SPECIAL SECRETARIAT FOR WATER

MINISTRY OF ENVIRONMENT & ENERGY

1st Update of River Basin Management Plans

River Basin District of

Northern Peloponnese (EL02)

Summary

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HELLENIC REPUBLIC
MINISTRY OF ENVIRONMENT & ENERGY
SPECIAL SECRETARIAT FOR WATER

DEVELOPMENT OF 1st UPDATE OF RIVER BASIN MANAGEMENT PLANS FOR THE 14 WATER DISTRICTS OF GREECE, IN ACCORDANCE WITH THE DIRECTIVE 2000/60/EC, THE LAW 3199/2003 AND THE P.D. 51/2007 - STUDY M1 "RIVER BASIN DISTRICT OF WESTERN PELOPONNESE (EL01), NORTHERN PELOPONNESE (EL02) AND EASTERN PELOPONNESE (EL03)"

JOINT VENTURE OF PELOPONNESE WATERBODIES:

- "HYDROEXIGIANTIKI LIMITED PARTNERSHIP" L.S. LAZARIDIS & PARTNERS LIMITED PARTNERSHIP
- LAZARIDIS & ASSOCIATES ATEM
- TEM (DESIGN CONSULTANCY) S.A.
- HPC-PASECO, SURVEYS AND STUDIES FOR THE PROTECTION, MANAGEMENT OF THE ENVIRONMENT & ENERGY SINGLE MEMBER LIMITED LIABILITY COMPANY
- DRAKOPOULOU EFSTATHIA daughter of LEONIDAS
- LIONIS MICHALIS son of HARALAMBOS
- VAKAKIS & PARTNERS RURAL DEVELOPMENT CONSULTANTS S.A.
- ALEXANDROS KOTZABOPOULOS son of GEORGE

RIVER BASIN DISTRICT OF NORTHERN PELOPONNESE (EL02)

Summary of 1st Update of River Basin Management Plans – English (Deliverable 22b Study M1)

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1st UPDATE OF RIVER BASIN MANAGEMENT PLANS

RIVER BASIN DISTRICT OF NORTHERN PELOPONNESE (EL02)

Summary

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LIST OF ABBREVIATIONS

AR	At Risk
AWB	Artificial Water Body/bodies
EQR	Ecological Quality Ratio
GD	Guidance Document
GIG	Geographical Intercalibration Group (
GOLR	General Organization of Land Reclamation
GWB	Groundwater Body/bodies
HMWB	Heavily Modified Water Body/ bodies
LOLR	Local Organization of Land Reclamation
MEWSS	Municipal Enterprise for Water Supply and Sewerage
NR	Not at Risk
NWMN	National Water Monitoring Network
PAR	Probably At Risk
PNR	Probably Not at Risk
RB	River Basin
RBD	River Basin District
RBMP	River Basin Management Plan
SCI	Site of Community Importance
SPA	Special Protection Area
SWB	Surface Water Body/bodies
WB	Water body/bodies
WFD	Water Framework Directive
WISE	Water Information System of Europe

1 INTRODUCTION – 1st UPDATE OF RIVER BASIN MANAGEMENT PLANS

1.1 INTRODUCTION

By decision 391 / 08.04.2013 (Government Gazette B' 1004) of the National Water Committee the 1st River Basin Management Plan of the River Basin District examined was approved.

The 1st Update has major changes and improvements from the 1st Management Plan:

- It is based on the use of data from the National Water Monitoring Network (NWMN), for the 2012-2015 period
- It is being drawn up at the same time as the Flood Risk Management Plans pursuant to Directive 2007/60 /EC and synergy of actions and a program of measures has being accomplished
- It is also being drawn up at the same time as the programs of measures for the achievement of the good environmental status of the marine waters of the country in accordance with the Directive 2008/56/EC and has achieved synergy of actions and of program of measures
- It takes into account the National Strategy for Adaptation to Climate Change and incorporates into the program of measures sub-actions of the National Strategy for Adaptation to Climate Change
- It takes into account the results of actions that have been implemented so far in the context of increasing knowledge of water status and the pressures they receive, as well as the actions implemented to fill in the gaps identified in the 1st Management Plan
- It takes into account the new requirements arising from the EU Directive 2000/60/EC Guidance Documents.
- It takes into account the results of the European Commission's Special Report on the Evaluation of Management Plans 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

The 1st Update is being carried out simultaneously for the 14 River Basin Districts of the country and homogeneity has been achieved in the individual methodologies but also in the proposed programs of measures (basic and supplementary).

1.2 CONSULTATION PROCESS

The consultation process on the 1st Update of River Basin Management Plans lasted from November 2015 to December 2017 and included the following:

• **1st Phase**: In November 2015, the content of the foreseen activities for the 1st Update of the RBMP was posted on the website of the Ministry of Environment and Energy timetable tender documents for the site of the RBMP (www.ypeka.gr) as well as the detailed timetable of the consultation process.

• **2nd Phase**: In June 2016, data on the important issues of water resources management in each RBD were posted on the same website, containing briefly the results of the National Water Monitoring Network for the RBD, the main pressures, the identification of the competent authorities and stakeholders involved in the consultation. Also, in December 2016, the basic common methodologies for the designation and classification of water bodies status, assessment of pressures and impacts including hydromorphological pressures, the definition of Highly Modified Water Bodies and the identification of the exemptions of Article 4 of Directive 2000/60 / EC, were posted on the same website.

• **3rd Phase**: In June 2017 a draft of the 1st Update of RBMP was posted on a special website of the Special Secretariat (http://wfdver.ypeka.gr), as well as a questionnaire. This phase included the publication of the Strategic Environmental Impact Study. **The consultation was completed in December 2017.**

2 DIFFERENTIATIONS IN COMPARISON WITH THE 1st RBMP

2.1 NEW ANALYTICAL METHODOLOGIES FOR CRITICAL ASPECTS OF THE IMPLEMENTATION OF DIRECTIVE 2000/60/EC

For the 1st Update of RBMP of the country, new analytical methodologies were developed for critical aspects of the implementation of Directive 2000/60/EC. All the analytical methodologies are available on the website of the Special Secretariat for Water http://wfdver.ypeka.gr/:

- Analysis of anthropogenic pressures and their impacts on surface and underground water systems
- Determination and criteria for assessment of hydromorphological alterations
- Determination of Heavily modified (HMWB) and Artificial (AWB) Water Bodies
- Determination of the "exceptions" to the achievement of the environmental objectives of Directive 2000/60/EC:
    - Identification of the "exceptions" of paragraphs 4 to 6 of Article 4 of Directive 2000/60 / EC (4.4 - 4.6)
    - Identification of the "exceptions" of paragraph 7 of Article 4 of Directive 2000/60 / EC (4.7) on new modifications
- Assessment (designation classification) of surface water bodies status:
    - Assessment of the ecological and chemical status of river water bodies
    - Assessment of ecological and chemical status of lake water bodies
    - Assessment of the ecological and chemical status of coastal and transitional water bodies
- Assessment methodologies for individual BQEs for each surface water category that has been approved by the EU in the context of the intercalibration exercise at European level. These methodologies concern the following:
    - Analytical methodologies for the assessment of biological quality elements in rivers.
    - Analytical methodologies for the assessment of biological quality elements in lakes.
    - Analytical methodologies for assessing the biological quality elements in coastal and transitional waters.

2.2 MAIN DIFFERENTIATIONS IN COMPARISON WITH THE 1ST RBMP

Main differentiations in comparison with the 1st RBMP

Content of 1st Update of RBMP/ Activity	Differentiation in comparison with the 1st RBMP
COMPETENT AUTHORITIES	The competent authorities are not differentiated in comparison with the 1st RBMP. In the Update, the inventory of the competent authorities and stakeholders involved in the Water Management, as it derives from the existing institutional framework, is rationalized and it is presented in accordance with the requirements of the new EU Guidance Document (GD Reporting 2016).
DESIGNATION OF SURFACE WATER BODIES - TYPOLOGY	In the Update, new typology was developed for river and lake WB. Furthermore, the reservoirs are reported as River Heavily Modified WB but their assessment is done with elements and tools designated for lakes, as lakes is the category of natural WB they resemble the most. In accordance with the above the number of WB is revised. It is noted that during the Update, the prefix of the WB codes were reformulated from GR to EL, in order to be compatible with the EE databases.
DESIGNATION OF GROUNDWATER BODIES	The number of GWB is revised based of the results of the NWMN or/and special studies completed from the publication of the 1st RBMP till today. It is noted that during the Update, the prefix of the WB codes were reformulated from GR to EL, in order to be compatible with the EE databases.
HEAVILY MODIFIED WATER BODIES (HMWB) AND ARTIFICIAL WATER BODIES (AWB)	The HMWB that were defined under the 1st RBMP are re-examined based on the new methodology and the data from the NWMN.
PROTECTED AREAS	The Registry of Protected Areas of the 1st RBMP is revised based on: The new Natura 2000 areas proposed by the Ministry of Environment and Energy according with the provisions of the Bird (2009/147/EC) and Habitat (92/43/EEC) Directives. The monitoring results from the Bathing Waters and the provisions of the Bathing Waters Directive (2006/7/EC) Other directives on water protection with more strict objectives as the Drinking Water Directive (80/778/EEC, as revised by the Directive 98/83/EC)), the ShellfishDirective (2006/113/EC), freshwater fish Directive (2006/44/EK), Nitrates Directive (91/676/EOK), Urban Waste Water Treatment Directive (91/271/EOK) etc New data that came up after the publication of the 1st RBMP and the relevant EE Guidance Documents. Furthermore it is noted that in the framework of the Update the CORINE protected areas and Landscapes of Special Natural Beauty were not included in the Registry of Protected Areas.
PRESSURES AND IMPACTS	The analysis of pressures and impacts in the Update is done according to the new national methodology and data produced after the approval of the 1st RBMP. The main differentiation is the new analytical method of assessment of hydromorphological pressures.

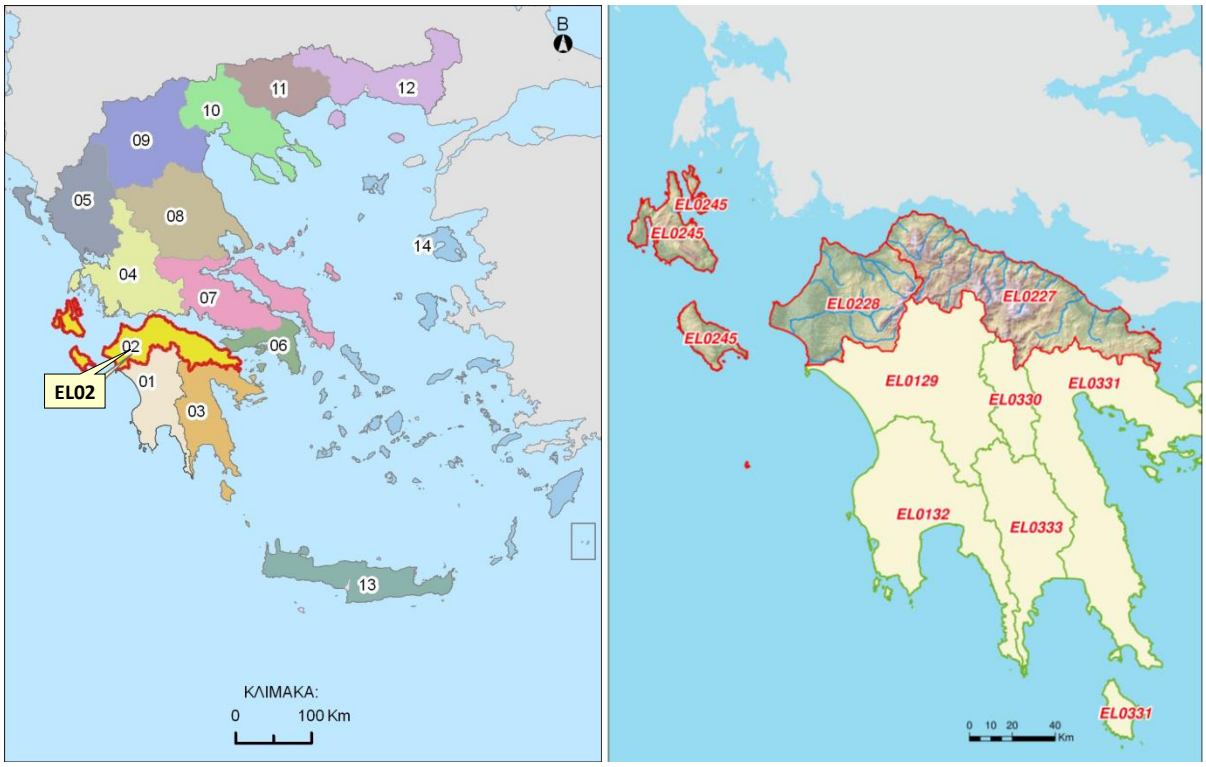
Content of 1st Update of RBMP/ Activity	Differentiation in comparison with the 1st RBMP
CLASSIFICATION OF THE STATUS OF SURFACE WATER BODIES	In the framework of the Update the classification of status of SWB in done according to the new national methodologies approved by the EU and based on the results of the NWMN. For the WB where no monitoring data is available, the classification of status was done by grouping based on their type and the analysis of pressures.
CLASSIFICATION OF THE STATUS OF GROUNDWATER BODIES	The classification of status of the GWB is not different from the 1st RBMP. The classification is based on the new data from the NWMN.
NATIONAL WATER MONITORING NETWORK	The Update takes in consideration the results of the NWMN of the status of the national WB with important number of sampling for the period 2112-2015 for BQE, Physicochemical and chemical indicators and hydromorphological quality elements. It also includes monitoring of the chemical and quantitative status of the GWB.
ECONOMIC ANALYSIS OF WATER USE	For the economical analysis of water uses, the provisions of the new Joint Ministerial Decision οικ. 135275/22.05.17 on water pricing are taken in consideration.
ENVIRONMENTAL OBJECTIVES – EXEMPTIONS	In the framework of the Update, the environmental objectives and exemptions are set according to the new national methodologies, developed according the EU guidance.
PROGRAMME OF MEASURES	The PoM of the 1st Update is differentiated from the 1st RBMP, following the new methodologies: Continuation/improvement of 1st RBMP measures New measures for the achievement of the environmental objectives set Correlation of measures with significant pressures Correlation of measures with Basic Measure Types and implementation indicators set by the EU Synergies of PoM with the National Strategy on Climate Change Adaptation.

3 DESCRIPTION OF RIVER BASIN DISTRICTS – COMPETENT AUTHORITIES

3.1 RIVER BASINS

The **River Basin District of Northern Peloponnese (EL02)** is one of the fourteen River Basin Districts in which the Greek area was divided by Law 1739/1987 (Government Gazette 201 / A / 20-11-1987).

Figure 3-1. River Basin District of Northern Peloponnese (EL02)



According to Government Gazette No 706/2010 (Government Gazette 1383 / B / 2- 9-10) Decision of the National Water Committee , the Stream Basins of N. Peloponnese (EL0227), River Basin of Piros - Vergas - Pinios (EL0228) and of Kefalonia – Ithaca – Zakinthos (EL0245) constitute the Northern Peloponnese River Basin District (EL02).

Table 3-1. River Basins of the Northern Peloponnese River Basin District (EL02)

River Basin	Code	Surface (km²)
Streams of N. Peloponnese	EL0227	3.685
Piros - Vergas - Pinios	EL0228	2.423
Kefalonia – Ithaca – Zakinthos	EL0245	1.289

3.2 COMPETENT AUTHORITIES

Law 3199/2003 (Government Gazette A' 280) on the Protection and Management of Water Bodies harmonises the National Law with the provisions of the Directive 2000/60/EC and defines the competent authorities for the protection and management of Water Bodies.

Designated competent authorities at national level:

- The **National Water Committee**
- The **National Water Council**
- The **Special Secretariat for Water**

Table3-2. National competent authority ID

Official Name	**Special Secretariat for Water**
Acronym	S.S.W.
Contact Information	
Address	Amaliados17
Postal Code	11523
City	Athens
Country	Greece
Web-page	http://www.ypeka.gr/ http://wfdver.ypeka.gr/
Contact	tel: 210 6475102, 213 1515410-1 e-mail: info.egy@prv.ypeka.gr

Designated competent authorities at Decentralised Administration level:

- **Decentralised Administration Water Council**
- **Water Directorates of the Decentralised Administration**

Table3-3. Decentralised Administration competent authorities ID

Official Name	**Decentralised Administration of Peloponnese, Western Greece and Ionian Islands /Water Directorate of Western Greece**
Acronym	W.D.D.EL.
Contact Information	
Address	Athinon 105
Postal Code	26504
City	Patra
Country	Greece
Web-page	www.apd-depin.gov.gr
Contact	tel: 2613623640 FAX: 2610 910965 e-mail: : ydat@apd-depin.gov.gr
Official Name	Decentralised Administration of Peloponnese, Western Greece and Ionian Islands /Water Directorate of Ionian Islands
Acronym	W.D.ION
Contact Information	
Address	Alykes Potamou
Postal Code	49100
City	Corfu
Country	Greece
Web-page	www.apd-depin.gov.gr
Contact	tel: 26613 61639 FAX: 26613 61553 e-mail: lagadas@1745.syzefxis.gov.gr

The following table gives a snapshot of the role played by each competent authority on every water management and protection thematic.

Table3-4. Main competences for every water protection and management thematic

Competent Authority	**Role**												
	Pressure and impact analysis	**Economic analysis**	**Monitoring of surface water**	**Monitoring of groundwater**	**Assessment of status of surface water**	**Assessment of status of groundwater**	**Preparation of RBMP**	**Preparation of PoM**	**Implementation of measures**	**Public participation**	**Enforcement of regulations**	**Co-ordination of implementation**	**Reporting to the European Commission**
Special Secretariat for Water of the Hellenic Ministry of Environment & Energy	M	M	M	M	M	M	M	M	M	M	M	M	M
Water Directorate of the Decentralised Administration	O	O	-	-	-	-	O	O	M	M	M	M	-
Hellenic Ministry of Foreign Affairs	-	-	-	-	-	-	-	-	O	-	M	-	-
Hellenic Ministry of Rural Development and Food	-	-	-	-	-	-	-	-	M	-	O	-	-
Hellenic Ministry of Infrastructure and Transport	-	-	-	-	-	-	-	-	M	-	O	-	-
Hellenic Ministry of Economy and Development	-	-	-	-	-	-	-	-	M	-	O	-	-
Hellenic Ministry of Health	-	-	-	-	-	-	-	-	M	-	O	-	-
Hellenic Ministry of Shipping and Island Policy	-	-	-	-	-	-	-	-	M	-	O	-	-
Hellenic Ministry of Interior	-	-	-	-	-	-	-	-	M	-	O	-	-
Municipalities	-	-	-	-	-	-	-	-	M	O	-	-	-
Regions	-	-	-	-	-	-	-	-	M	O	O	-	-
M: Main role, O: Other role, -: No role													

4 DESIGNATION AND CLASSIFICATION OF WATER BODIES

4.1 SURFACE WATER BODIES (SWB)

According to the 1st Update of RBMP, **91 surface water bodies,** are identified.

Table 4-1. Number of surface water bodies for each RB

Type of WB	RB EL0227	RB EL0228	RB EL0245	Total RBD
River WB	35	29	1	65
Lake WB	2	0	0	2
Transitional WB	1	3	1	5
Coastal WB	3	4	12	19
TOTAL WB	**41**	**36**	**14**	**91**

All the surface water bodies are presented in the following tables.

Table 4-2. River WB and the new typology, according to the European Decision 2013/480/EC and the MED GIG per RB

No	WB Name	WB Code	HMWB/ AWB	Length (km)	Immediate Catchment Area (km²)	Upstream Catchment area (km²)	Mean Annual Flow (hm³)	WB Type
Streams basins of N. Peloponnese (EL0227)								
1	GLAFKOS R._1	EL0227R000100001H	HMWB	8,7	29,0	80,3	64,8	R-M5
2	GLAFKOS R._2	EL0227R000100002N	NAT	6,4	47,8	32,6	47,6	R-M4
3	GLAFKOS R._3	EL0227R000100003N	NAT	11,3	32,6	0,0	19,3	R-M1
4	CHARADROS STREAM	EL0227R000300004N	NAT	7,7	36,7	0,0	14,2	R-M1
5	FINIKAS R._1	EL0227R000500005N	NAT	15,0	76,8	19,1	28,2	R-M4
6	FINIKAS R._2	EL0227R000500006N	NAT	7,8	19,1	0,0	5,6	R-M4
7	MEGANITAS STREAM	EL0227R000700007N	NAT	16,0	81,8	0,0	23,7	R-M1
8	SELINOUS R._3	EL0227R000900008N	NAT	24,4	132,4	254,2	211,9	R-M4
9	SELINOUS R._4	EL0227R000900009N	NAT	15,5	225,2	29,0	139,3	R-M4
10	SELINOUS R._5	EL0227R000900010N	NAT	7,8	29,0	0,0	15,9	R-M4
11	VOURAIKOS R._1	EL0227R001300011N	NAT	7,4	30,7	223,7	140,6	R-M4
12	VOURAIKOS R._2	EL0227R001300012N	NAT	12,5	80,2	143,4	123,7	R-M4
13	VOURAIKOS R._3	EL0227R001300013N	NAT	5,0	51,4	92,0	79,3	R-M4
14	VOURAIKOS R._4	EL0227R001300014N	NAT	5,0	19,5	72,5	50,9	R-M1
15	VOURAIKOS R._5	EL0227R001300015N	NAT	7,5	72,5	0,0	40,1	R-M1
16	KRATHIS R._1	EL0227R001700016N	NAT	17,5	76,2	77,8	101,5	R-M2
17	KRATHIS R._2	EL0227R001700017N	NAT	15,1	77,8	0,0	51,3	R-M1
18	THOLOPOTAMO STREAM	EL0227R001900018N	NAT	6,7	14,1	0,0	6,5	R-M1
19	KRIOS R._1	EL0227R001900019N	NAT	12,5	62,8	51,0	80,4	R-M4
20	KRIOS R._2	EL0227R001900020N	NAT	7,8	51,0	0,0	36,0	R-M4
21	DERVENIO STREAM	EL0227R002100021N	NAT	8,1	68,2	0,0	25,3	R-M4
22	SKOUPEIKO STREAM	EL0227R002100022N	NAT	10,8	46,4	0,0	14,0	R-M4
23	FONISSA STREAM	EL0227R002100023N	NAT	12,9	53,1	0,0	15,3	R-M4
24	TRIKALITIKOS R._1	EL0227R002300024N	NAT	22,4	135,6	42,1	76,8	R-M4
25	TRIKALITIKOS R._2	EL0227R002300025N	NAT	9,5	42,1	0,0	18,2	R-M4
26	KIRILLOU STREAM	EL0227R002700026N	NAT	4,3	74,6	0,0	23,2	R-M1
27	ASOPOS R._1	EL0227R002900027N	NAT	15,0	30,5	250,8	109,0	R-M5
28	ASOPOS R._2	EL0227R002900028N	NAT	1,9	6,2	244,6	97,2	R-M4
29	ASOPOS R._3	EL0227R002900029N	NAT	2,5	20,4	194,1	83,1	R-M4

No	WB Name	WB Code	HMWB/ AWB	Length (km)	Immediate Catchment Area (km²)	Upstream Catchment area (km²)	Mean Annual Flow (hm³)	WB Type
30	ASOPOS R._4	EL0227R002900030N	NAT	5,0	28,5	165,6	75,2	R-M4
31	ASOPOS R._5	EL0227R002900031N	NAT	13,9	165,6	0,0	64,2	R-M4
32	REZANI STREAM	EL0227R003300032N	NAT	23,6	165,7	0,0	35,5	R-M5
33	POTAMIA STREAM_1	EL0227R003700033H	HMWB	1,3	1,0	161,9	44,4	R-M5
34	POTAMIA STREAM_2	EL0227R003700034H	HMWB	8,3	161,9	0,0	44,1	R-M5
Piros - Vergas - Pinios RB (EL0228)								
1	IARDANOS STREAM	EL0228R000100001N	NAT	22,8	103,0	0,0	34,3	R-M2
2	PINIOS R._1	EL0228R000201002N	NAT	27,8	168,6	742,9	448,9	R-M2
3	PINIOS R._2	EL0228R000201003N	NAT	4,0	10,2	732,7	365,9	R-M2
4	PINIOS R._3	EL0228R000201004H	HMWB	3,5	14,2	718,5	360,8	R-M2
5	VELITSEIKO STREAM	EL0228R000202005N	NAT	7,7	17,3	0,0	8,5	R-M1
6	LADON PINIEOS R._1	EL0228R000204006N	NAT	2,5	37,1	200,2	116,9	R-M4
7	LADON PINIEOS R._2	EL0228R000204007N	NAT	32,5	194,2	6,0	98,6	R-M4
8	LADON PINIEOS R._3	EL0228R000204008N	NAT	2,7	6,0	0,0	3,0	R-M4
9	PINIOS R._4	EL0228R000203009N	NAT	2,5	3,3	324,2	161,3	R-M2
10	PINIOS R._5	EL0228R000203010N	NAT	3,8	8,6	315,7	159,7	R-M2
11	VILISSOS STREAM	EL0228R000206011N	NAT	17,3	75,2	0,0	37,0	R-M1
12	PINIOS R._6	EL0228R000205012N	NAT	2,5	4,6	235,9	118,4	R-M2
13	PINIOS R._7	EL0228R000205013N	NAT	7,6	21,7	214,2	116,2	R-M2
14	SKOUROPOTAMOS STREAM	EL0228R000208014N	NAT	17,5	95,9	0,0	47,2	R-M1
15	PINIOS R._8	EL0228R000207015N	NAT	22,5	89,1	29,1	58,2	R-M2
16	PINIOS R._9	EL0228R000207016N	NAT	6,9	29,1	0,0	14,3	R-M4
17	VERGAS STREAM	EL0228R000700017N	NAT	21,6	122,1	0,0	25,0	R-M2
18	MANNA STREAM_2	EL0228R000900019N	NAT	2,5	13,8	112,7	24,7	R-M2
19	MANNA STREAM_3	EL0228R000900020N	NAT	15,3	112,7	0,0	22,0	R-M2
20	PIROS R._1	EL0228R000401021N	NAT	3,0	5,1	484,6	145,8	R-M2
21	SERDINI STREAM	EL0228R000402022N	NAT	15,6	133,8	0,0	39,8	R-M2
22	PIROS R._2	EL0228R000403023N	NAT	7,5	10,9	339,9	104,4	R-M2
23	PARAPIROS STREAM_1	EL0228R000404024N	NAT	14,5	18,1	103,8	36,3	R-M2
24	PARAPIROS STREAM_2	EL0228R000404025N	NAT	10,0	44,2	18,0	18,5	R-M1
25	PARAPIROS STREAM_3	EL0228R000404026N	NAT	4,1	18,0	0,0	5,3	R-M4
26	PIROS R._3	EL0228R000405027N	NAT	27,5	202,3	15,7	64,9	R-M2
27	PIROS R._4	EL0228R000405028N	NAT	4,5	15,7	0,0	4,7	R-M4
Kefalonia – Ithaca – Zakinthos RB (EL0245)								
1	AGIA EUFIMIA STREAM.	EL0245R000100001N	NAT	3,5	61,7	0,0	21,9	R-M4

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

Table 4-3. Reservoirs WB according to the new methodology per RB

No	WB Name	WB Code	HMWB/ AWB	Surface (km²)	Perimeter (km)	WB Type
Streams basins of N. Peloponnese (EL0227)						
1	ASOPOS ARTIF.LAKE	EL0227RL02900001H	HMWB	1,3	12,2	L-M8
Piros - Vergas - Pinios RB (EL0228)						
1	ASTERIOU ARTIF.LAKE	EL0228RL00404001H	HMWB	1,6	15,4	L-M8
2	PINIOS ARTIF.LAKE	EL0228RL00203002H	HMWB	19,8	80,2	L-M8
***NAT**: Natural WB, **HMWB**:Heavily Modified WB, **AWB**: Artificial WB*						

Table 4-4. Lake WB according to the new methodology per RB

No	WB Name	WB Code	HMWB/ AWB	Surface (km²)	Perimeter (km)	WB Type
Streams basins of N. Peloponnese (EL0227)						
1	STIMFALIA LAKE	EL0227L000000002N	NAT	3,6	9,2	GR-VSNL
2	FENEOS ARTIF.LAKE	EL0227L000000003A	AWB	0,5	4,0	L-M5/7W
***NAT**: Natural WB, **HMWB**:Heavily Modified WB, **AWB**: Artificial WB*						

Table 4-5. Transitional WB per RB

No	WB Name	WB Code	HMWB/ AWB	Surface (km²)	Perimeter (km)	WB Type
Streams basins of N. Peloponnese (EL0227)						
1	ALIKI EGIO	EL0227T0001N	NAT	0,16	1,72	TW1
Piros - Vergas - Pinios RB (EL0228)						
1	PAPA LAGOON (ARAXOS)	EL0228T0001N	NAT	4,04	15,17	TW1
2	KOTICHI LAGOON	EL0228T0004N	NAT	7,0	16,62	TW1
3	PROKOPOS LAGOON	EL0228T0005N	NAT	5,63	17,7	TW1
Kefalonia – Ithaca – Zakinthos RB (EL0245)						
1	KOUTAVOS LAGOON (KEFALONIA)	EL0245T0001N	NAT	1,2	5,53	TW1
***NAT**: Natural WB, **HMWB**:Heavily Modified WB, **AWB**: Artificial WB*						

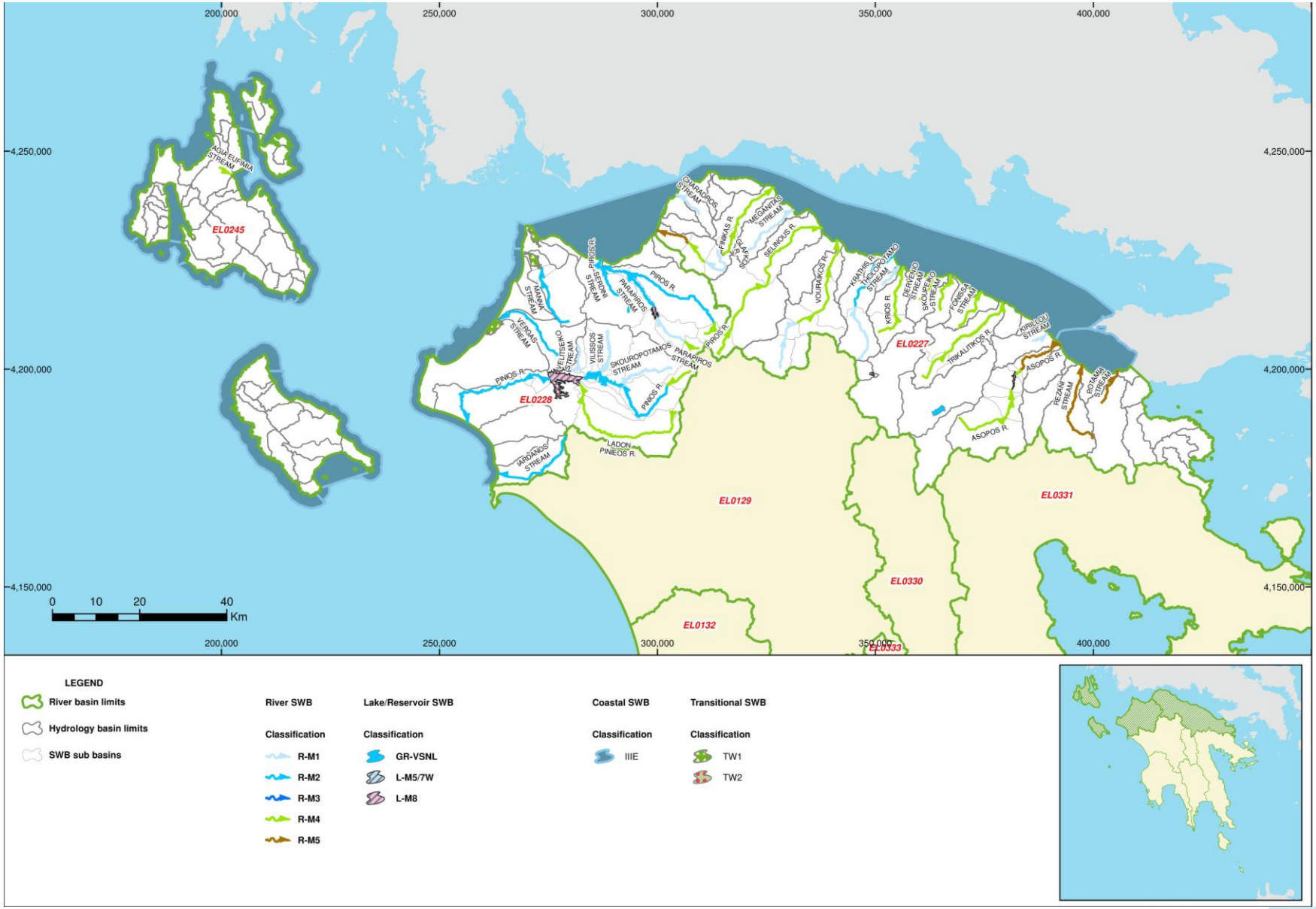
Table 4-6. Coastal WB per RB

No	WB Name	WB Code	HMWB/ AWB	Surface (km²)	Coastal Length (km)	WB Type
Streams basins of N. Peloponnese (EL0227)						
1	PORT OF PATRA	EL0227C0004H	HMWB	329,74	9,7	IIIE
2	CORINTHIAN GULF – COASTS OF PELOPONNESE	EL0227C0005N	NAT	831,91	139,7	IIIE
3	KORINTHOS BAY	EL0227C0006N	NAT	132,59	54,9	IIIE
Piros - Vergas - Pinios RB (EL0228)						
1	GULF OF PATRA	EL0228C0003N	NAT	317,74	59,5	IIIE
2	ARAXOS CAPE	EL0228C0007N	NAT	11,7	8,3	IIIE
3	GULF OF KILLINI	EL0228C0008N	NAT	108,43	43,6	IIIE
4	COAST OF PELOPONNESE OPPOSITE ZAKINTHOS	EL0228C0009N	NAT	86,23	56,2	IIIE
Kefalonia – Ithaca – Zakinthos RB (EL0245)						
1	WEST COAST OF KEFALONIA	EL0245C0001N	NAT	438,67	188,5	IIIE
2	EAST COAST OF KEFALONIA-ITHACA	EL0245C0002N	NAT	222,31	191,0	IIIE
3	MOUNTA CAPE	EL0245C0010N	NAT	6,96	4,9	IIIE
4	EAST BAY OF LOURDATA	EL0245C0011N	NAT	21,48	15,7	IIIE
5	WEST BAY OF LOURDATA	EL0245C0012N	NAT	40,54	30,4	IIIE

No	WB Name	WB Code	HMWB/ AWB	Surface (km^2)	Coastal Length (km)	WB Type
6	VARDIANOI ISLANDS	EL0245C0013N	NAT	43,25	29,3	IIIE
7	GULF OF ARGOSTOLI	EL0245C0014N	NAT	42,55	56,4	IIIE
8	WEST COAST OF ZAKINTHOS	EL0245C0015N	NAT	168,74	116,4	IIIE
9	EAST COAST OF ZAKINTHOS	EL0245C0016N	NAT	84,54	65,2	IIIE
10	LAGANAS GULF (ZAKINTHOS)	EL0245C0017N	NAT	61,25	37,0	IIIE
11	MARATHIAS CAPE	EL0245C0018N	NAT	6,39	4,6	IIIE
12	STROFADES ISLANDS	EL0245C0019N	NAT	25,39	11,7	IIIE

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

Map 1. Classification of SWB of RBD of Northern Peloponnesse (EL02), according to the new typology of the 1st Update of RBMP



4.2 GROUNDWATER BODIES

Under the 1st Update of RBMP the initially delimited GWB were re-examined.

Table 4-7. The GWB of the RBD

NO	GWB Name	GWB Code	Surface (km²)
Streams basins of N. Peloponnese (EL0227)			
1	Systima Patras- Riou	EL0200120	131,74
2	Systima Panachaikou	EL0200130	455,62
3	Systima Voreias Achaias	EL0200140	118,77
	Sub-systems :	EL0200141 EL0200142 EL0200143	
4	Systima Zarouchlas	EL0200150	172,67
5	Systima Valtou-Evrostinas	EL0200160	91,74
6	Systima Voreias Korinthias	EL0200170	825,46
	Sub-systems:	EL0200171 EL0200172 EL0200173	
7	Systima Korfiotissas	EL0200180	14,03
8	Systima Korinthou-Kiatou	EL0200190	71,16
9	Systima Arachnaiou	EL0200200	725,88
10	Systima Nemeas	EL0200210	107,94
11	Systima Zireias	EL0200220	196,71
12	Systima Feneou	EL0200230	40,31
13	Systima Kalavryton	EL0200240	201,78
14	Systima Voreiou Erymanthou	EL0200250	301,17
Piros - Vergas - Pinios RB (EL0228)			
1	Systima Pineiou	EL0200060	813,12
2	Systima Kyllinis	EL0200070	58,14
3	Systima Dytikis Achaias	EL0200080	379,86
4	Systima p.Larissou	EL0200090	185,09
	Sub-systems :	EL0200091 EL0200092 EL0200093 EL0200094	
5	Systima Morvis	EL0200100	528,32
6	Systima p. Peirou	EL0200110	179,66
7	Systima Dytikou Erymanthou	EL0200260	249,04
Kefalonia – Ithaca – Zakinthos RB (EL0245)			
1	Systima Kefalonias	EL0200010	602,37
2	Systima Lixouriou - Skalas	EL0200020	178,08
3	Systima Ithakis	EL0200030	95,69
4	Systima Vrachiona	EL0200040	261,86
5	Systima Zakynthou	EL0200050	144,43

Map2. Position and delimitation of the GWB of NorthernPeloponnese RBD (EL02)

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

Table 4-8. Total number and surface of HMWB and AWB in the RBD

Type of WB	HMWB		AWB	
	Number of WB	Surface - length (%)	Number of WB	Surface - length (%)
Lake WB	0	0%	1	12%
Longitudinal River WB	4	3,25%	0	0%
River WB (Reservoirs)	3	100%	0	0%
Transitional WB	0	0%	0	0%
Coastal WB	1	11,06%	0	0%

The following table presents the WB that were identified as HMWB and AWB per RB.

Table 4-9. River HMWB in the RBD

HMWB Code	Name	Type	Length (km)	Upstream Catchment area (km^2)	Designated Water Use
Streams basins of N. Peloponnese (EL0227)					
EL0227R000100001H	GLAFKOS R._1	R-M5	8,7	29,0	Hydropower, Flood Protection, Water Supply, Irrigation
EL0227R003700033H	POTAMIA STREAM_1	R-M5	1,3	1,0	Flood Protection
EL0227R003700034H	POTAMIA STREAM_2	R-M5	8,3	161,9	Flood Protection
Piros - Vergas - Pinios RB (EL0228)					
EL0228R000201004H	PINIOS R._3	R-M2	3,5	14,2	Irrigation, Water Supply

Table 4-10. Reservoirs (River HMWB) in the RBD

HMWB Code	Name	Type	Surface (km^2)	Designated Water Use
Streams basins of N. Peloponnese (EL0227)				
EL0227RL02900001H	ASOPOS ARTIF.LAKE	L-M8	1,28	Irrigation, Artificial Recharge
Piros - Vergas - Pinios RB (EL0228)				
EL0228RL00404001H	ASTERIOU ARTIF.LAKE	L-M8	1,63	Water Supply
EL0228RL00203002H	PINIOS ARTIF.LAKE	L-M8	19,85	Irrigation, Water Supply

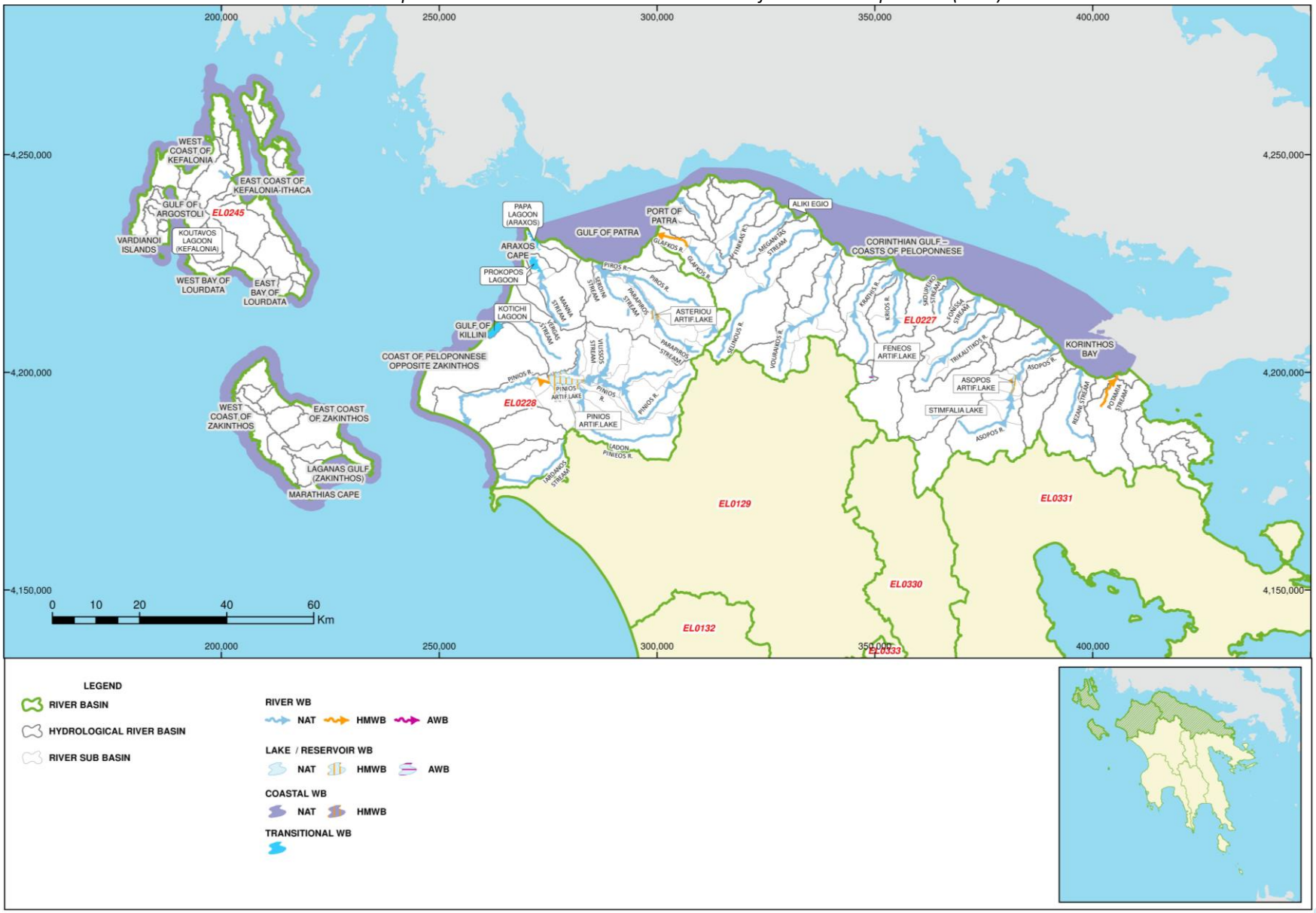
Table 4-11. Artificial Lake WB in the RBD

HMWB Code	Name	Type	Surface (km^2)	Designated Water Use
Streams basins of N. Peloponnese (EL0227))				
EL0227L000000003A	FENEOS ARTIF.LAKE	L-M5/7W	0,5	Irrigation

Table 4-12. Coastal HMWB in the RBD

HMWB Code	Name	Type	Surface (km^2)	Designated Water Use
Streams basins of N. Peloponnese (EL0227)				
EL0227C0004H	PORT OF PATRA	IIIE	1,0	Navigation, Recreation

Map 3. HMWB and AWB in the RBD of NorthernPeloponnese (EL02)



4.4 PROTECTED AREAS

In accordance with Directive 2000/60/EC, the 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 Community legislation for the protection of their surface water and groundwater or for the conservation of habitats and species directly depending on water.

This registry is called Registry of Protected Areas (RPA) and according to the Appendix V of the Presidential Decree 51/2007, it includes the following type or areas:

- **Water bodies designated for Drinking Water Abstraction**:

Table 4-13. Areas of Abstraction of Drinking water

NO	WB Name	WB Code	Area Code
Streams basins of N. Peloponnese (EL0227)			
1	Systima Panachaikou	EL0200130	EL0200130A7
2	Systima Zarouchlas	EL0200150	EL0200150A7
3	Systima Korfiotissas	EL0200180	EL0200180A7
4	Systima Zireias	EL0200220	EL0200220A7
5	GLAFKOS R._2	EL0227R000100002N	EL0227R000100002NA7
Piros - Vergas - Pinios RB (EL0228)			
6	Systima Dytikou Erymanthou	EL0200260	EL0200260A7
7	PINIOS ARTIF.LAKE	EL0228RL00203002H	EL0228RL00203002H7N

- **Water Bodies designated as Recreational watersincluding areas designated as Bathing Waters:** According to the list of Bathing Water Profiles of Greece (SSW, 2016), in NorthernPeloponnese RBD, in 2016, 129 Bathing Water Sites have been designated in coastal WB.

  Furthermore, they exist not designated Recreational WB that are used for alternative tourism (like rafting and kayak): SELINOUS R._3, in Streams basins of N. Peloponnese (EL0227).

- **Urban Waste Water Treatment Directive Sensitive Areas and Nitrates Directive Nitrate Vulnerable Zones (NVZ):**

Table 4-14. Nitrate Vulnerable Zones

NVZ Name	WB			
	WB Code	WB Name	WB Category	RB
Voreia Korinthia Zone EL0227NI012	EL0227R002900027N	ASOPOS R._1	River	EL0227
	EL0227R002900028N	ASOPOS R._2	River	EL0227
	EL0227R002900029N	ASOPOS R._3	River	EL0227
	EL0227R002900030N	ASOPOS R._4	River	EL0227
	EL0227R003300032N	REZANI STREAM	River	EL0227
	EL0227R003700033H	POTAMIA STREAM_1	River	EL0227
	EL0227R003700034H	POTAMIA STREAM_2	River	EL0227
	EL0227RL02900001H	ASOPOS ARTIF.LAKE	Lake	EL0227
	EL0200170	Systima Voreias Achaias	GWB	EL0227
	EL0200190	Systima Korinthou-Kiatou	GWB	EL0227
RB Pineios –Ilia ZoneEL0228NI01	EL0200060	Systima Pineiou	GWB	EL0228
	EL0200070	Systima Kyllinis	GWB	EL0228
	EL0200080	Systima Dytikis Achaias	GWB	EL0228
	EL0200100	Systima Morvis	GWB	EL0228

NVZ Name	WB			
	WB Code	WB Name	WB Category	RB
Larissou – Achaias ZoneΑχαΐας EL0228NI02	EL0200090	Systima p.Larissou	GWB	EL0228

Under the 1st Update of the RBMP, the necessity of designating new Nitrate Vulnerable Zones was examined and no such necessity exists.

According to the national legal framework, in NorthernPeloponnese RBD (EL02),no Urban Waste Water Treatment Directive Sensitive Areas exist.

- **Areas designated for Birds and Habitats protection including the Natura 2000 protected sites**:

The designation of natural protected areas is adaptable to the national specific conditions. The following map depicts these areas.

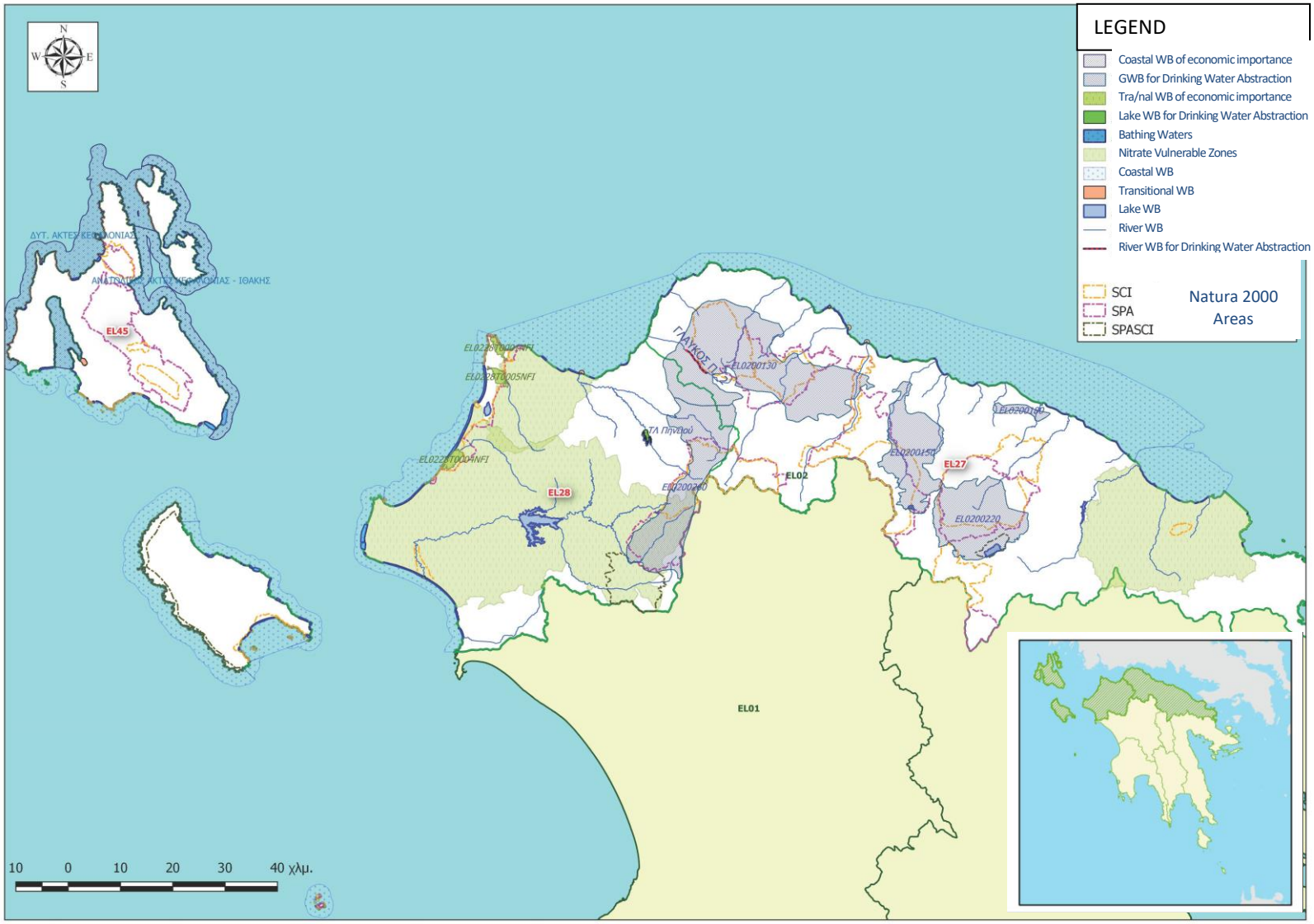
- **Areas designated for the protection of economically significant aquatic species:**

There are six aquatic farmsinNorthernPeloponnese RBD (EL02): 3 freshwater fish farms and 3 transitional waters aquacultures. It should be noted that special environmental requirements are set on these areas according to the Directive 2006/113/EC on the quality of shellfish waters.

Table 4-15. Proposed protection areas according to Directive 2006/113/EC

No	Protected Area Code	WB Code	WB name	WB category
1	EL0228T0001NFI	EL0228T0001N	PAPA LAGOON (ARAXOS)	Transitional
2	EL0228T0004NFI	EL0228T0004N	KOTICHI LAGOON	Transitional
3	EL0228T0005NFI	EL0228T0005N	PROKOPOS LAGOON	Transitional
4	EL0245C0001NFI	EL0245C0001N	WEST COAST OF KEFALONIA	Coastal
5	EL0245C0002NFI	EL0245C0002N	EAST COAST OF KEFALONIA-ITHACA	Coastal
6	EL0245C0014NFI	EL0245C0014N	GULF OF ARGOSTOLI	Coastal

Map 4. Protected Areas in NorthernPeloponnese RBD (EL02)



5 PRESSURES AND IMPACTS

Anthropogenic pressures on the bodies of water include all human activities that influence or may influence the water bodies of the area where they are developed. These pressures are characterized as significant as long as they form the cause for the WBs to be in danger of non-achieving their environmental objectives, according to EC No 03 Guidance Document.

5.1 POINT SOURCES OF POLLUTION

Point sources of pollution include all sources of nutrients (BOD, N, P). The list of these pressures includes:

- Waste Water Treatment Plants (WWTP)
- Discharges not connected to WWTP
- Hotels
- Industrial sites
- Livestock Farming
- Aquaculture – Fish farming
- Waste disposal sites
- Runoff from mining activities

From the above point sources of pollution derives the annual load of BOD, N και P produced.

Figure 5-1. Total annual load of BOD, N and P that are produced in the RB (EL0227), (EL0228) and (EL0245) from point sources

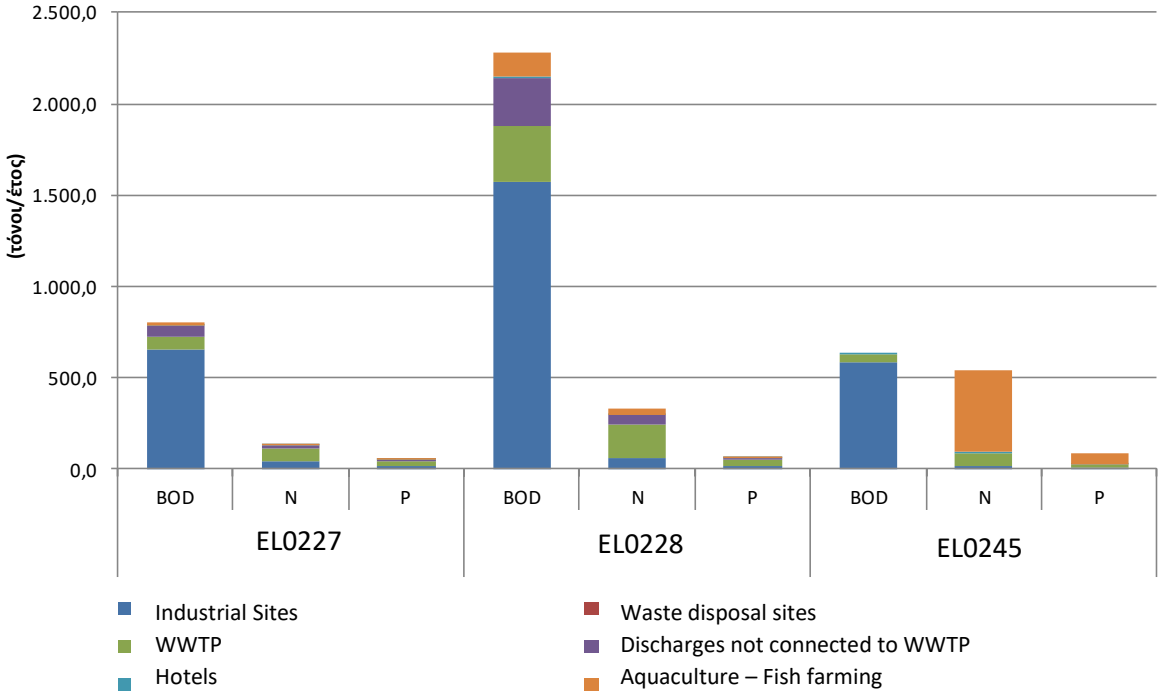


Table 5-1. Total annual load of BOD, N and P that are produced in Streams basins of N. Peloponnese (EL0227) from point sources

POINT SOURCES OF POLLUTION	BOD (t/y)	N (t/y)	P (t/y)
Industrial Sites	656,8	42,8	17,2
Waste disposal sites	0,0	0,0	0,0
Waste Water Treatment Plants (WWTP)	70,6	73,1	28,4
Discharges not connected to WWTP	54,5	10,9	2,3
Hotels	0,9	1,5	0,3
Aquaculture – Fish farming	16,2	3,2	0,5
TOTAL	**799,1**	**131,5**	**48,8**

Table 5-2. Total annual load of BOD, N and P that are produced in Piros - Vergas - Pinios RB (EL0228) from point sources

POINT SOURCES OF POLLUTION	BOD (t/y)	N (t/y)	P (t/y)
Industrial Sites	1.570,6	58,4	16,6
Waste disposal sites	0,0	0,0	0,0
Waste Water Treatment Plants (WWTP)	310,6	183,9	33,6
Discharges not connected to WWTP	261,8	52,4	10,9
Hotels	3,2	5,1	1,1
Aquaculture – Fish farming	137,6	27,7	4,7
TOTAL	**2.283,8**	**327,4**	**66,8**

Table 5-3. Total annual load of BOD, N and P that are produced in Kefalonia – Ithaca – Zakinthos RB (EL0245) from point sources

POINT SOURCES OF POLLUTION	BOD (t/y)	N (t/y)	P (t/y)
Industrial Sites	584,0	12,3	5,5
Waste disposal sites	0,0	0,0	0,0
Waste Water Treatment Plants (WWTP)	47,0	74,7	14,7
Discharges not connected to WWTP	0,0	0,0	0,0
Hotels	5,2	8,3	1,7
Aquaculture – Fish farming	0,0	448,0	61,0
TOTAL	**636,2**	**543,4**	**83,0**

5.2 DIFFUSE SOURCES OF POLLUTION

Diffuse sources of pollution include all sources of nutrients (BOD, N, P). The list of these pressures includes:

- Agriculture
- Discharges not connected to sewerage network
- Farming
- Other diffuse sources

From the above diffuse sources of pollution derives the annual load of BOD, N και P produced.

Figure 5-2. Total annual load of BOD, N and P that are produced in the RB (EL0227), (EL0228) and (EL0245) from diffuse sources

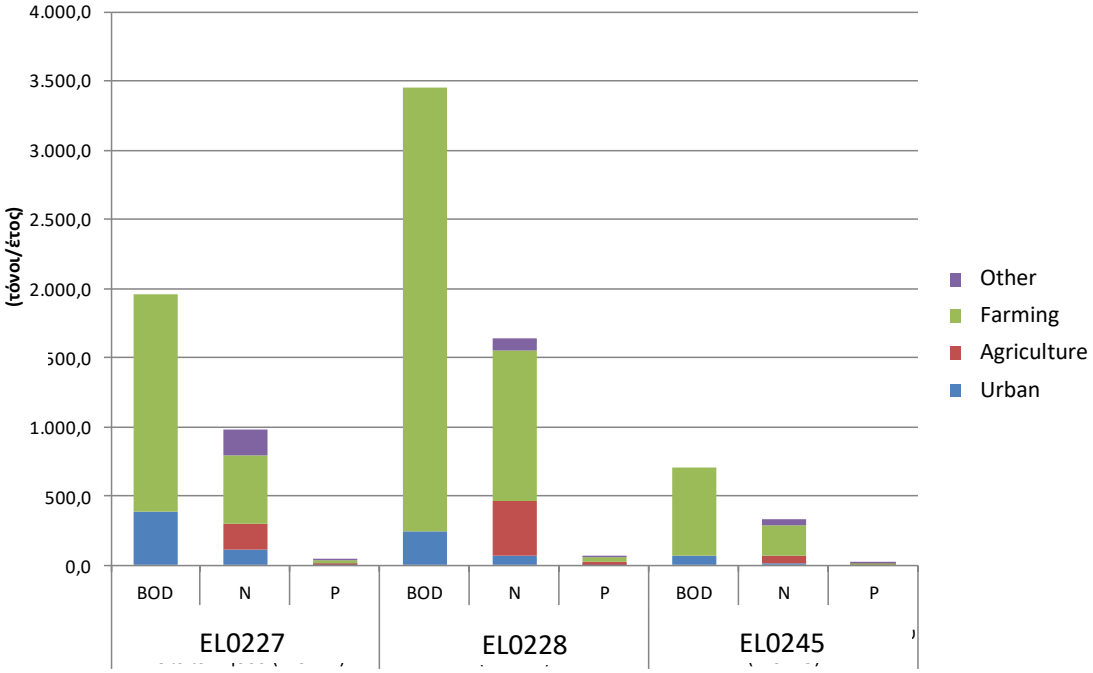


Table 5-4. Total annual load of BOD, N and P that are produced in Streams basins of N. Peloponnese (EL0227) from diffuse sources

LAND USE	BOD (t/y)	N (t/y)	P (t/y)
URBAN	393,4	112,4	3,1
AGRICULTURE	0,0	187,0	12,4
FARMING	1.566,1	495,7	19,2
OTHER SOURCES	0,0	192,4	2,2
TOTAL	**1.959,5**	**987,5**	**36,9**

Table 5-5. Total annual load of BOD, N and P that are produced in Piros - Vergas - Pinios RB (EL0228) from diffuse sources

LAND USE	BOD (t/y)	N (t/y)	P (t/y)
URBAN	249,7	71,3	1,8
AGRICULTURE	0,0	390,6	30,0
FARMING	3.204,1	1.087,0	32,7
OTHER SOURCES	0,0	87,9	0,8
TOTAL	**3.453,8**	**1.636,9**	**65,4**

Table 5-6. Total annual load of BOD, N and P that are produced in Kefalonia – Ithaca – Zakinthos RB (EL0245) from diffuse sources

LAND USE	BOD (t/y)	N (t/y)	P (t/y)
URBAN	71,1	20,3	0,7
AGRICULTURE	0,0	54,2	4,7
FARMING	632,4	218,4	10,4
OTHER SOURCES	0,0	46,5	0,9
TOTAL	**703,5**	**339,4**	**16,7**

5.3 HYDROMORPHOLOGICAL PRESSURES

5.3.1 Pressures related to hydromorphology

The hydromorphological alterations, that led to the designation of HMWB and AWB are presented In paragraph 4.3.

5.3.2 Sand Extraction

Sand extraction from WB can alter the geometry of river beds and cause hydromorphological alterations.

InStreams basins of N. Peloponnese (EL0227), sand extraction has been carried out in Vouraikos, Glafkos, Krathis, Meganeitis, Finikas and Charadros and from smaller stream that are not designated WB.

In Piros - Vergas - Pinios RB (EL0228), sand extraction has been carried out in Pinios, Piros and Parapiros and the coastal area of artificial lake of Pinios.

InKefalonia – Ithaca – Zakinthos RB (EL0245) no sand extraction has been carried out.

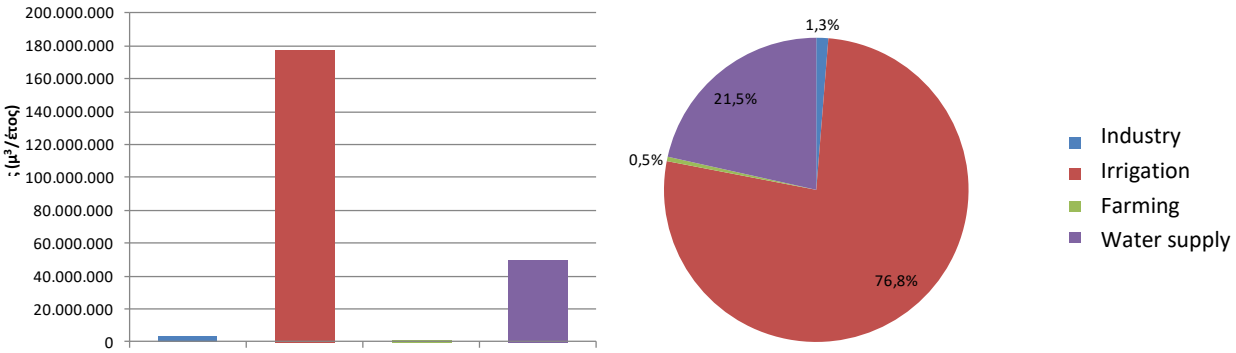
5.4 WATER ABSTRACTION

This paragraph includes information on the total annual water abstraction for all activities and uses:

- Public Water Supply
- Irrigation
- Farming
- Industry
- Other abstraction and uses

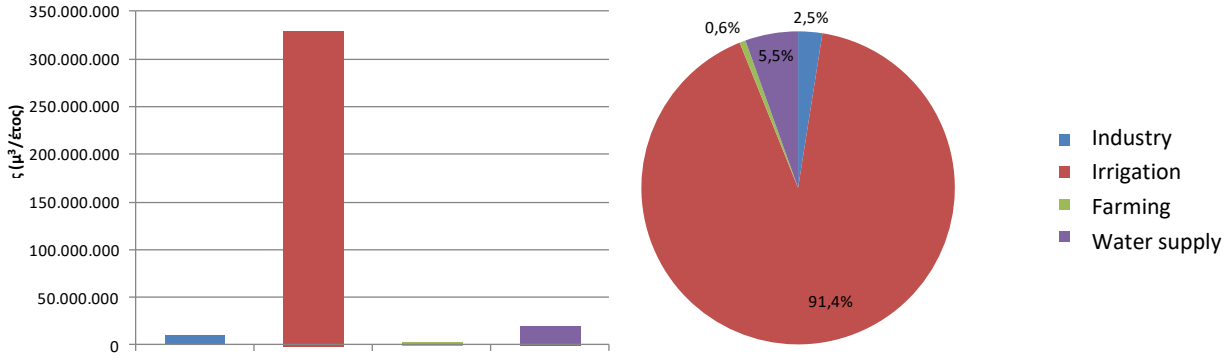
Total water abstraction in Streams basins of N. Peloponnese (EL0227) is ~230,5 hm^3 for all uses and activities. Abstraction for irrigation represents ~76,8% (~176,9 hm^3), industry ~1,3% (~2,9 hm^3), public water supply ~21,5% (~49,6 hm^3) and farming ~0,5% (~1,1 hm^3).

Figure 5-3. Total water abstraction in Streams basins of N. Peloponnese (EL0227)



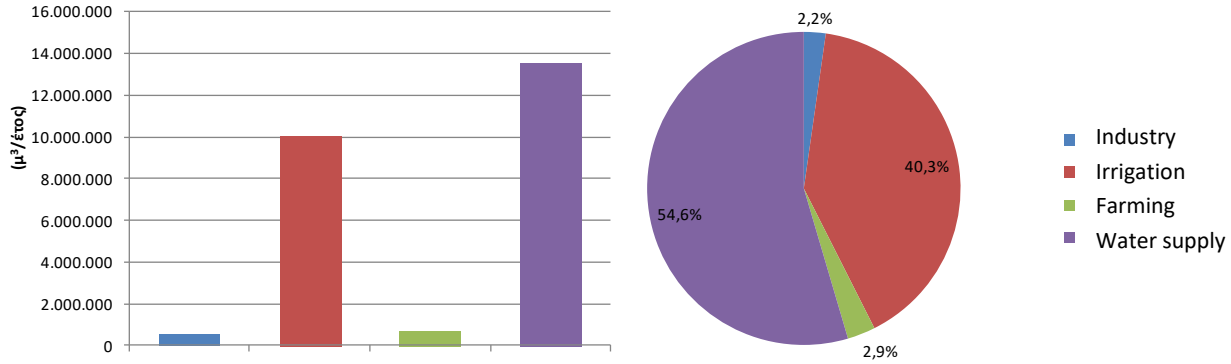
Total water abstraction in Piros - Vergas - Pinios RB (EL0228) is ~360,6 hm^3 for all uses and activities. Abstraction for irrigation represents ~91,4% (~329,7 hm^3), industry ~2,5% (~9,0 hm^3), public water supply ~5,5% (~19,7 hm^3) and farming ~0,6% (~2,2 hm^3).

Figure 5-4. Total water abstraction in Piros - Vergas - Pinios RB (EL0228)



Total water abstraction in Kefalonia – Ithaca – Zakinthos RB (EL0245) is ~24,8 hm^3 for all uses and activities. Abstraction for irrigation represents ~40,3% (~10,0 hm^3), industry ~2,2% (~0,6 hm^3), public water supply ~54,6% (~13,5 hm^3) and farming ~2,9% (~0,7 hm^3).

Figure 5-5. Total water abstraction in Kefalonia – Ithaca – Zakinthos RB (EL0245)



5.5 OTHER PRESSURES

Other pressures include:

- Runoff from mining and quarries
- Desalination plants
- Ports – Marinas - Navigation
- Groundwater Artificial Recharge
- Groundwater Alteration of water level or volume because of underground activity

Runoff from mining and quarries

In the Northern Peloponnese RBD (EL02), there are 6 mines and 1 quarry in Streams basins of N. Peloponnese (EL0227),5 mines in Piros - Vergas - Pinios RB (EL0228) and 5 mines inKefalonia – Ithaca – Zakinthos RB (EL0245).

Desalination plants

In the Northern Peloponnese RBD (EL02), there are 7 desalination plants in in Kefalonia – Ithaca – Zakinthos RB (EL0245).

Ports- Marinas-Navigation

In the Northern Peloponnese RBD (EL02), there are 13 ports in Streams basins of N. Peloponnese (EL0227), 6 ports/marinas in Piros - Vergas - Pinios RB (EL0228)and 22 ports/marinas in Kefalonia – Ithaca – Zakinthos RB (EL0245).

Groundwater artificial recharge

In the Northern Peloponnese RBD (EL02), there have been studies for the artificial recharge of the following GWB:

- Systima Korinthou-Kiatou (EL0200190)
- Systima p.Larissou (EL0200090)

The following overexploited GWB, could benefit from artificial recharge projects:

- Systima Patras- Riou(EL0200120)
- Systima Voreias Achaias (EL0200140)

Groundwater Alteration of water level or volume because of underground works

In the RBD the are no alterations of water level and volume because of underground works.

5.6 TOTAL NUTRIENT LOADS

Figure 5-6. Total nutrient surface loads (BOD, N and P) produced by point, diffuse and other pollution sources in RB (EL0227), (EL0228) and (EL0245)

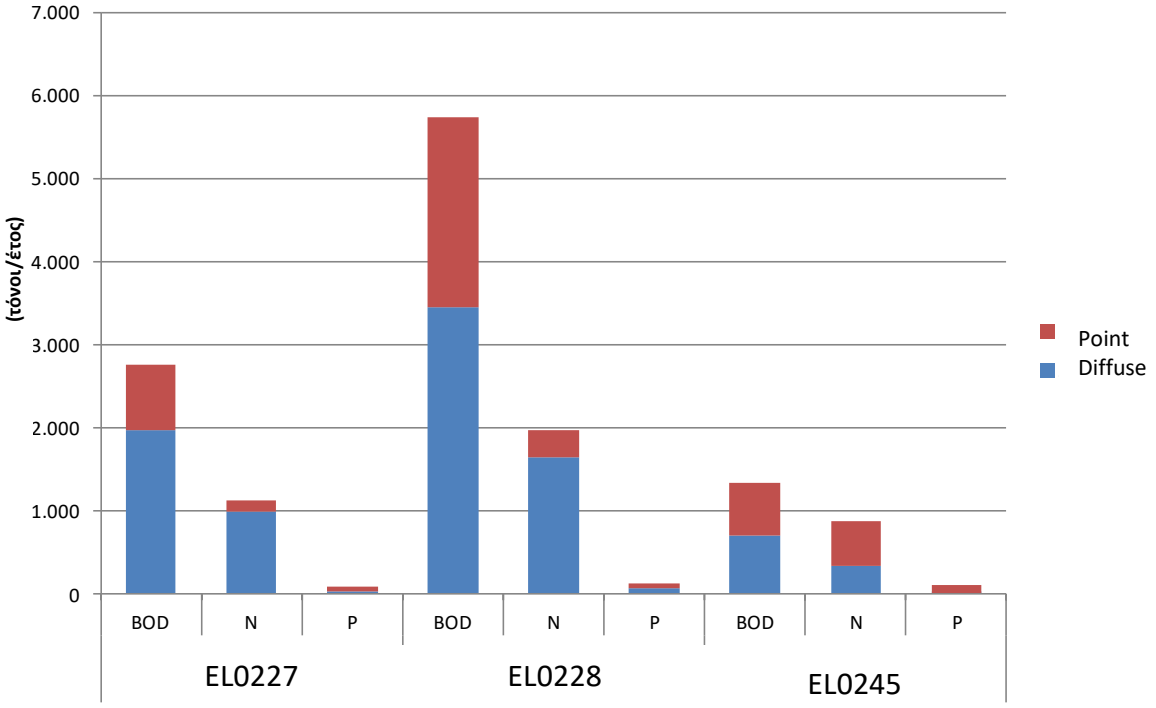


Table 5-7. Total annual nutrient surface loads (BOD, N and P) produced by all sources of pollution in Streams basins of N. Peloponnese (EL0227)

POLLUTION SOURCE	BOD (t/y)	N (t/y)	P (t/y)
POINT	799,1	131,5	48,8
DIFFUSE	1.959,5	987,5	36,9
TOTAL	**2.758,6**	**1.119,0**	**85,7**

Table 5-8. Total annual nutrient surface loads (BOD, N and P) produced by all sources of pollution in Piros - Vergas - Pinios RB (EL0228)

POLLUTION SOURCE	BOD (t/y)	N (t/y)	P (t/y)
POINT	2.283,8	327,4	66,8
DIFFUSE	3.453,8	1.636,9	65,4
TOTAL	**5.737,6**	**1.964,3**	**132,2**

Table 5-9. Total annual nutrient surface loads (BOD, N and P) produced by all sources of pollution in Kefalonia – Ithaca – Zakinthos RB (EL0245)

POLLUTION SOURCE	BOD (t/y)	N (t/y)	P (t/y)
POINT	636,2	543,4	83,0
DIFFUSE	703,5	339,4	16,7
TOTAL	**1.339,8**	**882,8**	**99,7**

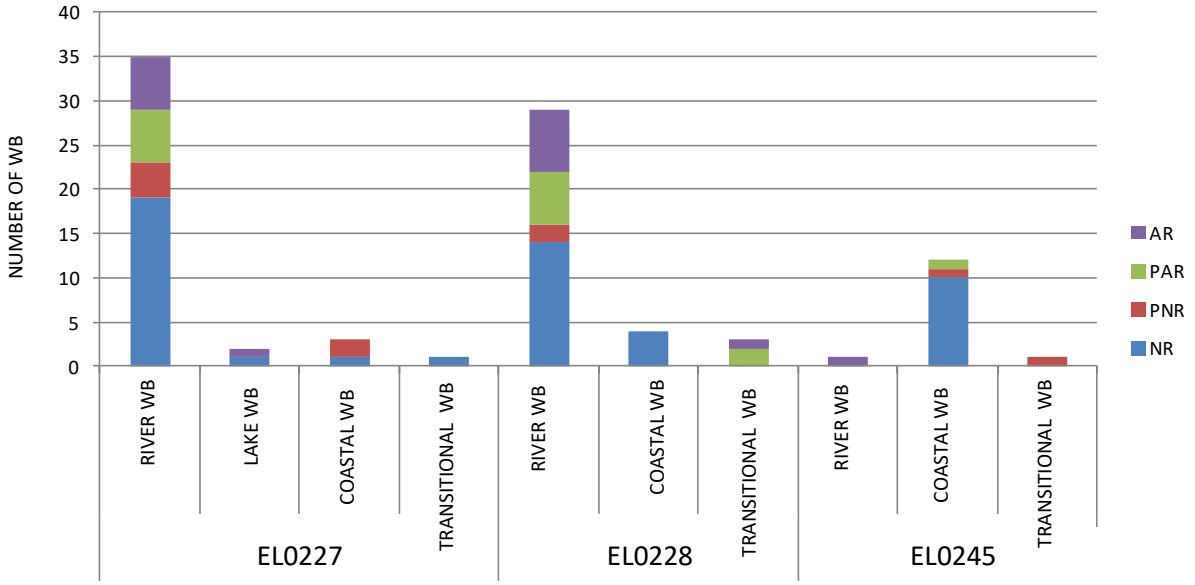
5.7 IMPACTS ASSESSMENT

5.7.1 Impacts assessment on SWB

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

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

Figure 5-7. Risk assessment of SWB failing to meet the WFD objectives in RB(EL0227), (EL0228) and (EL0245)



Streams basins of N. Peloponnese (EL0227)

Table 5-10. Risk assessment of SWB failing to meet the WFD objectives in RB Streams basins of N. Peloponnese (EL0227)– Number of WB

	Risk Assessment Categories*								
	NR – Not at Risk		PNR - Probably not at Risk		PAR –Probably At Risk		AR- At Risk		Total
WB Type	**Number of WB**	**Percentage of WB (%)**	**Number of WB**	**Percentage of WB (%)**	**Number of WB**	**Percentage of WB (%)**	**Number of WB**	**Percentage of WB (%)**	**Number of WB**
River WB	19	54,3%	4	11,4%	6	17,1%	6	17,1%	35
Lake WB	1	50,0%	0	0,0%	0	0,0%	1	50,0%	2
Transitional WB	1	100,0%	0	0,0%	0	0,0%	0	0,0%	1
Coastal WB	1	33,3%	2	66,7%	0	0,0%	0	0,0%	3
Total	**22**	**53,7%**	**6**	**14,6%**	**6**	**14,6%**	**7**	**17,1%**	**41**

Piros - Vergas - Pinios RB (EL0228)

Table 5-11. Risk assessment of SWB failing to meet the WFD objectives in Piros - Vergas - Pinios RB (EL0228)– Number of WB

	Risk Assessment Categories*								
	NR – Not at Risk		PNR - Probably not at Risk		PAR –Probably At Risk		AR- At Risk		Total
WB Type	Number of WB	Percentage of WB (%)	Number of WB	Percentage of WB (%)	Number of WB	WB Type	Number of WB	Percentage of WB (%)	Number of WB
River WB	14	48,3%	2	6,9%	6	20,7%	7	24,1%	29
Lake WB	-	-	-	-	-	-	-	-	0
Transitional WB	0	0,0%	0	0,0%	2	66,7%	1	33,3%	3
Coastal WB	4	100,0%	0	0,0%	0	0,0%	0	0,0%	4
Total	**18**	**50,0%**	**2**	**5,6%**	**8**	**22,2%**	**8**	**22,2%**	**36**

Kefalonia – Ithaca – Zakinthos RB (EL0245)

Table 5-12. Risk assessment of SWB failing to meet the WFD objectives in Kefalonia – Ithaca – Zakinthos RB (EL0245) – Number of WB

	Risk Assessment Categories*								
	NR – Not at Risk		PNR - Probably not at Risk		PAR –Probably At Risk		AR- At Risk		Total
WB Type	Number of WB	Percentage of WB (%)	Number of WB	Percentage of WB (%)	Number of WB	WB Type	Number of WB	Percentage of WB (%)	Number of WB
River WB	0	0,0%	0	0,0%	0	0,0%	1	100,0%	1
Lake WB	-	-	-	-	-	-	-	-	0
Transitional WB	0	0,0%	1	100,0%	0	0,0%	0	0,0%	1
Coastal WB	10	83,3%	1	8,3%	1	8,3%	0	0,0%	12
Total	**10**	**71,4%**	**2**	**14,3%**	**1**	**7,1%**	**1**	**7,1%**	**14**

5.7.2 Impacts assessment on GWB

Streams basins of N. Peloponnese (EL0227)

InStreams basins of N. Peloponnese (EL0227) there are 14 GWB, from which 12 are in good Chemical status and 2 in pour Chemical status.

Table 5-13. Quantitative and Chemical status of GWB inStreams basins of N. Peloponnese (EL0227)

NO	Code	Name	Quantitative status	Decline water levels Trend	Chemical status	Quality Issues	Pollutant Trend
1	EL0200120	Systima Patras- Riou	Good	-	Good	Locally	-
2	EL0200130	Systima Panachaikou	Good	No	Good	No	No
3	EL0200140	Systima Voreias Achaias	Good	Yes	Good	No	Locally
4	EL0200150	Systima Zarouchlas	Good	-	Good	No	No
5	EL0200160	Systima Valtou-Evrostinas	Good	No	Good	No	No
6	EL0200170	Systima Voreias Korinthias	Good	Yes	Poor	Locally	-
7	EL0200180	Systima Korfiotissas	Good	-	Good	No	No
8	EL0200190	Systima Korinthou-Kiatou	Poor	No	Poor	Locally	Locally
9	EL0200200	Systima Arachnaiou	Good	Yes	Good	Locally	-
10	EL0200210	Systima Nemeas	Good	Yes	Good	Locally	Locally
11	EL0200220	Systima Zireias	Good	No	Good	No	No
12	EL0200230	Systima Feneou	Good	-	Good	No	No
13	EL0200240	Systima Kalavryton	Good	No	Good	No	No
14	EL0200250	Systima Voreiou Erymanthou	Good	No	Good	No	No

Piros - Vergas - Pinios RB (EL0228)

In Piros - Vergas - Pinios RB (EL0228) there are 7 GWB: 6 are in Good Chemical status and 1 is in poor Chemical status

Table 5-14. Quantitative and Chemical status of GWB in Piros - Vergas - Pinios RB (EL0228)

NO	Code	Name	Quantitative status	Decline water levels Trend	Chemical status	Quality Issues	Pollutant Trend
1	EL0200060	Systima Pineiou	Good	No	Good	Locally	-
2	EL0200070	Systima Kyllinis	Good	No	Good	No	No
3	EL0200080	Systima Dytikis Achaias	Good	Yes	Good	Locally	-
4	EL0200090	Systima p.Larissou	Poor	Yes	Poor	Locally	-
5	EL0200100	Systima Morvis	Good	No	Good	No	No
6	EL0200110	Systima p. Peirou	Good	No	Good	Locally	-
7	EL0200260	Systima Dytikou Erymanthou	Good	No	Good	No	No

Kefalonia – Ithaca – Zakinthos RB (EL0245)

In Kefalonia – Ithaca – Zakinthos RB (EL0245) there are 5 GWB: 4 are in Good Chemical status and 1 is in poor Chemical status

Table 5-15. Quantitative and Chemical status of GWB in Kefalonia – Ithaca – Zakinthos RB (EL0245)

NO	Code	Name	Quantitative status	Decline water levels Trend	Chemical status	Quality Issues	Pollutant Trend
1	EL0200010	Systima Kefalonias	Good	No	Good	Yes	No
2	EL0200020	Systima Lixouriou - Skalas	Good	Yes	Good	Locally	-
3	EL0200030	Systima Ithakis	Good	No	Good	No	No
4	EL0200040	Systima Vrachiona	Good	No	Good	Yes	No
5	EL0200050	Systima Zakynthou	Poor	Yes	Poor	Locally	-

6 STATUS OF WATER BODIES

6.1 SWB STATUS

Table 6-1. Status of River WB and evolution from the 1st RBMP

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Update of RBMP	1st RBMP	1st Update of RBMP
EL0227R000100001H	GLAFKOS R._1	Unknown	Good	Good	Good
EL0227R000100002N	GLAFKOS R._2	Unknown	Good	Unknown	Good
EL0227R000100003N	GLAFKOS R._3	Good	Good	Unknown	Good
EL0227R000300004N	CHARADROS STREAM	Unknown	Moderate	Unknown	Good
EL0227R000500005N	FINIKAS R._1	Unknown	Moderate	Good	Unknown
EL0227R000500006N	FINIKAS R._2	Good	Good	Unknown	Good
EL0227R000700007N	MEGANITAS STREAM	Unknown	Moderate	Poor	Good
EL0227R000900008N	SELINOUS R._3	Unknown	Good	Unknown	Good
EL0227R000900009N	SELINOUS R._4	Good	Good	Unknown	Good
EL0227R000900010N	SELINOUS R._5	Good	Good	Unknown	Good
EL0227R001300011N	VOURAIKOS R._1	Unknown	Good	Unknown	Good
EL0227R001300012N	VOURAIKOS R._2	Good	Good	Unknown	Good
EL0227R001300013N	VOURAIKOS R._3	Unknown	Moderate	Unknown	Good
EL0227R001300014N	VOURAIKOS R._4	Unknown	Good	Unknown	Good
EL0227R001300015N	VOURAIKOS R._5	Good	Good	Unknown	Good
EL0227R001700016N	KRATHIS R._1	Good	Moderate	Unknown	Good
EL0227R001700017N	KRATHIS R._2	Good	Good	Unknown	Good
EL0227R001900018N	THOLOPOTAMO STREAM	Unknown	Good	Unknown	Good
EL0227R001900019N	KRIOS R._1	Unknown	Good	Unknown	Good
EL0227R001900020N	KRIOS R._2	Unknown	Good	Unknown	Good
EL0227R002100021N	DERVENIO STREAM	Unknown	Moderate	Unknown	Unknown
EL0227R002100022N	SKOUPEIKO STREAM	Unknown	Good	Unknown	Good
EL0227R002100023N	FONISSA STREAM	Unknown	Moderate	Unknown	Unknown
EL0227R002300024N	TRIKALITIKOS R._1	Unknown	Moderate	Unknown	Good
EL0227R002300025N	TRIKALITIKOS R._2	Good	Good	Unknown	Good
EL0227R002700026N	KIRILLOU STREAM	Unknown	Moderate	Unknown	Good
EL0227R002900027N	ASOPOS R._1	Unknown	Poor	Unknown	Good
EL0227R002900028N	ASOPOS R._2	Unknown	Good	Unknown	Good
EL0227R002900029N	ASOPOS R._3	Unknown	Good	Unknown	Good
EL0227R002900030N	ASOPOS R._4	Unknown	Good	Poor	Good
EL0227R002900031N	ASOPOS R._5	Moderate	Good	Unknown	Good
EL0227R003300032N	REZANI STREAM	Unknown	Moderate	Unknown	Good
EL0227R003700033H	POTAMIA STREAM_1	Unknown	Good	Unknown	Good
EL0227R003700034H	POTAMIA STREAM_2	Unknown	Unknown	Unknown	Good
EL0228R000100001N	IARDANOS STREAM	Unknown	Moderate	Unknown	Unknown
EL0228R000201002N	PINIOS R._1	Moderate	Poor	Poor	Good
EL0228R000201003N	PINIOS R._2	Moderate	Good	Good	Good
EL0228R000201004H	PINIOS R._3	Moderate	Poor	Unknown	Good
EL0228R000202005N	VELITSEIKO STREAM	Good	Good	Unknown	Good
EL0228R000204006N	LADON PINIEOS R._1	Good	Moderate	Unknown	Good
EL0228R000204007N	LADON PINIEOS R._2	Good	Good	Unknown	Good
EL0228R000204008N	LADON PINIEOS R._3	Good	Good	Unknown	Good
EL0228R000203009N	PINIOS R._4	Good	Good	Unknown	Good
EL0228R000203010N	PINIOS R._5	Good	Good	Unknown	Good

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Update of RBMP	1st RBMP	1st Update of RBMP
EL0228R000206011N	VILISSOS STREAM	Good	Good	Unknown	Good
EL0228R000205012N	PINIOS R._6	Good	Good	Unknown	Good
EL0228R000205013N	PINIOS R._7	Good	Good	Unknown	Good
EL0228R000208014N	SKOUROPOTAMOS STREAM	Good	Moderate	Unknown	Good
EL0228R000207015N	PINIOS R._8	Good	Good	Unknown	Good
EL0228R000207016N	PINIOS R._9	Unknown	Good	Unknown	Good
EL0228R000700017N	VERGAS STREAM	Unknown	Moderate	Unknown	Good
EL0228R000900019N	MANNA STREAM_2	Unknown	Moderate	Unknown	Good
EL0228R000900020N	MANNA STREAM_3	Unknown	Moderate	Unknown	Unknown
EL0228R000401021N	PIROS R._1	Poor	Moderate	Good	Good
EL0228R000402022N	SERDINI STREAM	Unknown	Moderate	Unknown	Unknown
EL0228R000403023N	PIROS R._2	Poor	Moderate	Unknown	Unknown
EL0228R000404024N	PARAPIROS STREAM_1	Poor	Moderate	Unknown	Unknown
EL0228R000404025N	PARAPIROS STREAM_2	Good	Good	Unknown	Good
EL0228R000404026N	PARAPIROS STREAM_3	Good	Good	Unknown	Good
EL0228R000405027N	PIROS R._3	Unknown	Moderate	Unknown	Unknown
EL0228R000405028N	PIROS R._4	Good	Good	Unknown	Good
EL0245R000100001N	AGIA EUFIMIA STREAM	Unknown	Moderate	Unknown	Good

Table 6-2. Status of Reservoirs WB and evolution from the 1st RBMP

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Update of RBMP	1st RBMP	1st Update of RBMP
EL0227RL02900001H	ASOPOS ARTIF.LAKE	Unknown	Unknown	Unknown	Unknown
EL0228RL00404001H	ASTERIOU ARTIF.LAKE	Unknown	Unknown	Unknown	Unknown
EL0228RL00203002H	PINIOS ARTIF.LAKE	Unknown	Good	Unknown	Good

Table 6-3. Status of Lakes WB including artificial lakes and evolution from the 1st RBMP

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Update of RBMP	1st RBMP	1st Update of RBMP
EL0227L000000002N	STIMFALIA LAKE	Unknown	Unknown	Unknown	Good
EL0227L000000003A	FENEOS ARTIF.LAKE	Unknown	Good	Unknown	Good

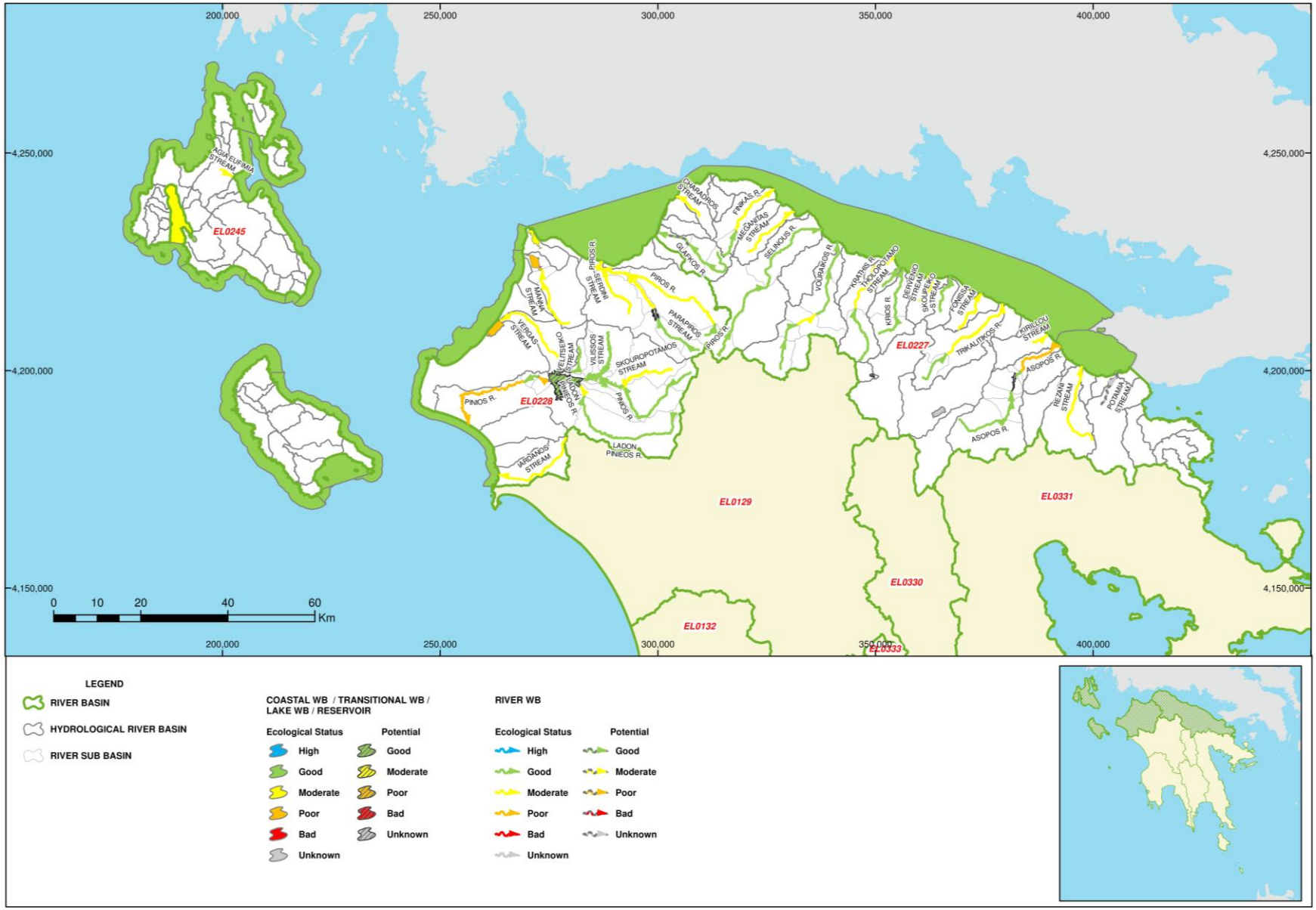
Table 6-4. Status of Transitional WB and evolution from the 1st RBMP

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Update of RBMP	1st RBMP	1st Update of RBMP
EL0227T0001N	ALIKI EGIO	Unknown	Unknown	Unknown	Unknown
EL0228T0001N	PAPA LAGOON (ARAXOS)	Poor	Moderate	Unknown	Good
EL0228T0004N	KOTICHI LAGOON	Poor	Poor	Unknown	Good
EL0228T0005N	PROKOPOS LAGOON	Moderate	Poor	Unknown	Good
EL0245T0001N	KOUTAVOS LAGOON (KEFALONIA)	Moderate	Good	Unknown	Good

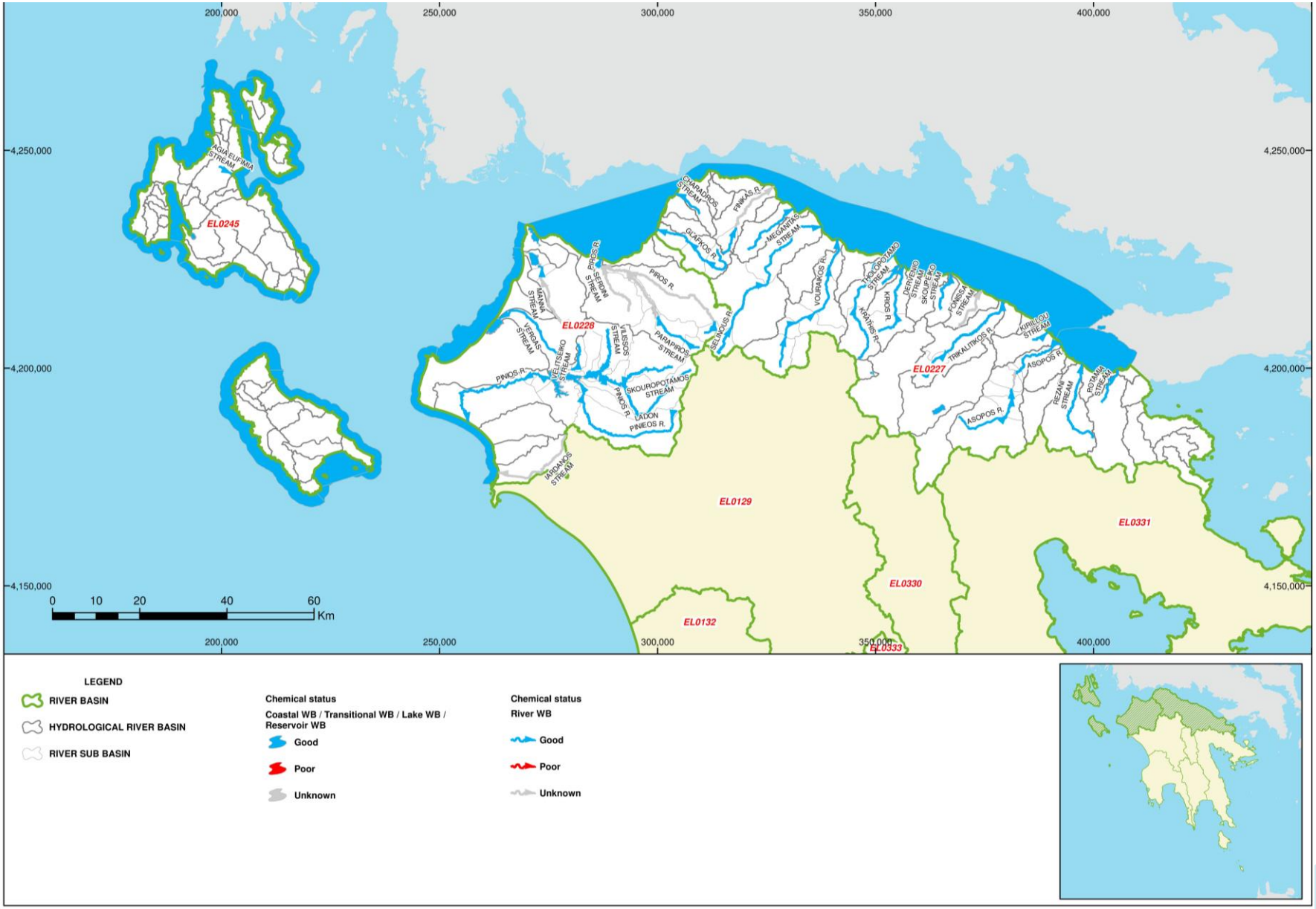
Table 6-5. Status of Coastal WB and evolution from the 1st RBMP

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Update of RBMP	1st RBMP	1st Update of RBMP
EL0227C0004H	PORT OF PATRA	Moderate	Good	Unknown	Good
EL0227C0005N	CORINTHIAN GULF – COASTS OF PELOPONNESE	Good	Good	Unknown	Good
EL0227C0006N	KORINTHOS BAY	Moderate	Good	Unknown	Good
EL0228C0003N	GULF OF PATRA	Moderate	Good	Unknown	Good
EL0228C0007N	ARAXOS CAPE	High	Good	Unknown	Good
EL0228C0008N	GULF OF KILLINI	High	Good	Unknown	Good
EL0228C0009N	COAST OF PELOPONNESE OPPOSITE ZAKINTHOS	High	Good	Unknown	Good
EL0245C0001N	WEST COAST OF KEFALONIA	High	Good	Unknown	Good
EL0245C0002N	EAST COAST OF KEFALONIA-ITHACA	High	Good	Unknown	Good
EL0245C0010N	MOUNTA CAPE	High	Good	Unknown	Good
EL0245C0011N	EAST BAY OF LOURDATA	High	Good	Unknown	Good
EL0245C0012N	WEST BAY OF LOURDATA	High	Good	Unknown	Good
EL0245C0013N	VARDIANOI ISLANDS	High	Good	Unknown	Good
EL0245C0014N	GULF OF ARGOSTOLI	Moderate	Moderate	Unknown	Good
EL0245C0015N	WEST COAST OF ZAKINTHOS	High	Good	Unknown	Good
EL0245C0016N	EAST COAST OF ZAKINTHOS	High	Good	Unknown	Good
EL0245C0017N	LAGANAS GULF (ZAKINTHOS)	Good	Good	Unknown	Good
EL0245C0018N	MARATHIAS CAPE	High	Good	Unknown	Good
EL0245C0019N	STROFADES ISLANDS	High	Good	Unknown	Good

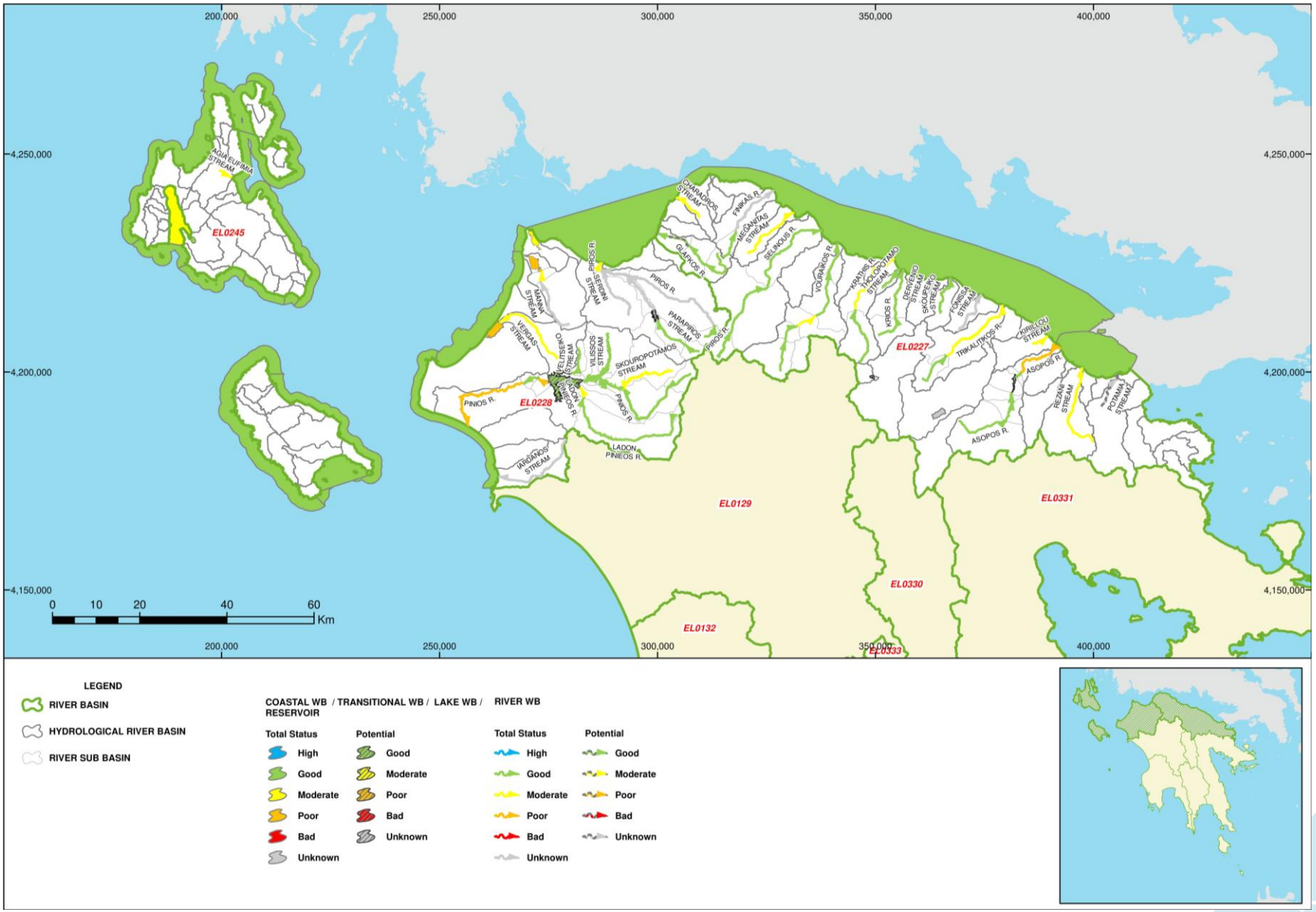
Map 5. Ecological status of SWB in RBD EL02



Map 6. Chemical status of SWB in RBD EL02



Map 7. Total status of SWB in RBD EL02



6.2 GWB STATUS

Table 6-6. Status of GWB and evolution from the 1st RBMP in Streams basins of N. Peloponnese (EL0227)

		1st RBMP		1st Update of RBMP	
GWB Code	**GWB Name**	**Chemical status**	**Quantitative status**	**Chemical status**	**Quantitative status**
EL0200120	Systima Patras- Riou	Good	Good	Good	Good
EL0200130	Systima Panachaikou	Good	Good	Good	Good
EL0200140	Systima Voreias Achaias	Good	Good	Good	Good
EL0200150	Systima Zarouchlas	Good	Good	Good	Good
EL0200160	Systima Valtou-Evrostinas	Good	Good	Good	Good
EL0200170	Systima Voreias Korinthias	Poor	Good	Poor	Good
EL0200180	Systima Korfiotissas	Good	Good	Good	Good
EL0200190	Systima Korinthou-Kiatou	Poor	Poor	Poor	Poor
EL0200200	Systima Arachnaiou	Good	Good	Good	Good
EL0200210	Systima Nemeas	Good	Good	Good	Good
EL0200220	Systima Zireias	Good	Good	Good	Good
EL0200230	Systima Feneou	Good	Good	Good	Good
EL0200240	Systima Kalavryton	Good	Good	Good	Good
EL0200250	Systima Voreiou Erymanthou	Good	Good	Good	Good

Table 6-7. Status of GWB and evolution from the 1st RBMP in Piros - Vergas - Pinios RB (EL0228)

		1st RBMP		1st Update of RBMP	
GWB Code	**GWB Name**	**Chemical status**	**Quantitative status**	**Chemical status**	**Quantitative status**
EL0200060	Systima Pineiou	Good	Good	Good	Good
EL0200070	Systima Kyllinis	Good	Good	Good	Good
EL0200080	Systima Dytikis Achaias	Good	Good	Good	Good
EL0200090	Systima p.Larissou	Poor	Poor	Poor	Poor
EL0200100	Systima p.Larissou	Good	Good	Good	Good
EL0200110	Systima p.Larissou	Good	Good	Good	Good
EL0200260	Systima Dytikou Erymanthou	Good	Good	Good	Good

Table 6-8. Status of GWB and evolution from the 1st RBMP in Kefalonia – Ithaca – Zakinthos RB (EL0245)

		1st RBMP		1st Update of RBMP	
GWB Code	**GWB Name**	**Chemical status**	**Quantitative status**	**Chemical status**	**Quantitative status**
EL0200010	Systima Kefalonias	Good	Good	Good	Good
EL0200020	Systima Lixouriou - Skalas	Good	Good	Good	Good
EL0200030	Systima Ithakis	Good	Good	Good	Good
EL0200040	Systima Vrachiona	Good	Good	Good	Good
EL0200050	Systima Zakynthou	Poor	Good	Poor	Poor

Map 8. Chemical status of GWB in RBD EL02

Map 9. Quantitative status of GWB in RBD EL02

7 ECONOMIC ANALYSIS

7.1 WATER SERVICES FINANCIAL COST

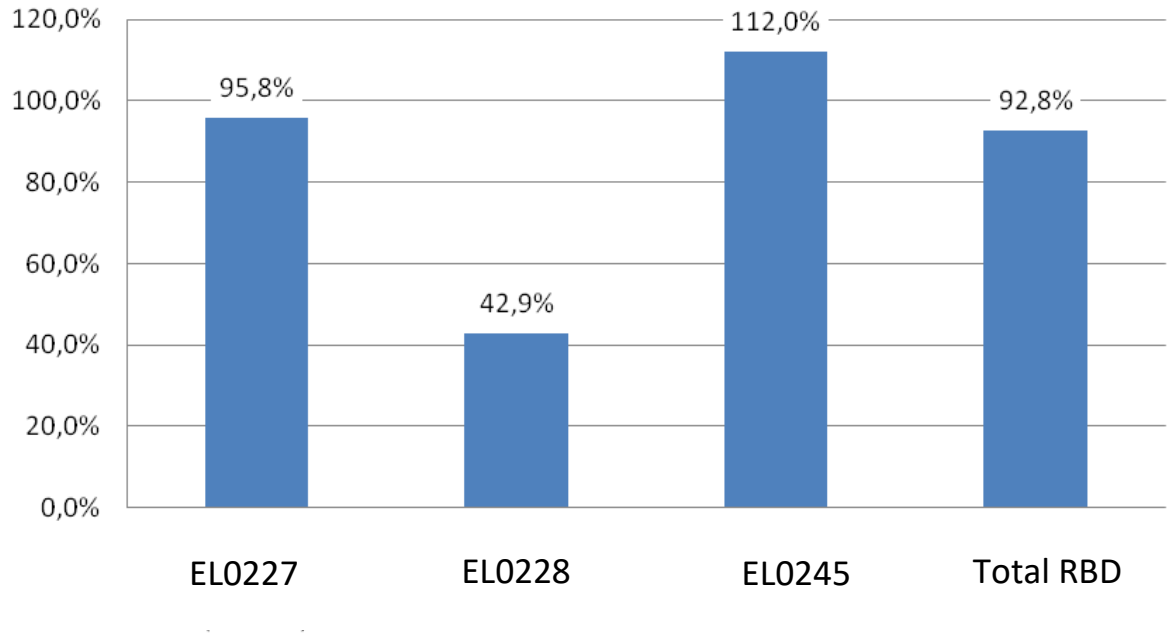
7.1.1 Drinking water supply, sewage collection and wastewater treatment

The total financial cost of drinkingwater supply, sewage collection and wastewater treatment in Northern Peloponnese RBD (EL02) is 45.698.053 €. Cost recovery is 92,8% (revenues 42,40 M € - 45,70 M € expenses).

Table 7-1. Financial Cost Recovery for Water Supply

RB	Total Financial Cost (€)	Average Financial Cost (€/m³)	Total Revenues (€)	Average Revenues (€/m³)	Financial Cost Recovery
Streams basins of N. Peloponnese (EL0227)	32.981.331	0,893	31.590.571	0,855	95,8%
Piros - Vergas - Pinios RB (EL0228)	4.971.971	0,403	2.133.101	0,173	42,9%
Kefalonia – Ithaca – Zakinthos RB (EL0245)	7.744.751	0,827	8.675.338	0,927	112,0%
Total RBD EL02	**45.698.053**	**0,779**	**42.399.010**	**0,723**	**92,8%**

Figure 7-1. Financial Cost Recovery for Water Supply



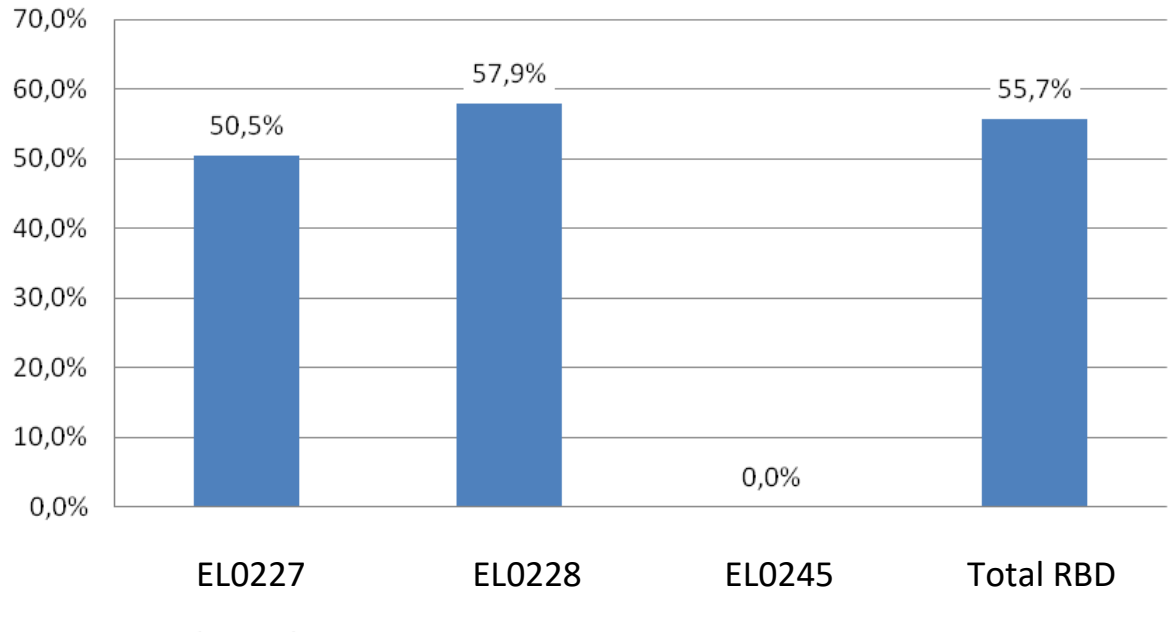
7.1.2 Irrigation

The total financial cost for Irrigation services in Northern Peloponnese RBD (EL02) is 10.321.732 €. Cost recovery is 55,7% (revenues 5,75 M € - 10,32 M € expenses).

Table 7-2. Financial Cost Recovery for Irrigation services

RB	Total Financial Cost (€)	Average Financial Cost (€/m³)	Total Revenues (€)	Average Revenues (€/m³)	Financial Cost Recovery
Streams basins of N. Peloponnese (EL0227)	3.086.642	0,067	1.559.455	0,034	50,5%
Piros - Vergas - Pinios RB (EL0228)	7.235.090	0,108	4.192.321	0,063	57,9%
Kefalonia – Ithaca – Zakinthos RB (EL0245)	-	-	-	-	-
Total RBD EL02	**10.321.732**	**0,093**	**5.751.775**	**0,052**	**55,7%**

Figure 7-2. Financial Cost Recovery for Irrigation services



7.2 ENVIRONMENTAL COST AND RESOURCE COST

7.2.1 Environmental Cost

The annual Environmental Cost in the RBD is 226.000 €. 33.2% in Streams basins of N. Peloponnese (EL0227), 33,6% in Piros - Vergas - Pinios RB (EL0228) and 33.2% inKefalonia – Ithaca – Zakinthos RB (EL0245). The Average Environmental Cost in the RBD is 0,0004€/m^3.

Table 7-3. Annual Environmental Cost

RB	Annual Environmental Cost (€)	Average EnvironmentalCost (€/m^3)
Streams basins of N. Peloponnese (EL0227)	75.000	0,0003
Piros - Vergas - Pinios RB (EL0228)	76.000	0,0002
Kefalonia – Ithaca – Zakinthos RB (EL0245)	75.000	0,0032
Total RBD EL02	**226.000**	**0,0004**

It is noted that in this RBD there is no Environmental Cost generated fromthe Industrial Water Use /Services.

Table 7-4. Distribution of the Environmental cost per Service

Environmental Cost	Water Supply	Irrigation	Total
Streams basins of N. Peloponnese (EL0227)			
Total cost for all years of PoM implementation (€) (2018-2021, 4 years)	0	300.000	300.000
Annual cost per service (€)	0	75.000	75.000
Percentage (%)	0,0%	100,0%	100,0%
Average Annual Cost (€/m^3)	0	0,00042	0,00033
Piros - Vergas - Pinios RB (EL0228)			
Total cost for all years of PoM implementation (€) (2018-2021, 4 years)	0	304.000	304.000
Annual cost per service (€)	0	76.000	76.000
Percentage (%)	0,0%	100,0%	100,0%
Average Annual Cost (€/m^3)	0	0,00023	0,00022
Kefalonia – Ithaca – Zakinthos RB (EL0245)			
Total cost for all years of PoM implementation (€) (2018-2021, 4 years)	0	300.000	300.000
Annual cost per service (€)	0	75.000	75.000
Percentage (%)	0,0%	100,0%	100,0%
Average Annual Cost (€/m^3)	0	0,00750	0,00319

In all the RB 100% of the total annual Environmental Cost is due to the Irrigation Service.

7.2.2 Resource cost

The annual Resource Cost in the RBD is 75.000€. 50 % in Streams basins of N. Peloponnese (EL0227), 16,7 % in Piros - Vergas - Pinios RB (EL0228) and 33,3 % in Kefalonia – Ithaca – Zakinthos RB (EL0245). The Average Resource Cost in the RBD is 0,125 €/1000 m^3.

Table 7-5. Annual Resource Cost

RB	Annual Resource Cost (€)	Average Resource Cost (€/1000 m^3)
Streams basins of N. Peloponnese (EL0227)	37.500	0,165
Piros - Vergas - Pinios RB (EL0228)	12.500	0,036
Kefalonia – Ithaca – Zakinthos RB (EL0245)	25.000	1,064
Total RBD EL02	**75.000**	**0,125**

It is noted that in this RBD, no Resource Cost is generated from the Industrial Water Use /Service.

Table 7-6. Distribution of the Resource Cost per Service

Resource Cost	Water Supply	Irrigation	Total
Streams basins of N. Peloponnese (EL0227)			
Total cost for all years of PoM implementation (€) (2018-2021, 4 years)	0	150.000	150.000
Annual cost per service (€)	0	37.500	37.500
Percentage (%)	0%	100%	100,0%
Average Annual Cost (€/m^3)	0	0,00021	0,00017
Piros - Vergas - Pinios RB (EL0228)			
Total cost for all years of PoM implementation (€) (2018-2021, 4 years)	0	50.000	50.000
Annual cost per service (€)	0	12.500	12.500
Percentage (%)	0,0%	100,0%	100,0%
Average Annual Cost (€/m^3)	0	0,00004	0,00004
Kefalonia – Ithaca – Zakinthos RB (EL0245)			
Total cost for all years of PoM implementation (€) (2018-2021, 4 years)	25.000	75.000	100.000
Annual cost per service (€)	6.250	18.750	25.000
Percentage (%)	25,0%	75,0%	100,0%
Average Annual Cost (€/m^3)	0,00046	0,00188	0,00106

The total Resource Cost (300.000 €) is due to the Water Supply Service 8,33% (25.000 €) and to the Irrigation Service 91,67% (275.000 €).

8 ENVIRONMENTAL OBJECTIVES -EXEMPTIONS

The environmental objectives set for the 91 SWB of the RBD by 2021 are presented in the following table:

Table 8-1. SWB Environmental objectives by 2021

Environmental Objective	Number of SWB
Maintain good / high ecological status/potential	57
Maintain good chemical status	79
Achieve good ecological status	9
Achieve good chemical status	0
Identify ecological status/potential	5
Determine the chemical status	12
Exemption Article 4.4 (Deadline extension)	25
Exemption Article 4.5 (Less strict environmental objectives)	0
Exemption Article 4.6 (Temporary deterioration)	0
Exemption Article 4.7 (New modifications)	0

The environmental objectives set for the 26 GWB of the RBD by 2021 are presented in the following table:

Table 8-2. GWB Environmental objectives by 2021

Environmental Objective	Number of GWB
Maintain good quantitative status	23
Maintain good chemical status	22
Achieve good quantitative status	0
Achieve good chemical status	0
Exemption Article 4.4 (Deadline extension)	4
Exemption Article 4.5 (Less strict environmental objectives)	0
Exemption Article 4.6 (Temporary deterioration)	0
Exemption Article 4.7 (New modifications)	0

8.1 DEADLINE EXTENSION (ARTICLE 4.4 DIRECTIVE 2000/60/EC)

Table 8-3. WB exemptions 2021

	EXEMPTIONS		Number of WB
	CATEGORY	SUB-CATEGORY	
SWB Ecological status	Article 4.4 (Deadline extension)	It takes longer to fix the problem than there is time available	11
SWB Ecological status	Article 4.4 (Deadline extension)	There is no information on the cause of the problem so the solution cannot be identified	14
GWB Quantitative Status	Article 4.4 (Deadline extension)	It takes longer to fix the problem than there is time available	3
GWB Chemical Status	Article 4.4 (Deadline extension)	It takes longer to fix the problem than there is time available	4

8.2 LESS STRICT ENVIRONMENTAL OBJECTIVES (ARTICLE 4.5 DIRECTIVE 2000/60/EC)

In the present Update of RBMP, no less strict environmental objectives are set for any GWB or SWB. This exemption category will be reviewed in the next Update of RBMP, taking into consideration the new monitoring data and after evaluating technically feasible measures.

8.3 TEMPORARY DETERIORATION (ARTICLE 4.6 DIRECTIVE 2000/60/EC)

In the present Update of RBMP, no temporary deterioration is foreseeing for any GWB or SWB. This exemption category will be reviewed in the next Update of RBMP, taking into consideration the new monitoring data and after evaluating technically feasible measures.

8.4 NEW MODIFICATIONS (ARTICLE 4.7 DIRECTIVE 2000/60/EC)

The 1st Update of RBMP defines the procedure for considering the potential inclusion in Article 4.7 of Directive 2000/60 / EC of water bodies affected by programmed projects.

For this purpose a specific analytical methodology has been developed, which is available on the relevant website of the Special Secretariat of Water http://wfdver.ypeka.gr/. The implementation procedure of Article 4.7 is set out in detail, is in force since the adoption of this Management Plan and concerns planned projects for which no environmental permit dossier has been filed or in cases where according to the existing legislation there is no requirement for approval of environmental terms, a request for authorization to build, install or operate has not been filed by the competent body, as appropriate.

9 PROGRAMME OF MEASURES

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

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

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

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

• Measures for the implementation of EU and national legislation on water protection (**Group I**).

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

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

9.1 PROGRESS OF IMPLEMENTATION OF THE 1ST RBMP POM

The PoM of the 1st RBMP included 51 Basic Measures (13 Group I and 38 Group II).

Table 9-1. Number of Basic Measures of 1st RBMP per category of Actions

Actions concerning measures	Number of measures
Administrative acts	6+10=16
Constructions	2+3=5
Studies	0+6=6
Measures relating to administrative acts but requiring specific studies or surveys	2+17=19
Measures relating to Services / advisory actions	3+2=5
Total	**13+38=51**

Table 9-2. Progress of the implementation of the Basic Measures of the Program of Measures of the 1st RBMP

Category of Measures	Total number of measures	Number of measures already implemented	Number of measures in progress / under construction	Number of measures not started
EU Directive measures	13	7	6	
Measures deemed appropriate for the purposes of Article 9 (cost recovery)	1	1		
Measures to promote an efficient and sustainable water use in order to avoid compromising the achievement of the objectives specified in Article 4	6	2	4	0

Category of Measures	Total number of measures	Number of measures already implemented	Number of measures in progress / under construction	Number of measures not started
Measures to meet the requirements of Article 7 (drinking water)	6		6	
Measures for thecontrols over the abstraction of surface water and groundwater	6	4	2	
Measures for thecontrols of artificial recharge of GWB	3	0	3	
Measures for point source discharges	9	3	5	1
Measures for diffuse sources liable to cause pollution	3	1	2	
Measures for any other significant adverse impacts on the status of water	2		2	
Special Measures for the priority substances and other substances				
Measures for the prevention of accidental pollution incidents / extreme whether events	2	2		
Total	**13+38=51**	**7+13=20**	**6+24=30**	**0+1=1**

In addition to the above basic measures, the program of measures of the 1st RBMP included 93 supplementary measures, of which 25 are horizontal supplementary, covering 12 categories of measures of Directive 2000/60/EC.

Table 9-3. Progress of the implementation of the Supplementary Measures of the Program of Measures of the 1st RBMP

Category of Measures	Total number of measures	Number of measures already implemented	Number of measures in progress / under construction	Number of measures not started
Legislative instruments	0	0	0	0
Administrative instruments	6	0	5	1
Negotiated environmental agreements	0	0	0	0
Emission controls	4	0	3	1
Recreation and restoration of wetlands areas	7	0	1	6
Abstraction controls	8	3	2	3
Demand management measures	7	0	7	0
Construction projects	8	0	4	4
Infrastructure rehabilitation projects	12	2	2	8
Artificial recharge of aquifers	2	1	1	0
Research, development and demonstration projects	9	3	0	6
Other relevant measures	5	0	2	3
Horizontal Supplementary measures concerning SWB	4	1	3	
Horizontal Supplementary measures concerning GWB	21	2	19	0
Total	**93**	**12**	**49**	**32**

9.2 PRORGAMME OF BASIC AND SUPPLEMENTARY MEASURES

Implementation timetable

The measures are divided into the following implementation timetable categories:

- Short term: Immediate implementation is possible
- Medium term: Implementation within 2 years
- Long term: Their implementation requires more than 2 years

Implementing bodies

For each measure, the implementing bodies are presented. The national legislation details the jurisdictions of each implementing body. Each measure can be implemented from additional implementing bodies, not mentioned below, if this derives from the legal framework.

New projects and activities

In the present Programme of Basic and Supplementary measures specific restrictions or requirements and set for "new" projects and activities. These restrictions or requirements do not apply on projects and activities that are already operational or under construction or have already secured funding or have at least one administrative act approved.

9.2.1 Actions implementing EU Directives (Group I Basic Measures)

The planned actions for the implementation of EU Directives and National legislation for the protection of WB are presented in the following table.

Table 9-4. Actions for the implementation of EU Directives

DIRECTIVE	PLANNED ACTIONS	IMPLEMENTING BODIES
Bathing water Directive (2006/7/ EC)	• Continue to monitor the quality of bathing water in accordance with Directive 2006/7 / EC.	Special Secretariat for Water, Directorate of Water of the Decentralized Administration
	• Updating the Greek Bathing Water Profiles Registry	
Habitats Directive (92/43/EEC) Birds Directive (2009/147/ EC)	• Setting /Approval Management Plans for protected areas of Natura 2000 network relating with water management issues	Ministry of Environment and Energy, Protected Areas Management Bodies
	• Monitoring/Assessment of the conservation status of habitats and species directly depending on water in Natura 2000 areas.	
Drinking water (Directives 98/83/ EC, 2015/1787/ EC)	• Monitoring of the implementation of the Directive	Ministry of Health

DIRECTIVE	PLANNED ACTIONS	IMPLEMENTING BODIES
Environmental Impact Assessment Directives (2011/92/EC, 2014/52/EC)	Amendment of the Ministerial Decision 170225/2014 – (Specifications for the contents of environmental permitting dossiers for projects and activities of category A) so that for certain categories of projects, which should be first specified, to make the following mandatory: • Emissions of pollutants by category, • Calculation of pollution impacts in WB defined in the Management Plans and • Comparing these concentrations with the Environmental Quality Standards. • Establishment of a monitoring program and notification of results to the relevant Water Directorate.	Ministry of Environment and Energy
Industrial Emissions Directive IED, (2010/75/EC)	• Keeping registration and records of installations that are in line with the provisions of the Directive	Decentralized administration
Nitrates Directive (91/676/ EC)	• Implementation of New Action Plans. The drafting of New Action Plans in all the vulnerable zones of the country has been entrusted by the Ministry of Rural Development and Food to the Agricultural University of Athens and is under preparation.	Ministry of Rural Development and Food
	• Systematic monitoring of nitrate levels in WBs that are or may be subject to nitrate pollution.	Special Secretariat for Water, Ministry of Rural Development and Food
Plant Protection Products (Directive 2009/128/EK, Regulation (EU) No. 1107/2009, Regulation (EU) No. 652/2014)	• Rational use of plant protection products	Ministry of Rural Development and Food
Major Accidents (Seveso) Directive (2012/18/EC)	• Keeping registration and records of installations that are in line with the provisions of the Directive	Decentralized administration
Sewage sludge Directive (86/278/EEC)	• Setting up a Joint Ministerial Decision, on Measures, Conditions and Procedures for the Use of Sludge from Domestic and Urban Wastewater Treatment and Certain Wastewater, in compliance with the provisions of Directive 86/278 / EEC and in replacement of Joint Ministerial Decision 80568/4225 / 1991 and promotion of actions related to the safe disposal of treated sludge.	Ministry of Environment and Energy
Urban Waste Water Treatment Directive (91/271/ EC, 98/15/ EC)	• Completion of sewerage and waste water treatment projects of the settlements that concerns the provisions of the Directive (covering all agglomerations with a population greater than 2,000 p.e.).	Region, MEWSS, Municipalities
	• Strengthening actions to control the effective operation of existing wastewater treatment and drainage projects.	Region

9.2.2 Basic Measures of other categories (Group II Basic Measures)

Table9-5. Basic measures of other categories

CODE - NAME OF MEASURE	CATEGORY	1st RBMP	IMPLEMENTING BODIES
M02B0201 Upgrading of the organizational function of organizations of land reclamation for the compliance with the financial and other data in order to meet the requirements of the Joint Ministerial Decision 132275/19.05.2017 (Government Gazette 1751 B'/22.05.2017) of the National Water Committee, which deals with pricing and costing rules for water supply services	Measures to implement the cost recovery principle (Art. 9)	YES	Organization of Land reclamation (Local, General) / Region / Ministry of Environment & Energy (Special Secretariat for Water) /Ministry of Rural Development & Food
M02B0202 Upgrade of the organizational function of MEWSS for the compliance with the financial and other data in order to meet the requirements of the Joint Ministerial Decision 132275/19.05.2017 (Government Gazette 1751 B'/22.05.2017) of the National Water Committee, which deals with pricing and costing rules for water supply services.	Measures to implement the cost recovery principle (Art. 9)	YES	MEWSS / Ministry of Environment & Energy (Special Secretariat for Water) / Ministry of Interior
M02B0203 Upgrading of the organizational function of the Local Government Organizations for the compliance with the financial and other data in order to meet the requirements of the Joint Ministerial Decision 132275/19.05.2017 (Government Gazette 1751 B'/22.05.2017) of the National Water Committee, which deals with pricing and costing rules for water supply services.	Measures to implement the cost recovery principle (Art. 9)	YES	Local Government Organizations / Ministry of Environment & Energy (Special Secretariat for Water) / Ministry of Interior
M02B0204 Training and expertise of all the stakeholders (Decentralized Administrations, Regions, MEWSS, LOLR, Local Government Organizations of the Joint Ministerial Decision 132275/19.05.2017 (Government Gazette 1751 B'/22.05.2017) of the National Water Committee, which deals with pricing and costing rules for water supply services.	Measures to implement the cost recovery principle (Art. 9)	YES	Ministry of Environment & Energy (Special Secretariat for Water)
M02B0301 Preparation / Update of the Water Supply Masterplan	Measures to promote an efficient and sustainable water use (Art. 4)	YES	MEWSS / Municipalities /Water suppliers/ Decentralized Administration (Water Directorate)
M02B0302 Actions for the reinforcement, rehabilitation, modernization of water supply networks and leakage control	Measures to promote an efficient and sustainable water use (Art. 4)	YES	Municipalities / MEWSS / Drinking water providers / Region / Decentralized Administration (Water Directorate)
M01B0303 Increase the efficiency of water use in land reclamation infrastructures	Measures to promote an efficient and sustainable water use (Art. 4)	YES	Ministry of Rural Development and Food, Regions

CODE - NAME OF MEASURE	CATEGORY	1st RBMP	IMPLEMENTING BODIES
M02B0304 Investments for saving water in agriculture	Measures to promote an efficient and sustainable water use (Art. 4)	YES	Individuals / Irrigation water providers / Ministry of Rural Development and Food / Regions
M02B0305 Determination of maximum irrigation requirements for crops for private water abstractions	Measures to promote an efficient and sustainable water use (Art. 4)	YES	Decentralized Administration (Water Directorate), Regional directorate of Rural Economy and Veterinary Medicine
M02B0306 Strengthening loss reduction actions on collective irrigation networks	Measures to promote an efficient and sustainable water use (Art. 4)	YES	GOLR/LOLR/Collective Irrigation Networks, Region
M02B0307 Preparation of manual of technical specifications for application of water reuse methods	Measures to promote an efficient and sustainable water use (Art. 4)	YES	Ministry of Environment & Energy (Special Secretariat for Water)
M02B0308 Update of the existing Strategic Plan to Address Water Scarcity and Drought	Measures to promote an efficient and sustainable water use (Art. 4)	YES	Decentralized Administration (Water Directorate), Ministry of Environment & Energy (Special Secretariat for Water)
M02B0401 Definition and delimitation of zones and / or measures for the protection of water abstraction points, intended for human consumption from groundwater bodies	Measures to meet the requirements of Article 7 (drinking water)	YES	Decentralized Administration (Water Directorate) and Drinking water providers (MEWSS, Municipalities etc.)
M02B0402 Protection of GWBs included in the registry of protected areas for human consumption and establishment of an institutional framework of protection	Measures to meet the requirements of Article 7 (drinking water)	YES	Decentralized Administration (Water Directorate)
M02B0403 Surface water projects for water supply protection	Measures to meet the requirements of Article 7 (drinking water)	YES	Municipalities / MEWSS / Water providers / Decentralized Administration (Water Directorate)
M02B0404 Implementation of Water Safety Plans	Measures to meet the requirements of Article 7 (drinking water)	YES	MEWSS, Municipalities, Drinking water providers, Decentralized Administration (Water Directorate)

CODE - NAME OF MEASURE	CATEGORY	1st RBMP	IMPLEMENTING BODIES
M02B0501 Restrictions, terms and conditions for the construction of groundwater abstraction projects (drilling, wells, etc.) for new uses, as well as extension of existing water use permits to: (a) area of GWBs in Poor quantitative status (b) the protection zone II of the abstractions serving the water supply networks that operated by Municipalities, Municipal Syndicates, MEWSS, Inter-MEWSS and drinking water companies , c) zones of collective irrigation networks d) coastal GWB with extensive or local salinization problems, regardless of their origin	Measures to control surface and groundwater abstractions	YES	Decentralized Administration (Water Directorate)
M02B0502 Annual online registration of surface and groundwater abstractions	Measures to control surface and groundwater abstractions	YES	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate), Regions
M02B0601 Investigation of the conditions for application of artificial underground aquifer enrichment as a mean of quantitative enhancement and quality protection of GWBs, with a priority for GWBs with poor condition and/or salinization issues.	Measures to control the artificial recharge of groundwater aquifers	YES	Region, Municipalities, Decentralized Administration (Water Directorate), Region
M02B0602 Establishment of a National Register of Waste Disposal Sites (Joint Ministerial Decision 145116/2011 (Government Gazette 354B)	Measures to control the artificial recharge of groundwater aquifers	YES	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate)
M02B0701 Strengthening environmental inspections and controls	Measures for point source pollution	NEW MEASURE	Region
M02B0702 Modernization of national legislation on waste and industrial waste management	Measures for point source pollution	YES	Ministry of Environment & Energy (Special Secretariat for Water), Ministry of health
M02B0703 Program of exploratory monitoring of the quality of groundwater bodies and surface water bodies in the areas of existing Landfills	Measures for point source pollution	YES	Landfill Operators, National Monitoring Network coordinated by the Water Directorate
M02B0704 Conditions for the licensing of new / extension of existing aquaculture units	Measures for point source pollution	YES	Ministry of Environment & Energy,Decentralized Administration,Region
M02B0705 Preparation of rules for sinkholes protection	Measures for point and diffuse source of pollution	YES	Decentralized Administration (Water Directorate)
M02B0801 Biological agriculture	Measures for diffuse source pollution	YES	Ministry of Rural Development and Food (Directorate of Quality Systems, Organic Production and Geographical Indications)

CODE - NAME OF MEASURE	CATEGORY	1st RBMP	IMPLEMENTING BODIES
M02B0802 Modernization of the institutional framework for sludge management by municipal waste water treatment plants with emphasis on widening the scope and updating the quality characteristics of the applicable sludge	Measures for diffuse source pollution	YES	Ministry of Environment & Energy (Environmental Certification Directorate), Ministry of Rural Development and Food
M02B0803 Reduce diffuse pollution from agriculture in the Nitrate Vulnerable Zones of the Directive 91/676/EEC	Measures for diffuse source pollution	NEW MEASURE	Ministry of Rural Development and Food, Regions
M02B0901 Establishment of an institutional framework for the definition of the conditions for the protection of recreational inland waters of Article 6 Directive 2000/60/EK -Temporary regulation for new projects in inland water bodies which are included as recreational waters in the Register of Protected Areas under Article 6 of Directive 2000/60/EC	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	YES	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate)
M02B0902 Determination of minimum natural lakes waterlevel, determination of maximum waterlevel fluctuation of reservoirs	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	NEW MEASURE	Managing Authority, Region, Protected Areas Management Bodies, Decentralized Administration (Water Directorate)
M02B0903 Development of national methodology and specifications for the determination of ecological flows of river water bodies	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	YES	Ministry of Environment & Energy (Special Secretariat for Water)
M02B0904 Special Measures to Achieve Good Ecological Potential in Heavily Modified Water Bodies (HMWB)	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	NEW MEASURE	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate), Region

CODE - NAME OF MEASURE	CATEGORY	1st RBMP	IMPLEMENTING BODIES
M02B0905 Determination of selected areas for river sediment deposits removal to meet the needs of technical projects	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	YES	Region, Decentralized Administration (Water Directorate), Municipalities
M02B0906 Monitoring, recording and rehabilitation of coastal erosion	Measures for any other significant adverse impacts on the status of water, in particular concerning hydromorphological alterations of SWB	NEW MEASURE	Ministry of Infrastructure, and Transport, Decentralized Administration (Water Directorate),
M02B1101 Compilation of pollution sources register (emissions, discharges and leaks)	Measures for Priority Substances and other pollutants.	YES	Ministry of Environment & Energy (Special Secretariat for Water)
M02B1102 Establishment / setting of emission limits in RBs for priority substances and other pollutants of the Joint Ministerial Decision 51354/2641 / E103 / 2010 as in force, as well as for Physico Chemical parameters in relation to the quality objectives set out in the Management Plans	Measures for Priority Substances and other pollutants.	YES	Decentralized Administration (Water Directorate), Ministry of Environment & Energy (Special Secretariat for Water)

9.2.3 Supplementary measures

9.2.3.1 Horizontal supplementary measures

Horizontal supplementary measures concern/ affect all WB of the RBD.

Table 9-6. Horizontal supplementary measures

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB	IMPLEMENTING BODIES	COST (€)
M02Σ0201 Development of a Monitoring Programme for the implementation of the Programme of Measures of the RBMP in the RBD and provision of supporting services for the implementation of the PoM.	Administrative measures	NEW MEASURE	Horizontal	Decentralized Administration (Water Directorate)	650.000
M02Σ0202 Control and management of artesian wells	Abstraction Controls	YES	Horizontal	Owner of the well, Decentralized Administration (Water Directorate)	0
M02Σ0501 Emission controls at the outlets of stormwater culverts and other point sources of pollution that result in surface water bodies	Emission controls	NEW MEASURE	Horizontal	Municipalities / MEWSS / Region/ Decentralized Administration (Water Directorate), Ministry of Environment & Energy (Special Secretariat for Water	100.000
M02Σ0502 Implementation of investments in agriculture and livestock holdings, aiming at improving environmental performance.	Emission controls	NEW MEASURE	Horizontal	Ministry of Rural Development and Food/ Regions	345.000
M02Σ1501 Professional training of agro-farmers for the protection of WB	Educational measures	YES	Horizontal	Special Management Service of the Rural Development Program of Ministry of Rural Development and Food, Region	175.950
M02Σ1502 Informing and raising public awareness on water issues	Educational measures	YES	Horizontal	Ministry of Environment & Energy (Special Secretariat for Water), Regions, Municipalities, MEWSS, Decentralized Administration (Water Directorate)	100.000

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB	IMPLEMENTING BODIES	COST (€)
M02Σ1503 Strengthening environmental program actions in Primary Education and Secondary Education	Educational measures	YES	Horizontal	Ministry of Education, Research and Religious Affairs and Ministry of Environment & Energy (Special Secretariat for Water), Regions, Municipalities, MEWSS, Decentralized Administration (Water Directorate)	100.000
M02Σ1601 Pilot measures to apply precision agriculture to reduce water consumption	Research, development & demonstration projects	NEW MEASURE	Horizontal	Special Management Service of the Rural Development Program of Ministry of Rural Development and Food, Regions	303.600
M02Σ1602 Consultancy services for agriculture exploitation management	Research, development & demonstration projects	NEW MEASURE	Horizontal	Decentralized Administrations of the Ministry of Rural Development and Food	469.200
M02Σ1603 Design and Implementation of a Special Exploratory Monitoring Program for the purpose of collecting data on the primary designation of WB Downstream Dams as HMWB	Research, development & demonstration projects	NEW MEASURE	Horizontal	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate)	250.000

9.2.3.2 Supplementary measures

Table 9-7. Supplementary measures in Streams basins of N. Peloponnese (EL0227)

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB		IMPLEMENTING BODIES	COST (€)
M02Σ0203 Prohibition of river sediment deposits removal, except for flood protection until the necessary studies have been carried out to identify selected sites for the needs of engineering projects	Administrative measures	2.05	EL0227R000300004N	CHARADROS STREAM	Decentralized Administration, Region	0 €
			EL0227R001700016N	KRATHIS R._1		
M02Σ0204 Sealing of private irrigation drilling of the AOSAK area of responsibility after the construction of the Asopos dam and the improvement / modernization of the AOSAK irrigation network	Administrative measures	2.04	EL0200190	Systima Korinthou-Kiatou	Decentralized Administration, Region	0 €
M02Σ0503 Inspections for compliance with the limits of disposal from industrial, processing and livestock-poultry units within the catchment area of the SWB, at least twice a year	Emission controls	5.04	EL0227R000500005N	FINIKAS R._1	Region,Decentralized Administration	0 €
			EL0227R000700007N	MEGANITAS STREAM		
			EL0227R001300013N	VOURAIKOS R._3		
			EL0227R002100021N	DERVENIO STREAM		
			EL0227R002100023N	FONISSA STREAM		
			EL0227R002300024N	TRIKALITIKOS R._1		
			EL0227R002700026N	KIRILLOU STREAM		
			EL0227R002900027N	ASOPOS R._1		
			EL0227R003300032N	REZANI STREAM		
			EL0227R003700034H	POTAMIA STREAM_2		
M02Σ0801 Determination and delimitation of GWB areas which are of poor quality due to salinization or have local salinization problems	Abstraction controls	ΟΣ_ΥΔ02_7	EL0200140	Systima Voreias Achaias	Decentralized Administration, Region	200.000 €
			EL0200170	Systima Voreias Korinthias		
			EL0200190	Systima Korinthou-Kiatou		
			EL0200200	Systima Arachnaiou		
M02Σ0802 Systematic monitoring of quality status of licensed water abstractions in GWB with high natural background (e.g. chlorides)	Abstraction controls	ΟΣ_ΥΔ02_5	EL0200200	Systima Arachnaiou	Decentralized Administration, Region	0 €

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB		IMPLEMENTING BODIES	COST (€)
M02Σ0804 Restriction of use of water drilling after the execution of a water supply project	Abstraction controls	13.01	EL0200190	Systima Korinthou-Kiatou	Decentralized Administration, Region, Municipality, Municipal Water Company	0 €
M02Σ0805 Install an Exploratory Monitoring Network. Drafting a Special Management Plan for the Stymphalia closed basin for abstractions control	Abstraction controls	New Measure	EL0200220	Systima Zireias	Ministry of Environment & Energy, Decentralized Administration, Region	300.000 €
M02Σ0806 Restrictions, terms and conditions for the construction of new water supply projects in Subsystem EL0200173 of GWB EL0200170 of Northern Corinth	Abstraction controls	New Measure	EL0200170 (EL0200173)	Systima Voreias Korinthias (Subsystem)	Decentralized Administration	0 €
M02Σ1401 Implementation of Artificial recharge of aquifers Project	Artificial Recharge	14.01	EL0200190	Systima Korinthou-Kiatou	Ministry of Rural Development and Food,, Decentralized Administration, Region	100.000 €

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB		IMPLEMENTING BODIES	COST (€)
M02Σ1604 Design of central processing units for agro-animal waste and processing plants	Research, development & demonstration projects	OM09-1			Ministry of Environment & Energy, Region, Decentralized Administration	300.000 €
			EL0227R000500005N	FINIKAS R._1		
			EL0227R000700007N	MEGANITAS STREAM		
			EL0227R001300013N	VOURAIKOS R._3		
			EL0227R002100021N	DERVENIO STREAM		
			EL0227R002100023N	FONISSA STREAM		
			EL0227R002300024N	TRIKALITIKOS R._1		
			EL0227R002700026N	KIRILLOU STREAM		
			EL0227R002900027N	ASOPOS R._1		
			EL0227R003300032N	REZANI STREAM		
			EL0227R003700034H	POTAMIA STREAM_2		

Table 9-8. Supplementary measures in Piros - Vergas - Pinios RB (EL0228)

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB		IMPLEMENTING BODIES	COST (€)
M02Σ0503 Inspections for compliance with the limits of disposal from industrial, processing and livestock-poultry units within the catchment area of the SWB, at least twice a year	Emission controls	5.04	EL0228R000100001N	IARDANOS STREAM	Region,Decentralized Administration	0 €
			EL0228R000201002N	PINIOS R._1		
			EL0228R000208014N	SKOUROPOTAMOS STREAM		
			EL0228R000700017N	VERGAS STREAM		
			EL0228R000900019N	MANNA STREAM_2		
			EL0228R000900020N	MANNA STREAM_3		
			EL0228R000402022N	SERDINI STREAM		
			EL0228R000403023N	PIROS R._2		
			EL0228R000404024N	PARAPIROS STREAM_1		
			EL0228R000405027N	PIROS R._3		
			EL0228T0001N	PAPA LAGOON (ARAXOS)		
M02Σ0801 Determination and delimitation of GWB areas which are of poor quality due to salinization or have local salinization problems	Abstraction controls	ΟΣ_ΥΔ02_7	EL0200090	Systima p.Larissou	Decentralized Administration, Region	50.000 €
M02Σ1301 Rehabilitation project of the lido	Infrastructure Rehabilitation projects	13.06	EL0228T0004N	KOTICHI LAGOON	Protected Area Managing Body, Ministry of Environment & Energy	50.000 €

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB		IMPLEMENTING BODIES	COST (€)
M02Σ1604 Design of central processing units for agro-animal waste and processing plants	Research, development & demonstration projects	OM09-1			Ministry of Environment & Energy, Region, Decentralized Administration	300.000 €
			EL0228R000100001N	IARDANOS STREAM		
			EL0228R000201002N	PINIOS R._1		
			EL0228R000208014N	SKOUROPOTAMOS STREAM		
			EL0228R000700017N	VERGAS STREAM		
			EL0228R000900019N	MANNA STREAM_2		
			EL0228R000900020N	MANNA STREAM_3		
			EL0228R000402022N	SERDINI STREAM		
			EL0228R000403023N	PIROS R._2		
			EL0228R000404024N	PARAPIROS STREAM_1		
			EL0228R000405027N	PIROS R._3		
			EL0228T0001N	PAPA LAGOON (ARAXOS)		

Table 9-9. Supplementary measures in Kefalonia – Ithaca – Zakinthos RB (EL0245)

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB		IMPLEMENTING BODIES	COST (€)
M02Σ0503 Inspections for compliance with the limits of disposal from industrial, processing and livestock-poultry units within the catchment area of the SWB, at least twice a year	Emission controls	5.04	EL0245R000100001N	AGIA EUFIMIA STREAM	Region,Decentralized Administration	0 €
			EL0245C0014N	GULF OF ARGOSTOLI		
M02Σ0801 Determination and delimitation of GWB areas which are of poor quality due to salinization or have local salinization problems	Abstraction controls	ΟΣ_ΥΔ02_7	EL0200020	Systima Lixouriou - Skalas	Decentralized Administration, Region	100.000 €
			EL0200050	Systima Zakynthou		
M02Σ0802 Systematic monitoring of quality status of licensed water abstractions in GWB with high natural background (e.g. chlorides)	Abstraction controls	ΟΣ_ΥΔ02_5	EL0200010	Systima Kefalonias	Decentralized Administration, Region	0 €
			EL0200040	Systima Vrachiona		

CODE & NAME OF MEASURE	CATEGORY	1st RBMP	AFFECTED WB		IMPLEMENTING BODIES	COST (€)
M02Σ0808 Reduction or replacement of groundwater abstractions with abstractions from a surface WB or other GWB or technical project (Water Reservoir, dam, desalination)	Abstraction controls	8.03	EL0200050	Systima Zakynthou	Decentralized Administration Municipal Water Company of Zakynthos	50.000 €
M02Σ0809 Restrictions, terms and conditions for the construction of new water supply projects in certain GWB of Ionio with salinization problems	Abstraction controls	New Measure	EL0200010	Systima Kefalonias	Decentralized Administration, Region	0 €
			EL0200020	Systima Lixouriou - Skalas		
			EL0200040	Systima Vrachiona		
			EL0200050	Systima Zakynthou		
M02Σ0810 Organization and execution of exploratory monitoring of the chemical and quantitative status of the GWB of Zakinthos	Abstraction controls	New Measure	EL0200050	Systima Zakynthou	Decentralized Administration Municipal Water Company of Zakynthos	0 € Cost covered by Municipal Water Company of Zakynthos
M02Σ1604 Design of central processing units for agro-animal waste and processing plants	Research, development & demonstration projects	OM09-1			Ministry of Environment & Energy, Region, Decentralized Administration	300.000 €
			EL0245R000100001N	AGIA EUFIMIA STREAM		
			EL0245C0014N	GULF OF ARGOSTOLI		
M02Σ1701 Densification/Consolidation of the GWB monitoring network	Other	New Measure	EL0200050	Systima Zakynthou	Special Secretariat for Water, Decentralized Administration	0 €

10 NEXT STEPS

The objective of the 1st Update of the River Basin Management Plan is to prevent further deterioration, to protect and improve the status of inland surface, transitional, coastal and groundwater, as well as directly dependent terrestrial ecosystems and wetlands. In order to achieve this goal, theimplementation of the Programme of Basic and SupplementaryMeasures is necessary.

The PoM is designed in such a way that the priority of each intervention is clearly defined according to its cost, its effectiveness, the importance of the WB being implemented and the necessary time of preparation.

All elements of the PoM are important, but some planning and prioritization is needed in order to monitor the progress of implementation of the PoM and identify where corrective interventions are required when deviations from targets are identified.

With the responsibility of the Water Directorate of the Decentralized Administration an **Action Plan for the implementation of the 1st Update of the RBMP** of the RBDis being prepared.

To this end, the Regional Working Group for the Implementation of the PoM of the RBMP of the RBD of the Country, which was established during the implementation of the 1st RBMP, is required to prepare the above Action Plan .

NORTHERN PELOPONNESE (EL02) RBD STATISTICAL DATA

The following Tables present aggregated statistical data for the Northern Peloponnese RBD (EL02).

Table Σ- 1. Categories of WB per RB inNorthern Peloponnese RBD(EL02)

WB Categories	RB EL0227	RB EL0228	RB EL0245	Total RBD
River WB	35	29	1	65
Lake WB	2	0	0	2
Transitional WB	1	3	1	5
Coastal WB	3	4	12	19
TOTAL OF SWB	41	36	14	91
Groundwater WB	14	7	5	26
TOTAL WB	**55**	**43**	**19**	**117**
Heavily modified water bodies (HMWB) and artificial Water bodies (AWB)	6	3	0	9
WB Connected with protected areas	26	16	11	53

Table Σ- 2. Typology of SWB per RB in Northern Peloponnese RBD (EL02)

TYPOLOGY OF SWB	RB EL0227	RB EL0228	RB EL0245	Total RBD
River WB	**34**	**27**	**1**	**62**
Type R-M1	8	4	0	12
Type R-M2	1	17	0	18
Type R-M3	0	0	0	0
Type R-M4	20	6	1	27
Type R-M5	5	0	0	5
Type R-L2	0	0	0	0
Reservoirs	**1**	**2**	**0**	**3**
Type L-M5/7W	0	0	0	0
Type L-M8	1	2	0	3
Type GR-SR	0	0	0	0
Lake WB	**2**	**0**	**0**	**2**
Type GR-DNL	0	0	0	0
Type GR-SNL	0	0	0	0
Type GR-VSNL	1	0	0	1
Τύπος L-M5/7W	1	0	0	1
Τύπος L-M8	0	0	0	0
Transitional WB	**1**	**3**	**1**	**5**
Type TW1	1	3	1	5
Type TW2	0	0	0	0
Coastal WB	**3**	**4**	**12**	**19**
Type IIIE	3	4	12	19

Table Σ- 3. Assessment (classification) results of River WBs status per RB in Northern Peloponnese RBD (EL02)

STATUS/ POTENTIAL			RB EL0227				RB EL0228				RB EL0245				TOTAL RBD			
			Number	% of Number	Length (km)	% of Length	Number	% of Number	Length (km)	% of Length	Number	% of Number	Length (km)	% of Length	Number	% of Number	Length (km)	% of Length
RIVER WB																		
TOTAL	ECOLOGICAL	High	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Good	22	64,7%	201,3	56,4%	14	51,9%	128,7	41,5%	0	0,0%	0,0	0,0%	36	58,1%	330,0	49,2%
		Moderate	10	29,4%	132,5	37,1%	11	40,7%	150,2	48,4%	1	100,0%	3,5	100,0%	22	35,5%	286,2	42,7%
		Poor	1	2,9%	15,0	4,2%	2	7,4%	31,3	10,1%	0	0,0%	0,0	0,0%	3	4,8%	46,3	6,9%
		Bad	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	1	2,9%	8,3	2,3%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	1	1,6%	8,3	1,2%
	CHEMICAL	Good	31	91,2%	321,1	89,9%	21	77,8%	207,0	66,7%	1	100,0%	3,5	100,0%	53	85,5%	531,5	79,2%
		Poor	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	3	8,8%	36,0	10,1%	6	22,2%	103,2	33,3%	0	0,0%	0,0	0,0%	9	14,5%	139,3	20,8%

Table Σ- 4. Assessment (classification) results of reservoirs, lakes, transitional, coastal and groundwater WB per RB in Northern Peloponnese RBD (EL02)

STATUS/ POTENTIAL			RB EL0227				RB EL0228				RB EL0245				TOTAL RBD			
			Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area
RESERVOIRS (RIVER HMWB) WB																		
TOTAL	ECOLOGICAL	Good	0	0,0%	0,0	0,0%	1	50,0%	19,8	92,4%	0	0,0%	0,0	0,0%	1	33,3%	19,8	87,2%
		Moderate	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Poor	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Bad	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	1	100,0%	1,3	100,0%	1	50,0%	1,6	7,6%	0	0,0%	0,0	0,0%	2	66,7%	2,9	12,8%
	CHEMIC	Good	0	0,0%	0,0	0,0%	1	50,0%	19,8	92,4%	0	0,0%	0,0	0,0%	1	33,3%	19,8	87,2%
		Poor	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	1	100,0%	1,3	100,0%	1	50,0%	1,6	7,6%	0	0,0%	0,0	0,0%	2	66,7%	2,9	12,8%
LAKE WB																		
TOTAL	ECOLOGICAL	High	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Good	1	50,0%	0,5	12,4%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	1	50,0%	0,5	12,4%
		Moderate	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Poor	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Bad	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	1	50,0%	3,6	87,6%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	1	50,0%	3,6	87,6%
	CHEMICAL	Good	2	100,0%	4,1	100,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	2	100,0%	4,1	100,0%
		Poor	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%

STATUS/ POTENTIAL			RB EL0227				RB EL0228				RB EL0245				TOTAL RBD			
			Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area
TRANSITIONAL WB																		
TOTAL	ECOLOGICAL	High	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Good	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	1	100,0%	1,2	100,0%	1	20,0%	1,2	6,6%
		Moderate	0	0,0%	0,0	0,0%	1	33,3%	4,0	24,2%	0	0,0%	0,0	0,0%	1	20,0%	4,0	22,4%
		Poor	0	0,0%	0,0	0,0%	2	66,7%	12,7	75,8%	0	0,0%	0,0	0,0%	2	40,0%	12,7	70,1%
		Bad	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	1	100,0%	0,2	100,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	1	20,0%	0,2	0,9%
	CHEMICAL	Good	0	0,0%	0,0	0,0%	3	100,0%	16,7	100,0%	1	100,0%	1,2	100,0%	4	80,0%	17,9	99,1%
		Poor	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	1	100,0%	0,2	100,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	1	20,0%	0,2	0,9%
COASTAL WB																		
TOTAL	ECOLOGICAL	High	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Good	3	100,0%	965,5	100,0%	4	100,0%	523,4	100,0%	11	91,7%	896,2	95,5%	18	94,7%	2.385,1	98,2%
		Moderate	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	1	8,3%	42,6	4,5%	1	5,3%	42,6	1,8%
		Poor	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Bad	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
	CHEMICAL	Good	3	100,0%	965,5	100,0%	4	100,0%	523,4	100,0%	12	100,0%	938,8	100,0%	19	100,0%	2.427,7	100,0%
		Poor	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
		Unknown	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%

STATUS/ POTENTIAL			RB EL0227				RB EL0228				RB EL0245				TOTAL RBD			
			Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area	Number	% of Number	Area (km²)	% of Area
GWB																		
TOTAL	CHEMICAL	Good	12	85,7%	2.558,4	74,0%	6	85,7%	2.208,1	92,3%	4	80,0%	1.138,0	88,7%	22	84,6%	5.904,5	82,8%
		Poor	2	14,3%	896,6	26,0%	1	14,3%	185,1	7,7%	1	20,0%	144,4	11,3%	4	15,4%	1.226,1	17,2%
		Unknown	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%
	QUANTITATIVE	Good	13	92,9%	3.383,8	97,9%	6	85,7%	2.208,1	92,3%	4	80,0%	1.138,0	88,7%	23	88,5%	6.730,0	94,4%
		Poor	1	7,1%	71,2	2,1%	1	14,3%	185,1	7,7%	1	20,0%	144,4	11,3%	3	11,5%	400,7	5,6%
		Unknown	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%	0	0,0%	0,0	0,0%