measures of the Program of Measures of the approved 1st Update of the RBMP

CATEGORY OF MEASURE	NUMBER OF MEASURES IMPLEMENTED OR TO BE IMPLEMENTED
Administrative Measures	1 of 1
Control of water abstractions	5 of 6
Research, development and demonstration projects	1 of 8
TOTAL - SUPPLEMENTARY MEASURES	7 of 29
Measures to implement the principle of cost recovery for water services (Article 9)	4 of 4
Measures to protect waters intended for human consumption (Article 7)	2 of 4
Measures to promote the efficient and sustainable use of water so as not to compromise the achievement of the objectives of the Directive (Article 4)	7 of 8
Measures to address negative impacts on the status of surface water bodies in particular from hydromorphological alterations	3 of 6
Measures on diffuse sources of discharges	2 of 3
Measures on point sources of discharges	1 of 5
Measures for priority substances and other substances	1 of 2
Measures to control surface and groundwater abstraction and surface water storage	2 of 2
TOTAL - BASIC MEASURES	22 of 36
TOTAL FOR THE RIVER BASIN DISTRICT OF EPIRUS	29

2.3 Main differentiations in comparison to the 1st Update of the RBMP

The table below summarises the most important differences identified in the 2nd Update of the RBMP of the River Basin District of Epirus compared to the approved 1st Update of the RBMP.

Table 2.3-1: Main differentiations between the 2nd Update and the 1st Update of the RBMP

CONTENT OF THE 2nd UPDATE OF RBMP/ACTIVITY	DIFFERENTIATION IN RELATION TO THE 1st UPDATE OF RBMP
COMPETENT AUTHORITIES	Differentiations in the competent authorities arising from Law no. 5037/2023. The relevant data are summarised in Chapter 3.2 of this report.
DELINEATION OF SURFACE WATER BODIES - TYPOLOGY	There are changes to the following WB: 1. A new river WB "Kerkyras P." with type RM-1 has been added to the River Basin of Kerkyras - Paxon. The results are summarised in Chapter 4.1 herein.
DESIGNATION OF GROUNDWATER SYSTEMS	In the framework of the 2nd Update of the RBMP, the delineated GWB were reviewed, and took into account all subsystems, so the number of GWB has increased from 27 to a total of 40. The results are summarised in Chapter 4.2 herein.
HEAVILY MODIFIED WATER BODIES (HMWB) AND ARTIFICIAL WATER BODIES (AWB)	The Heavily Modified WB that were defined in the 1st RBMP are reviewed on the basis of A) the methodology established by the GWD and B) the data of the National Monitoring Network The results and differentiations are summarised in Chapters 4.1 and 4.3 herein.
PROTECTED AREAS	There following changes have been identified: 1) Two SWB were added to the sensitive areas of the Urban Wastewater Treatment Directive: Lake Pamvotida and Tafros Lapsistas. 2) The SWB Louros P.4 and Louros P.5 were removed from protected areas registry for areas designated for the abstraction of water intended for human consumption. 3) Two new Natura 2000 areas, SEC, were added: GR2230009 (LIMNOTHALASSA ANTINIOTI AND POTAMOS FONISSA (KERKYRA)) and GR2230010 (THALASSIA PERIOCHI OF DIAPONTION NISON) 4) The part of the Aoos river basin designated as a protected landscape and protected natural formation was added to the areas of natural environment protection. 5) Data on recreational waters and inland recreational water areas were updated. The relevant results are summarised in Chapter 4.4 herein.
PRESSURES AND IMPACTS	The assessment of pressures and impacts is based on the updated common methodology developed in the framework of the "2nd Update of the River Basin Management Plan of the 14 River Basin District S of the country"

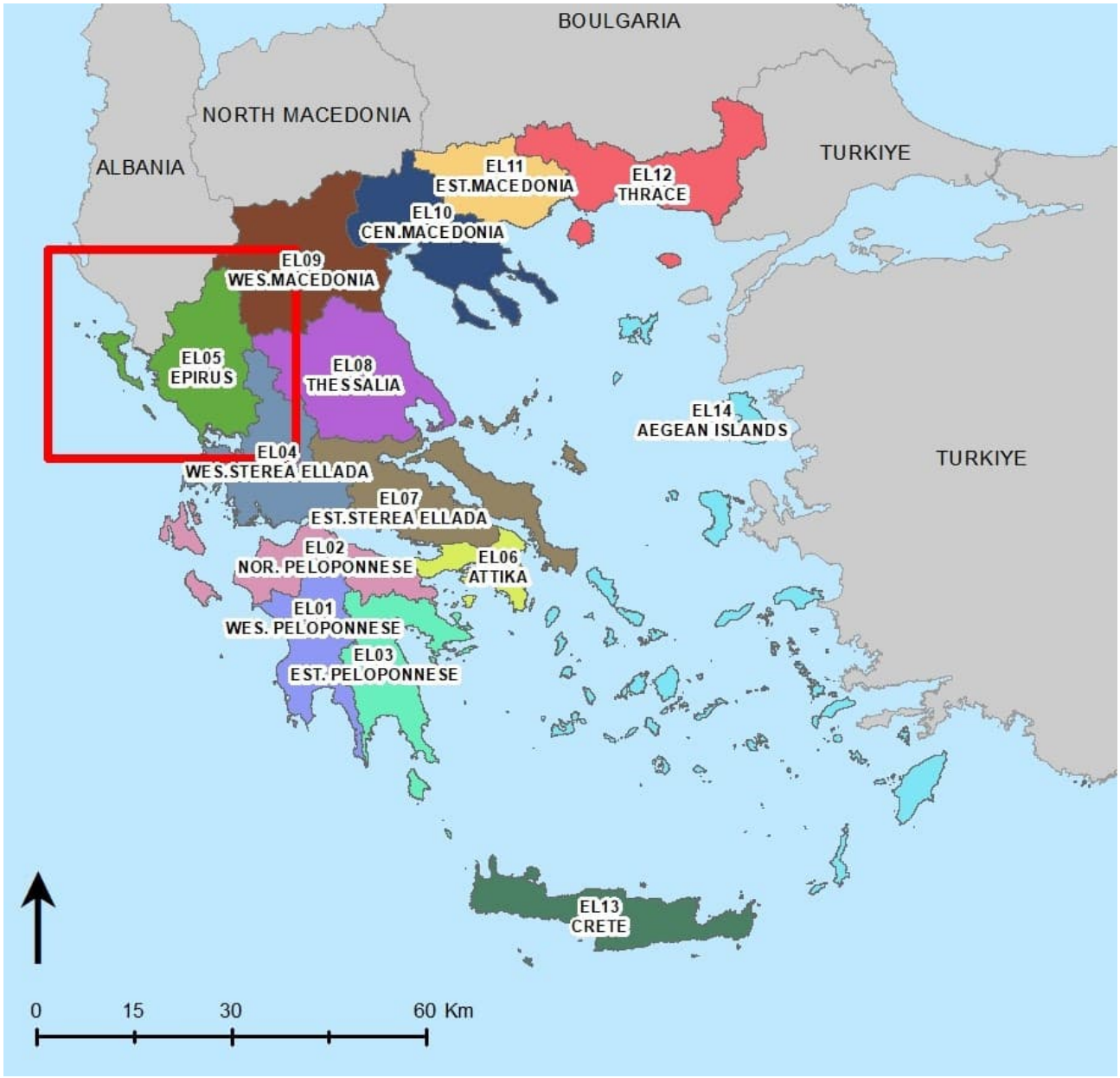
CONTENT OF THE 2nd UPDATE OF RBMP/ACTIVITY	DIFFERENTIATION IN RELATION TO THE 1st UPDATE OF RBMP
	and on the latest data available, which are related to a more complete picture of the cultivated areas, the establishment of new activities and the better mapping of activities in the RBD. A Registry of pollution sources was established which supported the analysis of the assessment and evaluation of pressures. Detection of relevant priority substances has taken place on a larger scale due to improved methods of analysis. The results are summarised in Chapter 5 of this report.
CLASSIFICATION OF THE STATUS OF SURFACE WATER BODIES	The basic methodological approach for classifying the status of surface and groundwater bodies has not changed since the 1st Update. An exception to this is the Heavily Modified Water Bodies for which the "Prague" approach is applied as described in the document regarding the application of the measure "Special measures for achieving Good Ecological Potential in HMWB" of the 1st Update of the RBMP. Regarding the overall picture of the results of the classification of the WB' status, there is a slight deterioration in terms of ecological status, with more water bodies in moderate status compared to the 1st Update. Parameters estimated to contribute to this deterioration are: ✓ The increase on the number of Biological Quality Data that are systematically monitored. ✓ The update of the list of Priority Substances based on Directive 2013/39 (Government Gazette B' 69 / 22-1-2016), led to the increase in the number of PS monitored through the NWMN. ✓ Inability to implement properly the monitoring program of the National Network due to covid or other problems, resulted in the collection of less data, mainly on parameters affecting the ecological status. ✓ An increase in the number of SWB whose ecological and chemical status is classified by grouping or expert judgement has resulted in reduced reliability of the classification result. The results are summarised in Chapter 6.1 of this report
CLASSIFICATION OF THE STATUS OF GROUNDWATER BODIES	The methodology for classifying the status of the GWB is not different from the 1st Update of the RBMP with specific improvements, additions in relation to MAC due to natural background and the identification of trends. The classification of the status of GWB is based on the latest data from the monitoring network. The results are summarised in Chapter 6.2 herein.
ECONOMIC ANALYSIS OF WATER USE	For the economic analysis of water uses, the general rules in force are applied for pricing of water services. The results are summarised in Chapter 7 of this report.

CONTENT OF THE 2nd UPDATE OF RBMP/ACTIVITY	DIFFERENTIATION IN RELATION TO THE 1st UPDATE OF RBMP
ENVIRONMENTAL OBJECTIVES - EXEMPTIONS	In the 2nd Update the environmental objectives and exemptions set is based on the new methodological approaches developed in accordance with the EU guidelines. The results are summarised in Chapter 8 of this report
PROGRAM OF MEASURES	The methodological approach for the preparation of the program of measures has not changed. During it's preparation, recommendations and comments of the staff of the competent Water Directorates (Epirus and Ionian Islands) were taken into account, as well as the evaluation of the implementation of the measures of the 1st Update of the RBMP and the problems encountered during the implementation. The new program of basic and supplementary measures is summarised in Chapter 9 of this document.

3 DESCRIPTION OF THE RIVER BASIN DISTRICT - COMPETENT AUTHORITIES

3.1 River basins

The River Basin District of Epirus (EL05) is one of the fourteen river basin districts into which the Greek territory was divided by Law 1739/1987 (Government Gazette 201/A/20-11-1987). The total area of the department is 9973,20 km².



Map 3.1-1: Location of the River Basin District of Epirus (EL05)

The River Basins (RB) that make up this River Basin District of Epirus (EL05) according to the Decision No. 706/2010 (Government Gazette 1383/B/2-9-10) of the National Water Committee, are presented in the Table and Map below.

Table 3.1-1: River basins in the RBD of Epirus WF (EL05)

River Basin District	Basin code	Name of River basin (RB)	Area (km²)
Epirus (EL05)	EL0511	RB Aoos	2360,73
	EL0512	RB Kalamas	2525,57
	EL0513	RB Acherontos	1292,17
	EL0514	RB Arachthos	2202,19
	EL0534	RB Kerkyras-Paxon	634,45
	EL0546	RB Louros	958,08

Map 3.1-2: River basins in the RBD of Epirus (EL05)

River Basin of Aoos (EL0511)

The Aoos River, which originates in Pindos, enters Albanian territory and flows into the Adriatic Sea. Its length inside the Greek territory is 70 km, while its total length is 260 km. At the Aoos springs the homonymous Artificial Lake has been created with an area of 8,21 km². Its main tributaries are Drinos (19 km), Sarantaporos (48 km) and Voidomatis (87 km). The Drinos River is merged to the Aoos River

in Albanian territory. Sarantaporos springs from the Gramos and from north of Mount Smolika, while Voidomatis springs from south of Mount Timphi.

River Basin of Kalama (EL0512)

The river Kalamas springs from Mount Dousko and flows into the Ionian Sea. Its total length is 115 km. The tributaries of Kalamas are Smolitsa, Tyria, Gormos, Mezeros, Velcistikos, Koutsis, Bania, Lagavista and Kalpakiotiko stream. The river Kalama also receives the runoff from the closed basin of Ioannina through the Lapsistas tunnel. The Lapsistas tunnel flows into the stream of Klimatia, which merge to Kalama near Sulopoulos.

In addition, the closed basin of Ioannina, which includes Lake Pamvotida (19.2 km²), the only natural lake in the river basin district, is included in the RB of Kalama.

River Basin of Acherontos (EL0513)

The river Acherontos springs south of Mount Tomaros and west of Mount Souliou and flows into the Ionian Sea. The total length of the river is 52 km. The tributaries of Acherontos are the Kokitos and the Dala stream, the former springs from Kefalovriso Paramithia and the latter between the Paramithia and Souliou mountains.

River Basin of Arachthos (EL0514)

The river Arachthos, with a length of about 110 km, moves through impermeable formations (fluvial), with very large fluctuations in flow. The Pournari dam on the river Arachthos, which is in operation since 1981, with upstream regulation, significantly alters the water regime of the river downstream.

River Basin of Kerkyras-Paxon (EL0534)

In the RB of Kerkyras-Paxon there are no main rivers, apart from small streams (Fonisas, Potami, Messagis).

River Basin of Louros (EL0546)

The Louros River, unlike the Arachthos, is fed by the groundwater aquifer that crosses it (riparian springs or springs in its bed), as well as by the springs of the Kampis and Hanopoulos system on the east side and the Priala and Skalas springs on the west side. This river, with a length of 70 km, has the most stable diet, which is due to the fact that most of its course is through karstic limestone.

3.2 Competent Authorities

According to Law 3199/2003 (Government Gazette A΄280) on Water Protection and Management, it harmonizes national law with the provisions of Directive 2000/60/EC and defines the competent authorities for water protection and management. The competent authorities are:

- The **National Water Committee**
- The **General Water Directorate**

Table 3.2-1: Identity of National Competent Authority

Official Name	**Directorate-General for Water**
Acronym	GDW
Legal Status	Administrative sector of the Ministry of Environment and Energy
Contact details	
Postal address	Mesogeion 119
PO Box. Code	11526
City	Athens
Country	Greece
Website	https://ypen.gov.gr, http://wfdver.ypeka.gr
Contact points	Tel: 2131513812 e-mail: d.vakalis@prv.ypeka.gr

At regional level the competent authorities are:

- The **Decentralised Administration Water Council**
- The **Water Directorates of the Decentralized Administration**,

Table 3.2-2: Identity of Regional Competent Authorities

Official Name	**Decentralized Administration of Epirus - Western Macedonia Water Directorate of Epirus**
Acronym	W.D.E.
Legal Status	Organizational Unit of the Decentralized Administration of Epirus - Western Macedonia Under the General Directorate for Spatial Planning, and Environmental Policy
Contact details	
Postal address	5ο km National Road Ioannina - Kozani
PO Box. Code	45 000
City	Ioannina
Country	Greece

Official Name	Decentralized Administration of Epirus - Western Macedonia Water Directorate of Epirus
Website	http://www.apdhp-dm.gov.gr
Contact points	Tel: 26510 90240 e-mail: dydaton@ apdhp-dm.gov.gr

Official Name	Decentralized Administration of Peloponnese, Western Greece and Ionian Islands Water Directorate of Ionion
Acronym	W.D.I.
Legal Status	Organizational Unit of the Decentralized Administration of Peloponnese, Western Greece & Ionion Sea Under the General Directorate for Spatial Planning, Environment and Rural Policy
Contact details	
Postal address	Alikes Potamou
PO Box. Code	49 100
City	Corfu (Kerkyras)
Country	Greece
Website	http://www.apd-depin.gov.gr
Contact points	Tel: 2661 361639 e-mail: lagadas@1745.syzefxis.gov.gr

According to the "New Architecture of Local Government and Decentralized Administration - Kallikratis Program" Law 3852/2010 (Government Gazette A 87), the responsibilities provided by Law 3199/2003 (Government Gazette A 280), as amended by Law 5037/2023 (Government Gazette A 58), on the protection and management of water resources are shared between the State Administration (central government) and the elected Regions. The State Administration has the responsibility for designing the protection and management strategy and the elected regions mainly involved with the implementation of the strategic planning.

The table below gives a summary of the nature of the role played by each competent authority by thematic area in the context of water management and protection.

Table 3.2-3: Role of competent authorities for water management and protection

Competent Authority	Main Roles												
	Pressure and impact analysis	Economic analysis	Surface water monitoring	Groundwater monitoring	Assessment of surface water status	Groundwater status assessment	Preparation of the PRSP	Training MT	Implementation of measures	Public participation	Enforcement of regulations	Coordination of implementation	Submission of data to the European Commission
General Directorate of Water of the Ministry of Environment & Energy	M	M	M	M	M	M	M	M	M	M	M	M	M
Water Directorate of Decentralized Administration	S	S	S	S	S	S	S	S	M	S	M	M	-
Ministry of Rural Development and Food	-	-	-	-	-	-	-	-	M	-	S	-	-
Ministry of Infrastructure and Transport	-	-	-	-	-	-	-	-	M	-	S	-	-
Ministry of Development	-	-	-	-	-	-	-	-	S	-	M	-	-
Ministry of National Economy and Finance	-	-	-	-	-	-	-	-	S	-	M	-	-
Ministry of Health	-	-	-	-	-	-	-	-	M	-	S	-	-
Ministry of Maritime Affairs and Island Policy	-	-	-	-	-	-	-	-	-	-	M	-	-
Ministry of Interior	-	-	-	-	-	-	-	-	S	-	M	-	-
Municipalities of the RS	-	-	-	-	-	-	-	-	M	-	S	-	-
Regions of the RBD	-	-	-	-	-	-	-	-	M	-	S	-	-

M	*Main Role*
S	*Supplementary Role*
-	*No role*

Responsibilities

According to the Commission's Decision No. 706/16.07.2010 Decision (Government Gazette B'1383/02.09.2010), of the former National Water Commission, and in particular its Annex II, as corrected by Government Gazette B'1572/28.09.2010 and is in force, the competent authorities, per River Basin in each River Basin District of the country were defined. Thus, for the RBs of the RBD of Epirus and in accordance with the provisions of Law 3852/2010, the competent authority for all the RBs was designated the D.A. of Epirus-Western Macedonia, except for the RB of Kerkyras-Paxon where the D.A. of Peloponnese, Western Greece & Ionion.

The following table presents an updated extract of Annex II of the above Decision of the National Water Commission, in accordance with Law 3852/2010.

Table 3.2-4: River basins and competent decentralised administration

RB code	Name of RB	Regions geographically located within the boundaries of river basins	Competent Decentralized Administration (according to Government Gazette B' 1383, 1572/2010 and N.3852/2010)	Comments
EL0511	Aoos	Epirus, Western Macedonia, Thessaly	Epirus - Western Macedonia	-
EL0512	Kalamas	Epirus	Epirus - Western Macedonia	-
EL0513	Acherontos	Epirus	Epirus - Western Macedonia	-
EL0514	Arachthos	Epirus, Western Greece	Epirus - Western Macedonia	-
EL0534	Kerkyras-Paxon	Ionian Islands	Peloponnese, Western Greece & Ionian Sea	-
EL0546	Louros	Epirus	Epirus - West. Macedonia	-

4 DELINEATION OF WATER BODIES

4.1 Surface water systems - typology

In the framework of the 2nd Update of the River Basin Management Plan of the RBD of Epirus(EL05), a total of **107 surface water bodies** were identified (of which 11 HMWB and 3 AWB are identified). The distribution of the WB in the RBD and per RB is presented in the following Table.

Table 4.1-1: Number of Surface Water Bodies in the RBD of Epirus (EL05) per RB (2nd Update of the RBMP)

TYPE OF WB	RB						RBD TOTAL
	Aoos (EL0511)	Kalamas (EL0512)	Acherontos (EL0513)	Arachthos (EL0514)	Kerkyras – Paxon (EL0534)	Louros (EL0546)	
River WB	22	19	6	26	4	6	83
Reservoirs	1	-	-	2	-	-	3
Lake WB	-	1	-	-	-	-	1
Transitional WB	-	1	1	1	3	1	7
Coastal WB	-	3	4	-	6	-	13
Total WB	**23**	**24**	**11**	**29**	**13**	**7**	**107**

It is noted in relation to the 1st Update of the RBMP, the following changes have been identified:

- The number of river water bodies increased by 1, as a new river water body Kerkyras P. that belongs to the RB of Kerkyras – Paxon (EL0534) has been added.
- The number of river WB designated as HMWB increased by 2 and a total of 4 river water bodies are designated as Heavily Modified. More specifically, a total of 2 water bodies after reviewing were designated as Natural from Heavily Modified (1st Update): Klimatias R. and Metsovitikos P. 1, while 4 new water bodies were designated as Heavily Modified: THIAMIS P. KALAMAS 1, THIAMIS P. KALAMAS 2, THIAMIS P. KALAMAS 3 and ARACHTHOS P. 2
- One transitional water body, the Limnothalassa Chalikiopoulou , has been designated as a Heavily Modified.

All surface water bodies are presented in the following tables.

Table 4.1-2: List and characteristics of river WB, according to European Decision 2018/229/EU and MED GIG, water bodies per RB of the RBD of Epirus (EL05)

No	Name of WB	WB code	Category (1)	Length (km)	Immediate catchment area (km²)	Upstream catchment area (km²)	Average Annual Flow (hm³)	Type of WB
AOOS RB (EL0511)								
1	DRINOS P.	EL0511R0A0101022N	NAT	27,98	236,98	236,99	195,03	R-M4
2	AOOS P. 2	EL0511R0A0200013N	NAT	23,06	178,46	670,1	623,44	R-M2
3	AOOS P. 3	EL0511R0A0200016N	NAT	13,02	62,25	408,87	415,64	R-M2
4	AOOS P. 4	EL0511R0A0200018N	NAT	11,80	80,55	236,09	269,56	R-M2
5	AOOS P. 5	EL0511R0A0200020N	NAT	10,07	27,78	113,3	136,05	R-M2
6	AOOS P. 6	EL0511R0A0200021N	NAT	4,02	30,05	30,05	25,81	R-M1
7	AOOS P. 1	EL0511R0A0201001N	NAT	22,37	156,55	1.217,77	1078,03	R-M3
8	SARANTAPOROS P. 1	EL0511R0A0202002N	NAT	40,40	275,66	886,62	631,92	R-M2
9	SARANTAPOROS P. 2	EL0511R0A0202007N	NAT	3,40	29,87	346,23	248,29	R-M2
10	SARANTAPOROS P. 3	EL0511R0A0202008N	NAT	46,16	316,35	316,35	192,39	R-M2
11	SARANTAPOROS P. - PARAPOTAMOS AMARANTHOU R.	EL0511R0A0202103N	NAT	7,12	39,28	39,23	27,21	R-M1
12	VOURKOPOTAMOS P.	EL0511R0A0202204N	NAT	7,67	102,13	102,13	78,85	R-M2
13	VOURMPIANITIKO R.	EL0511R0A0202305N	NAT	10,52	103,98	103,89	85,79	R-M2
14	PISTILIPIAPI R.	EL0511R0A0202406N	NAT	9,09	54,68	54,68	46,98	R-M1
15	VOIDOMATIS P. 1	EL0511R0A0204009N	NAT	7,09	24,82	391,11	377,22	R-M2
16	VOIDOMATIS 2	EL0511R0A0204010N	NAT	8,08	67,84	366,28	408,1	R-M2
17	VOIDOMATIS 3	EL0511R0A0204011N	NAT	11,47	79,46	298,44	381,45	R-M2
18	VOIDOMATIS 4	EL0511R0A0204012N	NAT	21,85	218,96	218,97	246,58	R-M2
19	AOOS P. - PARAPOTAMOS RASENITIS 1	EL0511R0A0206014N	NAT	3,54	13,81	82,76	85,09	R-M1
20	AOOS P. - PARAPOTAMOS RASENITIS 2	EL0511R0A0206015N	NAT	4,45	68,94	68,94	63,94	R-M1
21	GIOTSAS R.	EL0511R0A0208017N	NAT	11,22	110,53	110,53	106,41	R-M2
22	AOOS P. - PARAPOTAMOS ARKOUDAS	EL0511R0A0210019N	NAT	7,72	43,18	42,24	45,96	R-M1
KALAMAS RB (EL0512)								
23	THIAMIS P. KALAMAS 2*	EL0512R000200024H	HMWB	12,83	28,04	4.438,22	1318,28	R-M3
24	THIAMIS P. KALAMAS 3*	EL0512R000200027H	HMWB	3,56	3,45	2192,14	1305,61	R-M3

No	Name of WB	WB code	Category (1)	Length (km)	Immediate catchment area (km²)	Upstream catchment area (km²)	Average Annual Flow (hm³)	Type of WB
25	THIAMIS P. KALAMAS 4	EL0512R000200029N	NAT	25,87	116,83	2.141,61	1270,72	R-M3
26	THIAMIS P. KALAMAS 5	EL0512R000200032N	NAT	15,79	99,27	1.860,99	1078,46	R-M3
27	THIAMIS P. KALAMAS 6	EL0512R000200033N	NAT	9,14	32,76	1.761,71	1030,29	R-M3
28	THIAMIS P. KALAMAS 7	EL0512R000200034N	NAT	21,93	192,6	1.728,95	979,53	R-M3
29	THIAMIS P. KALAMAS 8	EL0512R000200040N	NAT	16,99	86,51	455,99	331,79	R-M4
30	THIAMIS P. KALAMAS 9	EL0512R000200041N	NAT	28,20	369,47	369,47	275,7	R-M4
31	THIAMIS P. KALAMAS 1*	EL0512R000201023H	HMWB	4,99	0,66	4.438,91	1318,59	R-M3
32	TECHNITO TMIMA EKVOLIS KALAMA 2	EL0512R000202025A	AWB	3,07	25,64	2.218,03	13,59	R-M3
33	TECHNITO TMIMA EKVOLIS KALAMA 1	EL0512R000202026A	AWB	2,86	0,25	0,25	13,7	R-M1
34	THIAMIS P. KALAMAS - PARAPOTAMOS ASPRO R.	EL0512R000204028N	NAT	7,67	49,78	47,08	31,45	R-M1
35	THIAMIS P. KALAMAS - PARAPOTAMOS KALPAKIOTIKOS 1	EL0512R000206030N	NAT	8,00	21,97	163,79	128,98	R-M2
36	THIAMIS P. KALAMAS - PARAPOTAMOS KALPAKIOTIKOS 2	EL0512R000206031N	NAT	12,90	141,81	141,81	104,03	R-M2
37	THIAMIS P. KALAMAS - PARAPOTAMOS LAGAVITSA R.	EL0512R000208035N	NAT	20,43	155	155,02	114,85	R-M2
38	TYRIA P.	EL0512R000210036N	NAT	38,81	263,55	263,56	236,8	R-M2
39	SMOLITSAS P.	EL0512R000212037N	NAT	27,02	171,37	661,78	123,98	R-M4
40	KLIMATIAS R.*	EL0512R000212138N	NAT	6,20	34,41	34,41	21,46	R-M4
41	TAFROS LAPSISTA	EL0512R000212139A	AWB	19,26	202,82	202,82	134,53	R-M4
ACHERONTOS RB (EL0513)								
42	ARETHOUA R.	EL0513R0001042N	NAT	14,85	119,48	119,49	87,42	R-M4
43	ACHERON P. (MAVROPOTAMOS) 2	EL0513R000200045N	NAT	18,10	61,6	652,53	367,81	R-M4
44	ACHERON P. (MAVROPOTAMOS) 3	EL0513R000200046N	NAT	12,75	111,23	332,15	295,26	R-M2

No	Name of WB	WB code	Category (1)	Length (km)	Immediate catchment area (km²)	Upstream catchment area (km²)	Average Annual Flow (hm³)	Type of WB
45	ACHERON P. (MAVROPOTAMOS) 4	EL0513R000200047N	NAT	29,86	221,35	221,35	201,87	R-M2
46	ACHERON P. (MAVROPOTAMOS) 1	EL0513R000201043N	NAT	5,99	52,07	704,61	660,37	R-M4
47	ACHERON P. (MAVROPOTAMOS) - PARAPOTAMOS KOKTOS (VOUVOS)	EL0513R000202044N	NAT	24,18	258,77	258,78	170	R-M4
			ARACHTHOS RB (EL0514)					
48	DIPOTAMON R.	EL0514R000100048N	NAT	20,33	124,97	194,81	112,85	R-M2
49	MANTANI R.	EL0514R000102049N	NAT	15,27	69,84	69,85	39,97	R-M1
50	ARACHTHOS P. 2*	EL0514R000200051H	HMWB	6,03	41,56	2.077,56	1651,6	R-M3
51	ARACHTHOS P. 3	EL0514R000200054N	NAT	10,73	91,82	1.411,29	1085,76	R-M3
52	ARACHTHOS P. 4	EL0514R000200055N	NAT	9,18	141,59	1.319,46	996,61	R-M3
53	ARACHTHOS P. 5	EL0514R000200056N	NAT	9,61	62,23	1.177,87	890,78	R-M3
54	ARACHTHOS P. 6	EL0514R000200063N	NAT	11,56	53,43	893,89	598,64	R-M2
55	ARACHTHOS P. 7	EL0514R000200064N	NAT	2,83	34,98	618,71	551,74	R-M2
56	ARACHTHOS P. 8	EL0514R000200065N	NAT	8,33	39,91	583,72	484,99	R-M2
57	ZAGORITIKOS P.	EL0514R000200072N	NAT	23,64	87,56	132,5	116,6	R-M2
58	ARACHTHOS P. 1	EL0514R000201050N	NAT	17,75	45,13	2.122,70	1660,22	R-M3
59	RETSANOREMA	EL0514R000202052N	NAT	24,26	316,76	316,77	298,64	R-M2
60	ARACHTHOS P. 9	EL0514R000203068N	NAT	12,40	54,82	329,28	284,01	R-M2
61	P. SARANTAPOROS.	EL0514R000204053N	NAT	15,05	124,05	124,06	213,57	R-M2
62	KALARRITIKOS P. 1	EL0514R000206057N	NAT	5,06	19,55	221,74	238,49	R-M2
63	KALARRITIKOS P. 2	EL0514R000206058N	NAT	5,31	40,95	202,19	257,22	R-M2
64	KALARRITIKOS P. 3	EL0514R000206060N	NAT	2,62	4,14	161,24	120,78	R-M2
65	KALARRITIKOS P. 4	EL0514R000206061N	NAT	3,01	27,73	99,54	114,38	R-M1
66	KALARRITIKOS P. 5	EL0514R000206062N	NAT	8,78	71,81	71,81	80,24	R-M1
67	KALARRITIKOS P. - PARAPOTAMOS MELISSOURGIOTIKOS	EL0514R000206159N	NAT	5,67	57,55	57,55	67,35	R-M1
68	METSOVITIKOS P. 1*	EL0514R000208066N	NAT	13,37	93,48	214,53	169,11	R-M2
69	METSOVITIKOS P. 2	EL0514R000208067N	NAT	20,30	121,04	121,05	146,48	R-M2
70	ARACHTHOS P. 10	EL0514R000210069N	NAT	14,99	62,56	141,94	123,16	R-M2
71	ARACHTHOS P. 11	EL0514R000210071N	NAT	5,98	59,73	59,73	54,63	R-M1
72	SOURIKA R.	EL0514R000210170N	NAT	5,06	19,64	19,64	18,53	R-M1
73	MEGAS LAKKOS R.	EL0514R000212073N	NAT	16,31	44,94	44,94	41,92	R-M1

No	Name of WB	WB code	Category (1)	Length (km)	Immediate catchment area (km²)	Upstream catchment area (km²)	Average Annual Flow (hm³)	Type of WB
KERKYRAS - PAXON RB (EL0534)								
74	POTAMI	EL0534R0001074N	NAT	2,16	15,62	15,62	7,69	R-M1
75	MESANGIS R.	EL0534R000301075N	NAT	7,51	39,83	39,84	16,91	R-M4
76	FONISAS P.	EL0534R000501076N	NAT	6,90	65,93	65,94	32,64	R-M1
77	KERKYRAS P.**	EL0534R000701083N	NAT	6,00	42,4	42,4	14,87	R-M1
LOUROS RB (EL0546)								
78	LOUROS P. 2	EL0546R000200078N	NAT	17,45	40,5	470,57	614,08	R-M4
79	LOUROS P. 3	EL0546R000200080N	NAT	1,73	5,36	350,79	535,61	R-M4
80	LOUROS P. 4	EL0546R000200081N	NAT	17,38	123,13	345,42	529,1	R-M4
81	LOUROS P. 5	EL0546R000200082N	NAT	15,13	222,27	222,28	324,24	R-M4
82	LOUROS P. 1	EL0546R000201077N	NAT	18,71	331,61	802,69	843,12	R-M4
83	LOUROS P. - PARAPOTAMOS	EL0546R000202079N	NAT	13,27	79,28	79,28	98,87	R-M4

(1)NAT: Natural Water Body, HMWB: Heavily Modified Water Body, AWB: Artificial Water Body
** Differences in the coding of river water bodies compared to the 1st Update of the RBMP, due to the change of the assessment of water bodies from Natural to HMWB and vice versa*
***Addition of a new WB*

Table 4.1-3: Lake water bodies with new typology per RB of the RBD of Epirus (EL05)

No	Name of WB	WB code	Category (1)	Area (km²)	Perimeter (km)	Immediate catchment area (km²)	Upstream catchment area (km²)	Average Annual FLow (hm³)	Type of WB
KALAMAS RB (EL0512)									
1	LIMNI PAMVOTIDA	EL0512L000000004H	HMWB	19,24	25,65	325,96	325,96	114,00	GR-SNL

(1)NAT: Natural Water Body, HMWB: Heavily Modified Water Body, AWB: Artificial Water Body

Table 4.1-4: Reservoir WB with new typology per RB of the RBD of Epirus (EL05)

No	Name of WB	WB code	Category(1)	Area (km)2	Perimeter (km)	Immediate catchment area (km²)	Upstream catchment area (km²)	Average Annual Flow (hm³)	Type of WB
AOOS RB (EL0511)									
1	TECHNITI LIMNI PIGON AOOU	EL0511RLA0200001H	HMWB	8,21	39,85	55,46	85,51	130,98	L-M8
ARACHTHOS RB (EL0514)									
2	TECHNITI LIMNI POURNARIOU	EL0514RL00200003H	HMWB	20,60	72,09	178,45	1.814,00	1.608,20	L-M8
3	TECHNITI LIMNI POURNARIOU II	EL0514RL00200002H	HMWB	0,65	6,9	5,45	1.718,00	1.650,04	GR-SR

(1)NAT: Natural Water Body, HMWB: Heavily Modified Water Body, QWB: Artificial Water Body

Table 4.1-5: List and characteristics of transitional water bodies per RB of the RBD of Epirus (EL05)

No	Name of WB	WB code	Category(1)	Area (km)2	Perimeter (km)	Type of WB
KALAMAS RB (EL0512)						
1	EKVOLES KALAMA	EL0512T0001N*	NAT	16,28	51,05	TW-1 (Estuaries)
ACHERONTOS RB (EL0513)						
2	LIMNOTHALASSA MAZOMA	EL0513T0004N	NAT	1,85	6,82	TW-2 (Polyhaline restricted)
ARACHTHOS RB (EL0514)						
3	EKVOLES ARACHTHOU	EL0514T0002N*	NAT	139,74	157,4	TW-1 (Estuaries)
KERKYRAS - PAXON RB (EL0534)						
4	LIMNOTHALASSA KORISSION (KERKYRAS)	EL0534T0005N	NAT	4,16	13,34	TW-2 (restricted)
5	LIMNOTHALASSA ANTINIOTI	EL0534T0006N	NAT	0,61	6,88	TW-2 (Other)
6	LIMNOTHALASSA CHALIKIOPOULOU	EL0534T0007H**	HMWB	2,24	11,43	TW-2 (Other)
LOUROS RB (EL0546)						
7	EKVOLES LOYROY - LIMNOTHALASSES RODIA, TSOYKALIO, LOGAROU	EL0546T0003N*	NAT	238,45	150,75	TW-2 (restricted)

(1) NAT: Natural Water Body, HMWB: Heavily Modified Water Body, AWB: Artificial Water Body

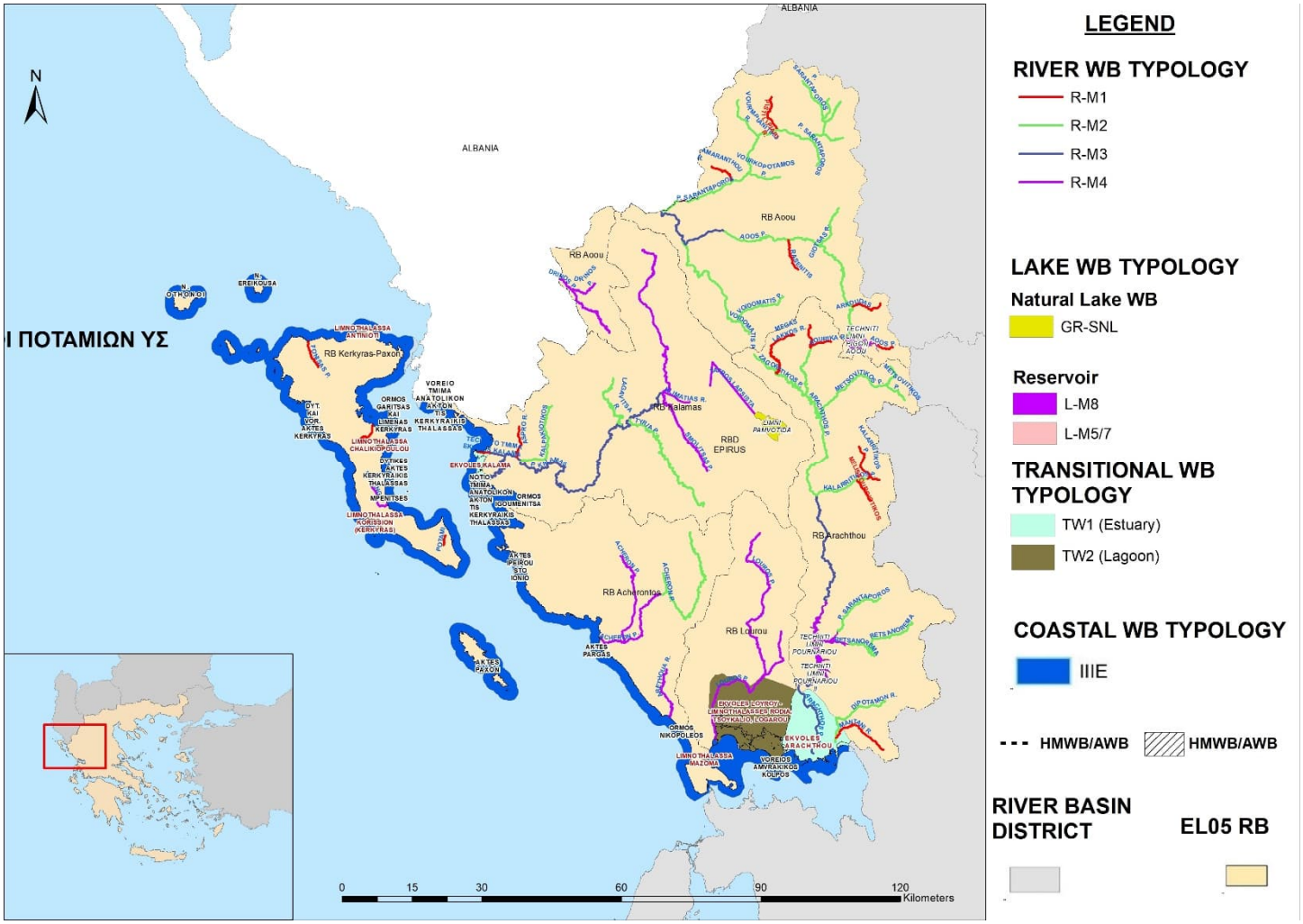
** In the framework of the 2nd Update of the of the RBMP, the need to re-delineate the boundaries of the transitional water bodies "EKVOLES KALAMA", "EKVOLES ARACHTHOU" and "EKVOLES LOUROS - LIMNOTHALASSES RODIA, TSOUKALIO, LOGAROU" emerged, while it is expected that the GDW will implement a relevant action for all the transitional water bodies of the country.*

*** Differences in the coding of transitional water bodies compared to the 1st Update of the RBMP, due to the change of the assessment of water bodies from Natural to ITYS and vice versa.*

Table 4.1-6: List and characteristics of coastal water bodies per RB of the RBD of Epirus (EL05)

No	Name of WB	WB code	Category(1)	Area (km)2	Perimeter (km)	Type of WB
KALAMAS RB (EL0512)						
1	ORMOS IGOUMENITSA	EL0512C0003H	HMWB	8,76	14,23	IIIE
2	VOREIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS	EL0512C0A01N	NAT	35,66	56,42	IIIE
3	NOTIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS	EL0512C0A02N	NAT	50,16	83,6	IIIE
ACHERONTOS RB (EL0513)						
4	AKTES IPEIROU STO IONIO	EL0513C0004N	NAT	89,33	134,68	IIIE
5	AKTES PARGAS	EL0513C0005N	NAT	50,20	83,85	IIIE
6	ORMOS NIKOPOLEOS	EL0513C0006N	NAT	65,19	84,95	IIIE
7	VOREIOS AMVRAKIKOS KOLPOS	EL0513C0007N	NAT	149,89	191,58	IIIE
KERKYRAS - PAXON RB (EL0534)						
8	AKTES PAXON	EL0534C0008N	NAT	88,82	124,11	IIIE
9	DYT. KAI VOR. AKTES KERKYRAS	EL0534C0009N	NAT	401,07	511,43	IIIE
10	DYTIKES AKTES KERKYRAIKIS THALASSAS - MPENITSES	EL0534C0010N	NAT	24,26	34,38	IIIE
11	ORMOS GARITSAS KAI LIMENAS KERKYRAS	EL0534C0011H	HMWB	20,2	31,6	IIIE
12	N. OTHONOI	EL0534C0012N	NAT	42,02	52,2	IIIE
13	N. EREIKOUSA	EL0534C0013N	NAT	25,84	30	IIIE

(1) *NAT: Natural Water Body, HMWB: Heavily Modified Water Body, AWB: Artificial Water Body*


ALBANIA
N
RB Kerkyras-Paxon
RB Aoou
RB Acheron
RB Louro
RB Arachthou
RBD EPIRUS
0 15 30 60 90 120
Kilometers
LEGEND
RIVER WB TYPOLOGY
R-M1
R-M2
R-M3
R-M4
LAKE WB TYPOLOGY
Natural Lake WB
GR-SNL
Reservoir
L-M8
L-M5/7
TRANSITIONAL WB TYPOLOGY
TW1 (Estuary)
TW2 (Lagoon)
COASTAL WB TYPOLOGY
IIIE
HMWB/AWB
HMWB/AWB
RIVER BASIN DISTRICT
EL05 RB

Map 4.1-1:Map of surface WB of the RBD of Epirus (EL05)

4.2 Groundwater bodies

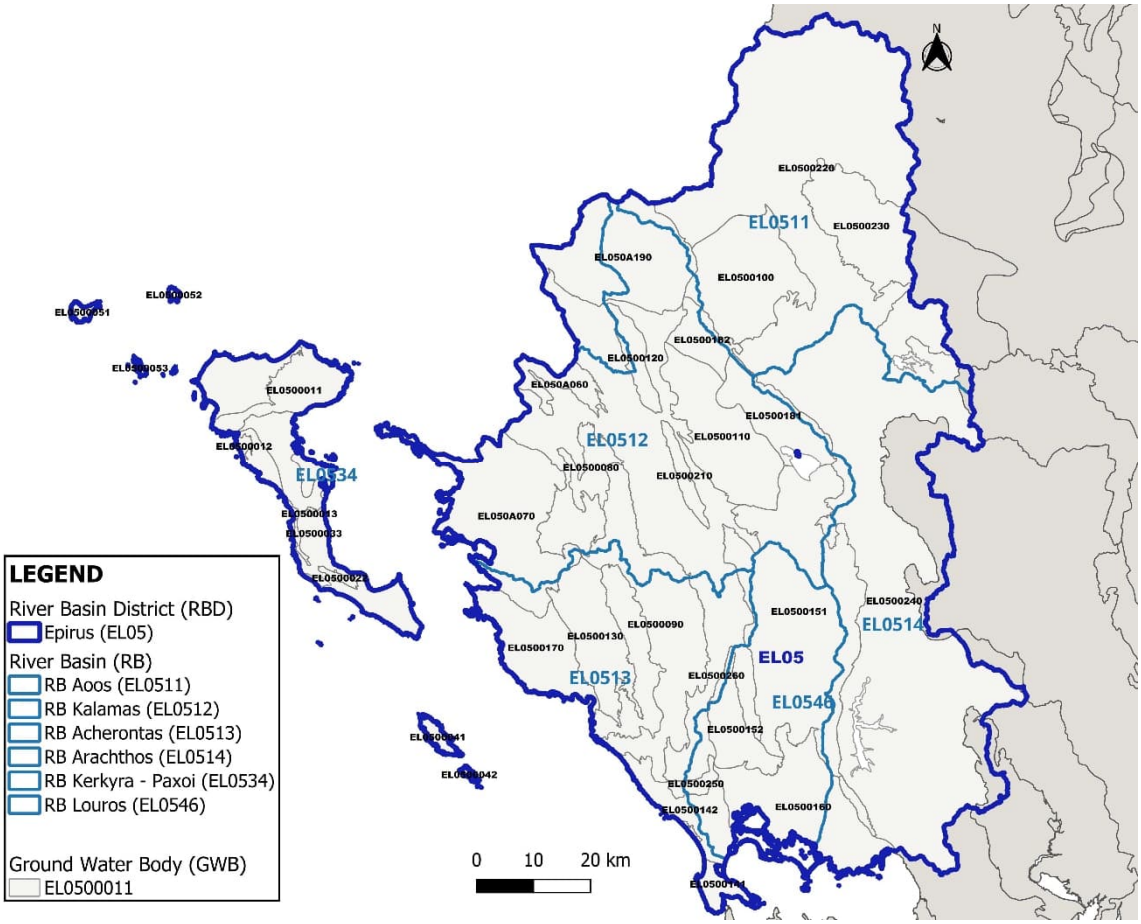
In the framework of the 2nd Update of the RBMP of the River Basin District of Epirus (EL05), the originally defined GWB were reviewed, and taking into account all subsystems, the number of delineated GWB, in relation to the 1st Update, is modified from 27 to a total of 40.

The table and the map below present the GWB of the River Basin District of Epirus (EL05) during the 2nd Update of the RBMP.

Table 4.2-1: Groundwater bodies in the RBD of Epirus (EL05)

No	Name of the GWB	GWB code	Area (x10^6 m)^2
AOOS RB (EL0511)			
1	SYSTIMA TYMFIS	EL0500100	324,14
2	SYSTIMA YDROFORION SARANTAPOROU-AOOU	EL0500220	1366,82
3	SYSTIMA YDROFORION SMOLIKA-MAVROVOUNIOU	EL0500230	350,63
KALAMAS RB (EL0512)			
4	SYSTIMA MESOU ROU KALAMA	EL0500080	76,69
5	SYSTIMA KLIMATIAS	EL0500110	301,92
6	SYSTIMA KASIDIARI	EL0500120	62,92
7	SYSTIMA MITSIKELIOY-VELLA (Mitsikeli)	EL0500181	162,16
8	SYSTIMA MITSIKELIOY-VELLA (Moni Vella)	EL0500182	80,81
9	SYSTIMA YDROFORION P.KALAMA	EL0500200	871,93
10	SYSTIMA KOURENTON	EL0500210	40,27
11	SYSTIMA MOURGKANAS	EL050A060	69,43
12	SYSTIMA FILIATON-IGOYMENITSAS	EL050A070	450,74
13	SYSTIMA POGONIANIS	EL050A190	386,29
ACHERONTOS RB (EL0513)			
14	SYSTIMA SOULIOU-PARAMYTHIAS	EL0500090	436,01
15	SYSTIMA KORONIS	EL0500130	215,49
16	SYSTIMA CHERSONISOU PREVEZAS(A)	EL0500141	48,09
17	SYSTIMA CHERSONISOU PREVEZAS(B)	EL0500142	131,54
18	SYSTIMA PARGAS	EL0500170	217,50
19	SYSTIMA YDROFORION ANO ROU ACHERONTOS-REMATOS ARETHOUA	EL0500260	245,49
20	SYSTIMA EKVOLON ACHERONTA - P. KOKYTOU	EL0500270	165,86
ARACHTHOS RB (EL0514)			
21	SYSTIMA YDROFORION P.ARACHTHOU	EL0500240	1618,13
KERKYRAS-PAXON RB (EL0534)			

No	Name of the GWB	GWB code	Area (x10^6 m)^2
22	SYSTIMA ASVESTOLITHON N.KERKYRAS (A)	EL0500011	137,11
23	SYSTIMA ASVESTOLITHON N.KERKYRAS (B)	EL0500012	8,39
24	SYSTIMA ASVESTOLITHON N.KERKYRAS (C)	EL0500013	1,37
25	SYSTIMA ASVESTOLITHON N.KERKYRAS (D)	EL0500014	5,31
26	SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (A)	EL0500021	95,14
27	SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (B)	EL0500022	9,34
28	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (A)	EL0500031	117,15
29	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (B)	EL0500032	29,30
30	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (C)	EL0500033	183,12
31	SYSTIMA N.PAXON – ANTIPAXON (A)	EL0500041	20,35
32	SYSTIMA N.PAXON – ANTIPAXON (B)	EL0500042	3,58
33	SYSTIMA N.OTHONON - EREIKOUSAS - MATHRAKIOU (OTHONOI)	EL0500051	10,53
34	SYSTIMA N.OTHONON - EREIKOUSAS - MATHRAKIOU (EREIKOUSA)	EL0500052	3,60
35	SYSTIMA N.OTHONON - EREIKOUSAS - MATHRAKIOU (MATHRAKI)	EL0500053	2,81
LOUROS RB (EL0546)			
36	SYSTIMA LOUROU (A)	EL0500151	828,17
37	SYSTIMA LOUROU (B)	EL0500152	121,34
38	SYSTIMA LOUROU (C)	EL0500153	15,50
39	SYSTIMA ARTAS	EL0500160	354,71
40	SYSTIMA ZALONGOU	EL0500250	24,70



Map 4.2-1: Location and boundaries of groundwater bodies in Epirus (EL05)

4.3 Heavily Modified Water Bodies (HMWB) and Artificial Water Bodies (AWB)

In the River Basin District of Epirus (EL05), 11 heavily modified and 3 artificial water bodies were identified out of a total of 107 water bodies.

Table 4.3-1: Overview of the number and coverage of heavily modified and artificial water bodies in the River Basin District of Epirus (EL05)

	Heavily modified Water Bodies		Artificial Water Bodies	
	Number of Water Bodies	Coverage (%)	Number of Water Bodies	Coverage (%)
Lake Water Bodies	1	100	0	0
Rivers Water Bodies (length along rivers - streams)	4	2,5	3	2,3
Reservoirs WB	3	100	0	0
Coastal Water Bodies	2	2,8	0	0
Transitional Water Bodies*	1	0,6	0	0

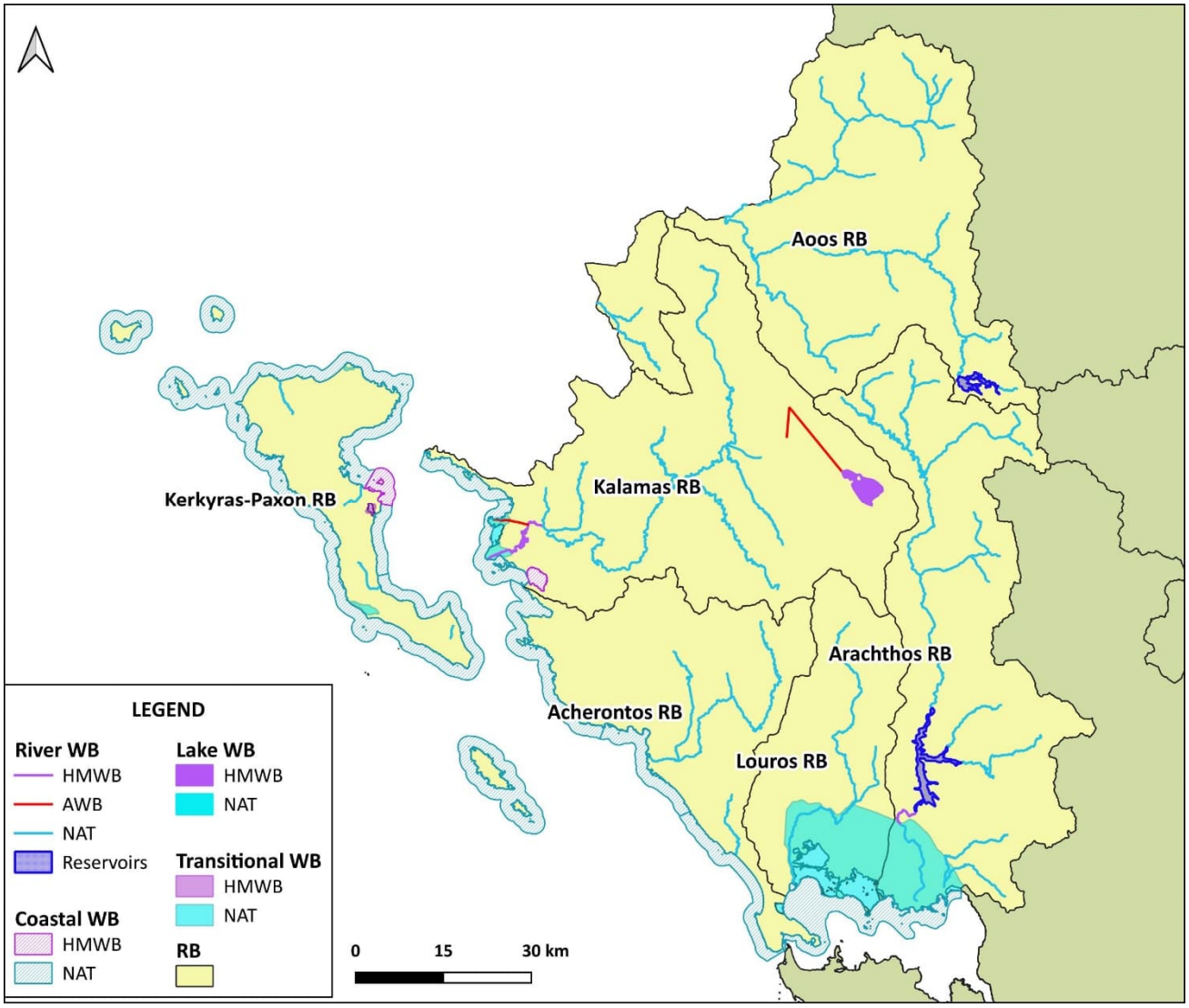
** In the framework of the 2nd Update of the of the RBMP, the need to re-delineate the boundaries of the transitional water bodies "EKVOLES KALAMA", "EKVOLES ARACHTHOU" and "EKVOLES LOUROS - LIMNOTHALASSES RODIA, TSOUKALIO, LOGAROU" emerged, while it is expected that the GDW will implement a relevant action for all the transitional water bodies of the country. In the 2nd Update of the RBMP, the above transitional water bodies were not assessed for hydromorphological alteration and were not considered for designation as HMWB.*

The table and map below present the surface water bodies that have been designated as heavily modified and artificial in the River Basin District of Epirus (EL05). The table presents their main characteristics, as well as the 'determined water use' (activity) of Article 4(3)(a) of the WFD to which each water body is designated.

Table 4.3-2: Designated heavily modified and artificial water bodies per RB in the River Basin District of Epirus (EL05).

NAME	CODE	TYPE OF WB	SURFACE AREA - LENGTH	"DETERMINED WATER USE" IN ACCORDANCE WITH ARTICLE 4(3)(a) of the WFD	CHARACTERISTICS*
AOOS RB (EL0511)					
TECHNITI LIMNI PIGON AOOU	EL0511RLA0200080H	RL	8.21 km^2	Water storage: Hydroelectric power generation, irrigation	HMWB
KALAMAS RB (EL0512)					

NAME	CODE	TYPE OF WB	SURFACE AREA - LENGTH	"DETERMINED WATER USE" IN ACCORDANCE WITH ARTICLE 4(3)(a) of the WFD	CHARACTERISTICS*
THIAMIS P. KALAMAS 1	EL0512R000201023H	R	4.99 km	Water regulation, flood protection	HMWB
THIAMIS P. KALAMAS 2	EL0512R000200024H	R	12.83 km	Water regulation, flood protection	HMWB
THIAMIS P. KALAMAS 3	EL0512R000200027H	R	3.56 km	Flood protection, hydropower generation, irrigation	HMWB
TECHNITO TMIMA EKVOLIS KALAMA 2	EL0512R000202025A	R	3.07 km	Flood protection	AWB
TECHNITO TMIMA EKVOLIS KALAMA 1	EL0512R000202026A	R	2.63 km	Flood protection	AWB
TAFROS LAPSISTAS	EL0512R000212139A	R	19.26 km	Flood protection	AWB
LIMNI PAMVOTIDA	EL0512L000000004H	L	19.24 km^2	Flood protection	HMWB
ORMOS IGOUMENITSAS	EL0512C0003H	C	9.15 km^2	Navigation including port facilities	HMWB
ARACHTHOS RB (EL0514)					
ARACHTHOS P. 2	EL0514R000200051H	R	6.03 km	Water regulation, flood protection	HMWB
TECHNITI LIMNI POURNARIOU	EL0514RL00200002H	RL	20.60 km^2	Water storage: Hydroelectric power generation, irrigation	HMWB
TECHNITI LIMNI POURNARIOU II	EL0514RL00200003H	RL	0.65 km^2		HMWB
KERKYRAS-PAXON RB (EL0534)					
ORMOS GARITSAS KAI LIMENAS KERKYRAS	EL0534C0011H	C	20.2 km^2	Navigation including port facilities	HMWB
LIMNOTHALASSA CHALIKIOPOULOU	EL0534T0007H	T	2.24 km²	Other significant human activities (airport)	HMWB
**HMWB: Specially modified water body, AWB: Artificial water body*					



Map 4.3-1: Overview of heavily modified and artificial water bodies in the River Basin District of Epirus (EL05)

4.4 Protected Areas

In accordance with Article 6 of Directive 2000/60/EC, Member States shall ensure the establishment of a Registry of all areas lying within each river basin district which have been designated as requiring special protection under specific provisions of EU legislation for the protection of their surface water and groundwater or the conservation of habitats and species directly depending on water .

This registry is called the Registry of Protected Areas (RPAs) and according to Annex V of Presidential Decree 51/2007, it includes all the following types of areas:

- **Areas designated for the abstraction of water intended for human consumption**, in accordance with Article 7 of PD 51/2007 (Article 7 of Directive 2000/60/EC). There has been no change compared to the 1st Update:

The table below shows the groundwater bodies used for abstracting water intended for human consumption. In relation to the 1st Update, the water bodies Louros P. 4 and Louros P. 5 were removed from the Registry of Protected Areas for human consumption.

Table 4.4-1: Groundwater Bodies included in the registry of protected areas of the River Basin District of Epirus (EL05)

No	Name of the GWB	GWB code	Registry of protected areas Article A7 code	Type of aquifer
RIVER BASIN OF AOOS(EL0511)				
1	SYSTIMA TYMFIS	EL0500100	EL0500100A7	Karstic
2	SYSTIMA YDROFORION SMOLIKA-MAVROVOUNIOU	EL0500230	EL0500230A7	Karstic
RIVER BASIN OF KALAMAS (EL0512)				
3	SYSTIMA MOURGKANAS	EL050A060	EL050A060A7	Karstic
4	SYSTIMA MESOU ROU KALAMA	EL0500080	EL0500080A7	Karstic
5	SYSTIMA KASIDIARI	EL0500120	EL0500120A7	Karstic
6	SYSTIMA MITSIKELIOY-VELLA (MITSIKELI)	EL0500181	EL0500181A7	Karstic
7	SYSTIMA MITSIKELIOY-VELLA (MONI VELLA)	EL0500182	EL0500182A7	Karstic
8	SYSTIMA POGONIANIS	EL050A190	EL050A190A7	Karstic
9	SYSTIMA KOURENTON	EL0500210	EL0500210A7	Karstic
RIVER BASIN OF LOUROS (EL0546)				
10	SYSTIMA LOUROU (A)	EL0500151	EL0500151A7	Karstic
11	SYSTIMA LOUROU (B)	EL0500152	EL0500152A7	Karstic
12	SYSTIMA LOUROU (C)	EL0500153	EL0500153A7	Karstic

- Water bodies designated as **recreational waters**, including areas designated as **bathing waters**:

In the River Basin District of Epirus (EL05) 112 areas have been designated and are included in the Registry of Bathing Water Areas of Greece, according to the list of bathing waters areas, which was posted on the EU website (https://cdr.eionet.europa.eu/gr/eu/bwd/bwd_788/envzhda6w/) in May 2023. Compared to the 1st Update, 21 new bathing areas have been added to the registry, while one area has been removed form it (Paleokastritsa Anatolika).

Furthermore, as far as recreational waters are concerned, there are regulated recreational activities in the RBD of Epirus (EL05). The most important of these activities are considered to be rafting and kayaking on the rivers of the region, canyoning and lake-based nautical activities. A total of 9 protected inland water recreation areas have been designated. Note that in relation to the 1st Update, the Potamos Kalama area (Gefyra Gytanis eos Delta) has been removed from the list of designated areas as recreational waters.

- **Areas sensitive to the presence of nutrients**, including areas designated as **vulnerable zones** (Nitrates Directive), and areas designated as **sensitive** (Urban Wastewater Treatment Directive):

Vulnerable zones

In the River Basin District of Epirus (EL05), according to JMD 20419/2522/18-9-2001 (Government Gazette 1212B/14-9-2001), the area "Pediada Artas Prevezas" (EL0514NI02) is identified as a zone vulnerable to nitrate pollution due to agricultural activities. It should be noted that a small part of this area of 13 km² falls within the Western Central Greece (EL04). There has been no change since the 1st Update.

Table 4.4-2: Groundwater bodies falling within the area of the Pediada Artas Prevezas

Code	Name
Groundwater Bodies	
EL0500090	SYSTIMA SOULIOU-PARAMYTHIAS
EL0500140	SYSTIMA CHERSONISOU PREVEZAS
EL0500150	SYSTIMA LOUROU
EL0500160	SYSTIMA ARTAS
EL0500240	SYSTIMA YDROFORION P.ARACHTHOU
EL0500250	SYSTIMA ZALONGOU
EL0500260	SYSTIMA YDROFORION ANO ROU ACHERONTOS-REMATOS ARETHOUA

Sensitive Areas

Regarding the sensitive areas in the River Basin District of Epirus (EL05), on the basis of the M.D. 19661/1982/1999 (Government Gazette 1811B'/29.09.1999), as amended by the Ministry of Environment and Natural Resources J.M.D. 136843/22 (Government Gazette 7215 B/31-12-22), the sensitive areas presented in the table below have been defined, together with the water bodies that fall within them. It should be noted that, in the framework of the 1st River Basin management Plans of the 14 River Basin Districts of the country, it was proposed to add in the list of sensitive areas the TAFROS LAPSISTA and LIMNI PAMVOTIDA. These areas were officially included according to the J.M.D. YPEN/136843/22 (Government Gazette-7215 B/31-12-22).

Table 4.4-3: Designated sites sensitive to the presence of nutrients in the River Basin District of Epirus (EL05)

No	Sensitive Area	WB code	Name of WB
1	AMVRAKIKOS KOLPOS	EL0513C0007N	VOREIOS AMVRAKIKOS KOLPOS
2	METSOVITIKOS (tributary of	EL0514R000208067N	METSOVITIKOS P. 2

No	Sensitive Area	WB code	Name of WB
	Arachthos P.)	EL0514R000208066N	METSOVITIKOS P. 1
3	POTAMOS ARACHTHOS	EL0514R000200056N	ARACHTHOS P. 5
		EL0514R000210071N	ARACHTHOS P. 11
		EL0514R000210069N	ARACHTHOS P. 10
		EL0514R000200065N	ARACHTHOS P. 8
		EL0514R000200054N	ARACHTHOS P. 3
		EL0514R000200063N	ARACHTHOS P. 6
		EL0514R000200055N	ARACHTHOS P. 4
		EL0514R000200064N	ARACHTHOS P. 7
		EL0514R000203068N	ARACHTHOS P. 9
		EL0514R000201050N	ARACHTHOS P. 1
		EL0514R000200051H	ARACHTHOS P. 2
4	POTAMOS LOUROS	EL0546R000200081N	LOUROS P. 4
		EL0546R000201077N	LOUROS P. 1
		EL0546R000200080N	LOUROS P. 3
		EL0546R000200078N	LOUROS P. 2
		EL0546R000200082N	LOUROS P. 5
5	TAFROS LAPSISTA	EL0512R000212139A	TAFROS LAPSISTA
6	LIMNI PAMVOTIDA	EL0512L000000004H	LIMNI PAMVOTIDA

- Areas designated for the **protection of habitats or species** where the conservation or improvement of water status is important for their protection, including relevant NATURA 2000 sites.

The selection and designation of protected natural areas is adapted to the national circumstances of each Member State. Due to the diversity of conditions within the European Union, Member States can apply the guidelines of the Guidance Documents in a flexible way since the characteristics as well as the problems faced by each RB vary from region to region. These areas are presented below:

In total, 40 Natura 2000 sites are found in the River Basin District of Epirus (EL05), of which 19 have been designated as SAC, 15 have been designated as SPA, while 6 sites have been designated as both SAC and SPA. The following table presents the Natura sites located on the boundaries of the River Basin District of Epirus. In relation to the 1st Update, the areas GR2230009 & GR2230010 belonging to the Kerkyras-Paxon RB have been added.

Table 4.4-4: Natura 2000 network sites in the River Basin District of Epirus (EL05)

No	Code Natura	Name of area	Category
1	GR1310001	VASILITSA	SAC
2	GR1310002	VALIA KALNTA KAI TECHNITI LIMNI AOOU	SPA
3	GR1310003	ETHNIKOS DRYMOS PINDOU (VALIA KALNTA) - EVRYTERI PERIOCHI	SAC
4	GR1320002	KORYFES OROUS GRAMMOS	SAC&SPA
5	GR2110001	AMVRAKIKOS KOLPOS, DELTA LOUROU KAI ARACHTHOU (PETRA, MYTIKAS, EVRYTERI PERIOCHI, KATO POUS ARACHTHOU, KAMPI FILIPPIADAS)	SAC
6	GR2110002	ORI ATHAMANON (NERAIDA)	SAC

No	Code Natura	Name of area	Category
7	GR2110004	AMVRAKIKOS KOLPOS, LIMNOTHALASSA KATAFOURKO KAI KORAKONISIA	SPA
8	GR2110006	KOILADA ACHELOOU KAI ORI VALTOU*	SPA
9	GR2120001	EKVOLES (DELTA) KALAMA	SAC
10	GR2120002	ELOS KALODIKI*	SAC
11	GR2120003	LIMNI LIMNOPOULA*	SAC
12	GR2120004	STENA KALAMA	SAC
13	GR2120005	YGROTOPOS EKVOLON KALAMA KAI NISOS PRASOUDI	SPA
14	GR2120006	ELI KALODIKI, MARGARITI, KARTERI KAI LIMNI PRONTANI*	SPA
15	GR2120007	STENA PARAKALAMOU	SPA
16	GR2120008	ORI PARAMYTHIAS, STENA KALAMA KAI STENA ACHERONTA	SPA
17	GR2120009	ORI TSAMANTA, FILIATON, FARMAKOVOUNI, MEGALI RACHI	SPA
18	GR2130001	ETHNIKOS DRYMOS VIKOU - AOOU	SAC
19	GR2130002	KORYFES OROUS SMOLIKAS	SAC&SPA
20	GR2130004	KENTRIKO TMIMA ZAGORIOU	SAC
21	GR2130005	LIMNI IOANNINON	SAC&SPA
22	GR2130006	PERIOCHI METSOVOU (ANILIO - KATARA)	SAC
23	GR2130007	OROS LAKMOS (PERISTERI)	SAC&SPA
24	GR2130008	OROS MITSIKELI*	SAC
25	GR2130009	OROS TYMFI (GKAMILA)	SPA
26	GR2130010	OROS DOUSKON, ORAIOKASTRO, DASOS MEROPIS, KOILADA GORMOU, LIMNI DELVINAKIOU*	SPA
27	GR2130011	KENTRIKO ZAGORI KAI ANATOLIKO TMIMA OROUS MITSIKELI	SPA
28	GR2130012	EVRYTERI PERIOCHI POLIS IOANNINON	SPA
29	GR2130013	EVRYTERI PERIOCHI ATHAMANIKON OREON	SPA
30	GR2140001	EKVOLES ACHERONTA (APO GLOSSA EOS ALONAKI) KAI STENA ACHERONTA	SAC
31	GR2140003	PARAKTIA THALASSIA ZONI APO PARGA EOS AKROTIRIO AGIOS THOMAS (PREVEZA), AKR. KELADIO - AG. THOMAS	SAC
32	GR2230001	LIMNOTHALASSA ANTINIOTI (KERKYRA)	SAC&SPA
33	GR2230002	LIMNOTHALASSA KORISSION (KERKYRA)	SAC
34	GR2230003	ALYKI LEFKIMMIS (KERKYRA)	SAC&SPA
35	GR2230004	NISOI PAXOI KAI ANTIPAXOI KAI EVRYTERI THALASSIA PERIOCHI	SAC
36	GR2230005	PARAKTIA THALASSIA ZONI APO KANONI EOS MESONGI (KERKYRA)	SAC
37	GR2230007	LIMNOTHALASSA KORISSION (KERKYRA) KAI NISOS LAGOUDIA	SPA
38	GR2230008	DIAPONTIA NISIA (OTHONOI, EREIKOUSA, MATHRAKI KAI VRACHONISIDES)	SPA
39	GR2230009**	LIMNOTHALASSA ANTINIOTI KAI POTAMOS FONISSAS (KERKYRA)	SAC
40	GR2230010**	THALASSIA PERIOCHI DIAPONTION NISON	SAC

** These areas do not include within their boundaries a surface water body of the River Basin District of Epirus*

No	Code Natura	Name of area	Category
** *New additions compared to the 1st Update*			

The table below presents areas protected by national legislation, in particular National Parks, Ecodevelopment Areas and nature conservation areas located within the boundaries of the River Basin District of Epirus (EL05). In relation to the 1st Update, the Protected Landscape and Protected Natural Formation Area of the Aoos River Basin has been added.

Table 4.4-5: Other areas of natural environment protection in the River Basin District of Epirus (EL05)

No	Name of area
1	ETHNIKO PARKO YGROTOPON AMVRAKIKOU
2	ETHNIKO PARKO VOREIAS PINDOU
3	PERIOCHI PROSTASIAS TIS FYSIS STENON KAI EKVOLON POTAMON ACHERONTA KAI KALAMA
4	PERIOCHI OIKOANAPTYXIS LIMNIS PAMVOTIDAS
5	ETHNIKO PARKO TZOUMERKON - PERISTERIOU KAI CHARADRAS ARACHTHOU
6	PERIOCHI PROSTATEUOMENOU TOPIOU KAI PROSTATEUOMENOU FYSIKOU SCHIMATISMOU TIS LEKANIS APORROIS TOY AOOU POTAMOU

The following Ramsar sites are also included in the RBD of Epirus (EL05). Compared to the 1st Update there has been no change.

Table 4.4-6: Ramsar sites in the River Basin District of Epirus (EL05)

A/N	Name of area
1	AMVRAKIKOS KOLPOS

Finally, 33 small island wetlands are included in the RBD of Epirus (EL05), as presented in the table below. It is noted that there are no differences compared to the 1st Update.

Table 4.4-7: Small island wetlands in the River Basin District of Epirus (EL05)

No	Name	Code	Island	Type	Location
1	Elos Molou	Y222KER006	Corfu (Kerkyras)	Marsh	Coastal
2	Limni Makri	Y222KER033	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
3	Elos akrotiriou Tourko	Y222KER019	Corfu (Kerkyras)		Coastal
4	Elos stous Koritous	Y222KER052	Corfu (Kerkyras)		Internal
5	Ekvoli potamou Fonissas	Y222KER036	Corfu (Kerkyras)	Exposure	Coastal
6	Elos Gouvion	Y222KER024	Corfu (Kerkyras)	Wetland system	Coastal
7	ELos Voutoumi	Y222APX001	Antipox	Marsh	Coastal

No	Name	Code	Island	Type	Location
8	ELos Ormou Praou 1	Y222KER034	Corfu (Kerkyras)	Marsh	Coastal
9	Limnio CHYTA	Y222KER049	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
10	Limni Koli	Y222KER031	Corfu (Kerkyras)	Permanent salt water swamp	Coastal
11	Elos Erimiti	Y222KER032	Corfu (Kerkyras)	Permanent freshwater quagmire	Coastal
12	Ekvoli Griti	Y222KER007	Corfu (Kerkyras)	Exposure	Coastal
13	Gavrolimni	Y222KER027	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
14	Ekvoli potamou Gardena	Y222KER009	Corfu (Kerkyras)	Exposure	Coastal
15	Ekvoli 1 paralias Marathia	Y222KER011	Corfu (Kerkyras)	Exposure	Coastal
16	Ekvoli paralias Petriti	Y222KER012	Corfu (Kerkyras)	Exposure	Coastal
17	Elos Kontokaliou	Y222KER044	Corfu (Kerkyras)	Marsh	Coastal
18	Ekvoli Potamou	Y222KER016	Corfu (Kerkyras)	Exposure	Coastal
19	Elos marinas Gouvion	Y222KER018	Corfu (Kerkyras)	Wetland system	Coastal
20	Elos Anemomilou	Y222KER020	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
21	Limni Skotini	Y222KER022	Corfu (Kerkyras)	Lake	Internal
22	Limni Berzanou	Y222KER023	Corfu (Kerkyras)	Lake	Internal
23	Ekvoli kai kanali Stravopotamou	Y222KER025	Corfu (Kerkyras)	Exposure	Coastal
24	Limni Kounoupina	Y222KER029	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
25	Vromolimni	Y222KER030	Corfu (Kerkyras)	Permanent salt water swamp	Coastal
26	Limni Boutsouli	Y222KER043	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
27	Oropedio Katapinos	Y222KER048	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
28	Limni Kloudatiki	Y222KER050	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
29	Limni Syvilitika	Y222KER053	Corfu (Kerkyras)	Seasonal freshwater trough	Internal

No	Name	Code	Island	Type	Location
30	Epochiako Telma Temploniou	Y222KER054	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
31	Elos Astrakeris	Y222KER055	Corfu (Kerkyras)	Marsh	Coastal
32	Limni Belenioti	Y222KER056	Corfu (Kerkyras)	Seasonal freshwater trough	Internal
33	Elos Ormou Praou	Y222KER057	Corfu (Kerkyras)	Wetland system	Coastal

- Areas designated for the **protection of aquatic species of economic importance**:

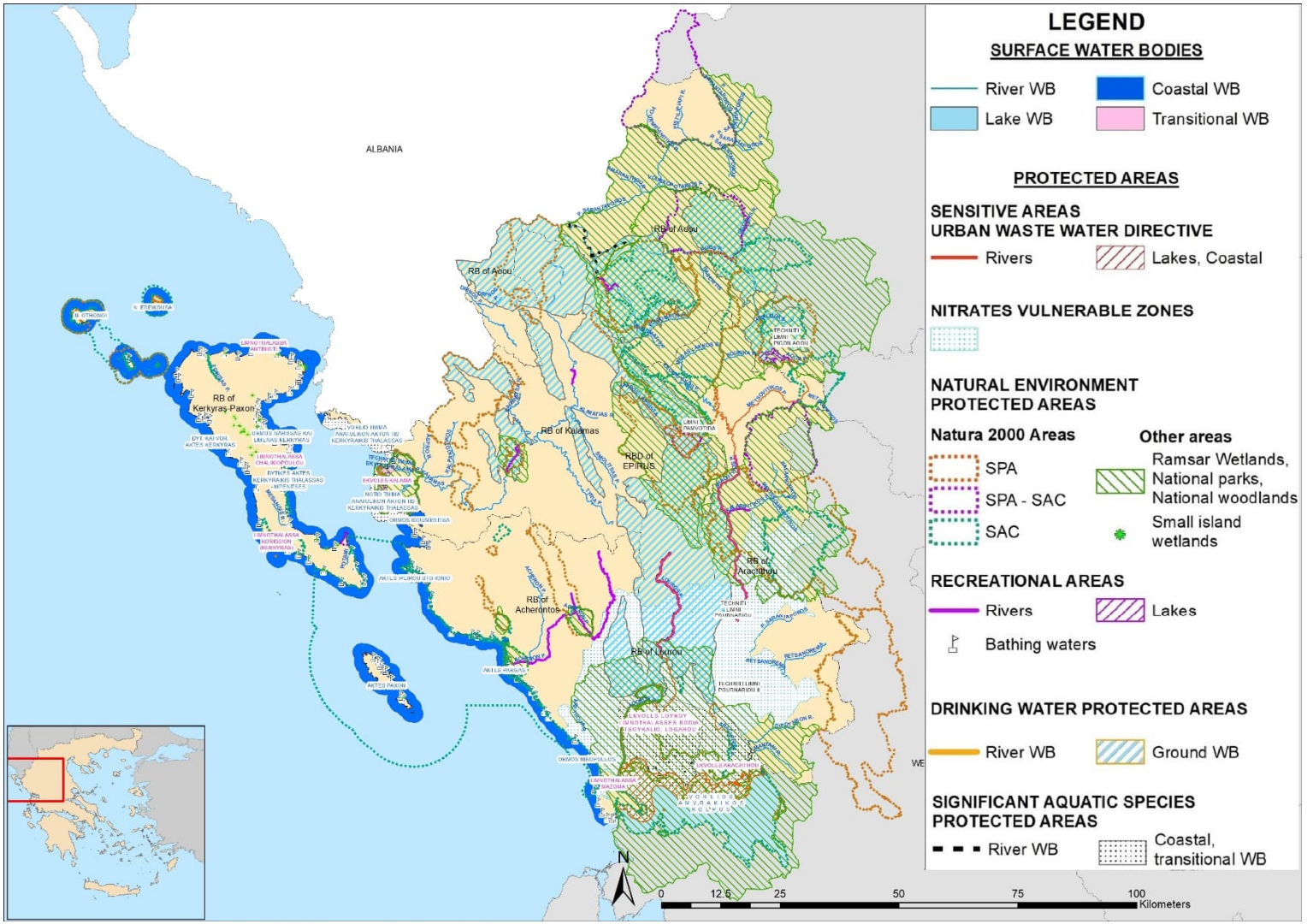
Taking into account the size and type of existing aquaculture facilities, the list of Protected Areas of Aquatic Species of Economic Importance in the RBD of Epirus (EL05) was established. There has been no change compared to the 1st Update. The table below shows these areas and the water bodies to which they belong to.

Table 4.4-8: Designated protected areas of aquatic species of economic importance in the River Basin District of Epirus and their respective WB

No	Area of economic importance for aquatic species	Description of the Area	Corresponding WB code	Name of the corresponding WB
1	POTAMOS LOUROS	A section of the potamos Louros , approximately 32 km long, starting from its sources (River Basin of Louros)	EL0546R000200081N	LOUROS P. 4
			EL0546R000200082N	LOUROS P. 5
2	POTAMOS AOOS	A section of the potamos Aoos, about 22km long, ending at the border with Albania (River Basin of Aoos)	EL0511R0A0201001N	AOOS P. 1
3	POTAMOS VOIDOMATIS	A section of the potamos Voidomatis, approximately 7km long, ending at its confluence with the Aoos (River Basin of Aoos)	EL0511R0A0204009N	VOIDOMATIS P. 1
4	EKVOLES ARACHTHOU	The Limnothalassa Rodia formed at the mouth of the potamos Arachthos (River Basin of Arachthos)	EL0514T0002N	EKVOLES ARACHTHOU
5	EKVOLES LOUROU - LIMNOTHALASSES RODIA, TSOUKALIO, LOGAROU	The Limnothalassa Logarou formed at the mouth of potamous Louros (River Basin of Louros)	EL0546T0003N	LOUROS ESTUARY - LOGAROS LAGOON
6	VOREIOS AMVRAKIKOS KOLPOS	The northern part of the Amvrakikos Kolpos	EL0513C0007N	VOREIOS AMVRAKIKOS KOLPOS
7	ANATOLIKES AKTES TIS KERKYRAIKIS THALASSAS	The eastern coast (coast of Epirus) of the Kerkyraikis Thalassas	EL0512C0A02N	NOTIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS
			EL0512C0A01N	VOREIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS

It is noted that the Presidential Decree (Government Gazette 326/D/2022) "Characterization and delineation of of Organized Area for Development of Aquaculture in marine areas of the Regional Unit of Thesprotia and environmental approval of this plan" has been issued for the marine areas of Sayiadas, Kalamas, Valtos and Ragiou of the Regional Unit of Thesprotia of the Region of Epirus, with a total sea area of 26.534,711 ha., which is located within the protected area “Anatolikes Aktes tis Kerkyraikis Thalassas“.

The protected areas for aquatic species of economic importance are related to Directive 2006/44/EC on the "quality of fresh waters needing protection or improvement in order to support fish life" and Directive 2006/113/EC on the "water quality required for shellfish".


LEGEND
SURFACE WATER BODIES
River WB
Coastal WB
Lake WB
Transitional WB
PROTECTED AREAS
SENSITIVE AREAS
URBAN WASTE WATER DIRECTIVE
Rivers
Lakes, Coastal
NITRATES VULNERABLE ZONES
NATURAL ENVIRONMENT
PROTECTED AREAS
Natura 2000 Areas
SPA
SPA - SAC
SAC
Other areas
Ramsar Wetlands, National parks, National woodlands
Small island wetlands
RECREATIONAL AREAS
Rivers
Lakes
Bathing waters
DRINKING WATER PROTECTED AREAS
River WB
Ground WB
SIGNIFICANT AQUATIC SPECIES
PROTECTED AREAS
River WB
Coastal, transitional WB
ALBANIA
RB of Aoou
RB of Kerkyras-Paxon
RB of Kalamas
RBD of EPIRUS
RB of Arachthou
RB of Acheron-tos
RB of Lourou
N
0
12.5
25
50
75
100
Kilometers

Map 4.4-1: Protected areas in the River Basin District of Epirus (EL05)

5 PRESSURES AND IMPACTS

Anthropogenic pressures on water bodies are defined as all human activities that affect or may affect the water bodies of the area in which they are developed. These pressures are identified as significant if they are a cause for the water bodies to be at risk of not achieving the environmental objectives in accordance to the methodology described in EU Guidance Document No 03.

The following are the results of the anthropogenic pressures analysis carried out for the purposes of the 2nd Update of the RBMP.

5.1 Point sources of pollution

This section includes all point sources of pollution that produce conventional pollutants (BOD_5, N, P) and have been considered in the Document: 'Analysis of anthropogenic pressures and their effects on surface and groundwater bodies, as 'pressures'. The list of categories of such pressures includes:

-Wastewater Treatment Plants (WWTP)

-Discharges of sewerage networks to a natural recipient

-Large hotel units

-Industrial sites

-Livestock farms

-Fisheries - Aquaculture

-Runoff from landfills and landfill sites

The total annual amounts of pollutant loads of BOD_5, N and P, potentially discharged to surface and groundwater bodies in the study area are presented per RB and point pressure category in the following Figure.

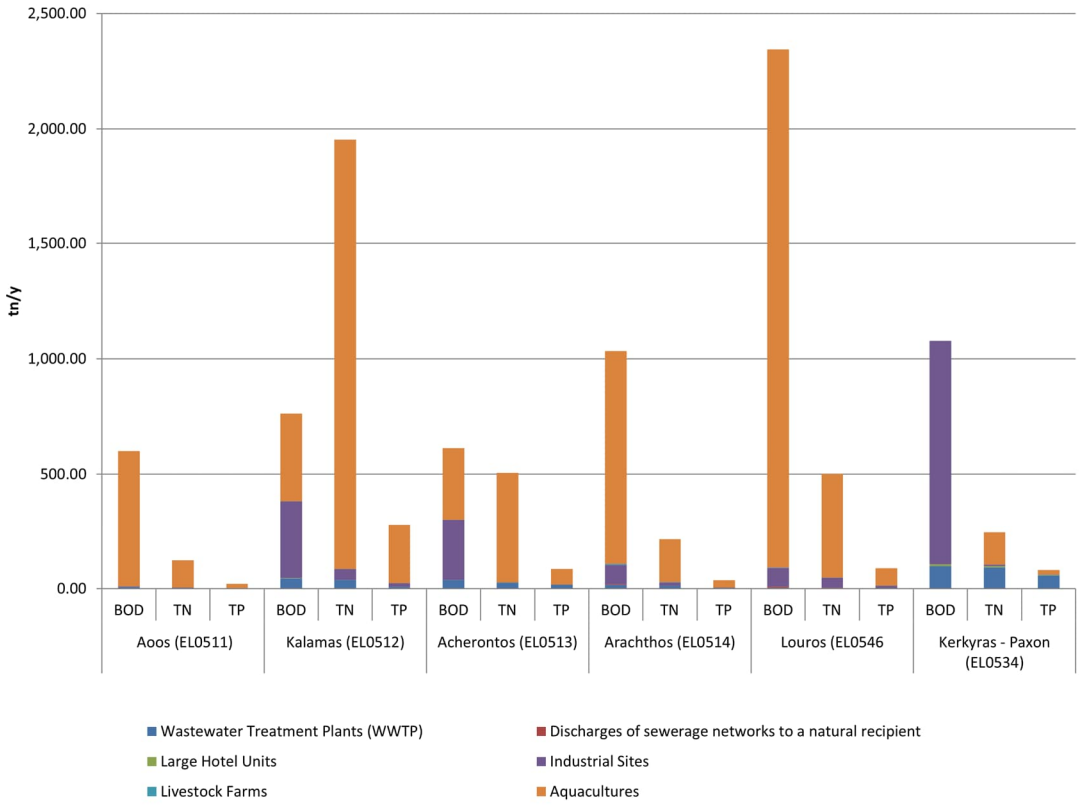


Figure 5.1-1:Total annual loads of BOD_5, N and P produced in river basins (EL0511), (EL0512), (EL0513), (EL0514), (EL0545), (EL0534) from point sources of pollution

The tables below present the total annual loads estimated to affect surface systems, resulting from the sum of the individual point pressures, per RB for the River Basin District of Epirus (EL05).

Table 5.1-1: Total annual loads of BOD_5, N and P produced by point sources of pollution in the RB of Aoos (EL0511)

POINT SOURCES OF POLLUTION	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
Wastewater Treatment Plants (WWTP)	5,86	1,67	0,35
Discharges of sewerage networks to a natural recipient (not connected to WWTP)	0,00	0,00	0,00
Large hotel units	0,00	0,00	0,00
Industrial sites	3,61	2,56	0,56
Livestock farms	0,05	0,02	0,01
Aquaculture - Fish farms	591,42	118,90	19,98

POINT SOURCES OF POLLUTION	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
TOTAL	**600,94**	**123,15**	**20,90**

Table 5.1-2: Total annual loads of BOD_5, N and P produced by point sources of pollution in the RB of Kalamas (EL0512)

POINT SOURCES OF POLLUTION	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
Wastewater Treatment Plants (WWTP)	44,79	37,44	7,93
Discharges of sewerage networks to a natural recipient (not connected to WWTP)	0,00	0,00	0,00
Large hotel units	0,45	0,19	0,15
Industrial sites	336,82	47,17	15,45
Livestock farms	1,17	0,59	0,24
Aquaculture - Fish farms	379,67	1868,02	256,74
TOTAL	**762,45**	**1953,22**	**280,36**

Table 5.1-3: Total annual loads of BOD_5, N and P produced by point sources of pollution in the RB of Acherontos (EL0513)

POINT SOURCES OF POLLUTION	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
Wastewater Treatment Plants (WWTP)	37,54	25,41	17,21
Discharges of sewerage networks to a natural recipient (not connected to WWTP)	0,00	0,00	0,00
Large hotel units	0,38	0,19	0,11
Industrial sites	263,91	1,60	0,26
Livestock farms	0,01	0,01	0,00
Aquaculture - Fish farms	311,00	478,43	67,13
TOTAL	**612,84**	**505,64**	**84,71**

Table 5.1-4: Total annual loads of BOD_5, N and P produced by point sources of pollution in the RB of Arachthos (EL0514)

POINT SOURCES OF POLLUTION	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
Wastewater Treatment Plants (WWTP)	16,58	12,10	2,60
Discharges of sewerage networks to a natural recipient (not connected to WWTP)	3,13	0,62	0,27
Large hotel units	0,00	0.00	0,00
Industrial sites	83,49	14,79	1,66
Livestock farms	3,34	0,70	0,16
Aquaculture - Fish farms	927,18	186,40	31,33
TOTAL	**1033,72**	**214,61**	**36,02**

Table 5.1-5: Total annual loads of BOD_5, N and P produced by point sources of pollution in the RB of Louros (EL0546)

POINT SOURCES OF POLLUTION	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
Wastewater Treatment Plants (WWTP)	2,54	1,57	0,30
Discharges of sewerage networks to a natural recipient (not connected to WWTP)	5,19	1,30	0,27
Large hotel units	0,00	0,00	0,00
Industrial sites	82,62	44,37	12,00
Livestock farms	0,43	0,27	0,12
Aquaculture - Fish farms	2253,19	452,98	76,15
TOTAL	**2343,97**	**500,49**	**88,84**

Table 5.1-6: Total annual loads of BOD_5, N and P produced by point sources of pollution in the RB of Kerkyras - Paxon (EL0534)

POINT SOURCES OF POLLUTION	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
Wastewater Treatment Plants (WWTP)	97,19	91,61	57,36
Discharge of sewerage networks to a natural recipient	0,00	0,00	0,00

POINT SOURCES OF POLLUTION	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
Large hotel units	7,83	6,61	1,86
Industrial units	972,58	6,00	1,52
Livestock farms	0,00	0,00	0,00
Fish farms	0,00	139,23	18,95
TOTAL	**1077,60**	**243,45**	**79,69**

5.2 Diffuse sources of pollution

All diffuse sources of pollution associated with conventional pollutants (BOD_5, N, P) are included. The list of categories of these pressures includes:

-Agricultural activities

-Wastewater that does not end up in a WWTP

-Livestock farming (pastoral)

-Contamination of water from other sources

The total annual quantities of pollutant loads of BOD_5, N and P generated by diffuse sources of pollution in the study area, are presented per RB and diffuse pressure category in the following Figure.

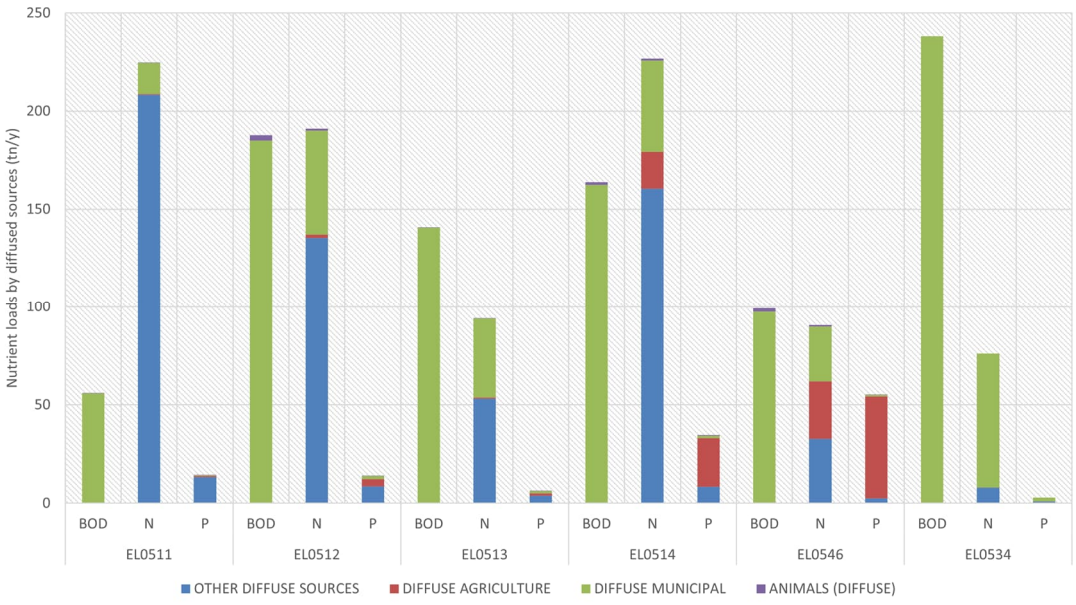


Figure 5.2-1:Total annual surface loads of BOD_5, N and P in river basins (EL0511), (EL0512), (EL0513), (EL0514), (EL0545), (EL0534) from diffuse sources of pollution

The tables below present the total annual loads potentially discharged to surface water bodies resulting from individual diffuse pressures, per RB for the River Basin District of Epirus (EL 05).

Table 5.2-1: Total annual loads of BOD_5, N and P potentially discharged from diffuse sources of pollution in the surface water bodies of the RB of Aoos (EL0511)

LAND USE	Annual BOD_5 (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
URBAN	55,84	15,95	0,39

AGRICULTURE	0,00	0,34	0,71
LIVESTOCK	0,04	0,03	0,01
OTHER SOURCES	0,00	208,28	13,20
TOTAL	**55,88**	**224,61**	**14,31**

Table 5.2-2: Total annual loads of BOD_5, N and P potentially discharged from diffuse sources of pollution in the surface water bodies of the RB of Kalamas (EL0512)

LAND USE	Annual BOD (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
URBAN	184,99	52,86	1,64
AGRICULTURE	0,00	1,90	3,64
LIVESTOCK	2,80	1,05	0,19
OTHER SOURCES	0,00	135,25	8,64
TOTAL	**187,79**	**191,06**	**14,11**

Table 5.2-3: Total annual loads of BOD_5, N and P potentially discharged from diffuse sources of pollution in the surface water bodies of the RB of Acherontos (EL0513)

LAND USE	Annual BOD (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
URBAN	140,59	40,17	1,12
AGRICULTURE	0,00	0,61	1,25
LIVESTOCK	0,04	0,03	0,01
OTHER SOURCES	0,00	53,06	3,76
TOTAL	**140,63**	**93,87**	**6,14**

Table 5.2-4: Total annual loads of BOD_5, N and P potentially discharged from diffuse sources of pollution into the surface water bodies of the RB of Arachthos (EL0514)

LAND USE	Annual BOD (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
URBAN	162,46	46,42	1,17
AGRICULTURE	0,00	19,01	24,88
LIVESTOCK	1,32	0,93	0,28
OTHER SOURCES	0,00	160,35	8,29
TOTAL	**163,78**	**226,70**	**34,62**

Table 5.2-5: Total annual loads of BOD_5, N and P potentially discharged from diffuse sources of pollution in the surface water systems of the RB OF Louros (EL0546)

LAND USE	Annual BOD (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
URBAN	97,43	27,84	0,85
AGRICULTURE	0,00	29,37	51,86
LIVESTOCK	1,70	0,70	0,14
OTHER SOURCES	0,00	32,66	2,42
TOTAL	**99,13**	**90,57**	**55,27**

Table 5.2-6: Total annual loads of BOD_5, N and P potentially discharged from diffuse sources of pollution in the Surface Water Systems of the Kerkyras – Paxon (EL0534)

LAND USE	Annual BOD (tonnes/year)	Annual N (tonnes/year)	Annual P (tonnes/year)
URBAN	238,08	68,02	2,00
AGRICULTURE	0,00	0,07	0,06
LIVESTOCK	0,00	0,00	0,00
OTHER SOURCES	0,00	8,00	0,90
TOTAL	**238,08**	**76,09**	**2,95**

5.3 Hydromorphological pressures

Hydromorphological pressures caused by engineering works or other anthropogenic interventions on surface water bodies are classified as Negligible, Low, Moderate, Intense, and Significant, depending on the magnitude of the pressure they are subjected to. It is noted that WB with Intense and Significant hydromorphological alteration were further considered for designation as a Heavily Modified WB.

The assessment of hydromorphological alterations in surface water bodies in the River Basin District of Epirus (EL05) is presented in the following tables per RB. It should be clarified that the hydromorphological interventions in artificial water bodies essentially are related to interventions resulting from the objectives these bodies serve and are not included in these tables.

Also, it should be noted that in the framework of the 2nd Update of the of the RBMP, the need to re-delineate the boundaries of the transitional water bodies "EKVOLES KALAMA", "EKVOLES ARACHTHOU" and "EKVOLES LOUROS - LIMNOTHALASSES RODIA, TSOUKALIO, LOGAROU" emerged, while it is expected that the GDW will implement a relevant action for all the transitional water bodies of the country. In the 2nd Update of the RBMP, the above transitional water bodies were not assessed for hydromorphological alteration and were not considered for designation as HMWB.

Table 5.3-1: Assessment of hydromorphological pressures/alterations of the river, lake and transitional water bodies in the RB of Aoos of the RBD of Epirus (EL05)

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0511R0A0101022N	DRINOS P.	27,98	Transversal structure	Low
EL0511R0A0200013N	AOOS P. 2	23,06	Water abstraction, Transversal structure	Low
EL0511R0A0200016N	AOOS P. 3	13,02	Water abstraction	Moderate
EL0511R0A0200018N	AOOS P. 4	11,80	Water abstraction, Transversal structure	Moderate
EL0511R0A0200020N	AOOS P. 5	10,07	Downstream of dam Pigon Aoou	Significant
EL0511R0A0200021N	AOOS P. 6	4,02	Transversal structure	Low
EL0511R0A0201001N	AOOS P. 1	22,37	Water abstraction, Channel straightening, Transversal structure	Moderate
EL0511R0A0202002N	SARANTAPOROS P. 1	40,40	Transversal structure	Low

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0511R0A0202007N	SARANTAPOROS P. 2	3,40	No intervention	Negligible
EL0511R0A0202008N	SARANTAPOROS P. 3	46,16	Transversal structure	Low
EL0511R0A0202103N	SARANTAPOROS P. - PARAPOTAM	7,12	Transversal structure	Low
EL0511R0A0202204N	VOURKOPOTAMOS P.	7,67	Transversal structure	Low
EL0511R0A0202305N	VOURMPIANITIKO R.	10,52	Transversal structure	Low
EL0511R0A0202406N	PISTILIPIAPI R.	9,09	Transversal structure	Low
EL0511R0A0204009N	VOIDOMATIS P. 1	7,09	Channel straightening, Transversal structure	Moderate
EL0511R0A0204010N	VOIDOMATIS 2	8,08	Transversal structure	Low
EL0511R0A0204011N	VOIDOMATIS 3	11,47	No intervention	Negligible
EL0511R0A0204012N	VOIDOMATIS 4	21,85	Transversal structure	Low
EL0511R0A0206014N	AOOS P. - PARAPOTAMOS RASENI	3,54	No intervention	Negligible
EL0511R0A0206015N	AOOS P. - PARAPOTAMOS RASENI	4,45	No intervention	Negligible
EL0511R0A0208017N	GIOTSAS R.	11,22	Transversal structure	Low
EL0511R0A0210019N	AOOS P. - PARAPOTAMOS ARCUDOS	7,72	No intervention	Negligible
EL0511RLA0200001H	TECHNITI LIMNI PIGON AOOU	8,21	Reservoir	Intense

Table 5.3-2: Assessment of hydromorphological pressures/alterations of the river, lake and transitional water bodies in the Kalama RB of the RBD of Epirus (EL05)

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0512L000000004H	LIMNI PAMVOTIDA	19,24	Water abstraction, berths, Intensive uses	Moderate
EL0512R000200024N	THIAMIS P. KALAMAS 2	12,83	Channel straightening, Transversal structure, Diversion of flow	Intense
EL0512R000200027N	THIAMIS P. KALAMAS 3	3,56	Weir of Yitanis, Channel straightening	Significant

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0512R000200029N	THIAMIS P. KALAMAS 4	25,87	Channel straightening, Transversal structure	Moderate
EL0512R000200032N	THIAMIS P. KALAMAS 5	15,79	Transversal structure	Low
EL0512R000200033N	THIAMIS P. KALAMAS 6	9,14	Transversal structure	Low
EL0512R000200034N	THIAMIS P. KALAMAS 7	21,93	Transversal structure	Low
EL0512R000200040N	THIAMIS P. KALAMAS 8	16,99	Water abstraction, Channel straightening, Transversal structure	Low
EL0512R000200041N	THIAMIS P. KALAMAS 9	28,20	Water abstraction, Channel straightening, Transversal structure	Low
EL0512R000201023N	THIAMIS P. KALAMAS 1	4,99	Flow diversion, Flow Diversion	Significant
EL0512R000202025A	TECHNITO TMIMA EKVOLIS KALAMA 2	3,07	Artificial WB	Significant
EL0512R000202026A	TECHNITO TMIMA EKVOLIS KALAMA 1	2,86	Artificial WB	Significant
EL0512R000204028N	THIAMIS P. KALAMAS - PARAPAT	7,67	Transversal structure	Low
EL0512R000206030N	THIAMIS P. KALAMAS - PARAPAT	8,00	Transversal structure	Low
EL0512R000206031N	THIAMIS P. KALAMAS - PARAPAT	12,90	Transversal structure	Low
EL0512R000208035N	THIAMIS P. KALAMAS - PARAPAT	20,43	Transversal structure	Low
EL0512R000210036N	TYRIA P.	38,81	Channel straightening, Transversal structure	Low
EL0512R000212037N	SMOLITSAS P.	27,02	Channel straightening, Transversal structure	Low
EL0512R000212138H	KLIMATIAS R.	6,20	Flow regulation, Transversal structure	Intense
EL0512R000212139A	TAFROS LAPSISTA	19,26	Artificial WB	Intense

Table 5.3-3: Assessment of hydromorphological pressures/alterations of the river, lake and transitional water bodies in the RB of Acherontos of the RBD of Epirus (EL05)

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0513R0001042N	ARETHOUA R.	14,85	Channel straightening, Transversal structure	Moderate

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0513R000200045N	ACHERON P. (MAVROPOTAMOS) 2	18,10	Water abstraction, Transversal structure	Moderate
EL0513R000200046N	ACHERON P. (MAVROPOTAMOS) 3	12,75	Transversal structure	Low
EL0513R000200047N	ACHERON P. (MAVROPOTAMOS) 4	29,86	Transversal structure	Low
EL0513R000201043N	ACHERON P. (MAVROPOTAMOS) 1	5,99	Water abstraction, Channel straightening, Transversal structure	Moderate
EL0513R000202044N	ACHERON P. (MAVROPOTAMOS) - PA	24,18	Water abstraction, Channel straightening, Transversal structure	Moderate
EL0513T0004N	LIMNOTHALASSA MAZOMA	1,9	Dykes	Moderate

Table 5.3-4: Assessment of hydromorphological pressures/alterations of the river, lake and transitional water bodies in the RB of Arachthos of the RBD of Epirus (EL05)

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0514R000100048N	DIPOTAMON R.	20,33	Transversal structure	Low
EL0514R000102049N	MANTANI R.	15,27	Transversal structure	Low
EL0514R000200051N	ARACHTHOS P. 2	6,03	Downstream of dam Pournari, Channel straightening, Transversal structure	Powerful
EL0514R000200054N	ARACHTHOS P. 3	10,73	Transversal structure	Low
EL0514R000200055N	ARACHTHOS P. 4	9,18	Transversal structure	Low
EL0514R000200056N	ARACHTHOS P. 5	9,61	Transversal structure	Low
EL0514R000200063N	ARACHTHOS P. 6	11,56	Transversal structure	Low
EL0514R000200064N	ARACHTHOS P. 7	2,83	Transversal structure	Low
EL0514R000200065N	ARACHTHOS P. 8	8,33	Transversal structure	Low

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0514R000200072N	ZAGORITIKOS P.	23,64	Transversal structure	Low
EL0514R000201050N	ARACHTHOS P. 1	17,75	Downstream of dam Pournari, Channel straightening, Transversal structure	Moderate
EL0514R000202052N	RETSANOREMA	24,26	Transversal structure	Low
EL0514R000203068N	ARACHTHOS P. 9	12,40	Transversal structure	Low
EL0514R000204053N	P. SARANTAPOROS.	15,05	Transversal structure	Low
EL0514R000206057N	KALARRITIKOS P. 1	5,06	No intervention	Negligible
EL0514R000206058N	KALARRITIKOS P. 2	5,31	Transversal structure	Low
EL0514R000206060N	KALARRITIKOS P. 3	2,62	Transversal structure	Low
EL0514R000206061N	KALARRITIKOS P. 4	3,01	Transversal structure	Low
EL0514R000206062N	KALARRITIKOS P. 5	8,78	Transversal structure	Low
EL0514R000206159N	KALARRITIKOS P. - PARAPOTAMOS MELISSOURGIOTIKOS	5,67	Transversal structure	Low
EL0514R000208066H	METSOVITIKOS P. 1	13,37	Flow regulation, Channel straightening, Transversal structure	Moderate
EL0514R000208067N	METSOVITIKOS P. 2	20,30	Transversal structure	Low
EL0514R000210069N	ARACHTHOS P. 10	14,99	Transversal structure	Low
EL0514R000210071N	ARACHTHOS P. 11	5,98	Transversal structure	Low
EL0514R000210170N	SOURIKA R.	5,06	Transversal structure	Low
EL0514R000212073N	MEGAS LAKKOS R.	16,31	Transversal structure	Low
EL0514RL00200002H	TECHNITI LIMNI POURNARIOU	22,02	Reservoir	Intense

WB code	Name of WB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0514RL00200003H	TECHNITI LIMNI POURNARIOU I	0,70	Reservoir	Intense

Table 5.3-5: Assessment of hydromorphological pressures/alterations of the river, lake and transitional water bodies in the RB of Louros of the RBD of Epirus (EL05)

WB code	Name of PWB	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0546R000200078N	LOUROS P. 2	17,45	Water abstraction, Channel straightening, Transversal structure	Intense
EL0546R000200080N	LOUROS P. 3	1,73	Hydroelectric power facilities of Louros P., Water abstraction, Transversal structure	Intense
EL0546R000200081N	LOUROS P. 4	17,38	Water abstraction, Channel straightening, Transversal structure	Moderate
EL0546R000200082N	LOUROS P. 5	15,13	Channel straightening, Transversal structure	Low
EL0546R000201077N	LOUROS P. 1	18,71	Water abstraction, Channel straightening, Transversal structure	Moderate
EL0546R000202079N	LOUROS P. - PARAPOTAMOS	13,27	Water abstraction, Channel straightening, Transversal structure	Moderate

Table 5.3-6: Assessment of hydromorphological pressures/alterations of the river, lake and transitional water bodies in the RB of Kerkyras-Paxon of the RBD of Epirus (EL05)

WB code	Name of WN	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
EL0534R0001074N	POTAMI	2,16	Channel straightening, Transversal structure	Moderate
EL0534R000301075N	MESANGIS R.	7,51	Channel straightening, Transversal structure	Moderate
EL0534R000501076N	FONISAS P.	6,90	Water abstraction, Channel	Moderate

WB code	Name of WN	Length (km) or Area (km²)	Type of Intervention	Pressure Assessment
			straightening, Transversal structure	
EL0534R000701083N	KERKYRAS P.	6,00	Channel straightening, Transversal structure	Moderate
EL0534T0005N	LIMNOTHALASSA KORISSION (KERKYRAS)	4.2	Small groynes	Low
EL0534T0007H	LIMNOTHALASSA CHALIKIOPOULOU	2,2	Canals, runway	Intense
EL0534T0006N	LIMNOTHALASSA ANTINIOTI	0,6	Walls, fish farm	Negligible

Table 5.3-7: Assessment of hydromorphological pressures/alterations of the coastal water bodies of the RBD of Epirus (EL05)

WB code	Name of WB	Exposure (km²)	Type of Intervention	Pressure Assessment
EL0512C0A02N	NOTIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS	50,07	Port Wall, Dyke Fish farms	Negligible
EL0513C0007N	VOREIOS AMVRAKIKOS KOLPOS	149,74	Ports, marinas, fishing shelters Piers, Jetties Walls, Berths Embankments, Fish farms	Moderate
EL0512C0A01N	VOREIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS	35,59	Piers, small port Dykes Fish farms	Negligible
EL0513C0005N	AKTES PARGAS	50,12	Piers, Berths	Negligible
EL0513C0006N	ORMOS NIKOPOLEOS	65,11	Ports, marinas Piers, Jetties, shore modification Walls, Berths	Low
EL0512C0003H	ORMOS OF IGOUMENITSA	8,74	Port of Igoumenitsa Piers, Jetties Walls, Berths Fish farms	Significant
EL0534C0010N	DYTIKES AKTES KERKYRAIKIS THALASSAS - MPENITSES	24,21	Marinas Piers, Jetties, Shore modification Walls, Berths	Moderate
EL0534C0011H	ORMOS GARITSAS KAI LIMENAS KERKYRAS	20,15	Port of Corfu (Kerkyras), marinas Piers, jetties Walls , piers	Powerful

WB code	Name of WB	Exposure (km²)	Type of Intervention	Pressure Assessment
EL0534C0009N	DYT. KAI VOR. AKTES KERKYRAS	400,12	Ports, marinas Piers, Jetties, Breakwaters Walls, Berths Fish farms	Low
EL0534C0013N	N. EREIKOUSA	25,77	Ports	Low
EL0513C0004N	AKTES IPEIROU STO IONIO	89,17	Ports, marinas Piers, Jetties, Breakwaters	Negligible
EL0534C0008N	AKTES PAXON	88,66	Ports, marinas Piers, Jetties, Breakwaters Walls, Berths	Low
EL0534C0012N	N. OTHONOI	41,89	Ports, Piers	Low

Finally, the above 5-scale for the overall assessment of the intensity of hydromorphological alterations is converted to a 3-scale for the overall assessment of the intensity of pressures for the overall assessment of pressures of all categories per SWB, as follows:

Low (L)	Medium (M)	High (H)
(1) Negligible	(3) Moderate	(4) Intense
(2) Low		(5) Slgnificant

The table below gives an overview of the number and coverage (length for rivers and surface area for the rest of the SWB) of surface water bodies by hydromorphological alteration pressure intensity category, in the whole of the River Basin District of Epirus (EL05).

Table 5.3-8: Overview of the number and coverage of surface water bodies by hydromorphological alteration pressure intensity category in the River Basin District of Epirus (EL05)

Pressure intensity	Number of River WB (Rivers-Streams)	Coverage (%)	Number of Reservoirs	Coverage (%)	Number of Lake WB	Coverage (%)
Low	54	69,7	0	0,0	0	0,0
Medium	21	24,6	0	0,0	0	0,0
High	8	5,7	3	100,0	1	100,0

Pressure intensity	Number of Transitional WB (*)	Coverage (%)	Number of Coastal WB	Coverage (%)
Low	2	54,0	9	80,7
Medium	1	21,3	2	16,6
High	1	24,7	1	2,7

**The transitional WB: EL0514T0002N- EKVOLES ARACHTHOU, EL0546T0003N- EKVOLES LOUROS - LIMNOTHALASSES RODIA, TSOUKALIO, LOGAROU and EL0512T0001- EKVOLES KALAMA are not included , for which re-delineation will be implemented.*

5.4 Water abstractions

This section includes data on total annual water abstractions for all activities and uses. The list with the categories of activities and uses considered includes:

- Water supply
- Irrigation
- Livestock
- Industrial water

From each of the above categories, the estimated total water abstraction that is carried out in the River Basin District of Epirus to cover the water needs of the River Basin District, is approximately 370.3 hm^3 per year. Of these, the largest part is intended for irrigation (295.8 hm^3), a significant part for water supply (57.3 hm^3), while the estimated abstractions for livestock (6.6 hm^3) and industry (10.6 hm^3) are much smaller. In addition, from EL05, and in particular from the Agiou Georgiou springs near the Louros P., an abstraction of 4.9 hm^3 is implemented to cover the water supply needs of Lefkada of EL04. Taking the above into account, the estimated total water abstraction in the River Basin District of Epirus is 375.2 hm^3 per year.

The distribution of the various uses of the abstractions implemented for the needs of the River Basin District of Epirus (EL05) is shown in the figure below.

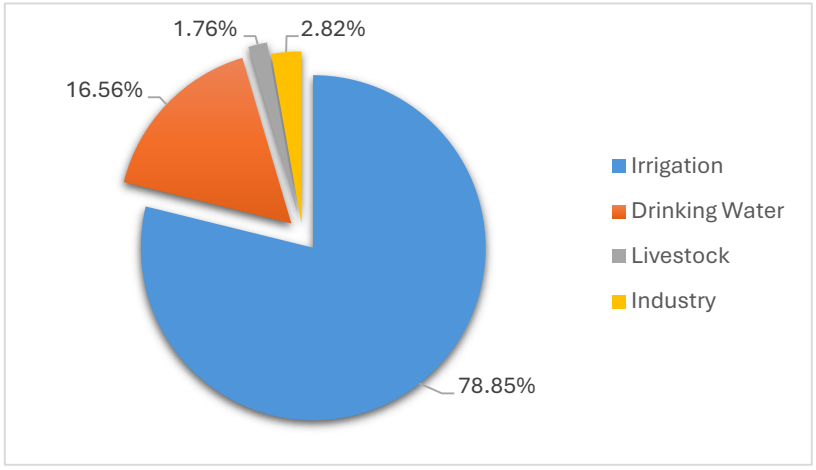


Figure 5.4-1: Distribution of annual water abstractions in the River Basin District of Epirus (EL05)

It is estimated that about 219.9 hm^3 (59%) are related to abstractions from surface water bodies and about 155.0 hm^3 (41%) to abstractions from groundwater bodies, while about 0.3 hm^3 (0.1%) of drinking water comes from seawater desalination (Municipality of Paxos).

The total annual water abstractions for all activities and uses, per RB of the River Basin District of Epirus (EL05) are presented below.

River Basin of Aoos (EL0511)

In the Aoos River Basin the total estimated abstraction is 19.6 hm³. Of this, the largest part is intended for irrigation (17.8 hm³), a small part for water supply (1.1 hm³), while the estimated abstraction for livestock (0.5 hm³) and industry (0.2 hm³) is much lower.

Table 5.4-1: Total abstractions per use in the Aoos river basin (EL0511)

Use	Annual Abstraction (hm³)
Abstraction for Irrigation for the areas irrigated in 2020	17,8
Abstraction for water supply	1,1
Abstraction for Livestock	0,5
Abstraction for Industry	0,2
Total	**19,6**

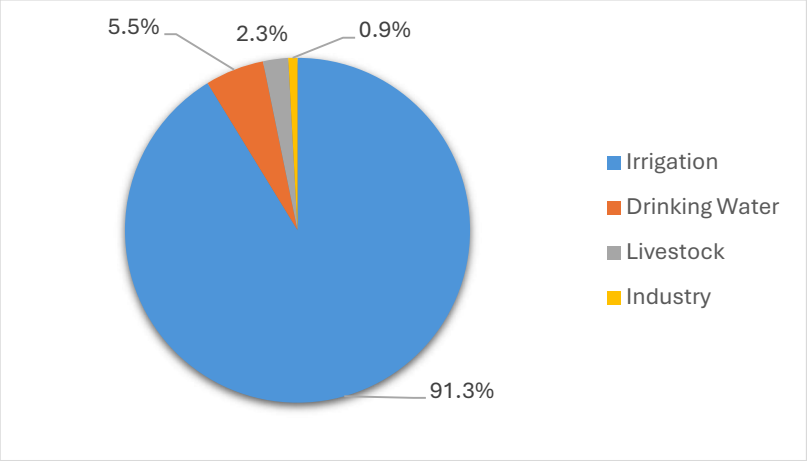


Figure 5.4-2: Distribution of annual water abstractions in the RB of Aoos (EL0511)

The abstractions to cover overall needs within the Aoos RB are implemented approximately 86% from SWB and 14% from GWB.

River Basin of Kalamas (EL0512)

In the Kalama River Basin the total estimated abstraction is 88.7 hm³. Of this, the largest part is for irrigation (56.3 hm³), a significant part for water supply (23.1 hm³), while the estimated abstractions for livestock (2.4 hm³) and industry (6.9 hm³) are much lower.

Table 5.4-2: Total abstractions per use in the Kalamas river basin (EL0512)

Use	Annual Abstraction in the Pamvotida RB (hm^3)	Annual Abstraction - Rest of Kalama RB (hm^3)	Total annual Abstraction (hm^3)
Abstraction for Irrigation for the areas irrigated in 2020	20,2	36,1	56,3
Abstraction for water supply	16,4	6,7	23,1
Abstraction for Livestock	1,3	1,1	2,4
Abstraction for Industry	3,7	3,2	6,9
Total	**41,6**	**47,1**	**88,7**

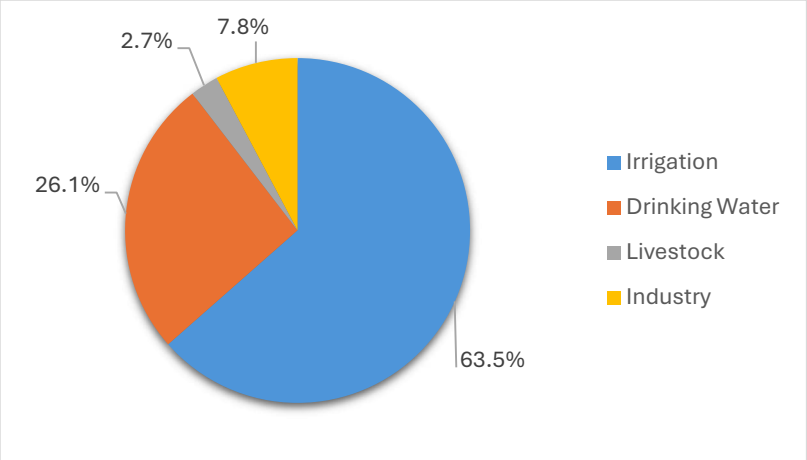


Figure 5.4-3: Distribution of annual water abstractions in the Kalamas RB (EL0512)

The abstractions to cover overall needs within the Kalamas RB are implemented approximately 53% from SWB and 47% from GWB.

River Basin of Acherontos (EL0513)

In the Acherontos River Basin the total estimated abstraction is 61.9 hm^3. Of this, the largest part is for irrigation (56.7 hm^3), a small part for water supply (4.4 hm^3), while the estimated abstractions for livestock (0.6 hm^3) and industry (0.2 hm^3) are much lower.

Table 5.4-3: Total abstractions by use in the Acherontos river basin (EL0513)

Use	Annual Abstraction (hm³)
Abstraction for Irrigation for the areas irrigated in 2020	56,7
Abstraction for water supply	4,4
Abstraction for Livestock	0,6
Abstraction for Industry	0,2
Total	61,9

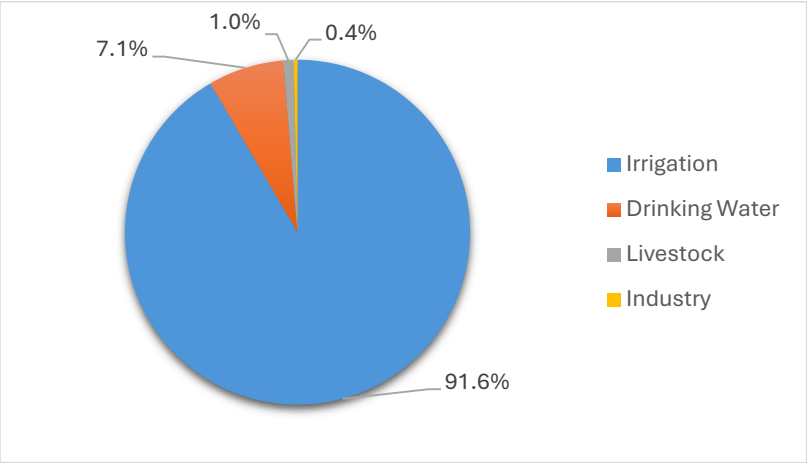


Figure 5.4-4: Distribution of annual water abstractions in the RB of Acherontos (EL0513)

The abstractions to cover overall needs within the Acherontos RB are implemented approximately 71% from SWB and 29% from GWB.

River Basin of Arachthos (EL0514)

In the Arachthos River Basin the total estimated abstraction is 77.7 hm³. Of this, the largest part is intended for irrigation (63.1 hm³), a significant part for water supply (4.2 hm³), while the estimated abstractions for livestock (1.3 hm³) and industry (1.3 hm³) are much lower.

Table 5.4-4: Total abstractions by use in the Arachthos river basin (EL0514)

Use	Annual Abstraction (hm³)
Abstraction for Irrigation for the areas irrigated in 2020	63,1
Abstraction for water supply	4,2
Abstraction for Livestock	1,3
Abstraction for Industry	1,3
Total	77,7

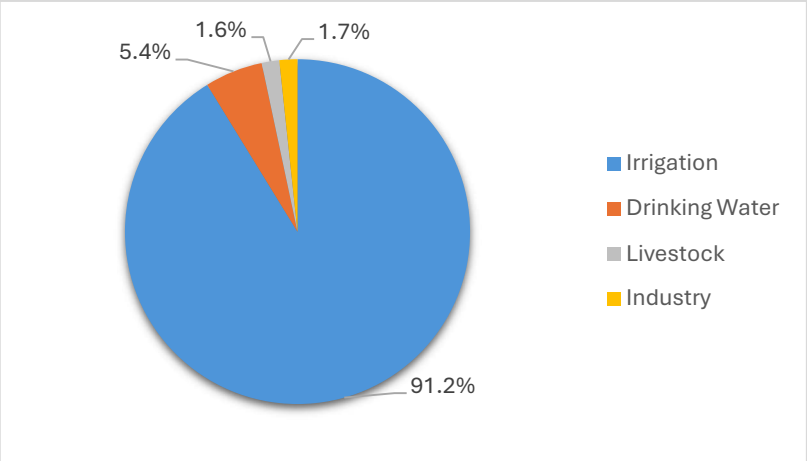


Figure 5.4-5: Distribution of annual water abstractions in the Arachthos RB (EL0514)

The abstractions to cover overall needs within the Arachthos RB are implemented approximately 79% from SWB and 21% by GWB.

River Basin of Louros (EL0546)

In the Louros River Basin the total estimated abstraction is 84.2 hm^3 . Of this, the largest part is intended for irrigation (65.0 hm^3), a significant part for water supply (15.7 hm^3), while the estimated abstractions for livestock (1.9 hm^3) and industry (1.6 hm^3) are much lower. It should be noted that part of the water supply abstraction, about 4.9 hm^3, is used for the water supply of Lefkada island from the Agios Georgios springs, which feed the Louros P.

Table 5.4-5: Total abstractions by use in the Louros river basin (EL0546)

Use	Annual abstraction to meet demand within EL05 (hm^3)	Annual Abstraction for supply outside of the EL05 (hm^3)
Abstraction for Irrigation for the areas irrigated in 2020	65,0	-
Abstraction for water supply	10,8	4,9(*)
Abstraction for Livestock	1,9	-
Abstraction for Industry	1,6	-
Total	**79,3**	**4,9**

(*) Refers to the abstraction from the springs of Ag. Georgiou, for the water supply of Lefkada island (EL04).

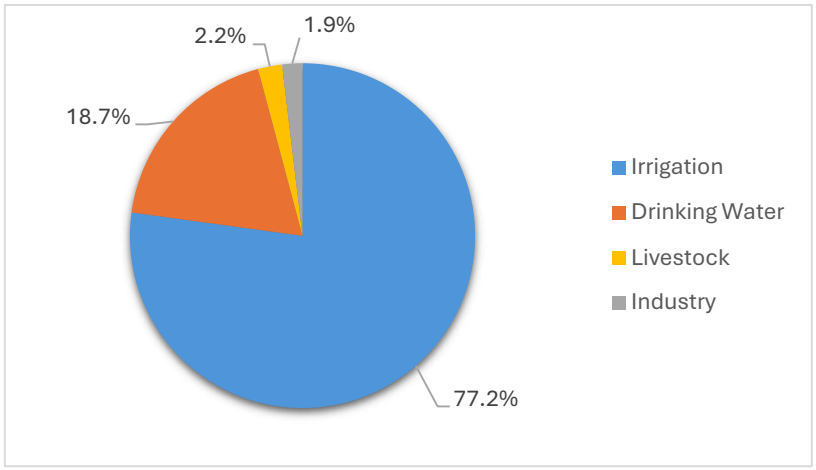


Figure 5.4-6: Distribution of annual water abstractions in the Louros RB (EL0546)

The abstractions to cover overall needs within the Louros RB are implemented approximately 57% from SWB and 43% from GWB.

River Basin of Kerkyras - Paxon (EL0534)

In the Kerkyras – Paxon river basin the total estimated abstraction is 43.1 hm³. Of this, and in contrast to the other RBs, the abstractions for both water supply and irrigation are significant (13.6 and 29.1 hm³, respectively), while the estimated abstractions for industry (0.4 hm³) and, even more so, for livestock (0.02 hm³) are much lower.

Table 5.4-6: Total abstractions by use in the Kerkyras - Paxon RB (EL0534)

Use	Annual Abstraction (hm³)
Abstraction for Irrigation for the areas irrigated in 2020	29,1
Abstraction for water supply	13,6
Abstraction for Livestock	0,02
Abstraction for Industry	0,4
Total	**43,1**

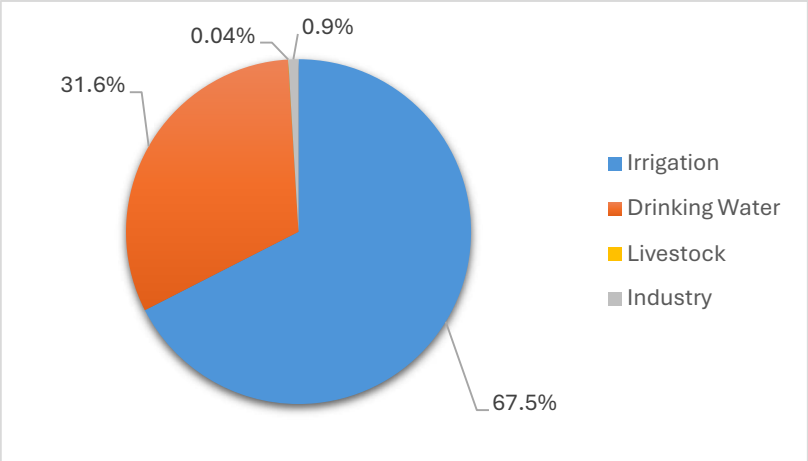


Figure 5.4-7: Distribution of annual water abstractions in the Kerkyras – Paxon RB (EL0534)

The abstractions to cover overall needs within within the Kerkyras – Paxon RB are implemented approximately 98% by GWB, 1% by SWB and 1% by desalination.

5.5 Other pressures

Other pressures include briefly:

- **Run-off from extractive activities (mines, mining)**
  In the Kalamas RB (EL0512) there are three (3) quarries of mining materials, namely two quarries of aggregates and one gypsum quarry, and desalination plants. In the Acherontos RB (EL0513) there are three (3) quarries of extractive materials, which extract aggregates. Two (2) quarries for extractive materials are operating in the Louros RB (EL0546), which export aggregates.
- **Desalination units**
  Specifically, thirteen (13) desalination plants operate in the Kerkyras - Paxon RB, of which five (5) operate on the island of Paxos and the remaining eight (8) on the island of Corfu (Kerkyras).
- **Ports - Marinas - Navigation**
  In the Kalamas River Basin there are the marina of Sayada, and one (1) port of International Interest, the port of Igoumenitsa. Five (5) marinas and one (1) Port of National Importance, the Port of Preveza, are located in the Acherontos River Basin. In the Kerkyras - Paxon River Basin, one (1) Port of International Interest, the Port of Corfu (Kerkyras), ports of Local Importance and marinas are located at the following locations: "Ypsos", "Pyrgi", "Koulouras", "Mandraki", "Benitses", "Kuspiadon", "Molos", "Paleokastritsa", "NAOK Corfu", "Astrakeri", "Kassiopi", "Gouvia", "Kanoni", "Othonon".
- **Artificial groundwater recharge**
  No study has been carried out for the implementation of an artificial recharge program in the area of the RBD EL05. The possibility of implementing an artificial recharge program

could be considered in the groundwater body of Hersonissos Preveza (EL0500140) where water recharge of the granular coastal alluvial aquifer is observed due to local overpumping.

- **Groundwater alteration of water level or groundwater quantity due to underground operations or the construction of large underground works.**
  There are no changes in groundwater levels and water quantity in the River Basin District of Epirus due to underground exploitation or the construction of large underground works.

5.6 Pressure aggregates

From the individual pollution sources of point, diffuse and other types of anthropogenic pressures, the total final annual amounts of BOD_5, N and P pollutant loads generated in the study area are derived, as shown in the figure below.

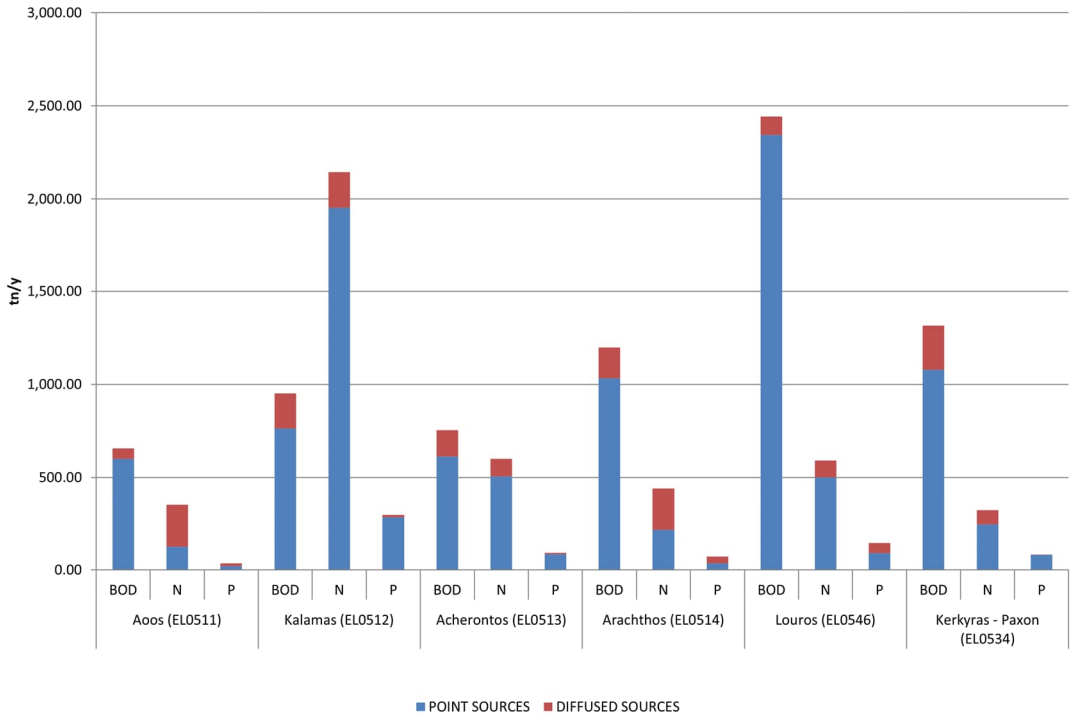


Figure 5.6-1: Total annual surface loads of BOD_5, N and P in river basins (EL0511), (EL0512), (EL0513), (EL0514), (EL0546), (EL0534) from all sources of pollution

The total annual surface loads resulting from the sum of the individual diffuse, point and other anthropogenic pressures are presented below, per RB of the RBD of Epirus (EL05).

Table 5.6-1: Total annual surface loads of BOD_5, N and P produced by all pollution sources in the RB of Aoos (EL0511)

SOURCE OF POLLUTION	BOD_5 (tonnes/year)	N (tonnes/year)	P (tonnes/year)
DIFFUSE	55,88	224,61	14,31
POINT	600,94	123,15	20,90
TOTAL	**656,82**	**347,76**	**35,21**

Table 5.6-2: Total annual surface loads of BOD_5, N and P produced by all pollution sources in the RB of Kalamas (EL0512)

SOURCE OF POLLUTION	BOD_5 (tonnes/year)	N (tonnes/year)	P (tonnes/year)
DIFFUSE	187,79	191,06	14,11
POINT	762,90	1953,40	280,51
TOTAL	**950,69**	**2.144,46**	**294,62**

Table 5.6-3: Total annual surface loads of BOD_5, N and P produced by all pollution sources in the RB of Acherontos (EL0513)

SOURCE OF POLLUTION	BOD_5 (tonnes/year)	N (tonnes/year)	P (tonnes/year)
DIFFUSE	140,63	93,87	6,14
POINT	612,84	505,64	84,71
TOTAL	**753,47**	**599,51**	**90,85**

Table 5.6-4: Total annual surface loads of BOD_5, N and P produced by all pollution sources in the RB of Arachthos (EL0514)

SOURCE OF POLLUTION	BOD_5 (tonnes/year)	N (tonnes/year)	P (tonnes/year)
DIFFUSE	163,78	226,70	34,62
POINT	1033,72	214,61	35,88
TOTAL	**1197,50**	**441,31**	**70,50**

Table 5.6-5: Total annual surface loads of BOD_5, N and P produced by all pollution sources in the RB of Louros (EL0546)

SOURCE OF POLLUTION	BOD_5 (tonnes/year)	N (tonnes/year)	P (tonnes/year)
DIFFUSE	99,13	90,57	55,27
POINT	2343,97	500,49	88,84
TOTAL	**2443,10**	**591,06**	**144,11**

Table 5.6-6: Total annual surface loads of BOD_5, N and P produced by all pollution sources in the RB of Kerkyras - Paxon (EL0534)

SOURCE OF POLLUTION	BOD_5 (tonnes/year)	N (tonnes/year)	P (tonnes/year)
DIFFUSE	238,08	76,09	2,95
POINT	1077,60	243,45	79,69
TOTAL	**1315,68**	**319,54**	**82,64**

5.7 Impact assessment

5.7.1 Assessment of the likelihood of achieving the environmental objectives of the Directive in surface water bodies

During the assessment of the impacts and the designation of the water bodies based on the likelihood of achieving the environmental objectives of the WFD, the following are assessed for each water body:

- Intensity of pressure from pollution sources and discharges: high (H), medium (M), low (L)
- The available data and the results of the monitoring program
- Expert judgement, when no data are available.

From the set of criteria, the water bodies of the River Basin District of Epirus (EL05) were ranked according to whether or not they are likely to achieve the environmental objectives of Directive 2000/60/EC.

The diagram and tables below summarise the assessment of the achievement or non-achievement of the objectives of Directive 2000/60/EC per water body category and per RB.

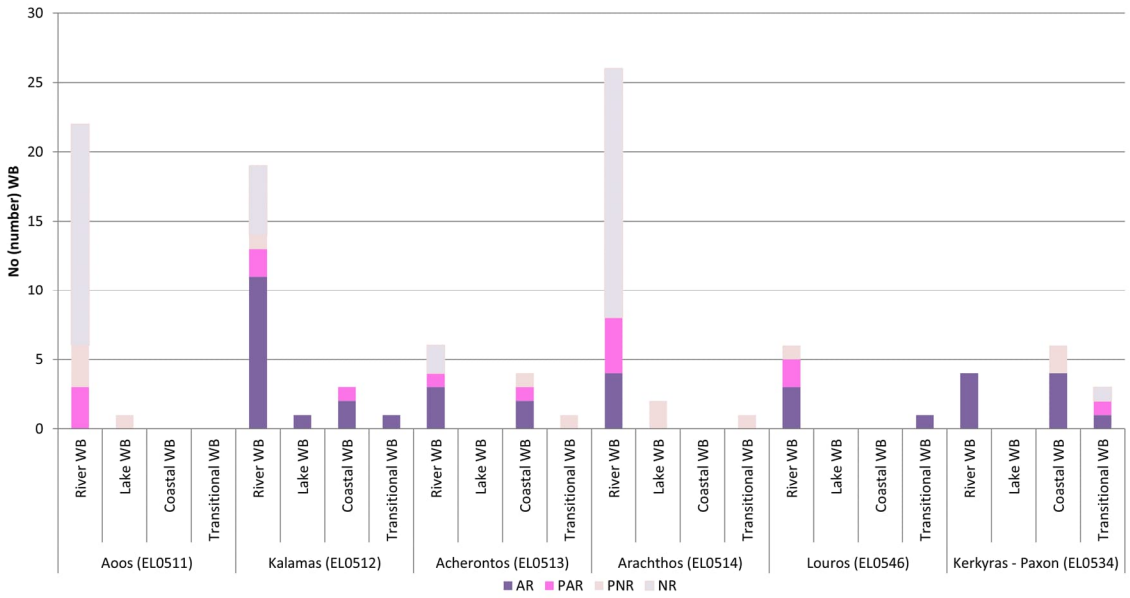


Figure 5.7-1: Assessment of the risk of not achieving the objectives of surface water bodies in River Basins (EL0511), (EL0512), (EL0513), (EL0514), (EL0545), (EL0534)

Table 5.7-1: Overview of risk assessment of surface water bodies failing to achieve the objectives in the RB of Aoos (EL0511) - Number of WB

Risk assessment categories*									
	NR		PNR		PAR		AR		Total
Type of WB	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB
Rivers WB	16	73%	3	14%	3	14%	0	0%	22
Lakes WB	0	0%	1	100%	0	0%	0	0%	1
Coastal WB	0		0		0		0		0
Transitional WB	0		0		0		0		0
Total	**16**	**70%**	**4**	**17%**	**3**	**13%**	**0**	**0%**	**23**

**As regards the assessment of the risk of not achieving the objectives of WFD, the following categories can be distinguished: at risk (AR), probably at risk (PAR), probably not at risk (PNR), not at risk (NR)*

Table 5.7-2: Overview of risk assessment of surface water bodies failing to achieve the objectives in the RB of Kalamas (EL0512) - Number of WB

Risk assessment categories*									
	NR		PNR		PAR		AR		Total
Type of WB	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB
Rivers WB	5	21%	1	4%	2	8%	11	46%	24
Lakes WB	0	0%	0	0%	0	0%	1	100%	1

Risk assessment categories*									
	NR		PNR		PAR		AR		Total
Type of WB	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB
Coastal WB	0	0%	0	0%	1	33%	2	67%	3
Transitional WB	0	0%	0	0%	0	0%	1	100%	1
Total	**5**	**21%**	**1**	**4%**	**3**	**13%**	**15**	**63%**	**24**
**As regards the assessment of the risk of not achieving the objectives of WFD, the following categories can be distinguished: at risk (AR), probably at risk (PAR), probably not at risk (PNR), not at risk (NR)*									

Table 5.7-3: Overview of risk assessment of surface water bodies failing to achieve the objectives in the RB of Acherontos (EL0513) - Number of WB

Risk assessment categories*									
	NR		PNR		PAR		AR		Total
Type of WB	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB
Rivers WB	2	33%	0	0%	1	17%	3	50%	6
Lakes WB	0		0		0	0%	0		0
Coastal WB	0	0%	1	0%	1	25%	2	50%	4
Transitional WB	0	0%	1	100%	0	0%	0	0%	1
Total	**2**	**18%**	**2**	**18%**	**2**	**18%**	**5**	**45%**	**11**
****As regards the assessment of the risk of** not achieving **the objectives** of WFD**, the following categories can be distinguished: at risk (AR), probably at risk (PAR), probably not at risk (PNR), not at risk (NR)***									

Table 5.7-4: Overview of risk assessment of surface water bodies failing to achieve the objectives in the RB of Arachthos (EL0514) - Number of WB

Risk assessment categories*									
	NR		PNR		PAR		AR		Total
Type of WB	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB
Rivers WB	18	69%	0	0%	4	15%	4	15%	26
Lakes WB	0		2		0	0%	0		2
Coastal WB	0	0%	0	0%	0		0		0
Transitional WB	0	0%	1	100%	0	0%	0	0%	1
Total	**18**	**62%**	**3**	**10%**	**4**	**14%**	**4**	**14%**	**29**
**As regards the assessment of the risk of not achieving the objectives of WFD, the following categories can be distinguished: at risk (AR), probably at risk (PAR), probably not at risk (PNR), not at risk (NR)*									

Table 5.7-5: Overview of risk assessment of surface water bodies failing to achieve the objectives in the RB of Louros (EL0546) - Number of WB

Risk assessment categories*									
	NR		PNR		PAR		AR		Total
Type of WB	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB
Rivers WB	0	0%	1	17%	2	33%	3	50%	6
Lakes WB	0		0		0	0%	0		0
Coastal WB	0		0		0		0		0
Transitional WB	0	0%	0	0%	0	0%	1	100%	1
Total	**0**	**0%**	**1**	**14%**	**2**	**29%**	**4**	**57%**	**7**
**As regards the assessment of the risk of not achieving the objectives of WFD, the following categories can be distinguished: at risk (AR), probably at risk (PAR), probably not at risk (PNR), not at risk (NR)*									

Table 5.7-6: Overview of risk assessment of surface water bodies failing to achieve the objectives in the RB of Kerkyras - Paxon (EL0534) - Number of WB

Risk assessment categories*									
	NR		PNR		PAR		AR		Total
Type of WB	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB	Percentage of number of WB (%)	Number of WB
Rivers WB	0	0%	0	0%	0	0%	4	100%	4
Lakes WB	0		0		0	0%	0		0
Coastal WB	0	0%	2	33%	0	0%	4	67%	6
Transitional WB	1	33%	0	0%	1	33%	1	33%	3
Total	**1**	**8%**	**2**	**15%**	**1**	**8%**	**9**	**69%**	**13**
**As regards the assessment of the risk of not achieving the objectives of WFD, the following categories can be distinguished: at risk (AR), probably at risk (PAR), probably not at risk (PNR), not at risk (NR)*									

5.7.2 Assessment of impacts on groundwater bodies

River Basin of Aoos (EL0511)

In the River Basin of Aoos, 3 groundwater bodies have been delineated that are in good qualitative (chemical) and quantitative status as presented in the table below.

Table 5.7-7: Table of qualitative (chemical) and quantitative status of groundwater bodies in the RB of Aoos (EL0511)

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality problems	Trend of pollutants
1	EL0500100	SYSTIMA TYMFIS	Good	No	Good	No	No
2	EL0500220	SYSTIMA YDROFORION SARANTAPOROU-AOOU	Good	No	Good	No	No
3	EL0500230	SYSTIMA YDROFORION SMOLIKA-MAVROVOUNIOU	Good	No	Good	No	No

River Basin of Kalamas (EL0512)

In the River Basin of Kalamas, 9 groundwater bodies have been delineated, one of which is divided into two subsystems that are in good qualitative (chemical) and quantitative status as presented in the table below.

Table 5.7-8: Table of qualitative (chemical) and quantitative status of groundwater bodies in the RB of Kalamas (EL0512)

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality problems	Trend of pollutants
1	EL050A060	SYSTIMA MOURGKANAS	Good	No	Good	'No.'	No
2	EL050A070	SYSTIMA FILIATON-IGOUMENITSAS	Good	No	Good	Locally high measurements of Cl and SO_4 due to natural background	No
3	EL0500080	SYSTIMA MESOU ROU KALAMA	Good	No	Good	No	No

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality problems	Trend of pollutants
4	EL0500110	SYSTIMA KLIMATIAS	Good	No	Good	No	No
5	EL0500120	SYSTIMA KASIDIARI	Good	No	Good	No	No
6	EL0500181	SYSTIMA MITSIKELIOY-VELLA (Mitsikeli)	Good	No	Good	No	No
7	EL0500182	SYSTIMA MITSIKELIOY-VELLA (Moni Vella)	Good	No	Good	No	No
8	EL050A190	SYSTIMA POGONIANIS	Good	No	Good	Locally high measurements of SO_4 due to natural background	No
9	EL0500200	SYSTIMA YDROFORION P. KALAMA	Good	No	Good	No	No
10	EL0500210	SYSTIMA KOURENTON	Good	No	Good	No	No

River Basin of Acherontos (EL0513)

In the River Basin of Acherontos, 6 groundwater bodies have been delineated, one of which is divided into two subsystems, the status of which is given in the table below.

The groundwater bodies of the RB are in good qualitative (chemical) and quantitative status, except for the Systima Chersonisou Prevezas (EL0500140) and the two subsystems (EL0500141 and EL0500142), which are in Badqualitative (chemical) status.

Table 5.7-9: Table of qualitative (chemical) and quantitative status of groundwater bodies in the RB of Acherontos (EL0513)

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality	Trend of pollutants
1	EL0500090	SYSTIMA SOULIOU-PARAMYTHIAS	Good	No	Good	Locally high measurements of SO_4 due to natural background.	No
2	EL0500130	SYSTIMA KORONIS	Good	No	Good	Locally high measurements	No

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality	Trend of pollutants
						of conductivity, Cl and SO_4 due to natural background.	
3	EL0500141	SYSTIMA CHERSONISOU PREVEZAS(A)	Good	No	Bad	Extensive pollution of NO_3, NO_2 and locally high measurements of Cl values. Local exceedances of the limits for Fe, Mn	No
4	EL0500142	SYSTIMA CHERSONISOU PREVEZAS(B)	Good	No	Bad	Extensive pollution of NO_2, NH_4. Local exceedances of the limits for Mn	No
5	EL0500170	SYSTIMA PARGAS	Good	No	Good	Locally high measurements of conductivity, Cl and SO_4 due to natural background. Local exceedances of the limits for Fe, Mn.	No
6	EL0500260	SYSTIMA YDROFORION ANO ROU ACHERONTOS-REMATOS ARETHOUA	Good	No	Good	No	No
7	EL0500270	SYSTIMA EKVOLON ACHERONTA-P. KOKYTOU	Good	No	Good	Locally high measurements of Cl	No

River Basin of Arachthos (EL0514)

In the River Basin of Arachthos, 1 groundwater body has been delineated, which it is in good qualitative (chemical) and quantitative status as presented in the table below.

Table 5.7-10: Table of qualitative (chemical) and quantitative status of groundwater bodies in the RB of Arachthos (EL0514)

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality	Trend of pollutants
1	EL0500240	SYSTIMA YDROFORION P. ARACHTHOU	Good	No	Good	No	No

River Basin of Kerkyras - Paxon (EL0534)

In the River Basin of Kerkyras - Paxon, 5 groundwater bodies have been delineated, which are divided into 14 subsystems, which are all in good qualitative (chemical) and quantitative status as presented in the table below.

Table 5.7-11: Table of qualitative (chemical) and quantitative status of groundwater bodies in the RB of Kerkyras - Paxon (EL0534)

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality	Trend of pollutants
1	EL0500011	SYSTIMA ASVESTOLITHON N.KERKYRAS (A)	Good	No	Good	Locally high measurements of SO_4 and Cl.	No
2	EL0500012	SYSTIMA ASVESTOLITHON N.KERKYRAS (B)	Good	No	Good	No	No
3	EL0500013	SYSTIMA ASVESTOLITHON N.KERKYRAS (C)	Good	No	Good	No	No
4	EL0500014	SYSTIMA ASVESTOLITHON N.KERKYRAS (D)	Good	No	Good	No	No
5	EL0500021	SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (A)	Good	No	Good	Local exceedances of the limits for conductivity, Cl and SO_4 due to natural background. Local exceedances the limits for Mn.	No

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality	Trend of pollutants
6	EL05000 22	SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (B)	Good	No	Good	Locally high measurements of conductivity, Cl and SO_4 due to natural background.	No
7	EL05000 31	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (A)	Good	No	Good	No	No
8	EL05000 32	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (B)	Good	No	Good	Locally high measurements of NO_3 and Cl. High SO_4 due to natural background.	No
9	EL05000 33	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (C)	Good	No	Good	Locally high measurements of Cl values. High SO_4 due to natural background. Local exceedances of the limits for Fe, Mn.	No
10	EL05000 41	SYSTIMA N.PAXON - ANTIPAXON(A)	Good	No	Good	Locally high measurements of Cl values Local exceedances of the limits for Fe, Mn	No
11	EL05000 42	SYSTIMA N.PAXON - ANTIPAXON(B)	Good	No	Good	Locally high measurements of Cl	No
12	EL05000 51	SYSTIMA N. OTHONON-EREIKOUSAS - MATHRAKIOU (Othonoi)	Good	No	Good	Locally high measurements of Cl. High measurements of SO_4 due to natural background.	No
13	EL05000 52	SYSTIMA N. OTHONON-EREIKOUSAS - MATHRAKIOU (Ereikousas)	Good	No	Good	Locally high measurements of Cl. High measurements of SO_4 due	No

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality	Trend of pollutants
						to natural background.	
14	EL0500053	SYSTIMA N. OTHONON-EREIKOUSAS - MATHRAKIOU (Mathrakiou)	Good	No	Good	Locally high measurements of Cl. High measurements of SO_4 due to natural background.	No

River Basin of Louros (EL0546)

In the River Basin of Louros, 3 groundwater bodies have been delineated that are in good qualitative (chemical) and quantitative status as presented in the table below.

Table 5.7-12: Table of qualitative (chemical) and quantitative status of groundwater bodies in the RB of Louros (EL0546)

No	Code	Name	Quantitative status	Trend of water decline levels	Qualitative (chemical) status	Quality	Trend of pollutants
1	EL0500151	SYSTIMA LOUROU (A)	Good	No	Good	Local exceedances of the limits for Fe, Mn.	No
2	EL0500152	SYSTIMA LOUROU (B)	Good	No	Good	Local exceedances of the limits for Fe	
3	EL0500153	SYSTIMA LOUROU (C)	Good	No	Good	Local exceedances of the limits for Fe, Mn.	
4	EL0500160	SYSTIMA ARTAS	Good	No	Good	Point source pollution of Cl, SO_4 and NO_3 . Local exceedances of the limits for Mn.	No
5	EL0500250	SYSTIMA ZALONGOU	Good	No	Good	No	No

6 STATUS OF WATER BODIES

6.1 Classification of the status of surface water bodies

The Tables and Maps below present the results of the classification of the ecological and chemical status of the surface water bodies of the River Basin District of Epirus (EL05) per RB, as assessed during the 2nd Update of the RBMP. In addition, the tables present the differentiations in the ecological and chemical status of the SWB compared to the previous RBMPs, as well as the classification method.

Table 6.1-1: Status assessment of river water bodies per RB in the River Basin District of Epirus (EL05) in comparison to previous RBMPs

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
RIVER BASIN OF AOOS (EL0511)																
1	EL0511R0A0101022N	DRINOS P.		GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
2	EL0511R0A0200013N	AOOS P. 2	X	GOOD	GOOD	GOOD	MODERATE	MP	GOOD	GR	MODERATE	GOOD	MP	GOOD	GR	GOOD
3	EL0511R0A0200016N	AOOS P. 3	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	MODERATE	GR	GOOD	GR	MODERATE
4	EL0511R0A0200018N	AOOS P. 4	X	GOOD	GOOD	GOOD	GOOD	MP	GOOD	MP	GOOD	MODERATE	MP	GOOD	MP	MODERATE
5	EL0511R0A0200020N	AOOS P. 5	X	GOOD	GOOD	GOOD	GOOD	MP	GOOD	MP	GOOD	GOOD	MP	GOOD	MP	GOOD
6	EL0511R0A0200021N	AOOS P. 6	X	MODERATE	GOOD	MODERATE	GOOD	GR	GOOD	GR	GOOD	MODERATE	GR	FAILING TO ACHIEVE GOOD	EJ	MODERATE
7	EL0511R0A0201001N	AOOS P. 1	X	GOOD	GOOD	GOOD	GOOD	MP	GOOD	MP	GOOD	GOOD	MP	GOOD	GR	GOOD
8	EL0511R0A0202002N	SARANTAPOROS P. 1		GOOD	GOOD	GOOD	GOOD	MP	GOOD	MP	GOOD	GOOD	MP	GOOD	MP	GOOD
9	EL0511R0A0202007N	SARANTAPOROS P. 2		GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
10	EL0511R0A0202008N	SARANTAPOROS P. 3		GOOD	GOOD	GOOD	MODERATE	MP	GOOD	MP	MODERATE	GOOD	MP	GOOD	MP	GOOD
11	EL0511R0A0202103N	SARANTAPOROS P. - AMARANTHOS R.		GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
12	EL0511R0A0202204N	VOURKOPOTAMOS P.	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
13	EL0511R0A0202305N	VOURMPIANITIKOR.	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
14	EL0511R0A0202406N	PISTILIPIAPI R.	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
15	EL0511R0A0204009N	VOIDOMATIS P. 1	X	GOOD	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	MP	GOOD	MP	GOOD
16	EL0511R0A0204010N	VOIDOMATIS 2	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
17	EL0511R0A0204011N	VOIDOMATIS 3	X	HIGH	GOOD	HIGH	GOOD	MP	GOOD	MP	GOOD	GOOD	GR	GOOD	GR	GOOD
18	EL0511R0A0204012N	VOIDOMATIS 4	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	EJ	GOOD	GR	GOOD
19	EL0511R0A0206014N	AOOS P. - PARAPOTAMOS RASENITIS 1	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
20	EL0511R0A0206015N	AOOS P. - PARAPOTAMOS RASENITIS 2	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
21	EL0511R0A0208017N	GIOTSAS R.	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
22	EL0511R0A0210019N	AOOS P. - PARAPOTAMOS ARKOUDAS	X	GOOD	GOOD	GOOD	MODERATE	GR	GOOD	GR	MODERATE	GOOD	GR	GOOD	GR	GOOD
RIVER BASIN OF KALAMAS (EL0512)																
23	EL0512R000200024H	THIAMIS P. KALAMAS 2*	X	UNKNOWN	UNKNOWN	UNKNOWN	POOR	MP	GOOD	MP	POOR	LOWER THAN GOOD	MM	GOOD	MP	LOWER THAN GOOD
24	EL0512R000200027H	THIAMIS P. KALAMAS 3*	X	GOOD	GOOD	GOOD	MODERATE	MP	GOOD	MP	MODERATE	LOWER THAN GOOD	MM	FAILING TO ACHIEVE GOOD	MP	LOWER THAN GOOD
25	EL0512R000200029N	THIAMIS P. KALAMAS 4	X	GOOD	UNKNOWN	UNKNOWN	GOOD	MP	UNKNOWN	-	UNKNOWN	MODERATE	MP	GOOD	GR	MODERATE
26	EL0512R000200032N	THIAMIS P. KALAMAS 5		HIGH	UNKNOWN	UNKNOWN	GOOD	MP	GOOD	MP	GOOD	GOOD	EJ	GOOD	MP	GOOD
27	EL0512R000200033N	THIAMIS P. KALAMAS 6	X	GOOD	GOOD	GOOD	GOOD	MP	GOOD	GR	GOOD	MODERATE	MP	GOOD	GR	MODERATE
28	EL0512R000200034N	THIAMIS P. KALAMAS 7		GOOD	GOOD	GOOD	GOOD	MP	GOOD	GR	GOOD	GOOD	MP	GOOD	GR	GOOD
29	EL0512R000200040N	THIAMIS P. KALAMAS 8	X	GOOD	UNKNOWN	UNKNOWN	MODERATE	MP	FAILING TO ACHIEVE GOOD	MP	MODERATE	MODERATE	EJ	GOOD	MP	MODERATE
30	EL0512R000200041N	THIAMIS P. KALAMAS 9		GOOD	GOOD	GOOD	MODERATE	GR	GOOD	GR	MODERATE	MODERATE	GR	GOOD	GR	MODERATE

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
31	EL0512R000201023H	THIAMIS P. KALAMAS 1*	X	UNKNOWN	GOOD	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	LOWER THAN GOOD	MM	GOOD	GR	LOWER THAN GOOD
32	EL0512R000202025A	TECHNITO TMIMA EKVOLIS KALAMA 2	X	UNKNOWN	UNKNOWN	UNKNOWN	GOOD	MP	UNKNOWN	-	UNKNOWN	GOOD	EJ	FAILING TO ACHIEVE GOOD	EJ	MODERATE
33	EL0512R000202026A	TECHNITO TMIMA EKVOLIS KALAMA 1	X	UNKNOWN	GOOD	UNKNOWN	UNKNOWN	-	GOOD	GR	UNKNOWN	GOOD	EJ	GOOD	EJ	GOOD
34	EL0512R000204028N	THIAMIS P. KALAMAS - PARAPOTAMOS ASPRO R.		GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
35	EL0512R000206030N	THIAMIS P. KALAMAS - PARAPOTAMOS KALPAKIOTIKOS 1	X	GOOD	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	MODERATE	GR	GOOD	GR	MODERATE
36	EL0512R000206031N	THIAMIS P. KALAMAS - PARAPOTAMOS KALPAKIOTIKOS 2	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
37	EL0512R000208035N	THIAMIS P. KALAMAS - PARAPOTAMOS LAGAVITSA R.		GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
38	EL0512R000210036N	TYRIA P.		GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
39	EL0512R000212037N	SMOLITSAS P.		GOOD	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	MODERATE	GR	GOOD	GR	MODERATE
40	EL0512R000212138N	KLIMATIAS R.*		MODERATE	UNKNOWN	MODERATE	MODERATE	MP	GOOD	GR	MODERATE	POOR	MP	GOOD	GR	POOR
41	EL0512R000212139A	TAFROS LAPSISTA	X	MODERATE	GOOD	MODERATE	MODERATE	MP	GOOD	GR	MODERATE	MODERATE	MP	GOOD	MP	MODERATE
RIVER BASIN OF ACHERONTOS (EL0513)																

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
42	EL0513R0001042N	ARETHOUA R.	X	MODERATE	UNKNOWN	MODERATE	MODERATE	GR	GOOD	GR	MODERATE	MODERATE	GR	GOOD	GR	MODERATE
43	EL0513R000200045N	ACHERON P. (MAVROPOTAMOS) 2	X	GOOD	GOOD	GOOD	GOOD	MP	GOOD	GR	GOOD	MODERATE	GR	GOOD	GR	MODERATE
44	EL0513R000200046N	ACHERON P. (MAVROPOTAMOS) 3	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
45	EL0513R000200047N	ACHERON P. (MAVROPOTAMOS) 4	X	GOOD	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
46	EL0513R000201043N	ACHERON P. (MAVROPOTAMOS) 1	X	GOOD	UNKNOWN	UNKNOWN	MODERATE	MP	GOOD	MP	MODERATE	BAD	MP	FAILING TO ACHIEVE GOOD	MP	BAD
47	EL0513R000202044N	ACHERON P. (MAVROPOTAMOS) - PARAPOTAMOS KOMTOS (VOUVOS)		GOOD	UNKNOWN	UNKNOWN	MODERATE	GR	GOOD	GR	MODERATE	MODERATE	GR	GOOD	GR	MODERATE
RIVER BASIN OF ARACHTHOS (EL0514)																
48	EL0514R000100048N	DIPOTAMON R.	X	GOOD	GOOD	GOOD	BAD	MP	GOOD	MP	BAD	POOR	MP	FAILING TO ACHIEVE GOOD	MP	POOR
49	EL0514R000102049N	MANTANI R.	X	GOOD	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
50	EL0514R000200051H	ARACHTHOS P. 2*	X	MODERATE	UNKNOWN	MODERATE	MODERATE	MP	UNKNOWN	-	UNKNOWN	LOWER THAN GOOD	MM	FAILING TO ACHIEVE GOOD	MP	LOWER THAN GOOD
51	EL0514R000200054N	ARACHTHOS P. 3	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
52	EL0514R000200055N	ARACHTHOS P. 4	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
53	EL0514R000200056N	ARACHTHOS P. 5	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	MP	GOOD	GR	GOOD
54	EL0514R000200063N	ARACHTHOS P. 6	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
55	EL0514R000200064N	ARACHTHOS P. 7	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
56	EL0514R000200065N	ARACHTHOS P. 8	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
57	EL0514R000200072N	ZAGORITIKOS P.	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
58	EL0514R000201050N	ARACHTHOS P. 1	X	UNKNOWN	GOOD	UNKNOWN	MODERATE	MP	GOOD	MP	MODERATE	POOR	MP	GOOD	MP	POOR
59	EL0514R000202052N	RETSANOREMA		GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	MODERATE	GR	GOOD	GR	MODERATE
60	EL0514R000203068N	ARACHTHOS P. 9	X	GOOD	GOOD	GOOD	MODERATE	MP	GOOD	GR	MODERATE	GOOD	MP	GOOD	GR	GOOD
61	EL0514R000204053N	P. SARANTAPOROS.		GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
62	EL0514R000206057N	KALARRITIKOS P. 1	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
63	EL0514R000206058N	KALARRITIKOS P. 2	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
64	EL0514R000206060N	KALARRITIKOS P. 3	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
65	EL0514R000206061N	KALARRITIKOS P. 4	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
66	EL0514R000206062N	KALARRITIKOS P. 5	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
67	EL0514R000206159N	KALARRITIKOS P. - PARAPOTAMOS MELISSOURGIOTIKOS	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
68	EL0514R000208066N	METSOVITIKOS P. 1*	X	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	-	GOOD	GR	UNKNOWN	MODERATE	EJ	GOOD	GR	MODERATE
69	EL0514R000208067N	METSOVITIKOS P. 2	X	GOOD	GOOD	GOOD	GOOD	MP	GOOD	MP	GOOD	MODERATE	MP	GOOD	MP	MODERATE
70	EL0514R000210069N	ARACHTHOS P. 10	X	GOOD	GOOD	GOOD	GOOD	MP	GOOD	MP	GOOD	GOOD	MP	FAILING TO ACHIEVE GOOD	MP	MODERATE
71	EL0514R000210071N	ARACHTHOS P. 11	X	GOOD	GOOD	GOOD	MODERATE	MP	GOOD	GR	MODERATE	MODERATE	MP	GOOD	GR	MODERATE

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
72	EL0514R000210170N	SOURIKA R.	X	GOOD	GOOD	GOOD	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
73	EL0514R000212073N	MEGAS LAKKOS R.	X	GOOD	GOOD	GOOD	MODERATE	MP	GOOD	GR	MODERATE	GOOD	GR	GOOD	GR	GOOD
RIVER BASIN OF KERKYRAS - PAXON (EL0534)																
74	EL0534R0001074N	POTAMI		GOOD	UNKNOWN	UNKNOWN	MODERATE	GR	GOOD	GR	MODERATE	MODERATE	GR	FAILING TO ACHIEVE GOOD	EJ	MODERATE
75	EL0534R000301075N	MESANGIS R.		GOOD	UNKNOWN	UNKNOWN	GOOD	MP	GOOD	MP	GOOD	BAD	MP	GOOD	MP	BAD
76	EL0534R000501076N	FONISAS P.	X	GOOD	UNKNOWN	UNKNOWN	GOOD	MP	GOOD	GR	GOOD	BAD	MP	FAILING TO ACHIEVE GOOD	EJ	BAD
77	EL0534R000701083N	KERKYRAS P.**	X									MODERATE	GR	FAILING TO ACHIEVE GOOD	EJ	MODERATE
RIVER BASIN OF LOUROS (EL0546)																
78	EL0546R000200078N	LOUROS P. 2	X	GOOD	UNKNOWN	UNKNOWN	GOOD	MP	GOOD	MP	GOOD	POOR	MP	GOOD	MP	POOR
79	EL0546R000200080N	LOUROS P. 3	X	UNKNOWN	GOOD	UNKNOWN	GOOD	MP	GOOD	GR	GOOD	GOOD	GR	GOOD	GR	GOOD
80	EL0546R000200081N	LOUROS P. 4	X	HIGH	GOOD	HIGH	MODERATE	MP	FAILING TO ACHIEVE GOOD	MP	MODERATE	POOR	MP	FAILING TO ACHIEVE GOOD	MP	ELLIPIS
81	EL0546R000200082N	LOUROS P. 5	X	GOOD	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	MODERATE	GR	FAILING TO ACHIEVE GOOD	EJ	MODERATE
82	EL0546R000201077N	LOUROS P. 1	X	MODERATE	GOOD	MODERATE	GOOD	MP	GOOD	GR	GOOD	MODERATE	MP	GOOD	GR	MODERATE

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
83	EL0546R000202079N	LOUROS P. - PARAPOTAMOS	X	GOOD	UNKNOWN	UNKNOWN	MODERATE	GR	UNKNOWN	-	UNKNOWN	MODERATE	GR	GOOD	GR	MODERATE

** Differences in the coding of river water bodies compared to the 1st Update of the RBMP, due to the change in the classification of water bodies from Natural to ITYS and vice versa*

***Addition of a new WB*

(MP): Classification based on monitoring program

(GR): Classification based on grouping

(EJ): Classification based on expert judgement

(MM): Classification based on mitigation measures methodology (Prague approach).

Table 6.1-2: Status assessment of lake water bodies per RB in the River Basin District of Epirus (EL05) in comparison to previous RBMPs

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
RIVER BASIN OF KALAMAS (EL0512)																
1	EL0512L000000004H	LIMNI PAMVOTIDA	X	POOR	FAILING TO ACHIEVE GOOD	POOR	BAD	MP	GOOD	MP	BAD	LOWER THAN GOOD	MM	GOOD	MP	LOWER THAN GOOD

(MP): Classification based on monitoring program

(GR): Classification based on grouping

(EJ): Classification based on expert judgement

(MM): Classification based on mitigation measures methodology (Prague approach).

Table 6.1-3: Status assessment of reservoirs per RB in the River Basin District of Epirus (EL05) in comparison to previous RBMPs

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
RIVER BASIN OF AOOS (EL0511)																
1	EL0511RLA0200001H	TECHNITI LIMNI PIGON AOOY	X	UNKNOWN	GOOD	UNKNOWN	GOOD	MP	GOOD	MP	GOOD	GOOD AND ABOVE	MP	GOOD	MP	GOOD AND ABOVE
RIVER BASIN OF ARACHTHOS (EL0514)																
2	EL0514RL00200003H	TECHNITI LIMNI POYRNARIOY		UNKNOWN	GOOD	UNKNOWN	GOOD	MP	GOOD	MP	GOOD	GOOD AND ABOVE	MP	GOOD	MP	GOOD AND ABOVE
3	EL0514RL00200002H	TECHNITI LIMNI POYRNARIOY II		UNKNOWN	UNKNOWN	UNKNOWN	GOOD	MP	GOOD	MP	GOOD	GOOD AND ABOVE	EJ	GOOD	MP	GOOD AND ABOVE

(MP): Classification based on monitoring program

(GR): Classification based on grouping

(EJ): Classification based on expert judgement

(MM): Classification based on mitigation measures methodology (Prague approach).

Table 6.1-4: Status assessment of transitional water bodies per RB in the River Basin District of Epirus (EL05) in comparison to previous RBMPs

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
RIVER BASIN OF KALAMAS (EL0512)																
1	EL0512T0001N	EKVOLES KALAMA	X	MODERATE	UNKNOWN	MODERATE	MODERATE	MP	GOOD	MP	MODERATE	MODERATE	MP	GOOD	MP	MODERATE
RIVER BASIN OF ACHERONTOS (EL0513)																
2	EL0513T0004N	LIMNOTHALASSA MAZOMA	X	MODERATE	UNKNOWN	MODERATE	MODERATE	MP	GOOD	MP	MODERATE	GOOD	MP	GOOD	MP	GOOD
RIVER BASIN OF ARACHTHOS (EL0514)																
3	EL0514T0002N	EKVOLES ARACHTHOY	X	MODERATE	UNKNOWN	MODERATE	MODERATE	MP	GOOD	MP	MODERATE	GOOD	MP	GOOD	KE	GOOD
RIVER BASIN OF KERKYRAS-PAXON (EL0534)																
4	EL0534T0005N	LIMNOTHALASSA KORISSION (KERKYRAS)	X	GOOD	UNKNOWN	UNKNOWN	POOR	MP	GOOD	MP	POOR	MODERATE	MP	GOOD	MP	MODERATE
5	EL0534T0006N	LIMNOTHALASSA ANTINIOTI	X	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	-	UNKNOWN	-	UNKNOWN	GOOD	EJ	GOOD	EJ	GOOD
6	EL0534T0007H	LIMNOTHALASSA CHALIKIOPOULOU	X	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	-	UNKNOWN	-	UNKNOWN	LOWER THAN GOOD	MM	FAILING TO ACHIEVE GOOD	EJ	LOWER THAN GOOD
RIVER BASIN OF LOUROS (EL0546)																
7	EL0546T0003N	EKVOLES LOYROY LIMNOTHALASSES RODIA, TSOYKALIO, LOGAROY	X	MODERATE	UNKNOWN	MODERATE	MODERATE	MP	GOOD	MP	MODERATE	MODERATE	MP	GOOD	MP	MODERATE

** Differences in the coding of river water bodies compared to the 1st Update of the RBMP, due to the change in the classification of water bodies from Natural to ITYS and vice versa*

(MP): Classification based on monitoring program

(GR): Classification based on grouping

(EJ): Classification based on expert judgement

(MM): Classification based on mitigation measures methodology (Prague approach)

Table 6.1-5: Status assessment of coastal water bodies per RB in the River Basin District of Epirus (EL05) in comparison to previous RBMPs

No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
RIVER BASIN OF KALAMAS (EL0512)																
1	EL0512C0003H	ORMOS IGOYMENITSAS	X	MODERATE	UNKNOWN	MODERATE	MODERATE	MP	GOOD	MP	MODERATE	LOWER THAN GOOD	MM	GOOD	MP	LOWER THAN GOOD
2	EL0512C0A01N	VOREIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS	X	MODERATE	UNKNOWN	MODERATE	MODERATE	GR	GOOD	GR	MODERATE	MODERATE	GR	GOOD	GR	MODERATE
3	EL0512C0A02N	NOTIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS	X	MODERATE	UNKNOWN	MODERATE	MODERATE	MP	GOOD	MP	MODERATE	MODERATE	MP	GOOD	GR	MODERATE
RIVER BASIN OF ACHERONTOS (EL0513)																
4	EL0513C0004N	AKTES IPEIROY STO IONIO	X	HIGH	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	EJ	GOOD
5	EL0513C0005N	AKTES PARGAS	X	HIGH	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	EJ	GOOD
6	EL0513C0006N	ORMOS NIKOPOLEOS	X	HIGH	UNKNOWN	UNKNOWN	GOOD	MP	GOOD	MP	GOOD	GOOD	MP	GOOD	EJ	GOOD
7	EL0513C0007N	VOREIOS AMVRAKIKOS KOLPOS	X	MODERATE	UNKNOWN	MODERATE	MODERATE	MP	GOOD	MP	MODERATE	POOR	MP	FAILING TO ACHIEVE GOOD	MP	POOR
RIVER BASIN OF KERKYRAS-PAXON (EL0534)																
8	EL0534C0008N	AKTES PAXON	X	HIGH	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	EJ	GOOD
9	EL0534C0009N	DYT. KAI VOR. AKTES KERKYRAS	X	HIGH	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	EJ	GOOD
10	EL0534C0010N	DYTIKES AKTES KERKYRAIKIS THALASSAS - MPENITSES	X	GOOD	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	EJ	GOOD	EJ	GOOD

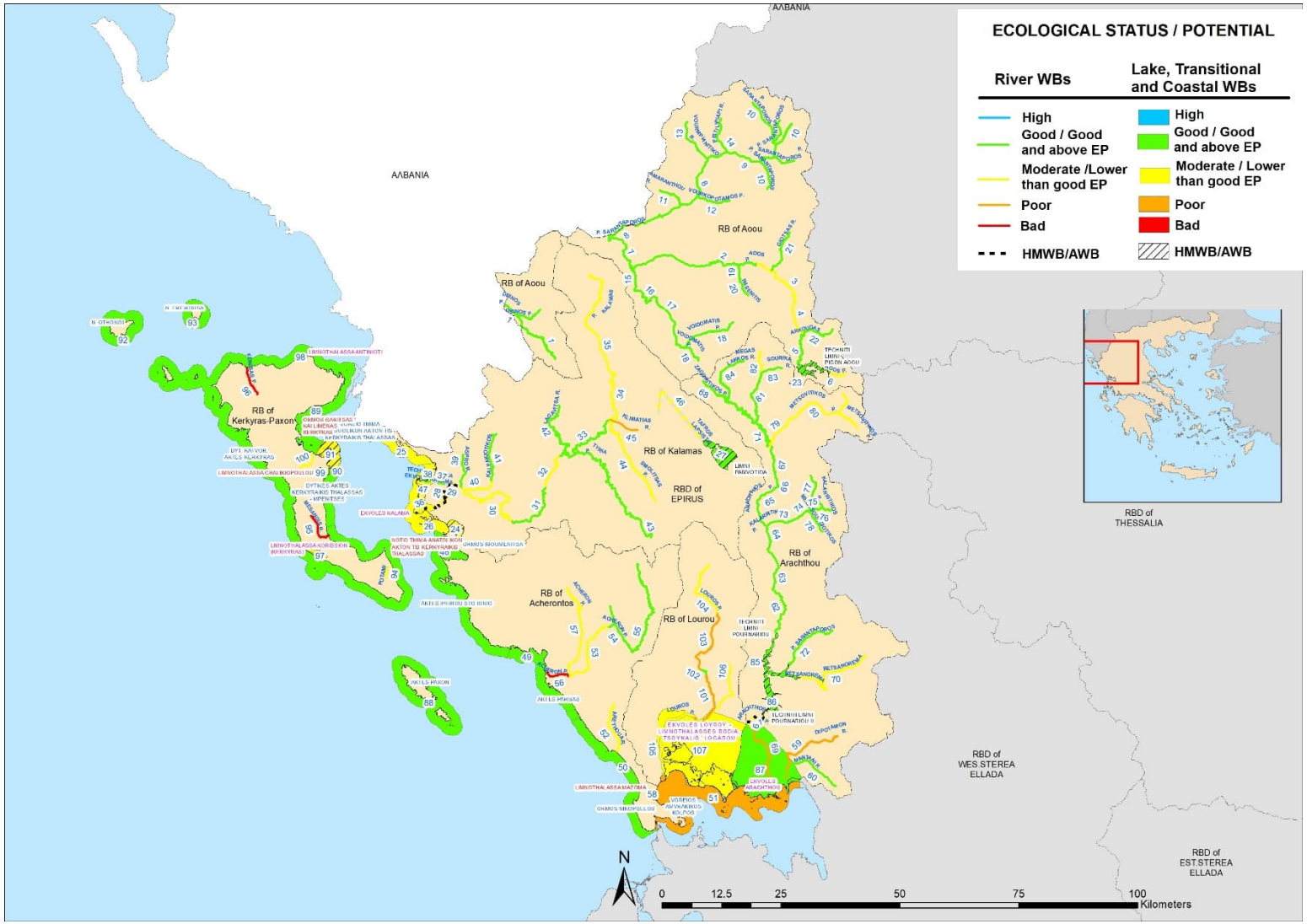
No	WB CODE - 2nd UPDATE OF RBMP	NAME OF WB	LOCATED INSIDE PRO-TECTED AREAS	1st RBMP			1st UPDATE OF RBMP					2nd UPDATE OF RBMP				
				ECOLO-GICAL STATUS/ POTENTIAL	CHEMI-CAL STATUS	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS	ECOLOGICAL STATUS/ POTENTIAL	CLASSI-FICATION METHOD	CHEMI-CAL STATUS	CLASSI-FICATION METHOD	TOTAL STATUS
11	EL0534C0011H	ORMOS GARITSAS KAI LIMENAS KERKYRAS	X	GOOD	UNKNOWN	UNKNOWN	MODERATE	MP	UNKNOWN	-	UNKNOWN	LOWER THAN GOOD	MM	FAILING TO ACHIEVE GOOD	EJ	LOWER THAN GOOD
12	EL0534C0012N	N. OTHONOI	X	HIGH	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	EJ	GOOD
13	EL0534C0013N	N. EREIKOYSA	X	HIGH	UNKNOWN	UNKNOWN	GOOD	GR	GOOD	GR	GOOD	GOOD	GR	GOOD	EJ	GOOD

(MP): Classification based on monitoring program

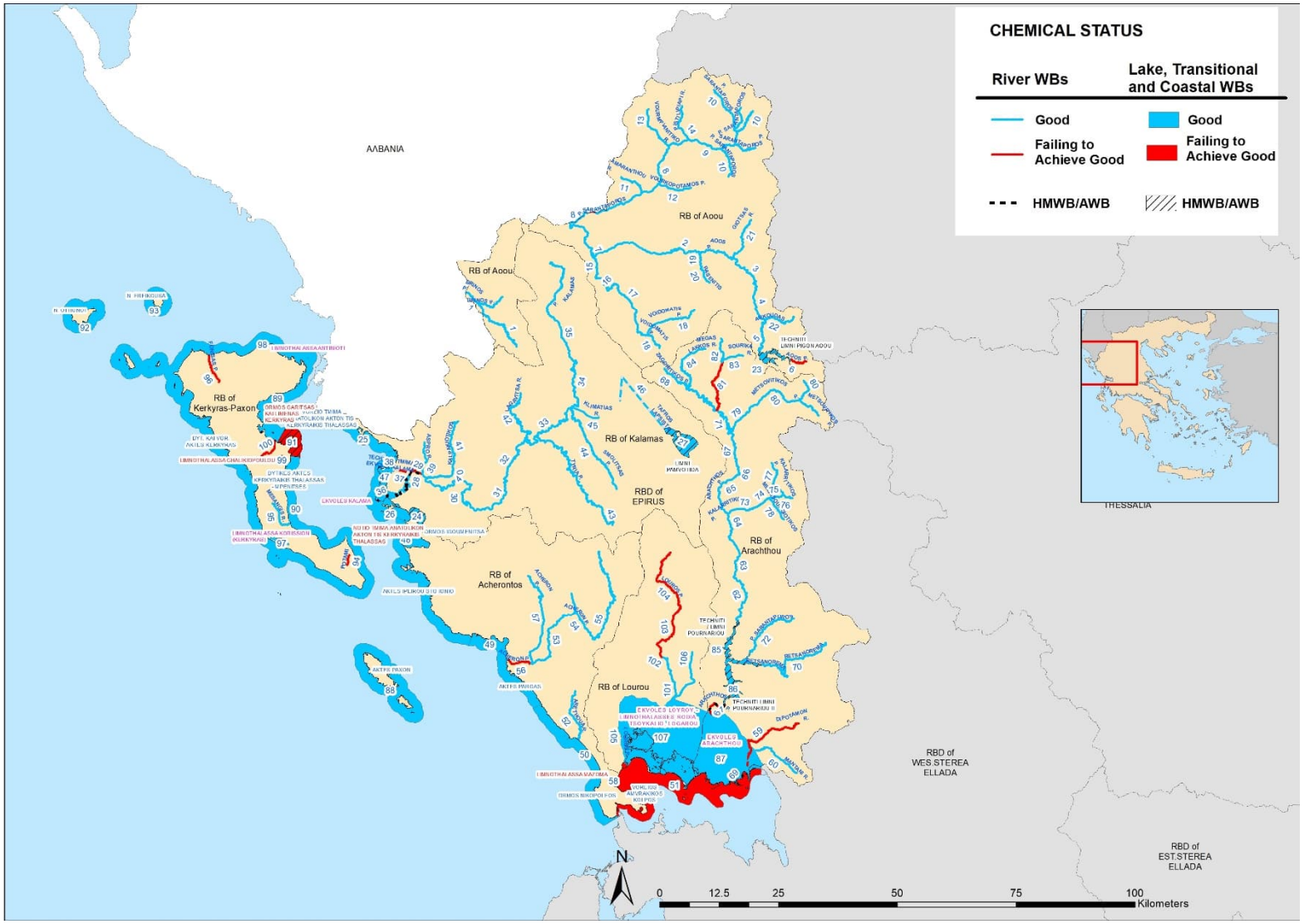
(GR): Classification based on grouping

(EJ): Classification based on expert judgement

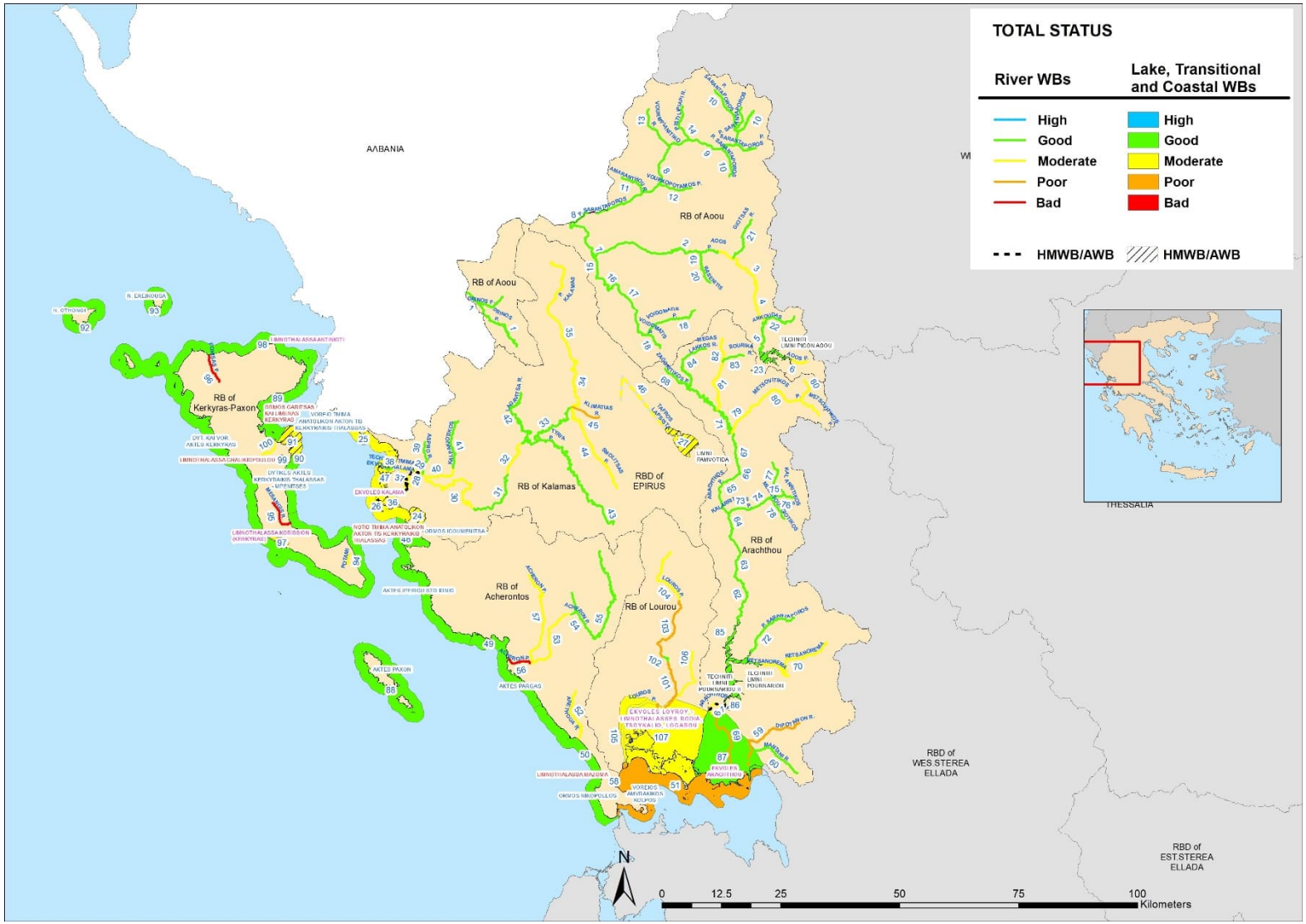
(MM): Classification based on mitigation measures methodology (Prague approach


ECOLOGICAL STATUS / POTENTIAL
River WBs
High
Good / Good and above EP
Moderate /Lower than good EP
Poor
Bad
HMWB/AWB
Lake, Transitional and Coastal WBs
High
Good / Good and above EP
Moderate / Lower than good EP
Poor
Bad
HMWB/AWB
ΑΛΒΑΝΙΑ
RB of Aoou
RB of Kerkyras-Paxon
RB of Kalamas
RBD of EPIRUS
RB of Arachthou
RB of Acherontos
RB of Loutou
RBD of THESSALIA
RBD of WES STEREA ELLADA
RBD of EST STEREA ELLADA
N
0
12.5
25
50
75
100
Kilometers

Map 6.1-1: Ecological status of surface water bodies in the River Basin District of Epirus (EL05)


CHEMICAL STATUS
River WBs
Lake, Transitional and Coastal WBs
Good
Failing to Achieve Good
HMWB/AWB
Good
Failing to Achieve Good
HMWB/AWB
ΑΛΒΑΝΙΑ
RB of Aoou
RB of Kerkyras-Paxon
RB of Kalamas
RBD of EPIRUS
RB of Arachthou
RB of Acherontos
RB of Louros
RBD of WES.STEREA ELLADA
RBD of EST.STEREA ELLADA
THESSALIA
N
0
12.5
25
50
75
100
Kilometers

Map 6.1-2: Chemical status of surface water bodies in the River Basin District of Epirus (EL05)


TOTAL STATUS
River WBs
Lake, Transitional and Coastal WBs
High
Good
Moderate
Poor
Bad
HMWB/AWB
HMWB/AWB
ΑΛΒΑΝΙΑ
RB of Aoou
RB of Kerkyras-Paxon
RB of Kalamas
RBD of EPIRUS
RB of Acherontos
RB of Lourou
RB of Arachthou
RBD of WES.STEREA ELLADA
RBD of EST.STEREA ELLADA
THESSALIA
N
0
12.5
25
50
75
100
Kilometers

Map 6.1-3: Total status of surface water bodies in the River Basin District of Epirus (EL05)

Map Legend: 6.1-1/2/3:

WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB
1	EL0511R0A0101022N	DRINOS P.	28	EL0512R000200024H	THIAMIS P. KALAMAS 2	55	EL0513R000200047N	ACHERON P. (MAVROPOTAMOS) 4	82	EL0514R000210071N	ARACHTHOS P. 11
2	EL0511R0A0200013N	AOOS P. 2	29	EL0512R000200027H	THIAMIS P. KALAMAS 3	56	EL0513R000201043N	ACHERON P. (MAVROPOTAMOS) 1	83	EL0514R000210170N	SOURIKA R.
3	EL0511R0A0200016N	AOOS P. 3	30	EL0512R000200029N	THIAMIS P. KALAMAS 4	57	EL0513R000202044N	ACHERON P. (MAVROPOTAMOS) - PARAPOTAMOS KOMTOS (VOUVOS)	84	EL0514R000212073N	MEGAS LAKKOS R.
4	EL0511R0A0200018N	AOOS P. 4	31	EL0512R000200032N	THIAMIS P. KALAMAS 5	58	EL0513T0004N	LIMNOTHALASSA MAZOMA	85	EL0514RL00200003H	TECHNITI LIMNI POURNARIOU
5	EL0511R0A0200020N	AOOS P. 5	32	EL0512R000200033N	THIAMIS P. KALAMAS 6	59	EL0514R000100048N	DIPOTAMON R.	86	EL0514RL00200002H	TECHNITI LIMNI POURNARIOU I
6	EL0511R0A0200021N	AOOS P. 6	33	EL0512R000200034N	THIAMIS P. KALAMAS 7	60	EL0514R000102049N	MANTANI R.	87	EL0514T0002N	EKVOLES ARACHTHOU
7	EL0511R0A0201001N	AOOS P. 1	34	EL0512R000200040N	THIAMIS P. KALAMAS 8	61	EL0514R000200051H	ARACHTHOS P. 2	88	EL0534C0008N	AKTES PAXON
8	EL0511R0A0202002N	SARANTAPOROS P. 1	35	EL0512R000200041N	THIAMIS P. KALAMAS 9	62	EL0514R000200054N	ARACHTHOS P. 3	89	EL0534C0009N	DYT. KAI VOR. AKTES KERKYRAS
9	EL0511R0A0202007N	SARANTAPOROS P. 2	36	EL0512R000201023H	THIAMIS P. KALAMAS 1	63	EL0514R000200055N	ARACHTHOS P. 4	90	EL0534C0010N	DYTIKES AKTES KERKYRAIKIS THALASSAS - MPENITSES

WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB
10	EL0511R0A0202008N	SARANTAPOROS P. 3	37	EL0512R000202025A	TECHNITO TMIMA EKVOLIS KALAMA2	64	EL0514R000200056N	ARACHTHOS P. 5	91	EL0534C0011H	ORMOS GARITSAS KAI LIMENAS KERKYRAS
11	EL0511R0A0202103N	SARANTAPOROS P. - AMARANTHOS R.	38	EL0512R000202026A	TECHNITO TMIMA EKVOLIS KALAMA 1	65	EL0514R000200063N	ARACHTHOS P. 6	92	EL0534C0012N	N. OTHONOIi
12	EL0511R0A0202204N	VOURKOPOTAMOS P.	39	EL0512R000204028N	THIAMIS P. KALAMAS - PARAPOTAMOS ASPRO R.	66	EL0514R000200064N	ARACHTHOS P. 7	93	EL0534C0013N	N. EREIKOUSA
13	EL0511R0A0202305N	VOURMPIANITIKO R.	40	EL0512R000206030N	THIAMIS P. KALAMAS - PARAPOTAMOS KALPAKIOTIKOS 1	67	EL0514R000200065N	ARACHTHOS P. 8	94	EL0534R0001074N	POTAMI
14	EL0511R0A0202406N	PISTILIPIAPI R.	41	EL0512R000206031N	THIAMIS P. KALAMAS - PARAPOTAMOS KALPAKIOTIKOS 2	68	EL0514R000200072N	ZAGORITIKOS P.	95	EL0534R000301075N	MESANGIS R.
15	EL0511R0A0204009N	VOIDOMATIS P. 1	42	EL0512R000208035N	THIAMIS P. KALAMAS - PARAPOTAMOS LAGAVITSA R.	69	EL0514R000201050N	ARACHTHOS P. 1	96	EL0534R000501076N	FONISAS P.
16	EL0511R0A0204010N	VOIDOMATIS 2	43	EL0512R000210036N	TYRIA P.	70	EL0514R000202052N	RETSANOREMA	97	EL0534T0005N	LIMNOTHALASSA KORISSION (KERKYRAS)
17	EL0511R0A0204011N	VOIDOMATIS 3	44	EL0512R000212037N	SMOLITSAS P.	71	EL0514R000203068N	ARACHTHOS P. 9	98	EL0534T0006N	LIMNOTHALASSA ANTINIOTI
18	EL0511R0A0204012N	VOIDOMATIS 4	45	EL0512R000212138N	KLIMATIAS R.	72	EL0514R000204053N	P. SARANTAPOROS.	99	EL0534T0007H	LIMNOTHALASSA CHALIKIOPOULOU

WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB	WB Index	WB CODE.	NAME OF WB
19	EL0511R0A0206014N	AOOS P. - PARAPOTAMOS RASENITIS 1	46	EL0512R000212139A	TAFROS LAPSISTA	73	EL0514R000206057N	KALARRITIKOS P. 1	100	EL0534R000701083N	KERKYRAS P.
20	EL0511R0A0206015N	AOOS P. - PARAPOTAMOS RASENITIS 2	47	EL0512T0001N	EKVOLES KALAMA	74	EL0514R000206058N	KALARRITIKOS P. 2	101	EL0546R000200078N	LOUROS P. 2
21	EL0511R0A0208017N	GIOTSAS R.	48	EL0513C0004N	AKTES IPEIROU STO IONIO	75	EL0514R000206060N	KALARRITIKOS P. 3	102	EL0546R000200080N	LOUROS P. 3
22	EL0511R0A0210019N	AOOS P. - PARAPOTAMOS ARKOUDAS	49	EL0513C0005N	AKTES PARGAS	76	EL0514R000206061N	KALARRITIKOS P. 4	103	EL0546R000200081N	LOUROS P. 4
23	EL0511RLA0200001H	TECHNITI LIMNI PIGON AOOU	50	EL0513C0006N	ORMOS NIKOPOLEOS	77	EL0514R000206062N	KALARRITIKOS P. 5	104	EL0546R000200082N	LOUROS P. 5
24	EL0512C0003H	ORMOS IGOYMENITSAS	51	EL0513C0007N	VOREIOS AMVRAKIKOS KOLPOS	78	EL0514R000206159N	KALARRITIKOS P. - PARAPOTAMOS MELISSOURGIOTIKOS	105	EL0546R000201077N	LOUROS P. 1
25	EL0512C0A01N	VOREIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS	52	EL0513R0001042N	ARETHOUA R.	79	EL0514R000208066N	METSOVITIKOS P. 1	106	EL0546R000202079N	LOUROS P. - PARAPOTAMOS
26	EL0512C0A02N	NOTIO TMIMA ANATOLIKON AKTON TIS KERKYRAIKIS THALASSAS	53	EL0513R000200045N	ACHERON P. (MAVROPOTAMOS) 2	80	EL0514R000208067N	METSOVITIKOS P. 2	107	EL0546T0003N	EKVOLES LOYROY - LIMNOTHALASSES RODIA, TSOYKALIO, LOGAROY
27	EL0512L000000004H	LIMNI PAMVOTIDA	54	EL0513R000200046N	ACHERON P. (MAVROPOTAMOS) 3	81	EL0514R000210069N	ARACHTHOS P. 10			

6.2 Classification of the status of groundwater bodies

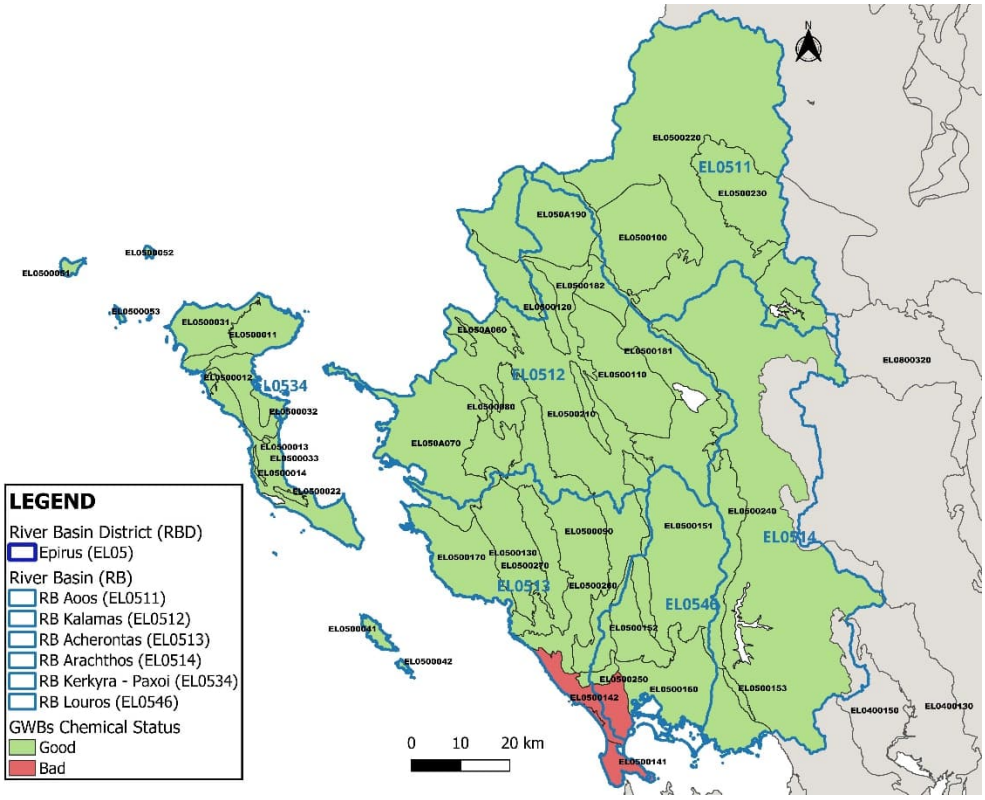
The Table and the following maps present the qualitative and quantitative status of the groundwater bodies of the River Basin District of Epirus (EL05) as they emerged during the 2nd Update of the RBMP per RB. In addition, the table shows the differentiations in the quantitative and qualitative (chemical) status of the GWB compared to the previous RBMPs.

Table 6.2-1: Results of the assessment of the status of groundwater bodies per RB in the River Basin District of Epirus (EL05) in comparison to previous RBMPs

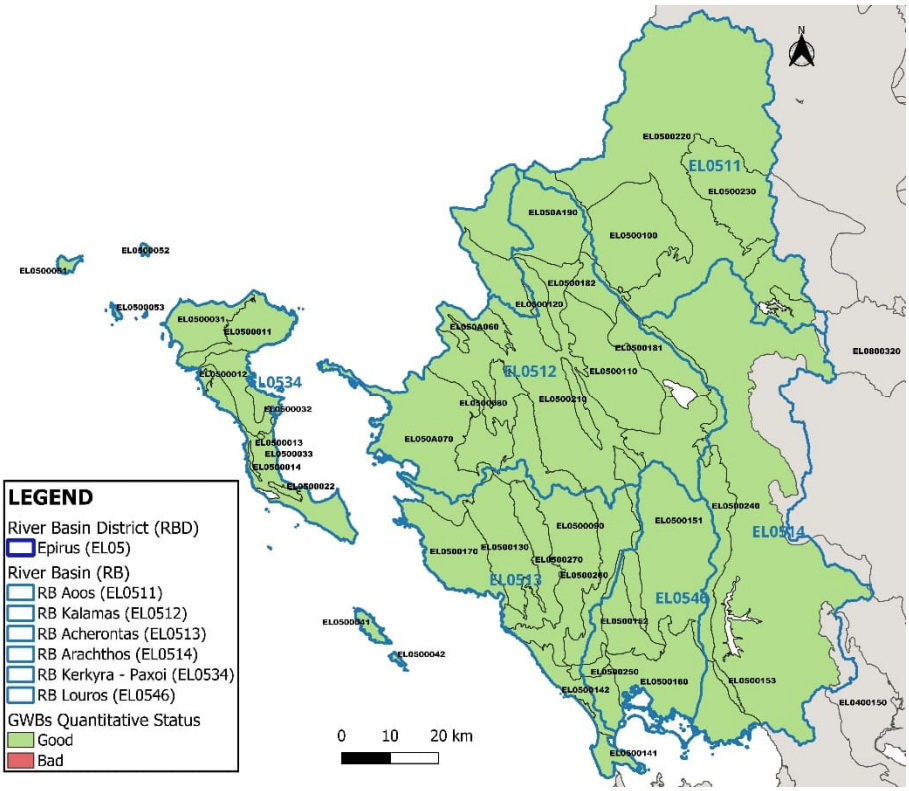
GWB code	Name of the GWB	1st RBMP		1st UPDATE OF RBMP		2nd UPDATE OF RBMP	
		Qualitative (chemical) status	Quantitative status	Qualitative (chemical) status	Quantitative status	Qualitative (chemical) status	Quantitative status
AOOS RB (EL0511)							
EL0500100	SYSTIMA TYMFIS	Good	Good	Good	Good	Good	Good
EL0500220	SYSTIMA YDROFORION SARANTAPOROU-AOOU	Good	Good	Good	Good	Good	Good
EL0500230	SYSTIMA YDROFORION SMOLIKA-MAVROVOUNIOU	Good	Good	Good	Good	Good	Good
KALAMAS RB (EL0512)							
EL050A060	SYSTIMA MOURGKANAS	Good	Good	Good	Good	Good	Good
EL050A070	SYSTIMA FILIATON-IGOYMENITSAS	Good	Good	Good	Good	Good	Good
EL0500080	SYSTIMA MESOU ROU KALAMA	Good	Good	Good	Good	Good	Good
EL0500110	SYSTIMA KLIMATIAS	Good	Good	Good	Good	Good	Good
EL0500120	SYSTIMA KASIDIARI	Good	Good	Good	Good	Good	Good
EL0500181	SYSTIMA MITSIKELIOU-VELLA (Mitsikeli)	Good	Good	Good	Good	Good	Good
EL0500182	SYSTIMA MITSIKELIOU-VELLA (Moni Vella)			Good	Good	Good	Good
EL050A190	SYSTIMA POGONIANIS	Good	Good	Good	Good	Good	Good
EL0500200	SYSTIMA YDROFORION P.KALAMA	Good	Good	Good	Good	Good	Good
EL0500210	SYSTIMA KOURENTON	Good	Good	Good	Good	Good	Good
ACHERONTAS RB (EL0513)							
EL0500090	SYSTIMA SOULIOU-PARAMYTHIAS	Good	Good	Good	Good	Good	Good
EL0500130	SYSTIMA KORONIS	Good	Good	Good	Good	Good	Good

GWB code	Name of the GWB	1st RBMP		1st UPDATE OF RBMP		2nd UPDATE OF RBMP	
		Qualitative (chemical) status	Quantitative status	Qualitative (chemical) status	Quantitative status	Qualitative (chemical) status	Quantitative status
EL0500141	SYSTIMA CHERSONISOU PREVEZAS(A)	Bad	Good	Bad	Good	Bad	Good
EL0500142	SYSTIMA CHERSONISOU PREVEZAS(B)			Bad	Good	Bad	Good
EL0500170	SYSTIMA PARGAS	Good	Good	Good	Good	Good	Good
EL0500260	SYSTIMA YDROFORION ANO ROU ACHERONTOS-REMATOS ARETHOUA	Good	Good	Good	Good	Good	Good
EL0500270	SYSTIMA EKVOLON ACHERONTOS - P. KOKYTOU	Good	Good	Good	Good	Good	Good
ARACHTHOS RB (EL0514)							
EL0500240	SYSTIMA YDROFORION P.ARACHTHOU	Good	Good	Good	Good	Good	Good
KERKYRAS – PAXON RB (EL0534)							
EL0500011	SYSTIMA ASVESTOLITHON N.KERKYRAS (A)	Good	Good	Good	Good	Good	Good
EL0500012	SYSTIMA ASVESTOLITHON N.KERKYRAS (B)			Good	Good	Good	Good
EL0500013	SYSTIMA ASVESTOLITHON N.KERKYRAS (C)			Good	Good	Good	Good
EL0500014	SYSTIMA ASVESTOLITHON N.KERKYRAS (D)			Good	Good	Good	Good
EL0500021	SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (A)	Good	Good	Good	Good	Good	Good
EL0500022	SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (B)			Good	Good	Good	Good

GWB code	Name of the GWB	1st RBMP		1st UPDATE OF RBMP		2nd UPDATE OF RBMP	
		Qualitative (chemical) status	Quantitative status	Qualitative (chemical) status	Quantitative status	Qualitative (chemical) status	Quantitative status
EL0500031	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (A)	Good	Good	Good	Good	Good	Good
EL0500032	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (B)			Good	Good	Good	Good
EL0500033	SYSTIMA KOKKODON YDROFORION N. KERKYRAS (C)			Good	Good	Good	Good
EL0500041	SYSTIMA N.PAXON - ANTIPAXON(A)	Good	Good	Good	Good	Good	Good
EL0500042	SYSTIMA N.PAXON - ANTIPAXON(B)			Good	Good	Good	Good
EL0500051	SYSTIMA N.OTHONON - EREIKOUSAS - MATHRAKIOU (OTHONOI)	Good	Good	Good	Good	Good	Good
EL0500052	SYSTIMA N.OTHONON - EREIKOUSAS - MATHRAKIOU (EREIKOUSA)			Good	Good	Good	Good
EL0500053	SYSTIMA N.OTHONON - EREIKOUSAS - MATHRAKIOU (MATHRAKI)			Good	Good	Good	Good
LOUROS RB (EL0546)							
EL0500151	SYSTIMA LOUROU (A)	Good	Good	Good	Good	Good	Good
EL0500152	SYSTIMA LOUROU (B)			Good	Good	Good	Good
EL0500153	SYSTIMA LOUROU (C)			Good	Good	Good	Good
EL0500160	SYSTIMA ARTAS	Good	Good	Good	Good	Good	Good
EL0500250	SYSTIMA ZALONGOU	Good	Good	Good	Good	Good	Good



Map 6.2-1: Chemical status of the GWB in the River Basin District of Epirus (EL05)



Map 6.2-2: Quantitative status of the GWB in the River Basin District of Epirus (EL05)

6.3 Water status monitoring network

Monitoring Network of SWB

A total of 57 stations for monitoring of surface water bodies operate in the RBD of Epirus (EL05), of which 29 are surveillance and 28 are operational stations. The following table summarises the number of stations per category of water body, type of monitoring and group of monitored parameters.

Table 6.3-1: Distribution of monitoring stations for SWB in the RBD of Epirus (EL05)

Station category	Ecological and chemical monitoring		Ecological monitoring only	
	Surveillance	Operational	Surveillance	Operational
Rivers	12	9	13	6
Lakes*	3	1	0	0
Transitional	0	7	0	0
Coastal	0	3	1	2
Total	15	20	14	8

Monitoring network of GWB

The following table summarises the number of stations by type of monitoring and group of monitored parameters.

Table 6.3-2: Distribution of monitoring stations for GWB in the River Basin District of Epirus (EL05)

Station category	Qualitative (chemical) and quantitative monitoring	
	Surveillance	Operational
Groundwater body level	60	7
Springs flow	49	-

7 ECONOMIC ANALYSIS OF WATER USE

7.1 Estimation of Water Services Costs - Financial Costs

7.1.1 Drinking water supply, sewerage collection and wastewater treatment services

The total financial cost of the drinking water supply, the sewerage collection and wastewater treatment service (where applicable) in the RBD of Epirus (EL05) is estimated at € 57.2 million.

The recovery of the total financial cost of the drinking water supply, the sewerage collection and wastewater treatment service (where applicable) for the RBD is estimated at 78.8%.

There is no recorded supply and thus consumption of water from private boreholes from the water supply network in the River Basin District of Epirus (EL05). It should be noted that as regards the use of water from private boreholes, the financial costs of private boreholes are fully (100%) covered by the borehole owner.

The unit total financial cost of drinking water supply, the sewerage collection and wastewater treatment service (where applicable) in the RBD EL05 is 1.699 €/m³ of authorized users consumption and the unit total financial revenue per cubic meter of authorized users consumption is 1.340 €/m³.

The table below presents the total and unit financial cost and financial revenue figures as well as the recovery of the total financial cost of drinking water supply, the sewerage collection and wastewater treatment service (where applicable), per RB of the River Basin District of Epirus (EL05), based on the available data of the service providers per RB.

Table 7.1-1: Financial cost recovery for drinking water supply, the sewerage collection and wastewater treatment service (where applicable), in the RBs of the RBD of Epirus (EL05), 2020

RB	Authorised use consumption (m³)	Total Financial Cost (€)	Average Unit Financial Cost (€/m³)	Total Revenue (€) (charges) (Not including environmental cost)	Average unit revenue (€/m³) (Not including environmental cost)	Total Financial Cost Recovery (%)
PROVIDERS WITH AVAILABLE COST AND REVENUE DATA PER RB [1]	**23.126.009**	**38.726.563**	**1,675**	**30.977.760**	**1,340**	**80,0%**
RB OF AOOS (EL0511)	[2]	[2]	[2]	[2]	[2]	[2]
RB OF KALAMAS (EL0512)	8.161.692	15.598.273	1,911	13.426.548	1,645	86,1%
RB OF ACHERONTOS (EL0513)	977.681	894.307	0,915	695.046	0,711	77,7%
RB OF ARACHTHOS (EL0514)	[2]	[2]	[2]	[2]	[2]	[2]
RB OF KERKYRAS-PAXON (EL0546)	5.521.283	8.491.214	1,538	7.280.876	1,319	85,7%
RB OF LOUROS (EL0534)	8.465.353	13.742.769	1,623	9.575.290	1,131	69,7%
PROVIDERS WITH INCOMPLETE OR UNAVAILABLE COST AND/OR REVENUE DATA - TOTAL RBD	**10.558.033**	**18.507.597**	**1,753**	**14.142.700**	**1,340**	**76,4%**
TOTAL PROVIDERS	**33.684.042**	**57.234.161**	**1,699**	**45.120.460**	**1,340**	**78,8%**
PRIVATE BOREHOLES (only	**9.316.120**					**100%**

RB	Authorised use consumption (m³)	Total Financial Cost (€)	Average Unit Financial Cost (€/m³)	Total Revenue (€) (charges) (Not including environmental cost)	Average unit revenue (€/m³) (Not including environmental cost)	Total Financial Cost Recovery (%)
drinking water supply) [3]						
TOTAL RIVER BASIN DISTRICT	43.000.162					83,4%
[1] The distribution of providers per RB was based on the abstraction of providers.						
[2] No cost and revenue data were available from providers that are included in the Aoos and Arachthos RBs.						
[3] This refers to water supplied from the drinking water supply network for industrial use.						

Source: Ministry of Environment / GDNEW / Water Services Monitoring Mechanism and Study Team's Estimates where no data is provided by the provider.

7.1.2 Water supply service for agricultural use

The total financial cost of the water supply service for agricultural use in the River Basin District of Epirus (EL05) was estimated at 6.6 million €.

The recovery of the total financial cost of the water supply service for agricultural use in the RBD of Epirus is estimated at 114.7% taking into account only the water supply associations for agricultural use and at 108.9% including the private boreholes that supply water from the irrigation network.

Water consumption from private boreholes in the River Basin District of Epirus (EL05), which are supplied by the irrigation network, is for agricultural and livestock use. Private boreholes owners are considered to fully recover their financial costs.

The unit total financial cost of the water supply service for agricultural use in the RBD of EL05 is 0.053 €/m³ of authorised use consumption and the unit total financial revenue per cubic meter of authorised use consumption is 0.061 €/m³.

The table below presents the total and unit financial cost and revenue figures as well as the recovery of the total financial cost of water supply service for agricultural use per RB of the River Basin District of Epirus (EL05) based on the available data of the providers per RB.

Table 7.1-2: Recovery of Financial Costs of water supply service for agricultural use in the RBs of the RBD of Epirus (EL05)

LAP	Authorised use consumption (m³)	Total Financial Cost (€)	Average Unit Financial Cost (€/m³)	Total Revenue (€) (charges) (Not including environmental cost)	Average unit revenue (€/m³) (Not including environmental cost)	Total Financial Cost Recovery (%)
PROVIDERS WITH AVAILABLE COST AND REVENUE DATA PER RB	**37.385.054**	**2.135.834**	**0,058**	**2.273.866**	**0,061**	**106,46%**
RB OF AOOS (EL0511)	[1]	[1]	[1]	[1]	[1]	[1]
RB OF KALAMAS (EL0512)	96.691	2.640	0,027	2.980	0,031	112,9%
RB OF ACHERONTOS (EL0513)	31.460.883	1.990.440	0,063	2.102.770	0,067	105,6%
RB OF ARACHTHOS (EL0514)	5.827.480	142.753	0,024	168.116	0,029	117,8%
RB OF KERKYRAS-PAXON (EL0546)	[1]	[1]	[1]	[1]	[1]	[1]
RB OF LOUROS (EL0534)	[1]	[1]	[1]	[1]	[1]	[1]
PROVIDERS WITH INCOMPLETE OR UNAVAILABLE COST AND/OR REVENUE DATA - TOTAL RBD	**87.431.616**	**4.483.728**	**0,051**	**5.317.841**	**0,061**	**118,6%**
TOTAL PROVIDERS	**124.816.670**	**6.619.562**	**0,053**	**7.591.707**	**0,061**	**114,7%**
PRIVATE GROUNDING (only for agricultural water supply) [2]	**80.740.339**					**100%**
TOTAL RIVER BASIN DISTRICT	**205.557.009**					**108,9%**

[1] No cost and revenue data were available by the providers that are included in the Aoos and Kerkyras - Paxon RBs.

[2] Includes quantities for agricultural and livestock use.

Source: Ministry of Environment / GDNEW / Water Services Monitoring Mechanism and Estimates by consultants where no data are provided by the provider

7.2 Environmental and resource cost

7.2.1 Environmental Cost Assessment

The total environmental cost of the RBD amounts to €1,590,000. Of this, 37.16% of the environmental cost is attributed to the Pamvotida Sub-basin and 1.06% to the rest of the Kalamas RB (EL0512), 32.92% to the Louros RB (EL0546), 20,58% in the Acherontos RB (EL0513), 1.09% in the Arachthos RB (EL0514) and 0.17% in the Aoos RB (EL0511), while in the RB Kerkyras-Paxon RB no environmental cost is assigned. The unit environmental cost at RBD level is estimated at 0.00121 €/m³.

Table 7.2-1: Environmental Cost in the RBs of the RBD of Epirus (EL05) for the period 2024-2027

RB	Total Environmental Cost (€)	Unit Environmental Cost (€/m³)
EL0511 (AOOS)	2,976,00 €	0,00004
PAMVOTIDA SUB-BASIN	635,372,00 €	0,00382
EL0512 (KALAMAS)	18,180,00 €	0,00337
EL0513 (ACHERONTOS)	351,924,00 €	0,00142
EL0514 (ARACHTHOS)	18,592,00 €	0,00006
EL0534 (KERKYRAS-PAXON)	- €	-
EL0546 (LOUROS)	562,956,00 €	0,00177
Total RBD EL05	**1,590,000,00 €**	**0,00121**

The distribution of environmental cost by use in the RBs of the RBD EL05 is presented in the table below.

Table 7.2-2: Distribution of Environmental Cost per Water Use in the RBD of Epirus (EL05)

Environmental Cost	Households	Agricultural	Livestock	Industry
EL0511 (AOOS)				
Total costs for all years of PoM implementation (€)	1,818,67 €	- €	826,67 €	330,67 €
Annual Cost per use (€)	454,67 €	- €	206,67 €	82,67 €
Share of use (%) in total annual costs	61,11%	0,00%	27,78%	11,11%
Annual Unit Cost (€/m³)	**0,00041**	**-**	**0,00041**	**0,00041**
EL0512 (KALAMAS)				

Environmental Cost	Households	Agricultural	Livestock	Industry
Total costs for all years of PoM implementation (€)	11,073,27 €	- €	1,818,00 €	5,288,73 €
Annual Cost per use (€)	2,768,32 €	- €	454,50 €	1,322,18 €
Share of use (%) in total annual costs	60,91%	0,00%	10,00%	29,09%
Annual Unit Cost (€/m³)	**0,00041**	**-**	**0,00041**	**0,00041**
EL0513 (ACHERONTOS)				
Total costs for all years of PoM implementation (€)	14,381,78 €	331,691,62 €	4,403,23 €	1,447,37 €
Annual Cost per use (€)	3,595,44 €	82,922,91 €	1,100,81 €	361,84 €
Share of use (%) in total annual costs	4,09%	94,25%	1,25%	0,41%
Annual Unit Cost (€/m³)	**0,00082**	**0,00146**	**0,00183**	**0,00181**
EL0514 (ARACHTHOS)				
Total costs for all years of PoM implementation (€)	6,942,35 €	7,219,62 €	2,281,20 €	2,148,82 €
Annual Cost per use (€)	1,735,59 €	1,804,91 €	570,30 €	537,21 €
Share of use (%) in total annual costs	37,34%	38,83%	12,27%	11,56%
Annual Unit Cost (€/m³)	**0,00041**	**0,00003**	**0,00044**	**0,00041**
EL0546 (LOUROS)				
Total costs for all years of PoM implementation (€)	17,850,97 €	748,044,27 €	10,873,56 €	8,993,76 €
Annual Cost per use (€)	4,462,74 €	187,011,07 €	2,718,39 €	2,248,44 €
Share of use (%) in total annual costs	2,27%	95,20%	1,38%	1,14%
Annual Unit Cost (€/m³)	**0,00041**	**0,00288**	**0,00143**	**0,00141**
PAMVOTIDA SUB-BASIN				

Environmental Cost	Households	Agricultural	Livestock	Industry
Total costs for all years of PoM implementation (€)	405,953,67 €	197,115,38 €	8,398,77 €	23,904,18 €
Annual Cost per use (€)	101,488,42 €	49,278,85 €	2,099,69 €	5,976,05 €
Share of use (%) in total annual costs	63,89%	31,02%	1,32%	3,76%
Annual Unit Cost (€/m³)	**0,00619**	**0,00244**	**0,00162**	**0,00162**

In the Aoos RB 61.11% of the total environmental cost is related to household use and 27.78% to livestock, in the RB of Acherontos 94.25% of the total environmental cost is related to agriculture and 4.09% to household use, in the RB of Arachthos 38.83% of the total environmental cost is related to agriculture and 37.34% to household use, while in the RB of Louros 95.2% of the total environmental cost is related to agriculture and 2.27% to household use. Finally, in the Pamvotida sub-basin, 63.89% of the total environmental cost is related to household use and 31.02% to agriculture, while in the rest of the RB of Kalamas 60.91% of the environmental cost is related to household use and 29.09% to industry. Note that household use includes drinking water supply and sewerage collection.

7.2.2 Resource Cost Estimate

There is no Resource Cost in the River Basin District of Epirus.

7.2.3 Environmental fees

According to the rules of water cost and price, water service providers will, from 2018 onwards, determine their costs, taking into account the environmental and resource costs calculated as presented in the above paragraphs. In terms of pricing, the relevant charges will have to be determined.

The following decisions have been issued for the River Basin District of Epirus (EL05), up to the year of use 2021, concerning the Environmental Cost and the Resource Cost:

1. **RB: EL0534 - No. Prot: 6179 / 10-01-2019 (Year of use 2019)**

Environmental costs (€) per cubic meter of water and per water use				
Environmental costs	Household use*	Agriculture**	Livestock***	Industry
RB OF KERKYRAS-PAXON (EL0534)				
Annual Unit Cost (€/m³)	0,0004	0,0004	-	0,0004
Environmental cost (€) per cubic meter of water and per water use				

Environmental costs	Household use*	Agriculture**	Livestock***	Industry
RB OF KERKYRAS-PAXON (EL0534)				
Annual Unit Cost (€/m³)	0,0004	0,0004	-	0,0004

2. RB: EL0512 / EL0513 / EL0514 - No. Prot : 37912 / 14-03-2019 (Year of use 2019)

Environmental costs (€) per cubic metre of water and per water use					
Environmental costs	Household use*	Agriculture**	Livestock***	Industry	Total
PAMBOOTIDA SUB-BASIN					
Annual Unit Cost (€/m³)	0,00224	0,0031	0,0022	0,00224	0,0026
RB OF ACHERONTOS (EL0513)					
Annual Unit Cost (€/m³)	0,0017	0,0021	0,0019	0,0017	0,002
RB OF ARACHTOS (EL0514)					
Annual Unit Cost (€/m³)	0,00003	0,00003	0,00003	0,00003	0,00003

3. RB: EL0546 - No. Prot: 47916 / 02-04-2019 (Year of use 2019)

Environmental costs (€) per cubic metre of water and per water use					
Environmental costs	Household use*	Agriculture**	Livestock***	Industry	Total
RB OF LOUROS (EL0546)					
Annual Unit Cost (€/m³)	0,00002	0,00013	0,00002	0,00002	0,00012

4. RB: EL0534 - No. Prot: 3744 / 09-01-2020 (Year of use 2020)

Environmental costs (€) per cubic metre of water and per water use				
Environmental costs	Household use*	Agriculture**	Livestock***	Industry
RB OF KERKYRAS-PAXON (EL0534)				
Annual Unit Cost (€/m³)	0,0004	0,0004	-	0,0004
Environmental Fee (€) per cubic meter of water and per water use				
Environmental costs	Household use*	Agriculture**	Livestock***	Industry
RB OF KERKYRAS-PAXON (EL0534)				
Annual Unit Cost (€/m³)	0,0004	0,0004	-	0,0004

5. RB: EL0512 / EL0513 / EL0514 - No. Prot: 14875 / 06-02-2020 (Year of use 2020)

Environmental costs (€) per cubic metre of water and per water use					
Environmental costs	Household use*	Agriculture**	Livestock***	Industry	Total
PAMBOOTIDA sub-basin					
Annual Unit Cost (€/m³)	0,00224	0,0031	0,0022	0,00224	0,0026
RB OF ACHERON (EL0513)					

Annual Unit Cost (€/m³)	0,0017	0,0021	0,0019	0,0017	0,002
RB OF ARACHTOS (EL0514)					
Annual Unit Cost (€/m³)	0,00003	0,00003	0,00003	0,00003	0,00003

6. RB: EL0546 - No. Prot: 22320 / 20-02-2020 (Year of use 2020)

Environmental costs (€) per cubic metre of water and per water use					
Environmental costs	Household use*	Agriculture**	Livestock***	Industry	Total
RB OF LOUROS (EL0546)					
Annual Unit Cost (€/m³)	0,00002	0,00013	0,00002	0,00002	0,00012

7. RB: EL0512 / EL0513 / EL0514 - No. Prot: 163149 / 17-12-2020 (Year of use 2021)

Environmental costs (€) per cubic metre of water and per water use					
Environmental costs	Household use*	Agriculture**	Livestock***	Industry	Total
PAMBOOTIDA sub-basin					
Annual Unit Cost (€/m³)	0,00224	0,0031	0,0022	0,00224	0,0026
RB OF ACHERON (EL0513)					
Annual Unit Cost (€/m³)	0,0017	0,0021	0,0019	0,0017	0,002
RB OF ARACHTOS (EL0514)					
Annual Unit Cost (€/m³)	0,00003	0,00003	0,00003	0,00003	0,00003

8. RB: EL0534 - No. Prot: 227300 / 18-12-2020 (Year of use 2021)

Environmental costs (€) per cubic metre of water and per water use				
Environmental costs	Household use*	Agriculture**	Livestock***	Industry
RB OF KERKYRAS-PAXON (EL0534)				
Annual Unit Cost (€/m³)	0,0004	0,0004	-	0,0004
Environmental Fee (€) per cubic meter of water and per water use				
Environmental costs	Household use*	Agriculture**	Livestock***	Industry
RB OF KERKYRAS-PAXON (EL0534)				
Annual Unit Cost (€/m³)	0,0004	0,0004	-	0,0004

9. RB: EL0546 - No. Prot: 164526 / 18-12-2020 (Year of use 2021)

Environmental costs (€) per cubic metre of water and per water use					
Environmental costs	Household use*	Agriculture**	Livestock***	Industry	Total
RB OF LOUROS (EL0546)					
Annual Unit Cost (€/m³)	0,00002	0,00013	0,00002	0,00002	0,00012

**Household use includes drinking water supply and sewerage*

*** Agriculture includes the subcategories "2.1 Irrigation" "2.4 Antifrozen protection" "2.3 Aquaculture" "2.5 Other water uses serving agricultural activities" of the basic category "2. Agricultural use" of Annex I of the J.M.D. 146896/14.*

****Livestock farming includes poultry farming*

8 ENVIRONMENTAL OBJECTIVES - EXEMPTIONS

The following Table summarises the objectives set for 2027 for the 107 SWB of the RBD of Epirus. More specifically:

Table 8-1: Ecological status/ecological potential and chemical status targets for surface water bodies by 2027

OBJECTIVE	NUMBER OF SURFACE WB
Maintain of good / high ecological status	60
Maintain of good chemical status	92
Achieve good ecological status/potential	44
Achieve good chemical status	15
Exemption in accordance with Article 4.4	46
Exemption in accordance with Article 4.5	0
Exemption in accordance with Article 4.6	0

According to the above, it appears that for a total of 46 SWB exemption of Article 4.4 for an extension of the deadline is implemented.

The Table below summarises the objectives set for the 40 GWB of the RBD of Epirus:

Table 8-2: Quantitative and chemical status objectives for GWB after 2027

OBJECTIVE	NUMBER OF SYSTEMS
Maintain of good quantitative status	40
Maintain of good chemical status	38
Achieve good quantitative status	0
Achieve good chemical status	2
Exemption in accordance with Article 4.4	2
Exemption in accordance with Article 4.5	0
Exemption in accordance with Article 4.6	0

According to the above, for 2 GWB the objective is to achieve good chemical status whenever Natural Hydrogeological Conditions allow it after 2027.

9 PROGRAM OF MEASURES

9.1 Main management issues in the RBD of Epirus (EL05)

The most important management issues for the River Basin District of Epirus, as highlighted by the assessment of anthropogenic pressures and their impacts on each surface and groundwater body, are the following.

Pollution of surface water and groundwater bodies

The most important pressures identified in the River Basin District of Epirus are mainly related to poultry farming activity, the concentration of fish farming units (sea and inland waters) and the establishment and operation of primary sector product utilisation units (inside and outside the Industrial Areas).

The oil mills installed on the island of Corfu (Kerkyras), with their number exceeding one hundred, constitute the most important pressure on the island's water systems.

Water abstractions from rivers and lakes:

The surface water bodies that are subject to significant abstractions are:

- from the springs of Agiou Georgiou and the parts of Louros P. that extend after the Louros Hydroelectric Plant, significant abstractions are made to meet the water supply needs of the municipalities of Arta, Preveza, Nikolaou Skoufa and Lefkada, and also to serve the irrigation system of the Arta Plain, which is the largest consumer of irrigation water. It should be noted that this system includes many old irrigation networks which are in dire need of modernisation and serious repairs.

- in Techniti Limni Pournariou II there are significant abstractions which irrigate many old irrigation networks that are in dire need of modernisation and serious repairs, with the result that the networks often operate in a marginal condition with high water losses, while in some cases the use of irrigation water is not in accordance with good agricultural practices of good management.

Significant abstractions from the river water bodies of the RBD, mainly for the coverage of irrigation needs of water irrigation networks associations, are related to existing technical water abstraction works of great age. These works are in many cases in need of modernisation, and it is noted that their environmental impact on the affected water bodies and ecosystems has not been assessed, so that no environmental terms have been issued for their operation, and no measures have been taken to address or mitigate the impacts.

Regarding the abstractions from lakes, Lake Pamvotida in the closed basin of Ioannina, suffers on an annual basis a medium abstraction partly due to irrigation of the GOEV of the Ioannina Basin (TOEV

Anatoli, Krya-Lapsista and Poros) and overflows and partly due to significant underground flow to the neighbouring basins of Kalamas, Arachthos and Louros.

In conclusion, in the River Basin District of Epirus, the surface water bodies do not face problems of overexploitation, although irrigation is mainly carried out by surface waters. Over-exploitation problems occur only in some river systems located downstream of irrigation dams or hydroelectric plants during the summer months and not on an annual basis.

However, it is noted that in the irrigation networks of the Arta's plain, sometimes it is implemented very high irrigation water consumptions due to

- the age and sometimes poor maintenance of the irrigation water network infrastructure
- the difficulty of coordinating the energy and irrigation use of the water of the river Arachthos
- the poor organisational and financial situation of some TOEVs.

Restrictions - Commitments

Some interventions, such as the modernisation of old irrigation networks and others, require the allocation of financial resources.

Hydromorphological alterations:

The hydromorphological alterations of surface water bodies in the River Basin District of Epirus consist of interventions mainly concerning hydroelectric dams, with the consequent regulation of the flow downstream, but also of the adjustment of river and lake sections, significant abstractions from lakes and interventions on coasts.

Quantitative groundwater management

In terms of groundwater bodies, the River Basin District of Epirus is rich in groundwater resources.

Groundwater covers both drinking water supply and industrial needs for the whole RBD, as well as irrigation needs where these are not covered by surface waters(e.g. the plains of Arta, Preveza and the island of Corfu (kerkyras)).

In the River Basin District of Epirus, only the groundwater body of Systima Chersonisou Prevezas is in a state of local overexploitation. In this case overexploitation is accompanied by local salinisation due to sea intrusion. In this water body, overabstraction is observed only at a local level, while the deterioration in quality with the presence of chloride and nitrate is linked both to the fact that it is open to the sea from both its eastern and western boundaries and to agricultural activities.

A particular characteristic of the River Basin District is the increased natural background values for sulphate ions in several Groundwater Bodies due to the development of both Triassic limestones mudflats with gypsum (Epirus, Corfu (Kerkyras)) and neonatal gypsum (Corfu (Kerkyras)).

Sufficiency and good quality of drinking water

Regarding problems of drinking water sufficiency and quality in the River Basin District of Epirus, the main problems are technical, organizational and financial, problems of insufficient resources for the islands of Corfu (Kerkyras) and Paxos, quality pollution of natural origin of groundwater.

9.2 Program of Basic and Complementary Measures

According to paragraph 3 of Article 11 of the Directive, the Basic Measures are the minimum requirements that must be met in order to achieve the Environmental Objectives of Article 4 and comprise two sub-groups of measures.

The groups of basic measures on the basis of which the program of basic measures of the 2nd Update of the RBMP of Epirus has been designed, are described In the following sections,.

9.2.1 Actions in implementation of EU Directives (Group I Basic Measures)

The table below lists the provisions transposing the EU Directives of Annex VI of Directive 2000/60/EC (as amended and in force) into national law .

DIRECTIONS	INCORPORATION INTO NATIONAL LAW
Bathing waters (Directive 2006/7/EC)	**JMD 8600/416/E103/23.02.2009 (Government Gazette 356/B/2009) on the** "Quality and management measures of bathing water, in compliance with the provisions of Directive 2006/7/EC "on the management of bathing water quality and the repeal of Directive 76/160/EEC" as amended and in force.
Protection of wild birds (Directive 2009/147/EC) and habitats (Directive 92/43/EEC)	**JMD ΗΠ 37338/1807/E103/1.9.2010** (Government Gazette 1495/B/2010) "Determination of measures and procedures for the conservation of wild birds and their habitats, in compliance with the provisions of Directive 79/409/EEC "On the Conservation of Wild Birds" of the European Council of 2 April 1979, as codified by Directive 2009/147/EC" and its amending **JMD HH 8353/276/E103/2012 (Government Gazette 415/B/2012).** **JMD 33318/3028/11.12.1998 (Government Gazette 1289/B/1998)** "definition of measures and procedures for the conservation of natural habitats and wild fauna and flora" and its amendment **JMD HH 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 and 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)** "Update of the national list of sites 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".

DIRECTIONS	INCORPORATION INTO NATIONAL LAW
Drinking Water (Directive 2020/2184/EU)	**JMD No. Δ1 (δ)/ΓΠ οικ. 27829/15-5-2023 (Government Gazette 3525/B/25-5-2023)** "Quality of water intended 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)"
Environmental Impact of Projects/ Activities (Directives 85/337/EEC, 2011/92/EU, 2014/52/EU)	**Law 4014/2011 (Government Gazette 209/A/2011)** "Environmental licensing of projects and activities, regulation of arbitrary acts in connection with the creation of environmental balance and other provisions under the competence of the Ministry of Environment" as amended and in force. **MD οικ.5688/2018 (Government Gazette 988/B` 21.3.2018)** "Modification of the annexes of the 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 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 environmental protection".
Industrial Emissions Directive IED (Directives 96/61/EC, 2008/1/EC, 2010/75/EU)	**MD 36060/1155/E.103/2013 (Government Gazette 1450/B/2013)** "Establishing a framework of rules, measures and procedures for the integrated 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"
Protection from Nitrate Pollution (Directive 91/676/EEC)	**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 οικ. 19652/1906/1999 (Government Gazette 1575/B/1999)** "Identification 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 Joint Ministerial Decision No. 16190/1335/1997 "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 the **Ministry of Public Provisions 20419/2522/2001 (Government Gazette 1212/B/2001), the Ministry of Public Provisions 24838/1400/E103/2008 (Government Gazette 1132/B/2008), the Ministry of Public Provisions 106253/2010 (Government Gazette 1843/B/2010), the Ministry of Public Provisions 190126/2013 (Government Gazette 983/B/2013), the Ministry of Public Provisions 147070/2014 (Government Gazette 3224/B/2014)** and in force. **JMD YPEN/38552/265/2019 (Government Gazette 1496/B/3-5-2019)** Action Program for areas identified as vulnerable zones from nitrate pollution of agricultural origin according to Article 2 of the relevant Decree No. 19652/1906/1999 Joint Ministerial Decision (V'1575), as in force, in compliance with Directive 91/676/EEC "for the protection of waters against nitrate pollution of agricultural origin" of the Council of the European Communities of 12 December 1991, as amended and in force. **MD 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)

DIRECTIONS	INCORPORATION INTO NATIONAL LAW
Plant protection products (Directive 2009/128/EC, as amended by 2019/782/EU, Regulation (EC) No 1107/2009, Regulation (EU) No 652/2014)	**Law 4036/27.01.2012 (Government Gazette 8/A/2012)** "Placing of agricultural products on the market, rational use of agricultural products 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)].
Addressing major accident (Seveso) (Directive 2012/18/EU)	**JMD 172058/2016 (Government Gazette 354/B/2016)** "Determination of rules, measures and conditions for addressing the risks of major accidents in installations or units, due to the presence of hazardous substances, in compliance with the provisions of Directive 2012/18/EU "on the control of major accident hazards involving dangerous substances and on the amendment and subsequent repeal of Council Directive 96/82/EC" of the European Parliament and of the Council of 4 July 2012. Replacement of Decree No 12044/613/2007 (376/B/2007), as corrected (Government Gazette 2259/B/2007)'.
Use of Sewage Sludge (Directives 86/278/EEC, 2018/853/EU, Regulation 2019/1010/EU)	**JMD 80568/4225/05.07.1991 (Government Gazette 641/B/1991)** "Methods, conditions and restrictions for the use in agriculture of sludge from domestic and urban wastewater treatment" **JMD No. ΥΠΕΝ/ΔDA/41828/630 (FEK 2692/B/21.04.2023)** "Measures, conditions and procedures for the use of treated sludge in agriculture and soil remediation - Compliance with the provisions of Council Directive 86/278/EEC of 12 June 1986 "on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture", as amended by Regulation (EU) 2019/1010 of the European Parliament and of the Council of 5 June 2019 and replacing Regulation (EU) No. 80568/4225/1991 (B' 641) Joint Ministerial Decision."
Urban Wastewater Treatment (Directives 91/271/EEC, 98/15/EC)	**KYA 5673/400/05.03.1997 (Government Gazette 192/B/1997)** "Measures and conditions for the treatment of urban wastewater" and its amending decisions **YA 19661/1982/2.8.1999 (Government Gazette 1811/B/1999)** and **YA 48392/939/28.3.2002 (Government Gazette 405/B/2002)**

The planned actions for the implementation of EU and national legislation on water protection are presented in the following table.

Table 9.2-1: : Actions in implementation of EU Directives

DIRECTIONS	PLANNED ACTIONS
Bathing waters (Directive 2006/7/EC)	• **BO11:** Continue monitoring bathing water quality in accordance with Directive 2006/7/EC.
	• **BO12:** Update of the Registry of Swimming Beaches
Protection of wild birds (Directive 2009/147/EC) and habitats (Directive 92/43/EEC)	• **BO21:** Preparation/institution of Management Plans for protected areas of the Natura 2000 network that are directly dependent on water, with special reference to water management issues.
	• **BO22:** Monitor/assess the conservation status of water-dependent habitats and species in Natura 2000 sites.

DIRECTIONS	PLANNED ACTIONS
Drinking Water (2020/2184/EE)	• **BO31:** Monitoring the implementation of the Directive
Industrial Emissions Directive IED (Directive 2010/75/EU)	• **BO51:** Keeping a record-Registry of establishments covered by the provisions of the Directive
Protection from nitrates (Directive 91/676/EEC)	• **BO61:** Systematic monitoring of nitrate levels in water bodies that are or may be subject to nitrate pollution. Implementation of the Code of Good Agricultural Practice.
Plant protection products (Directive 2009/128/EC, Regulation (EC) No 1107/2009, Regulation (EU) No 652/2014)	• **BO71:** Rational use of plant protection products
Addressing major accident (Seveso) (Directive 2012/18/EU)	• **BO81:** Keeping a record-Registry of establishments covered by the provisions of the Directive.
Use of Sewage Sludge (Directive 86/278/EEC)	• **BO91:** Preparation of a CBA on measures, conditions and procedures for the use of sludge from the treatment of domestic and urban wastewater and certain liquid wastes, in compliance with the provisions of Directive 86/278/EEC and replacing CBA 80568/4225/1991 and promotion of actions related to the safe disposal of treated sludge.
Urban waste water treatment (Directives 91/271/EEC and 98/15/EC) Regulation (EC) No 1107/2009, Regulation (EU) No 652/2014)	• **BO101:** Completion of sewerage and wastewater treatment works in agglomerations covered by the Directive
	• **BO102:** Strengthening actions to monitor the efficient operation of existing wastewater treatment and drainage projects.

9.2.2 Other Basic Measures (Group II Basic Measures)

These categories of basic measures relate to the basic principles of Community and national water management legislation. The basic measures in this group relate to the horizontal application of actions to groups of water bodies, usually with the aim of achieving or maintaining good status in them.

A summary table is presented below with the measures proposed by this Group in the program of measures of the River Basin District of Epirus and the corresponding categories of measures. The program of measures for the River Basin District of Epirus includes 21 basic measures.

Table 9.2-2: Basic Measures of Other Categories

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE
M05B0204 **Training and expertise of all stakeholders (Decentralized Administrations, Regional Administration and water service providers) on the general rules of costing and pricing of water supply services**	Measures to implement the principle of cost recovery for water services (Article 9)	-	Ongoing Measure (modification of title and description)
M05B0301 **Preparation / Update of Water Master Plans (Masterplan)**	Measures to promote the efficient and sustainable use of water so as not to compromise the achievement of the objectives of the Directive (Article 4)	-	M05B0301 Ongoing Measure (modification of description)
M05B0302 **Actions for the reinforcement, rehabilitation, modernization of water supply networks and leakage control**	Measures to promote the efficient and sustainable use of water so as not to compromise the achievement of the objectives of the Directive (Article 4)	Modification / Specialization of measure WD05B100	M05B0302 Ongoing Measure (modification of description)
M05B0303 **Increasing water use efficiency in land improvement infrastructure**	Measures to promote the efficient and sustainable use of water so as not to compromise the achievement of the objectives of the Directive (Article 4)	Modification / Specialization of measure WD05B060	M05B0303 Ongoing measure (modification of the description of the measure)
M05B0304 **Investments for saving water in agriculture**	Measures to promote the efficient and sustainable use of water so as not to compromise the achievement of the objectives of the Directive (Article 4)	Modification / Specialization of measure WD05B060	M05B0304 Ongoing measure
M05B0305 **Determination of upper limits for crop irrigation needs for private water abstraction**	Measures to promote the efficient and sustainable use of water so as not to compromise the achievement of the objectives of the Directive (Article 4)	Modification/ Specialization of measure WD05B150	M05B0305 Ongoing measure (modification of measure description)
M05B0401 **Protection of water abstraction points/zones intended for human consumption from Groundwater Bodies**	Measures to protect waters intended for human consumption (Article 7)	Modification / Specialization of measure WD05B080	M05B0401 Ongoing measure (modification of measure description, including obligations of Directive 2020/2184/EU)
M05B0402 **Protection of GWB included in the Register of protected areas for human consumption and establishment of an institutional framework of**	Measures to protect waters intended for human consumption (Article 7)	Modification / Specialization of measure WD05B120	M05B0402 Ongoing measure

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE
protection			
M05B0403 **Protection of water projects intended for human consumption from Surface Water Bodies**	Measures to protect waters intended for human consumption (Article 7)	-	M05B0403 Ongoing measure (modification of the description of the measure including the obligations of Directive 2020/2184/EU)
M05B0501 **Restrictions, terms and conditions for the construction of groundwater abstraction projects (boreholes, wells, etc.) for new uses, as well as the extension of permits for existing water uses in:** **(a) areas with poor quantitative status** **(b) in protection zone II of water abstractions serving drinking water supply networks operated by water service providers,** **(c) zones of irrigation networks associations** **(d) GWB in coastal zones with extensive or localised salinisation problems, irrespective of their origin**	Measures to control surface and groundwater abstraction and surface water storage	Modification / Specialization of measure WD05B190	M05B0501 Ongoing measure (modification of measure description)
M05B0601 **Investigation of the conditions for the application of artificial groundwater aquifer enrichment as a means of quantitative enhancement and qualitative protection of GWB, with priority to GWB in poor condition and treatment of salinisation**	Measures for the control and licensing of artificial enrichment of the GIS	Continuation of Measure WD05B200	M05B0601 Ongoing measure
M05B0701 **Strengthening environmental inspections and audits**	Measures on point sources of discharges	-	M05B0701 Ongoing measure
M05B0702 **Defining guidelines and developing tools for the effective control of wastewater and industrial wastewater discharges**	Measures on point sources of discharges	-	New measure to replace M05B0702 & M05B1102
M05B0704 **Conditions** for the **licensing** of **new/expansion of existing aquaculture facilities**	Measures on point sources of discharges	-	M05B0704 Ongoing measure
M05B0705 **Establishment of rules for the protection of** sinkholes	Measures on point & diffuse sources of discharges	-	M05B0705 Ongoing measure
M05B0801 Biological agriculture	Measures on diffuse sources of discharges	Modification / Specialization of measure WD05B300	M05B0801 Ongoing measure (modification of measure description)
M05B0803 **Reduction of diffuse pollution from agriculture in the vulnerable zones of Directive 91/676/EEC**	Measures on diffuse sources of discharges	-	M05B0803 Ongoing measure (modification of measure

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE
			description)
M05B0902 **Determination of the** maximum range of reservoir level variation	Measures to address negative impacts on the status of surface water bodies in particular from hydro-morphological alterations	-	M05B0902 Ongoing measure (modification of measure description)
M05B0905 Determination of selected areas for river sediment deposits removal **for the needs of civil engineering works**	Measures to address negative impacts on the status of surface water bodies in particular from hydro-morphological alterations	Continuation of Measure WD05B340	M05B0905 Ongoing measure (modification of measure description)
M05B0906 **Monitoring, recording and restoration of coastal erosion**	Measures to address negative impacts on the status of surface water bodies in particular from hydro-morphological alterations		M05B0906 Ongoing measure
M05B0907 **Measures to identify and achieve Good Ecological Potential in** Heavily **Modified Water** Bodies	Measures to address negative impacts on the status of surface water bodies in particular from hydro-morphological alterations	-	New measure, following the implemented measure M05B0904 of the 1st Update

9.2.3 Supplementary Measures

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

Methodologically, supplementary measures were suggested:

α) To maintain the good status of surface or groundwater bodies, as well as to increase knowledge and awareness on specific issues for the rational use of water for targeted users. In this case, the supplementary measures are applied horizontally and do not identify the water bodies affected.

b) Water bodies that, despite the implementation of the program of basic measures, are estimated to fail to achieve the good status objective by 2027, namely:

- in water bodies which, according to measurements of qualitative and quantitative parameters or according to the new grouping methodological approach, are in a lower than good status,
- in water bodies which are in good status but where there is clear evidence, through the analysis of pressures, that they are at risk of failing to achieve their environmental objectives.

The measures of case (b) shall be taken into consideration for the calculation of environmental and/or resource costs, in accordance with the applicable costing rules.

The program of measures for the River Basin District of Epirus includes 39 additional measures. The following table lists the complementary measures to achieve good status in the surface and groundwater bodies of the river basin district:

Table 9.2-3: Supplementary measures to achieve the objectives of the Directive in surface and groundwater bodies in the River Basin District of Epirus (EL05)

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
M05Σ0201 **Development of a Monitoring System for the Program of Measures of the RBMP of the River Basin District and provision of support services for the implementation of the program of measures of the RBMP of the River Basin District**	Administrative Measures	-	M05Σ0201 Ongoing measure	All WB	650.000
M05Σ0202 **Incorporation of Greek Library of Mitigation Measures (GEP measures) into the environmental permits of projects and activities**	Administrative Measures	-	NEW MEASURE	All WB	0
M05Σ0203 **Establishment of the Ionian Islands River Basin District (EL15)**	Administrative Measures	-	NEW MEASURE	All WB (in EL0534)	0
M05Σ0204 **A package of measures to prevent and tackle water scarcity and drought.**	Administrative Measures	-	NEW MEASURE	All WB (in EL0534)	190.000
M05Σ0205 **Establishment of an institutional framework for determining the conditions for the protection of inland recreational waters under Article 6 of Directive 2000/60/EC - Temporary regulation for new projects in inland water bodies included as recreational waters in the Register of Protected Areas under Article 6 of Directive 2000/60/EC**	Administrative Measures	Continuation of measure WD05B330	Modification of the basic measure M05B0901	EL0512L000000004H (PAMVOTIDA LAKE), EL0511RLA0200001H (TECHNITI LIMNI PIGON AOOU), EL0511R0A0204010N (BOVIDOMATIS P. 2), EL0514R000200056N (ARACHTHOS P. 5), EL0514R000200054N (ARACHTHOS P. 3), EL0514R000200063N (ARACHTHOS P. 6), EL0514R000200055N	0

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
				(ARACHTHOS P. 4), EL0514R000200064N (ARACHTHOS P. 7), EL0514R000200065N (ARACHTHOS P. 8), EL0514R000206057N (KALARRITIKOS P. 1), EL0512R000200033N (THIAMIS P. KALAMAS 6), EL0512R000200040N (THIAMIS P. KALAMAS 8), EL0513R000201043N (ACHERON P. (MAVROPOTAMOS) 1), EL0513R000200045N (ACHERON P. (MAVROPOTAMOS) 2), EL0513R000200046N (ACHERON P. (MAVROPOTAMOS) 3), EL0513R000200047N (ACHERON P. (MAVROPOTAMOS) 4), EL0546R000200081N (LOUROS P. 4), EL0546R000200082N (LOUROS P. 5)	

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
M05Σ0401 **Initiatives on making an environmental agreement between the Management Authority of the protected area of the wetland system of Amvrakikos and the organisations of agricultural farmers' and livestock farmers' for the reduction of the impacts of agriculture on the status of wetland ecosystems**	Environmental agreements after negotiations	It is related to the measure WD05S030 of the first RBMP	M05Σ0401 Ongoing measure	EL0513C0007N (VOREIOS AMVRAKIKOS KOLPOS), EL0514R000100048N (DIPOTAMON R.), EL0514R000200051N (ARACHTHOS P. 2), EL0546R000200081N (LOUROS P. 4), EL0546R000202079N (LOUROS P. - PARAPOTAMOS)	20.000
M05Σ0402 **Initiatives on making an environmental agreement between the Management Authority of the protected area of the wetland system of Amvrakikos and association of fishermen and aquaculture farmers for the reduction of any potential impacts of extensive and intensive aquaculture on the status of transitional and coastal water bodies and ecosystems**	Environmental agreements after negotiations	It is related to the measure WD05S040 of the first RBMP	M05Σ0402 Ongoing measure	EL0513C0007N (VOREIOS AMVRAKIKOS KOLPOS)	20.000
M05Σ0501 **Audits in the outlets of stormwater and other point sources of pollution discharging into surface water systems**	Emission controls	-	M05Σ0501 Ongoing measure	All WB	120.000
M05Σ0503 **Audits on compliance with the discharging limits by industrial processing and livestock and poultry farms within the catchment area of the water body at least twice a year**	Emission controls	-	M05Σ0503 Ongoing measure	EL0512L0000000000004H (LIMNI PAMVOTIDA), EL0512R000212139A (TAFROS LAPSISTA)	200.000
M05Σ0504 **Design and implementation of a specialised program aiming at monitoring point source**	Emission controls	-	NEW MEASURE	THE BAY OF IGOUMENITSA EL0512C0003H	100.000

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
discharges in SWB related to specific pollutants according to the results of the Registry of pollution sources				ARACHTHOS P. 10 EL0514R000210069N (and upstream WB) ARACHTHOS P. 2 EL0514R000200051N (and upstream WB) ACHERON P. (MAVROPOTAMOS) 1 EL0513R000201043N (and upstream WB) AOOS P. 4 EL0511R0A0200018N (and upstream WB) VOREIOS AMVRAKIKOS KOLPOS EL0513C0007N DIPOTAMON R. EL0514R000100048N (and upstream WB) THYAMIS P. KALAMAS 3 EL0512R000200027N (and upstream WB) LOUROS P. 2 EL0546R000200078N (and upstream WB) LOUROS P. 4 EL0546R000200081N (and upstream WB) METSOVITIKOS P.2 EL0514R000208067N TAFROS LAPSISTA EL0512R00021213139A (and upstream WB)	

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
M05Σ0505 **Implementation of mechanisms and technologies for the limitation of chemical and biological pollution, hydromorphological alterations, and hydro-morphological changes from aquaculture farms in inland waters**	Emission controls	-	NEW MEASURE	LOUROS P. 1 (EL0546R000201077N), LOUROS P. 2 (EL0546R000200078N), LOUROS P. 3 (EL0546R000200080N), LOUROS P. 4 (EL0546R000200081N), LOUROS P. 5 (EL0546R000200082N), BOIODOMATIS P.1 (EL0511R0A0204009N)	200.000
M05Σ0506 **Investigative monitoring program on the quality status of groundwater and surface water bodies in the areas of existing landfills**	Emission controls	Modification / Specialisation of measure WD05S080	Modification of basic measure M05B0703	SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (EL0500021), SYSTIMA KOKKODON YDROFORION N. KERKYRAS (EL0500033), ARACHTHOS P. 6 (EL0514R000200063N), TECHNITI LIMNI POURNARIOU (EL0514RL00200003H), THYAMIS P. KALAMAS 4 (EL0512R000200029N), ACHERON P. (MAVROPOTAMOS) - PARAPOTAMOS KOKTOS (VOUVOS) (EL0513R000202044N)	0
M05Σ0701 **Projects for the improvement of the hydraulic connection between some parts of the wetland systems of Amvrakikos, which are facing problems of insufficient fresh or saltwater supply.**	Restoration and rehabilitation of wetland areas	It is related to measure WD05S110 of the first RBMP	M05Σ0701 Ongoing measure	EL0513C0007N (VOREIOS AMVRAKIKOS KOLPOS)	500.000

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
M05Σ0702 **Preparation of a study for examining the possibility to develop new wetland areas around the surface sources of supply of Lake Pamvotida.**	Restoration and rehabilitation of wetland areas	It is related to the measure WD05S120 of the first RBMP	M05Σ0702 Ongoing measure	EL0512L00000000004H (LIMNI PAMVOTIDA)	100.000
M05Σ0801 **Quality control of licensed water abstraction projects in groundwater bodies with high natural background values (chloride ions)**	Control of abstractions	It is related to the measure WD05S160 of the first RBMP	M05Σ0801 Ongoing measure	EL0500010 (SYSTIMA ASVESTOLITHON N.KERKYRAS), EL0500040 (SYSTIMA N.PAXON - ANTIPAXON), EL0500050 (SYSTIMA N.OTHONON - EREIKOUSAS - MATHRAKIOU), EL0500170 (SYSTIMA PARGAS), EL050A070 (SYSTIMA FILIATON-IGOYMENITSAS)	50.000
M05Σ0802 **Control of artesian wells**	Control of abstractions	It is related to the measure WD05S150 of the first RBMP	M05Σ0802 Ongoing measure	All WB	0
M05Σ0803 **Restrictions, terms and conditions for the construction of new boreholes in the Mitsikeli subsystem (EL0500181) of the SYSTIMA MITSIKELIOY-VELLA, as well as for the extension of existing water use permits**	Control of abstractions	It is related to the measure WD05S130 of the first RBMP	M05Σ0803 Ongoing measure	EL0500181 (SYSTIMA MITSIKELIOY-VELLA (Mitsikeli)	0
M05Σ0804 **Restrictions and conditions for the construction of new water abstraction projects in the SYSTIMA CHERSONISOU PREVEZAS EL0500140 and its subsystems that are in poor quality condition.**	Control of abstractions	-	Further Specialisation of M05Σ0804	SYSTIMA CHERSONISOU PREVEZAS (EL0500140) and its subsystems	0
M05Σ0805	Control of abstractions	-	M05Σ0805	EL0500140 (SYSTIMA	50.000

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
Reduction or replacement of groundwater pumping with abstraction from a surface water body or other groundwater body or technical project Ponds, dam)			Ongoing measure	CHERSONISOU PREVEZAS)	
M05Σ0806 Restrictions and conditions for the construction of new water abstraction projects in SYSTIMA ASVESTOLITHON N.KERKYRAS (EL0500010), SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (EL0500020), & SYSTIMA KOKKODON YDROFORION N. KERKYRAS (EL0500030)	Control of abstractions	-	M05Σ0806 Ongoing measure	KALARRITIKOS SYSTIMA ASVESTOLITHON N.KERKYRAS (EL0500010), SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS (EL0500020), SYSTIMA KOKKODON YDROFORION N. KERKYRAS (EL0500030) and their subsystems	0
M05Σ0807 Implementation of a water flow metering program in SWB with high abstraction pressure assessment	Control of abstractions	-	NEW MEASURE	THIAMIS P. KALAMAS 2 (EL0512R000200024H), THIAMIS P. KALAMAS 1 (EL0512R000201023H), AEOS P. 5 (EL0511R0A0200020N)	80.000
M05Σ0808 Specific arrangements for the protection of the quantitative status of the GWB	Control of abstractions	-	NEW MEASURE	All WB (in EL0536)	0
M05Σ0809 Electronic annual recording of measurements of surface and groundwater bodies abstractions	Control of abstractions		Modification of Basic M05B0502	All WB	200.000
M05Σ1001 Preparation of studies on the reuse of treated wastewater for all existing WWTPs	Efficiency and re-use measures	-	M05Σ1001 Ongoing measure	All WB	90.000
M05Σ1002 Providing incentives for the installation of water saving equipment / upgrading of wastewater treatment facilities in large hotels and reduction of abstraction from GWB	Efficiency and re-use measures	-	NEW MEASURE	EL0500010 (SYSTIMA ASVESTOLITHON N.KERKYRAS), EL0500020 (SYSTIMA TRIADIKON LATYPOPAGON N. KERKYRAS), EL0500032 (SYSTIMA	200.000

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
				KOKKODON YDROFORION N. KERKYRAS), EL0500040 (SYSTIMA N.PAXON - ANTIPAXON)	
M05Σ1301 **Restoration of communication between the springs of Santinikos and Amfithea with LIMNI PAMVOTIDA.**	Rehabilitation projects	It is related to measure WD05S340 of the first RBMP	M05Σ1301 Ongoing measure	EL0512L00000000004H (LIMNI PAMVOTIDA)	300.000
M05Σ1302 **Habitat restoration in the transitional HMWB LIMNOTHALASSA CHALIKIOPOULOU**	Rehabilitation projects	-	NEW MEASURE	EL0534T0007H (LIMNOTHALASSA CHALIKIOPOULOU)	250.000
M05Σ1303 **Ensuring additional flow/ minimum flow measurements in the old Kalamas riverbed**	Rehabilitation projects	-	NEW MEASURE	THIAMIS P. KALAMAS 2 (EL0512R000200024H), THIAMIS P. KALAMAS 1 (EL0512R000201023H)	20.000
M05Σ1401 **Study to investigate the possibility of enriching the groundwater body of the SYSTIMA CHERSONISOU PREVEZAS from the Louros River**	Artificial enrichment of the GWB	-	M05Σ1401 Ongoing measure	SYSTIMA CHERSONISOU PREVEZAS (EL0500140)	150.000
M05Σ1402 **Study to investigate the possibility of enriching the groundwater of the area of Kanaliou-Kastrosikias from the ARETHOUA stream**	Artificial enrichment of the GWB	-	M05Σ1402 Ongoing measure	SYSTIMA CHERSONISOU PREVEZAS (EL0500140)	150.000
M05Σ1501 **Professional training of farmers for the protection of water bodies**	Educational measures	-	M05Σ1501 Ongoing measure	All WB	97.155
M05Σ1502 **Informing and raising public awareness regarding water issues**	Educational measures	-	M05Σ1502 Ongoing measure	All WB	50.000
M05Σ1503 **Strengthening of environmental programs in Primary Education**	Educational measures	-	M05Σ1503 Ongoing measure	All WB	50.000

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
M05Σ1601 **Pilot measures for the implementation of precision agriculture**	Research, development and demonstration projects	-	M05Σ1601 Ongoing measure	All WB	200.000
M05Σ1603 **Design and implementation of a specific investigative monitoring program with the aim of collecting data for the provisional identification of water bodies downstream of dams as Heavily Modified Water Bodies**	Research, development and demonstration projects	-	M05Σ1603 Ongoing measure	EL0511R0A0200020N (AOOS P. 5), EL0514R000200051H (ARACHTHOS P. 2)	180.000
M05Σ1605 **Assessment of the ecocapacity of the Louros River regarding the potential installation of trout farms**	Research, development and demonstration projects	It is related to the measure WD05S300 of the first RBMP	M05Σ1605 Ongoing measure	EL0546R000200081N (LOUROS P. 4)	50.000
M05Σ1606 **Monitoring the anoxicity observed in the Amvrakikos Gulf and the time evolution of this stratification**	Research, development and demonstration projects	-	M05Σ1606 Ongoing measure	EL0513C0007N (VOREIOS AMVRAKIKOS KOLPOS),	100.000
M05Σ1609 **Development of a network of hydrometric stations**	Research, development and demonstration projects	-	NEW MEASURE	All WB	700.000
M05Σ1610 **Regional Monitoring Program for SWB in the RBD of Epirus with a low level of confidence in status assessment**	Research, development and demonstration projects	-	NEW MEASURE	EL0511R0A0200016N (AOOS P. 3), EL0511R0A0200021N (AOOS P. 6), EL0512R000200041N (THIAMIS P. KALAMAS 9), EL0512R000201023H (THIAMIS P. KALAMAS 1), EL0512R000202026A (TECHNITO TMIMA EKVOLIS KALAMA 1), EL0512R000206030N, (THYAMIS	320.000 €

CODE - NAME OF MEASURE	CATEGORY OF MEASURE	CORRELATION WITH 1st RBMP	CORRELATION WITH 1st UPDATE	WB CONCERNED	COST (€)
				P. KALAMAS - PARAPOTAMOS KALPAKIOTIKOS 1), EL0512R000212037N (SMOLITSAS P.), EL0513R0001042N (ARETHOUA R.), EL0513R000202044N (ACHERON P. (MAVROPOTAMOS) - PARAPOTAMOS KOKTOS (VOUVOS)), EL0514R000202052N (RETSANORREMA), EL0534R0001074N (POTAMI), EL0534R000701083N (KERKYRAS P.), EL0546R000200080N (LOUROS P. 3), EL0546R000200082N (LOUROS P. 5), EL0546R000202079N (LOUROS P. - PARAPOTAMOS), EL0534R000501076N (FONISSAS P.), EL0534T0006N (LIMNOTHALASSA ANTINIOTI)	

10 NEXT STEPS

10.1 Difficulties encountered in the preparation of the 2nd Update

The preparation of the Management Plan, as a whole, was a demanding task, multidimensional and complex, with the main limitation being the lack of information regarding both the results of the monitoring program implemented in the National Monitoring Network and the non-implementation of measures of the 1st Update concerning the implementation of investigative monitoring programs.

Quantitative data of different water uses, with the exception of household water use, still have deficiencies or difficulties in their accurate calculation in the preparation of the 2nd Update.

Apart from the above, the usual problems that occur both at national level and at the level of the River Basin District of Epirus were the following:

- Restrictions on the recording of pollutant loads discharged by industry and the anti-pollution technologies applied.
- Restrictions on recording of abstractions for both drinking water supply and irrigation.
- Difficulties in the completeness of data collection that would complement and document to a greater extent, issues considered under the requirements of the Directive such as pressure data.
- Deficiencies in the correlation of geospatial data with point sources of pollution.
- Inadequately staffed competent departments that are required to implement the Management Plans, both at the level of decentralised administration and at the regional level (Water Directorates, Water Management Departments etc.).
- Unsatisfactory cooperation between bodies with an important role in water management (Regional Irrigation Network Association, Local Irrigation Network Association, Ministry of Rural Development and Food).
- Incomplete records of water cost and billing, non-adherence to relevant accounting standards in some MEWSS or local authorities.
- No distinction between the economic elements of water supply and sewerage services, making it impossible to differentiate between the two water services in the economic analysis.
- Non-differentiation of billing data by use by water service providers for both water supply and irrigation water supply.
- Limited access of the relevant authorities to Community financial resources for the implementation of measures included in the respective programs of basic and supplementary measures.

10.2 Next steps - Implementation of the Management Plan

The objective of the Management Plan is to prevent further deterioration, protect and improve the status of inland surface, transitional, coastal and groundwater bodies, as well as the terrestrial ecosystems and wetlands directly dependent on them. To achieve this objective requires the implementation of the Program of Basic and Supplementary Measures.

The Program of Measures has been designed in such a way that the priority of each intervention is clearly indicated according to its cost, its effectiveness, the importance of the water system to which it applies and the necessary time to prepare it.

All elements of the Program of Measures are important, but some planning and prioritisation is required to enable the monitoring of the progress and to identify where corrective action is needed when deviations from targets are identified.

In the following, some main axes are proposed that constitute a basic framework for the organisation of the Action Plan, which can be enriched and eventually shaped according to the views of the competent services, in order to better implement the Management Plan:

- **Monitoring/investigation programs for the quantitative and qualitative status of surface and groundwater bodies.** Bodies have been identified for which existing data are not sufficient for classification (with emphasis on water bodies with a low level of confidence, due to classification by grouping/expert judgement and high or moderate pressure intensity). Priority should therefore be given to measures related to the verification of the status of these systems.
- **Ensuring drinking water in sufficient quantity and satisfactory quality in accordance with the requirements of the relevant legislation**.
- **Water for agriculture.** Agriculture is an important activity for the local and national economy. Measures related to modernization of irrigation infrastructure, adoption of modern irrigation methods and adoption of good agricultural practices that reduce irrigation water abstractions and the impact of agriculture on diffuse and point source pollution and are an important priority for the Management Plan.
- **Protected areas.** The River Basin District includes several protected areas of particular importance.
- **Strengthening environmental inspections and audits.** The implementation of the Program of Measures requires wider and more intensive audits of water abstractions and pollution from point sources.
- **Other Measures in accordance with the Program of Measures.**

Further critical issues that determine the degree of implementation of the Program of Measures are the following:

- coordinating the stakeholders involved in its implementation and ensuring channels of communication with other stakeholders.

- The evaluation of the results of the Monitoring Network of water bodies and its appropriate adaptation, where necessary, both to cover missing data and to rationalise it, so that during the process of implementing the program of measures it is possible to monitor the progress and impact of the measures on water status.

11 CROSS-BORDER COOPERATION

Our country shares with Albania the RB of Aoos (EL0511), occupying the upstream part of the basin (approximately 25%). In the case of Aoos there is no issue of significant negative impacts on the water bodies due to anthropogenic uses and operations in the upstream part of the basin, but there should be an update on the provisions of the Management Plan when it is finalized.

It is noted that significant cross-border cooperation has developed between Greece and Albania in recent years.

The Water Directorate of Epirus of the Decentralized Administration of Epirus - Western Macedonia, participated in two meetings in 2023, in the framework of the project "ESPID4Vjosa", which is implemented by EuroNatur and EcoAlbania. The project is funded by the Austrian Development Agency and started to be implemented in December 2021. The aim of the project is to support the initiation process of the development of the management plan for the Aoos River Basin by providing water management authorities and other stakeholders with preliminary information on the use, challenges and risks in water resources management.

In these meetings the Directorate of Water of Epirus presented the results of the 2nd Update of the RBMP of Epirus, with emphasis on the River Basin of Aoos (EL0511). More specifically, the results of the status of the surface water bodies and calculation of water abstractions from the RB of Aoos were presented, while there was reference to the proposed ecological corridor of Aoos - Voidomatis - Sarantaporos proposed in the Special Environmental Study of the Natura 2000 sites of the Regional Units of Thesprotia, Ioannina and Grevena – ANATOLIKO TMIMA (SES 11a), for which the public consultation process has been completed.

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12 SUMMARY STATISTICS FOR THE RIVER BASIN DISTRICT OF EPIRUS (EL05)

The following Tables contain aggregated statistics for the River Basin District of Epirus (EL05).

Table 12-1: Categories of Water body per RB in the RBD of Epirus (EL05)

CATEGORIES OF WATER BODIES	RB of Aoos (EL0511)	RB of Kalamas (EL0512)	RB of Acherontos (EL0513)	RB of Arachthos (EL0514)	RB of Kerkyras-Paxon (EL0534)	RB of Lourus (EL0546)	RBD TOTAL
River WB	22	19	6	26	4	6	83
Lake WB	1	1	0	2	0	0	4
Transitional WB	0	1	1	1	3	1	7
Coastal WB	0	3	4	0	6	0	13
TOTAL SURFACE WB	23	24	11	29	13	7	107
Groundwater bodies	3	10	7	1	14	5	40
TOTAL NUMBER OF WATER BODIES	26	34	18	30	27	12	147
Heavily modified and artificial water bodies (HMWB/AWB)	1	8	0	3	2	0	14
Water bodies linked to protected areas	20	22	10	25	10	8	95

Table 12-2:Types of surface water bodies per RB in the RBD of Epirus (EL05)

TYPOLOGY OF SURFACE WATER BODIES	RB of Aoos (EL0511)	RB of Kalamas (EL0512)	RB of Acherontos (EL0513)	RB of Arachthos (EL0514)	RB of Kerkyras-Paxon (EL0534)	RB of Lourus (EL0546)	RBD TOTAL
River water bodies	**22**	**19**	**6**	**26**	**4**	**6**	**83**
Type R-M1	6	2	0	7	3	0	18
Type R-M2	14	4	2	14	0	0	34
Type R-M3	1	8	0	5	0	0	14
Type R-M4	1	5	4	0	1	6	17
Type R-M5	0	0	0	0	0	0	0
Reservoirs	**0**	**1**	**0**	**0**	**0**	**0**	**3**
Type L-M5/7	0	0	0	0	0	0	0
Type L-M8	1	0	0	1	0	0	2
Type GR-SR	0	0	0	1	0	0	1
Lake water bodies	**0**	**1**	**0**	**0**	**0**	**0**	**1**
Type GR-DNL	0	0	0	0	0	0	0
Type GR-SNL	0	1	0	0	0	0	1
Type GR-VSNL	0	0	0	0	0	0	0
Type GR-SP1	0	0	0	0	0	0	0
Transitional water bodies	**0**	**1**	**1**	**1**	**3**	**1**	**7**
Type TW 1	0	1	0	1	0	0	2
Type TW 2	0	0	1	0	3	1	5
Coastal water bodies	0	1	0	1	0	1	3
Type IIIE	**0**	**3**	**4**	**0**	**6**	**0**	**13**

Table 12-3: Results of the assessment of the status of water bodies per RB in the River Basin District of Epirus (EL05)

STATUS/ POTENTIAL			RB of Aoos (EL0511)				RB of Kalamas (EL0512)				RB of Acherontos (EL0513)				RB of Arachthos (EL0514)			
			Number	% Number	Length (km)	% Length	Number	% Number	Length (km)	% Length	Number	% Number	Length (km)	% Length	Number	% Number	Length (km)	% Length
RIVER WATER BODIES																		
TOTAL NUMBER OF RIVER WB	ECOLOGICAL	High																
		Good/Good and Above EP	19	86,36%	283,25	90,76%	8	42,11%	123,46	43,24%	2	33,33%	42,61	40,30%	19	73,08%	185,41	63,19%
		Moderate/Lower than Good EP	3	13,64%	28,84	9,24%	10	52,63%	155,86	54,59%	3	50,00%	57,14	54,03%	5	19,23%	69,93	23,83%
		Poor		0,00%		0,00%	1	5,26%	6,20	2,17%		0,00%		0,00%	2	7,69%	38,08	12,98%
		Bad		0,00%		0,00%		0,00%		0,00%	1	16,67%	5,99	5,67%		0,00%		0,00%
		Unknown		0,00%		0,00%						0,00%		0,00%				
	CHEMICAL	Good	21	95,45%	308,07	98,71%	17	89,47%	278,91	97,68%	5	83,33%	99,75	94,33%	23	88,46%	252,07	85,91%
		Failing to achieve good	1	4,55%	4,02	1,29%	2	10,53%	6,62	2,32%	1	16,67%	5,99	5,67%	3	11,54%	41,35	14,09%
		Unknown										0,00%		0,00%		0,00%		0,00%

(continuation of Table)

STATUS/ POTENTIAL			RB of Kerkyras-Paxon (EL0534)				RB of Lourus (EL0546)				RBD TOTAL			
			Number	% Number	Length (km)	% Length	Number	% Number	Length (km)	% Length	Number	% Number	Length (km)	% Length
RIVER WATER BODIES														
TOTAL NUMBER OF RIVER WB	ECOLOGICAL	High												
		Good/Good and Superior EP		0,00%		0,00%	1	16,67%	1,73	2,07%	49	59,04%	636,46	57,70%
		Moderate/Lower than Good EP	2	50,00%	8,16	36,16%	3	50,00%	47,11	56,31%	26	31,33%	367,05	33,28%
		Poor		0,00%		0,00%	2	33,33%	34,83	41,63%	5	6,02%	79,11	7,17%
		Bad	2	50,00%	14,40	63,84%		0,00%		0,00%	3	3,61%	20,40	1,85%
		Unknown		0,00%		0,00%		0,00%		0,00%				
	CHEMICAL	Good	1	25,00%	7,51	33,28%	4	66,67%	51,15	61,14%	71	85,54%	997,46	90,43%
		Failing to achieve good	3	75,00%	15,06	66,72%	2	33,33%	32,52	38,86%	12	14,46%	105,56	9,57%
		Unknown												

STATUS/ POTENTIAL			RB of Aoos (EL0511)				RB of Kalamas (EL0512)				RB of Acherontos (EL0513)				RB of Arachthos (EL0514)			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
LAKE WATER BODIES																		
TOTAL NUMBER OF LAKE WB	ECOLOGICAL	High																
		Good/Good and Superior OD																
		Moderate/Lower than Good OD					1	100,00%	19,24	100,00%								
		Poor																
		Bad																
		Unknown																
	CHEMICAL	Good					1	100,00%	19,24	100,00%								
		Failing to achieve good																
		Unknown																

(continuation of Table)

STATUS/ POTENTIAL			RB of Kerkyras-Paxon (EL0534)				RB of Lourus (EL0546)				RBD TOTAL			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
LAKE WATER BODIES														
TOTAL NUMBER OF LAKE WB	ECOLOGICAL	High												
		Good/Good and Superior OD												
		Moderate/Lower than Good OD									1	100,00%	19,24	100,00%
		Poor												
		Bad												
		Unknown												
	CHEMICAL	Good									1	100,00%	19,24	100,00%
		Failing to achieve good												
		Unknown												

STATUS/ POTENTIAL			RB of Aoos (EL0511)				RB of Kalamas (EL0512)				RB of Acherontos (EL0513)				RB of Arachthos (EL0514)			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
RESERVOIRS																		
TOTAL NUMBER OF RESERVOIRS	ECOLOGICAL	Good and superior	1	100,00%	8,21	100,00%									2	100,00%	21,25	100,00%
		Medium																
		Poor																
		Bad																
		Unknown																
	CHEMICAL	Good	1	100,00%	8,21	100,00%									2	100,00%	21,25	100,00%
		Failing to achieve good																
		Unknown																

(continuation of Table)

STATUS/ POTENTIAL			RB of Kerkyras-Paxon (EL0534)				RB of Lourus (EL0546)				RBD TOTAL			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
RESERVOIRS														
TOTAL NUMBER OF RESERVOIRS	ECOLOGICAL	Good and superior									3	100,00%	29,46	100,00%
		Medium												
		Poor												
		Bad												
		Unknown												
	CHEMICAL	Good									3	100,00%	29,46	100,00%
		Failing to achieve good												
		Unknown												

STATUS/ POTENTIAL			RB of Aoos (EL0511)				RB of Kalamas (EL0512)				RB of Acherontos LAP (EL0513)				RB of Arachthos (EL0514)			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
TRANSITIONAL WATER BODIES																		
TOTAL NUMBER OF TRANSITIONAL WB	ECOLOGICAL	High																
		Good/Good and Superior OD									1	100,00%	1,85	100,00%	1	100,00%	139,74	100,00%
		Moderate/Lower than Good OD					1	100,00%	16,28	100,00%								
		Poor																
		Bad																
		Unknown																
	CHEMICAL	Good					1	100,00%	16,28	100,00%	1	100,00%	1,85	100,00%	1	100,00%	139,74	100,00%
		Failing to achieve good																
		Unknown																

(continuation of Table)

STATUS/ POTENTIAL			RB of Kerkyras-Paxon (EL0534)				RB of Lourus (EL0546)				RBD TOTAL			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
TRANSITIONAL WATER BODIES														
TOTAL NUMBER OF TRANSITIONAL WB	ECOLOGICAL	High												
		Good/Good and Superior OD	1	33,33%	0,61	8,70%					3	42,86%	142,20	35,26%
		Moderate/Lower than Good OD	2	66,67%	6,40	91,29%	1	100,00%	238,45	100,00%	4	57,14%	261,13	64,74%
		Poor												
		Bad												
		Unknown												
	CHEMICAL	Good	2	66,67%	4,78	68,19%	1	100,00%	238,45	100,00%	6	85,71%	401,10	99,44
		Failing to achieve good	1	33,33%	2,24	31,95%					1	14,29%	2,24	0,56%
		Unknown												

STATUS/ POTENTIAL			RB of Aoos (EL0511)				RB of Kalamas (EL0512)				RB of Acherontos LAP (EL0513)				RB of Arachthos (EL0514)			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
COASTAL WATER BODIES																		
TOTAL NUMBER OF COASTAL WB	ECOLOGICAL	High																
		Good/Good and Superior OD						0,00%		0,00%	3	75,00%	204,71	57,73%				
		Moderate/Lower than Good OD					3	100,00%	94,58	100,00%		0,00%		0,00%				
		Poor						0,00%		0,00%	1	25,00%	149,89	42,27%				
		Bad																
		Unknown																
	CHEMICAL	Good					3	100,00%	94,58	100,00%	3	75,00%	204,71	57,73%				
		Failing to achieve good									1	25,00%	149,89	42,27%				
		Unknown																

(continuation of Table)

STATUS/ POTENTIAL			RB of Kerkyras-Paxon (EL0534)				RB of Lourus (EL0546)				RBD TOTAL			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
COASTAL WATER BODIES														
TOTAL NUMBER OF COASTAL WB	ECOLOGICAL	High												
		Good/Good and Superior OD	5	83,33%	582,01	96,65%					8	61,54%	786,71	74,83%
		Moderate/Lower than Good OD	1	16,67%	20,20	3,35%					4	30,77%	114,78	10,92%
		Poor		0,00%		0,00%					1	7,69%	149,89	14,26%
		Bad												
		Unknown												
	CHEMICAL	Good	5	83,33%	582,00	96,65%					11	84,62%	881,29	83,82%
		Failing to achieve good	1	16,67%	20,20	3,35%					2	15,38%	170,09	16,18%
		Unknown												

STATUS/ POTENTIAL			RB of Aoos (EL0511)				RB of Kalamas (EL0512)				RB of Acherontos (EL0513)				RB of Arachthos (EL0514)			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
GROUNDWATER BODIES																		
TOTAL NUMBER OF GROUNDWATER BODIES	QUALITY	Good	3	100,00%	2041,59	100,00%	10	100,00%	2503,16	100,00%	5	71,43%	1280,35	87,70%	1	100,00%	1618,13	100,00%
		Bad	0	0,00%	0,00	0,00%	0	0,00%	0,00	0,00%	2	28,57%	179,63	12,30%	0	0,00%	0,00	0,00%
	QUANTITATIVE	Good	3	100,00%	2041,59	100,00%	10	100,00%	2503,16	100,00%	7	100,00%	1459,98	100,00%	1	100,00%	1618,13	100,00%
		Bad	0	0,00%	0,00	0,00%	0	0,00%	0,00	0,00%	0	0,00%	0,00	0,00%	0	0,00%	0,00	0,00%

(continuation of Table)

STATUS/ POTENTIAL			RB of Kerkyras-Paxon (EL0534)				RB of Lourus (EL0546)				RBD TOTAL			
			Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area	Number	% Number	Area (km)²	% Area
GROUNDWATER BODIES														
TOTAL NUMBER OF GROUNDWATER BODIES	QUALITY	Good	14	100,00%	627,1	100,00%	5	100,00%	1344,42	100,00%	38	95,00%	9.414,75	98,13%
		Bad	0	0,00%	0,00	0,00%	0	0,00%	0,00	0,00%	2	5,00%	179,63	1,87%
	QUANTITATIVE	Good	14	100,00%	627,1	100,00%	5	100,00%	1344,42	100,00%	40	100,00%	9.594,38	100,00%
		Bad	0	0,00%	0,00	0,00%	0	0,00%	0,00	0,00%	0	0,00%	0,00	0,00%

ANNEX I: TABLE OF MEASURES TO ACHIEVE GEP INCLUDED IN BASIC MEASURE M05B0907

Affected HMWB	GEP measures
ARACHTHOS P. 2 (EL0514R000200051H)	Prohibition of removing material from the rest of the riverbed downstream of the dam | Prohibition of obstruction of sediment transport in tributaries that confluence downstream of the dam
	Ecologically optimised conservation practices including sediment and vegetation management
	Seasonal or tidal restrictions on activity (e.g. maintenance works outside the breeding season)
	Choice of methods (e.g. vegetation cutting for drainage) or equipment
THIAMIS P. KALAMAS 3 (EL0512R0002010201027H)	Prohibition of removing material from the rest of the riverbed downstream of the dam | Prohibition of obstruction of sediment transport in tributaries that confluence downstream of the dam
	Ecologically optimised conservation practices including sediment and vegetation management
	Seasonal or tidal restrictions on activity (e.g. maintenance works outside the breeding season)
	Choice of methods (e.g. vegetation cutting for drainage) or equipment
THIAMIS P. KALAMAS 2 (EL0512R000200024H)	Provide additional flow/ minimum flow components (e.g. low flow, base flow, fish flow)
	Ecological adapted operation mode
	Improvement/development of key habitats (e.g. gravel bed/creation of ripples, provision of shelter)
	Ecologically optimised conservation practices including sediment and vegetation management
	Choice of methods (e.g. vegetation cutting for drainage) or equipment
	Development of riparian vegetation (e.g. tree planting)
THIAMIS P. KALAMAS 1 (EL0512R0002010201023H)	Provide additional flow/ minimum flow components (e.g. low flow, base flow, fish flow)

Affected HMWB	GEP measures
	Ecological adapted operation mode
	Improvement/development of key habitats (e.g. gravel bed/creation of ripples, provision of shelter)
	Ecologically optimised conservation practices including sediment and vegetation management
	Choice of methods (e.g. vegetation cutting for drainage) or equipment
	Development of riparian vegetation (e.g. tree planting)
ORMOS IGOYMENITSAS (EL0512C0003H)	Rip rap or ecological blocks instead of using concrete or steel
ORMOS GARITSAS KAI LIMENAS KERKYRAS (EL0534C0011H)	Rip rap or ecological blocks instead of using concrete or steel
	Select dredging method to retain sediment in the system or to avoid raising suspended sediment levels
LIMNI PAMVOTIDA (EL0512L00000000004H)	Vegetation management
	Increase of inflow
	Protection of important wetlands
	Ecologically optimised fish enrichment for species recovery and/or ecological regulation of catches *To the extent that a need for the fish species is documented by the National Monitoring Network*
LIMNOTHALASSA CHALIKIOPOULOU (EL0534T0007H)	Habitat restoration