RIVER BASIN MANAGEMENT PLAN - SUMMARY

Management Plan for the River Basins of Eastern Peloponnese River Basin District

SPECIAL SECRETARIAT FOR WATER

APRIL 2013

MANAGEMENT PLANS OF EASTERN PELOPONNESE RIVER BASIN DISTRICT (RBD 03)

IN LINE WITH THE SPECIFICATIONS OF DIRECTIVE 2000/60/EC, UNDER LAW 3199/2003 AND PRESIDENTIAL DECREE 51/2007

MANAGEMENT PLAN

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1. INTRODUCTION

Historically, the management of natural resources – especially of water resources - was mostly determined by all social activities and growth interventions rather than determining them. In modern societies the management of water resources has acquired particular significance since the sustainability of resources is no longer taken for granted but in some cases it is the main objective.. This fact, included in the general degradation of the environment and at the same time reinforced by the impending climate change, enlarges the scope and the content of the water resources management by rendering it a determining factor of development policies. The scope of the water resources management is not only limited to the rational and fair satisfaction of the users' needs but also determines to a great extent these needs and the manner and degree of their satisfaction. The main national institutional framework of harmonization with Directive 2000/60 is Law 3199/9-12-2003 (Government Gazette A' 280/09.12.2003) on the "protection and water management – harmonization with Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000" as amended and in force and Presidential Decree 51/2007 (GG A΄54/08.03.2007) "Determination of measures and procedures for the integrated water protection and management in compliance with the provisions of Directive 2000/60/EC" establishing a framework for the Community action in the field of water policy" of the European Parliament and of the Council of 23 October 2000, in pursuance of the provisions of Article 15(1), Law 3199/2003.

The compilation of the management plans in the RBD (River Basin District) of Eastern Peloponnese was undertaken –under the terms of the relevant contract- by a team of collaborating design companies and design consultants consisting of the following:

- "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
- LIONIS MICHALIS son of HARALAMBOS
- DRAKOPOULOU EFSTATHIA daughter of LEONIDAS
- VAKAKIS & PARTNERS RURAL DEVELOPMENT CONSULTANTS S.A.
- EFI KARATHANASI & PARTNERS "HORODINAMIKI PERIVALLON ANAPTIKSI LIMITED PARTNERSHIP"
- ALEXANDROS KOTZABOPOULOS son of GEORGE
- ANAGNOPOULOS NIKOLAOS son of VASILIOS
- TERRA NOVA ENVIRONMENTAL DESIGN CONSULTANCY LTD LIABILITY COMPANY

In accordance with article 5 of Law 4117/5-2-2013, the compiled Management Plan was approved by the National Water Committee following the recommendation of the Special Secretariat for Water of the Ministry of Environment, Energy and Climate Change and was published in the Government Gazette (GG 1004/B/24-04-2013).

2. Contents of the Management Plan

This document is a summary of the River Basin Management Plan (RBMP) of Eastern Peloponnese (GR01) and the following detailed documentation texts are attached:

Annex A consists of the following Supporting Documents:

1. Determination and recording of the competent authorities and determination of their areas of responsibility (Deliverable 1, phase A)
2. Identification and typology of surface water bodies, initial and further characterization of groundwater bodies (Deliverable 5, phase A)
3. Type-specific reference conditions for the types of surface water bodies (Deliverable 6, phase A)
4. Final designation of heavily modified and artificial water bodies (Deliverable 7, phase A)
5. Assessment and classification of the qualitative (ecological and chemical) status of surface water bodies (Deliverable 9, phase A)
6. Assessment and classification of the qualitative (chemical) and quantitative status of groundwater bodies (Deliverable 10, phase A)
7. Updated monitoring programmes of the status of surface and groundwater bodies (Deliverable 1, phase B)

Annex B consists of the following Supporting Documents:

1. Analysis of the anthropogenic pressures and their impacts on surface and groundwater bodies (Deliverable 8, phase A)
2. Catalogue of scheduled and new projects/ activities/ modifications with the socio-economic benefits served (Deliverable 12, phase A)

Annex C consists of the following Supporting Document:

1. Registry of Protected Areas (Deliverable 2, phase A)

Annex D consists of the following Supporting Document:

1. Determination of environmental objectives, including “exemptions” from objectives achievement (Deliverable 11, phase A)

Annex E consists of the following Supporting Documents:

1. Draft programme of key and supplementary measures for the protection and recovery of water bodies (Deliverable 13, phase A)
2. Evaluation of the proposed measures including cost-effectiveness analysis and finalization of the programs of key and supplementary measures (Deliverable 2, phase B)

Annex F consists of the following Supporting Documents:

1. Economic analysis of the water uses and determination of the current cost recovery degree for the different water services (Deliverable 3, phase A)
2. Preliminary assessment of alternative proposals for flexible water tariff policy (Deliverable 4, phase A)

Annex G consists of the following Supporting Document:

1. Report with the evaluation of the consultation (Phase C)

Annex H consists of the following Supporting Documents:

1. Implementation report of Directive 2006/118/EC “on the protection of groundwater against pollution and detrioration” and JMD 39626/2208/E103/2009 (Deliverable 14, phase A)
2. Draught and Water Scarcity Management Plan based on preventive planning principles (Deliverable 4, phase B)
3. Strategic Environmental Impact Assessment (Deliverable 5, phase B)

Annex I includes the additional actions for the River Basin District (RBD) except for the Plan’s Program of Measures.

Annex J includes 36 maps.

3. CONSULTATION PROCESS

Water Framework Directive 2000/60/EC (WFD), article 14, provides for public participation during the process of preparing the River Basin Management Plans.

Specifically, the directive stipulates that Member States shall encourage the active involvement of all interested parties in the implementation of this Directive. Member States shall ensure that, for each river basin district, they publish and make available for comments to the public, including users:

- the timetable and work program for the plan preparation, including the consultation;
- a summary of the important issues identified in each Water Basin;
- the draft management plans.

The consultation process was organized in two phases:

Phase A, which lasted until 31 January 2012, included the uploading of the following documents on the web page http://wfd.ypeka.gr:

- Report on the consultation measures to be taken;
- Catalogue of water-related agencies;
- Overview of the significant water management issues and their accompanying documents;
- Questionnaire about the consultation procedure;
- Questionnaire about the overview of the significant water management issues.

Phase B which lasted until 21 November 2012, included the uploading of the following documents on the web page http://wfd.opengov.gr/:

- The draft Management Plan of the Eastern Peloponnese River Basin District, including the programme of measures;
- The strategic environmental impact assessment (SEIA);
- The Plan addressing drought & water scarcity;
- Catalogue of water-related agencies;
- Questionnaire about the program of measures of the Management Plan.

Apart from uploading the Management Plan's documents and filling in their questionnaires, the organization of one-day conferences for the River Basin District of Eastern Peloponnese is also provided for. During phase A, a one-day conference was organized for the overview of significant management issues for the RBD of Eastern Peloponnese (Nafplio, 20/01/2012). During phase B, 2 one-day conferences were organized for the RBD of Eastern Peloponnese for the Preliminary Program of Key and Supplementary Measures. The one-day conferences were held on 10/7/2012 in Sparta and on 11/7/2012 in Tripoli.

4 DESCRIPTION OF THE RIVER BASIN DISTRICT

4.1 Administrative and Natural Characteristics

The River basin district of Eastern Peloponnese (RBD 03) is one out of the fourteen river basin districts into which the Greek territory was divided pursuant to Law 1739/1987 (GG 201/A/20-11-1987). The River basin district of Eastern Peloponnese is extended geographically over the eastern and southeastern Peloponnese. Within its boundaries the following islands are also encompassed: Poros, Hydra, Spetses, Spetsopoula, Dokos, Kithira and Antikithira as well as the peninsula of Methana. To the west, the river basin district borders with the River basin district of Western Peloponnese (RBD 01) whilst to the north, it borders with the River basin district of Northern Peloponnese (RBD 02). The district's total area is 8,442km^2. As regards the natural – geomorphological boundaries of the District, these are as follows: to the west, the mountains of Taigetos and Menalo, to the north the mountainous axis of Oligirtos, Lirkio and Onia, to the east the mountain of Parnonas, the Argolikos Gulf and the Gulf of Epidaurus and to the south the Gulf of Lakonia. The Basins of Tripoli Plateau (GR30), Streams of Argolikos Gulf (GR31) and Evrotas (GR33) comprise the said River basin district of Eastern Peloponnese (RBD 03), pursuant to the Decision no 706/2010 (GG 1383/B/2-9-10) of the National Water Committee.

4.2 Population Data

From an administrative perspective, the RBD includes in whole or in part, the Regional Units of Argolida, Arcadia, Corithia, Lakonia, Messinia and Islands. The total actual population in Tripoli Plateau Basin (GR30), according to the census data of the Hellenic Statistical Authority (ELSTAT) as of year 2001, amounts to 44,785 inhabitants. The general trend of the population change for the area is estimated at an approximate 3.9% increase in the period 1991 – 2001. The total actual population in the Stream Basin of Argolikos Gulf (GR31), according to the census data of the Hellenic Statistical Authority (ELSTAT) as of year 2001, amounts to 183,536 inhabitants. The general trend of the population change for the area is estimated at an approximate 5.5% increase in the period 1991 – 2001. The total actual population in Evrotas River Basin (GR33), according to the census data of the Hellenic Statistical Authority (ELSTAT) as of year 2001, amounts to 61,722 inhabitants. The general trend of the population change for the area is estimated at an approximate 3.2% increase in the period 1991 – 2001.

4.3 Water Uses

Throughout the entire river basin district the total annual needs in water for all activities and uses amount to ~373mil.m^3. In agriculture (irrigated lands), which is the key user of water, a percentage of ~89% (~330mil.m^3) of the total needs of water is consumed, in industry ~1.9% (~7,1mil.m^3), in irrigation ~8.5% (~31.7mil.m^3) and in stock farming ~1.2% (~4.6mil.m^3).

4.4 Land Uses

In Tripoli Plateau Basin, throughout a total area of 907km^2, the following main categories of land uses are distinguished: Forests and forested areas, 42%; Agricultural land, 29%, Pastures, 23%, and Urban and other uses, 6%. In the Stream Basin of Argolikos Gulf, throughout a total area of 5,296km^2, the following main categories of land uses are distinguished: Forests and forested areas, 50%; Agricultural land, 29%; Pastures, 17%, and Urban and other uses, 4%. In Evrotas River Basin throughout a total area of 2,239km^2, the following main categories of land uses are distinguished: Forests and forested areas,42%; Agricultural land, 31%; Pastures, 25%, and Urban and other uses, 2%.

5 COMPETENT AUTHORITIES

The information related to the corresponding competent authorities of the State Decentralized Administration and the Region is provided below in the form of tables.

Table 5-1. Competent Authority of State Decentralized Administration for Tripoli Plateau Basin (GR30) and Evrotas river basin (GR33)

Official name	Decentralized Administration of Peloponnese, Eastern Greece and Ionian Sea/ General Directorate of Planning and Environmental Policy / Water Division of Peloponnese
Acronym	-
Legislation establishing and determining competencies	• Law 3199/2003 (GG 280/A/9-12-03) • J.M.D. Οικ. 47630/2005 (GG 1688/B/1-12-05) • Law 3852/2010 (GG 87/A/7-6-10) • P.D. 139 (GG 232/A/27-12-10)
Legal regime	Permanent unit subject to a decentralized administration unit of the state
Postal address	37, Menalou & Sekeri streets, PC 22100, Tripoli, Greece
Website	www.apd-depin.gov.gr
Point(s) of contact (telephone, e-mail)	2710 234458 ggdxpp@apd-depin.gov.gr

Table 5-2. Competent Authority of Local Government for Tripoli Plateau Basin (GR30) and Evrotas river basin (GR33)

Official name	Region of Peloponnese / General Directorate of Growth Planning, Environment and Infrastructures/ Division of Environment and Planning
Acronym	-
Legislation establishing and determining competencies	• Law 3199/2003 (GG 280/A/9-12-03) • Law 3852/2010 (GG 87/A/7-6-10) • P.D. 131 (GG 224/A/27-12-10)
Legal regime	Permanent unit subject to a self-governed Public Law Body Corporate
Postal address	29, 28th October street, PC 22100, Tripoli, Greece
Website	www.ppel.gov.gr
Point(s) of contact (telephone, e-mail)	2713 610101, naarkper@otenet.gr

Table 5-3. Competent Authorities of State Decentralized Administration for the Stream Basin of Argolikos Gulf (GR31)

Official name	**Decentralized Administration of Peloponnese, Eastern Greece and Ionian Sea/ General Directorate of Planning and Environmental Policy / Water Division of Peloponnese**
Acronym	-
Legislation establishing and determining competencies	• Law 3199/2003 (GG 280/A/9-12-03) • J.M.D. Οικ. 47630/2005 (GG 1688/B/1-12-05) • Law 3852/2010 (GG 87/A/7-6-10) • P.D. 139 (GG 232/A/27-12-10)
Legal regime	Permanent unit subject to a decentralized administration unit of the state
Postal address	37, Menalou & Sekeri streets, PC 22100, Tripoli, Greece
Website	www.apd-depin.gov.gr
Point(s) of contact (telephone, e-mail)	2710 234458 ggdxpp@apd-depin.gov.gr
Official name	**Decentralized Administration of Attica/ General Directorate of Planning and Environmental Policy / Water Division of Attica**
Acronym	-
Legislation establishing and determining competencies	• Law 3199/2003 (GG 280/A/9-12-03) • J.M.D. Οικ. 47630/2005 (GG 1688/B/1-12-05) • Law 3852/2010 (GG 87/A/7-6-10) • P.D. 135 (GG 228/A/27-12-10)
Legal regime	Permanent unit subject to a decentralized administration unit of the state
Postal address	239, Messogion Ave., PC. 15451, Athens, Greece
Website	www.apdattikis.gov.gr
Point(s) of contact (telephone, e-mail)	210 3725706-707 nero@attica.gr

Table 5-4. Competent Authorities of Local Administration for the Stream Basin of Argolikos Gulf (GR31)

Official name	**Region of Peloponnese / General Directorate of Growth Planning, Environment and Infrastructures/ Division of Environment and Planning**
Acronym	-
Legislation establishing and determining competencies	• Law 3199/2003 (GG 280/A/9-12-03) • Law 3852/2010 (GG 87/A/7-6-10) • P.D. 131 (GG 224/A/27-12-10)
Legal regime	Permanent unit subject to a self-governed Public Law Body
Postal address	29 28th October street, PC 22100, Tripoli, Greece
Website	www.ppel.gov.gr
Point(s) of contact (telephone, e-mail)	2713 610101, naarkper@otenet.gr
Official name	**Region of Attica/ General Directorate of Development / Directorate of Industry, Energy & Natural Resources/ Water Resources Management Department**
Acronym	-

Official name	Region of Peloponnese / General Directorate of Growth Planning, Environment and Infrastructures/ Division of Environment and Planning
Legislation establishing and determining competencies	• Law 3199/2003 (GG 280/A/9-12-03) • Law 3852/2010 (GG 87/A/7-6-10) • P.D. 145 (GG 238/A/27-12-10) • M.D. 44403 (GG 2494/B/4/11/2011)
Legal regime	Permanent unit subject to a self-governed Public Law Body
Postal address	4, Politechniou str., PC. 10433, Athens, Greece
Website	www.patt.gov.gr
Point(s) of contact (telephone, e-mail)	213-2101105 dviom@patt.gov.gr

6 IDENTIFICATION OF BODIES OF WATER

In RBD03, 100 surface water bodies and 27 groundwater bodies were identified in total. Out of the surface water bodies, 80 are rivers, 11 are coastal waters, 1 is a lake and 6 are transitional water bodies. Two surface WBs have been characterized as Artificial Water Bodies (AWB) whilst 9 WBs have been characterized as Heavily Modified Water Bodies (HMWB).

River Water Bodies (WB)

In the River basin district of Eastern Peloponnese (RBD 03), 80 rivers are identified of a total length of 567.4km with 5 types of river WB (sL0,sL1, sH1,mL0,mL1).

Lake WB

In the River basin district of Eastern Peloponnese (RBD 03), 1 lake is found which is an L-M8 HMWB.

Coastal WB

In the River basin district of Eastern Peloponnese (RBD 03), 11 coastal C1-type WBs are identified in total, of a total length of coasts of 1,106.1 km.

Transitional WB

In the River basin district of Eastern Peloponnese (RBD 03), 6 transitional TW-1 (lagoons) and TW-2 (river estuaries) WBs are identified, covering an area of 5.9 km^2.

Groundwater Bodies

In the River basin district of Eastern Peloponnese (RBD 03), 27 groundwater bodies are identified covering an area of 8064.1 km^2. Out of these, an initial characterization has been carried out for 13 groundwater bodies and further characterization for 14 GBs. Out of the 27 GBs, 19 are directly related to surface waters or terrestrial ecosystems.

Table 6.1. Total number of Water Bodies per water category in the RBD of Eastern Peloponnese

Type of WB	Number	Length/ area (km/ km^2)	Maximum length/ Max. area (km/ km^2)	Minimum length/ Min. area (km/ km^2)
Rivers	80	567.5	25.8	0.5
Lakes	1	1.23	1.23	1.23
Coastal	13	1,106.1	223.6	0.8
Transitional	6	5.94	2.23	0.39
Groundwater	27	8,064.15	1,453.6	26
Total	**127**			

7 PRESSURES ON THE AQUATIC ENVIRONMENT

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.

7.1 Point Pressures

Wastewater Treatment Plants (WWTP)

In Tripoli Plateau Basin (GR30), there is one priority B agglomeration, Tripoli, where the respective WWTP has been constructed and is currently in operation. The WWTP of Tripoli operates by using secondary treatment, denitrification and phosphorus elimination/ dephosphorization (2NP). In the Stream Basin of Argolikos Gulf (GR31) there are 9 priority C agglomerations (New Epidaurus, Kranidi, Kithira, Ancient Epidaurus, Ermioni, Ligourio, Monemvasia, Methana and North Kinouria) and 3 priority B agglomerations (Argos-Nafplio, Tolo, Poros-Galatas). WWTPs have been constructed and are currently in operation in all these agglomerations. The main urban centers served by the WWTPs are Argos, Nafplio, Tolo, the area of N. Kio, Ancient Epidaurus, New Epidaurus, Astros, Coastal Astros, Ligourio, Ermioni, Kranidi, Monemvasia and the island areas of Porow, Methana and Kithira. In the Basin under study there are priority C agglomerations, which, even though they are included –pursuant to Directive 91/271- in the areas where the construction of a WWTP is required, no WWTP operates there. The construction of WWTP and sewage works in Neapoli and Leonidio has been included in corresponding financing programs. In addition, accession of the project of sewage works in Molaoi and in some other coastal agglomerations of the Municipality of Asopos is about to take place. The other priority C agglomerations wherein construction of a WWTP is required are Vlahiotis (Elos), Hydra, and Spetses.

In Evrotas River Basin (GR33), there are 2 priority C agglomerations and 1 priority B agglomeration. WWTPs have been constructed and are currently in operation in one priority B agglomeration (Sparta) and in one priority C agglomeration (Geraki). The main urban center served by WWTP in Evrotas River Basin is the city of Sparta. The WWTP construction project of Githio is at a tendering stage; Githio is a priority C agglomeration. Upon construction and completion of the project, the city of Githio and some of the closest touristically developing areas will be served. In Skala, priority C agglomeration, no constructed WWTP operates, even though the said area is included –pursuant to Directive 91/271- in the area where construction of such plant is required.

Industrial plants

In total, 378 industrial plants are identified in the river basin district. Out of these, 51 are located in Tripoli Plateau Basin (GR30), 212 in the Stream Basin of Argolikos Gulf (GR31) and the remaining 115 in Evrotas River Basin (GR33). In Tripoli Plateau Basin, 51 industries have been recorded, out of which 31 have been characterized as significant. The key activities

relate to the production of dairy and cheese products (29%), and meat processing and conservation. Significant is also the number of metal treatment plants and chemical industries. The majority of industrial activities in the area of Argolikos Gulf Stream Basin is related to food production and especially oil production. Out of the 212 industries in total that have been recorded in the area under study, 80 have been characterized as significant. Most of them relate to oil production (44% of plants) and food industry in general as well as the production of fruit and vegetable juices. Furthermore, the pressures from many meat processing and conservation industries (14%) are identified among the significant pressures, whilst there is a remarkable number of cheese-making industries as well (10%). The majority of industrial activities in the area of Evrotas River Basin are related to food production and especially oil and cheese production. Out of the 115 industries in total that have been recorded in the area under study, 33 have been characterized as significant. Most of them relate to oil production (49% of plants) as well as to the production of dairy and cheese products (21%). Furthermore, the pressures from many fruit and vegetable juice production industries (9% of plants) are identified among the significant pressures whilst there is a remarkable number of meat processing and conservation industries (9%).

Livestock Farming

In the RBD, 373 livestock farms were identified. Out of these, 22 are located in Tripoli Plateau Basin (six significant), whilst 80 in Argolikos Gulf Stream Basin (seven significant) and 271 in Evrotas River Basin (16 significant).

Losses from Uncontrolled Waste Dumping Sites and Landfill Sites

In Tripoli Plateau Basin, there are 3 active Uncontrolled Waste Dumping Sites, situated in the regional unit of Arcadia and specifically in the municipal units of Levidi, Korithi and Tripoli. In Argolikos Gulf Stream Basin, there are 32 uncontrolled waste dumping sites in operation rendering them a significant factor of pressure. More specifically, in the Basin's areas situated in the Regional Unit of Argolida, 16 sites are identified in operation: two (2) in the regional unit of Arcadia, eight (8) in Lakonia and five (5) in the regional unit of Piraeus. In Evrotas River Basin the uncontrolled disposal of wastes creates a significant pressure. In the area there are still many uncontrolled waste dumping sites which are either in operation or have not been fully restored yet. In total, the uncontrolled waste dumping sites in operation are eight (8). All sites are found in the regional unit of Lakonia and particularly in the municipal units of Farida, Skala, Karies, Geronthi, Krokees, East Mani, Sparta, and Pellana.

Mines, quarries

Thirteen quarries have been recorded in river basin GR30, 45 quarries in river basin GR31, and 10 quarries and one mine in river basin GR33.

Aquaculture – Fish farming

Fish farming is based on special artificial facilities in costal or inland surface water bodies. In the Stream Basin of Argolikos Gulf and in Evrotas River Basin, fish farming facilities are found in coastal or river water bodies.

Desalination facilities

In the Stream Basin of Argolikos Gulf, one desalination plant, of a capacity of 4500 m^3/month, is in operation in the Municipal Unit of Voia.

Sand extraction

In the Stream Basin of Argolikos Gulf sand extraction has been carried out from time to time along rivers or streams. Some of the sand extraction locations are found in identified water bodies (Inahos, Tanos, Xeria rivers, Vrasiatis stream, and Mariorrema stream.) In Evrotas River Basin large quantities of sand have been extracted from time to time along rivers or streams of both identified and non-identified water bodies. Sand has also been extracted from the beds of Platis and Evrotas rivers and from the confluents of Enous river, i.e. Rasina and Magoulitsa streams.

Ports – Marines – Navigation

The Stream Basin of Argolikos Gulf encompasses not only a large part of the Peloponnese eastern and southeastern coastal zone but also many islands. The most significant ports are located in Methana, Ermioni, Portoheli, Nafplio, Neapoli and Monemvasia as well as on islands (Poros, Hydra, Spetses, Elafonisos, Kithira and Antikithira). The most important port in Evrotas River Basin is the port of Githio whose traffic increases in summer. A smaller port, where small fishing and leisure boats moor, is in Kotronas, East Mani.

7.2 Diffuse Pressures

Agricultural activities

As regards the cultivation areas in Tripoli Plateau Basin, there are presently approximately 182,000 stremmas of cultivated land in total. In the Stream Basin of Argolikos Gulf GR31 there are presently approximately 1,176,000 stremmas of cultivated land in total; in the area of Evrotas River Basin GR33 there are presently approximately 491,000 stremmas of cultivated land in total.

Urban wastewater not collected in WWTPs

Urban wastewater that is diffused in groundwater and surface water bodies derives from population of any kind (of permanent or seasonal nature as well as tourists) that do not have

access to WWTP. This category encompasses urban wastewater treated by WWTP and used for the irrigation of cultivation lands.

Free range Livestock

Free range farming refers to the raising of cattle, poultry, sheep and goats of free range. Free range farming, given the dispersion and constant movement of animals to pastures is treated as a diffuse source of pollution. For the identification of the number of animals, data from the Bulletins of Annual Agricultural Statistical Research of Municipalities and Communities of ELSTAT as of year 2007 are used.

Natural pollution

Apart from anthropogenic pressures, diffuse pollution is also generated by atmospheric depositions and natural uses of land, i.e. forests and pastures. The pollutants from the diffuse natural pollution and other categories of diffuse pollution are diffused in the subsoil.

7.3 Total review of all pressures

From the individual pollution sources of the point, diffuse and other anthropogenic pressures analyzed in the previous paragraphs, the total final annual and summer quantities of pollutant loads of BOD, N and P that end up in the surface water bodies of the area under study are derived. The pollutants that end up in the groundwater bodies are traced by a network of monitoring stations of IGME (Greek Institute of Geology and Mineral Exploration) and their impact is assessed by measurement data.

In Tripoli Plateau Basin, the total annual surface loads arising from the sum of the individual diffuse, point and other anthropogenic pressures are 870.1 tons/year BOD, 318.1 tons/year N and 32.2 tons/year P. For the summer period, the produced pollutant loads are 292.2 tons/year BOD, 105.1 tons/year N and 10.7 tons/year P respectively. In the Stream Basin of Argolikos Gulf, the total annual surface loads arising from the sum of the individual diffuse pressures are 4954.1 tons/year BOD, 2774.9 tons/year N and 305.4 tons/year P. For the summer period, the produced pollutant loads are 1672.1 tons/year BOD, 919.5 tons/year N and 102.5 tons/year P respectively. In Evrotas River Basin, the total annual surface loads arising from the sum of the individual diffuse, point and other anthropogenic pressures are ι 2773.5 tons/year BOD, 701.9 tons/year N and 52 tons/year P. For the summer period, the produced pollutant loads are 935.5 tons/year BOD, 230.1 tons/year N and 16.8 tons/year P respectively.

7.4 Total water withdrawal

No water is withdrawn from surface water bodies in Tripoli Plateau Basin. Water needs are covered by groundwater bodies by means of wells and springs and the water quantity amounts to 7.4 mil.m^3 annually.

No water is withdrawn from surface water bodies in the Stream Basin of Argolikos Gulf. Water needs are covered by groundwater bodies by means of wells and springs and the water quantity amounts to 209 mil.m^3 annually.

In Evrotas River Basin, water is withdrawn from surface water bodies to meet irrigation needs. Withdrawal occurs both at the main bed of Evrotas river and at its confluents. In particular, the irrigation system of Zaharias dam serves the irrigation needs of 807 stremmas with withdrawal of ~0.7mil.m^3/year from Evrotas river. Furthermore, the irrigation needs of Vrontamas community are served by water withdrawal from Evrotas river through a small concrete irrigation dam. Furthermore, dams provide the required water quantities to meet of the needs of collective irrigational networks. To satisfy the needs of 2,500 stremmas of the irrigation project of Kalivia, Soha, water is withdrawn from Kalives stream whilst for the irrigational needs of 5,500 str. Of the collective networks of Paleopanagia and Anogia water is abstracted from Kakaris stream. The other needs are covered by groundwater bodies by means of wells and springs and the water quantity amounts to 81 mil.m^3 annually.

8 STATUS OF WATER BODIES

8.1 Surface Water Bodies

The status of surface WBs has been assessed and classified pursuant to article 2 of Annex V of Directive 2000/60/EC, with the aim to achieve the good ecological and chemical status for all surface bodies and the good status of the groundwater until 2015.

In the RBD of Eastern Peloponnese for the 37% of WBs the status is unknown. In particular, in the Stream Basin of Argolikos Gulf the rate of surface WBs of an unknown status is much higher (62%) than the respective rate in Evrotas River Basin (13%). 24% of river WBs is classified as high or good status. The status of 31% of river WBs is assessed as moderate whilst 7.5% of river WBs is classified as poor or bad status. In RBD 03 there is 1 lake of an unknown qualitative status. As regards coastal WBs, 84% of them are classified as high or good status, whilst the remaining 16% of a moderate status. The six transitional WBs identified in the RBD of Eastern Peloponnese are of an unknown status.

Table 8-1. Status of river water bodies in River Basin 31

No	Code	Name	AWB/ HMWB	Chemical Status	Ecological Status/ Potential
1	GR0331R000700001A	MARIORREMA STREAM	AWB	Unknown	Unknown
2	GR0331R000700002H	MARIORREMA STREAM	HMWB	Unknown	Unknown
3	GR0331R000700003H	MARIORREMA STREAM	HMWB	Unknown	Unknown
4	GR0331R000700004N	MARIORREMA STREAM	-	Unknown	Unknown
5	GR0331R000700005N	MARIORREMA STREAM	-	Unknown	Good
6	GR0331R001100006N	DAFNES STREAM	-	Unknown	Unknown
7	GR0331R001100007H	DAFNES STREAM	HMWB	Unknown	Unknown
8	GR0331R001100008N	DAFNES STREAM	-	Unknown	Unknown
9	GR0331R001500009N	VRASIATIS STREAM	-	Unknown	Unknown
10	GR0331R001500010N	VRASIATIS STREAM	-	Unknown	Unknown
11	GR0331R001900011N	TANOS R.	-	Unknown	Unknown
12	GR0331R001900012N	TANOS R.	-	Unknown	Unknown
13	GR0331R001900013N	TANOS R.	-	Unknown	Unknown
14	GR0331R001900014N	TANOS R.	-	Unknown	Good
15	GR0331R001900015N	TANOS R.	-	Unknown	Good
16	GR0331R002300016N	XORVRIO STREAM	-	Unknown	Unknown
17	GR0331R002300017N	XORVRIO STREAM	-	Unknown	Unknown
18	GR0331R002300018N	XORVRIO STREAM	-	Unknown	Unknown
19	GR0331R000201019H	INAHOS R.	HMWB	Bad	Moderate
20	GR0331R000202020H	XERIAS R.	HMWB	Unknown	Unknown
21	GR0331R000202021N	XERIAS R.	-	Unknown	Unknown

No	Code	Name	AWB/ HMWB	Chemical Status	Ecological Status/ Potential
22	GR0331R000202022N	XERIAS R.	-	Unknown	Unknown
23	GR0331R000203023H	INAHOS R.	HMWB	Bad	Moderate
24	GR0331R000204024H	DERVENI STREAM	HMWB	Unknown	Unknown
25	GR0331R000204025N	DERVENI STREAM	-	Unknown	Unknown
26	GR0331R000204026N	DERVENI STREAM	-	Unknown	Unknown
27	GR0331R000205027H	INAHOS R.	HMWB	Bad	Moderate
28	GR0331R000205028N	INAHOS R.	-	Bad	Moderate
29	GR0331R000205029N	INAHOS R.	-	Bad	Unknown
30	GR0331R000205030N	INAHOS R.	-	Unknown	Unknown
31	GR0331R003300031N	RADOS R.	-	Unknown	Unknown

Table 8-2. Status of river water bodies in River Basin 33

No	Code	Name	AWB/ HMWB	Chemical Status	Ecological Status/ Potential
1	GR0333R000300001N	PLATIS R.	-	Unknown	Unknown
2	GR0333R000300002N	PLATIS R.	-	Unknown	Unknown
3	GR0333R000300003N	PLATIS R.	-	Unknown	Unknown
4	GR0333R000300004N	PLATIS R.	-	Unknown	Unknown
5	GR0333R000300005N	PLATIS R.	-	Unknown	Unknown
6	GR0333R000201006H	EVROTAS R.	HMWB	Bad	Moderate
7	GR0333R000201007N	EVROTAS R.	-	Unknown	Moderate
8	GR0333R000201008N	EVROTAS R.	-	Unknown	Poor
9	GR0333R000201009N	EVROTAS R.	-	Unknown	Poor
10	GR0333R000201010N	EVROTAS R.	-	Unknown	Poor
11	GR0333R000202011N	RASINA STREAM	-	Good	Poor
12	GR0333R000202112N	GERAKARI STREAM	-	Good	Moderate
13	GR0333R000202113N	GERAKARI STREAM	-	Good	Good
14	GR0333R000202014N	RASINA STREAM	-	Good	Poor
15	GR0333R000202015N	RASINA STREAM	-	Unknown	Good
16	GR0333R000202016N	RASINA STREAM	-	Unknown	Good
17	GR0333R000203017N	EVROTAS R.	-	Bad	Moderate
18	GR0333R000203018N	EVROTAS R.	-	Bad	Moderate
19	GR0333R000204019N	KAKARI STREAM	-	Unknown	Good
20	GR0333R000204020N	KAKARI STREAM	-	Unknown	Good
21	GR0333R000205021N	EVROTAS R.	-	Bad	Moderate
22	GR0333R000206022N	KALIVES STREAM	-	Unknown	Unknown
23	GR0333R000206023N	KALIVES STREAM	-	Unknown	Good
24	GR0333R000206024N	KALIVES STREAM	-	Unknown	Good
25	GR0333R000207025N	EVROTAS R.	-	Bad	Moderate
26	GR0333R000208026N	MAGOULITSA STREAM	-	Unknown	Moderate
27	GR0333R000208027N	MAGOULITSA STREAM	-	Bad	Moderate
28	GR0333R000208028N	MAGOULITSA STREAM	-	Unknown	Good
29	GR0333R000209029N	EVROTAS R.	-	Bad	Poor

No	Code	Name	AWB/ HMWB	Chemical Status	Ecological Status/ Potential
30	GR0333R000210030N	INOUS R.	-	Bad	Moderate
31	GR0333R000210131N	SOFRONI STREAM	-	Bad	Moderate
32	GR0333R000210132N	SOFRONI STREAM	-	Bad	Moderate
33	GR0333R000210133N	SOFRONI STREAM	-	Unknown	Good
34	GR0333R000210034N	INOUS R.	-	Bad	Moderate
35	GR0333R000210235N	ARAHOVITIKO STREAM	-	Bad	Moderate
36	GR0333R000210236N	ARAHOVITIKO STREAM	-	Bad	Moderate
37	GR0333R000210237N	ARAHOVITIKO STREAM	-	Unknown	Good
38	GR0333R000210038N	INOUS R.	-	Unknown	Good
39	GR0333R000210039N	INOUS R.	-	Unknown	Good
40	GR0333R000211040N	EVROTAS R.	-	Bad	Moderate
41	GR0333R000211041N	EVROTAS R.	-	Bad	Moderate
42	GR0333R000212042N	KARDARI STREAM	-	Good	Moderate
43	GR0333R000213043N	EVROTAS R.	-	Bad	Moderate
44	GR0333R000214044N	KOLINIATIKO STREAM	-	Unknown	Moderate
45	GR0333R000214045N	KOLINIATIKO STREAM	-	Unknown	Good
46	GR0333R000215046N	EVROTAS R.	-	Unknown	Good
47	GR0333R000216047N	LAGKADAS STREAM	-	Good	Good
48	GR0333R000216048N	LAGKADAS STREAM	-	Unknown	Good
49	GR0333R000217049N	EVROTAS R.	-	Bad	Moderate

Table 8-3. Status of lake water bodies in River Basin 30

No	Code	Name	AWB/ HMWB	Chemical Status	Ecological Status/ Potential
1	GR0330L000000001H	TAKA ARTIF. LAKE	-	Unknown	Unknown

Table 8-4. Status of coastal and transitional water bodies in River Basin 31

No	Code	Name	AWB/ HMWB	Chemical Status	Ecological Status/ Potential
1	GR0331T0001N	DREPANOS-ASINI LG	-	Unknown	Unknown
2	GR0331T0002N	THERMISIA LG	-	Unknown	Unknown
3	GR0331T0003N	STROGGILI LIMNI LG	-	Unknown	Unknown
4	GR0331T0004N	VIVARI LG (EVROTAS DELTA)	-	Unknown	Unknown
5	GR0331T0005N	MOUSTOU WETLAND	-	Unknown	Unknown
6	GR0331C0001N	ARGOLIKOS GULF	-	Unknown	Moderate
7	GR0331C0002N	HYDRA-DOKOS-SPETSES CHANNEL	-	Unknown	Moderate
8	GR0331C0003N	HYDRA COASTS	-	Unknown	High
9	GR0331C0004N	ISLET_1	-	Unknown	High
10	GR0331C0005N	E. COAST OF PELOPONNESE	-	Unknown	High

No	Code	Name	AWB/ HMWB	Chemical Status	Ecological Status/ Potential
11	GR0331C0006N	ELAFONISOS COASTS	-	Unknown	High
12	GR0331C0009N	E. COAST OF KITHIRA	-	Unknown	High
13	GR0331C0010N	W. COAST OF KITHIRA	-	Unknown	High
14	GR0331C0011N	COAST OF ANTIKITHIRA	-	Unknown	High
15	GR0331C0012N	ISLET_2	-	Unknown	High
16	GR0331C0013N	ISLET_3	-	Unknown	High

Table 8-5. Status of coastal and transitional water bodies in River Basin 33

No	Code	Name	AWB/ HMWB	Chemical Status	Ecological Status/ Potential
1	GR0333C0007N	COAST OF LAKONIKOS GULF	-	Unknown	Good
2	GR0333C0008N	TENARO CAPE – LAKONIKOS GULF	-	Unknown	High
3	GR0333T0001N	ESTUARY OF EVROTAS R.	-	Unknown	Unknown

Table 8-6. Summarized status of surface water bodies (WB) in RBD 03

Type	Number of WBs	High/Good (number, %)	Moderate (number, %)	Poor/Bad (number, %)	Unknown (number, %)
Rivers	80	19 (23.7%)	25 (31.3%)	6 (7.5%)	30 (37.5%)
Lakes	1	0 (0%)	0 (0%)	0 (0%)	1 (100%)
Transitional	6	0 (0%)	0 (0%)	0 (0%)	6 (100%)
Coastal	13	11 (84.6%)	2 (18.2%)	0 (0%)	0 (0%)
Total	**100**	**30 (30%)**	**27 (27%)**	**6 (6%)**	**37 (37%)**

8.2 Heavily modified and artificial water bodies

The to-date human activity has altered the initial characteristics of some water bodies. These changes, regardless of the extent of the alteration they have caused and the reasons for which they ocurred, make these water bodies particular in a sense. Such bodies are addressed in a different manner by Directive 2000/60/EC and are called **Heavily Modified Water Bodies** (HMWB). Similarly, artificial water bodies are created where in the past they did not exist. These bodies are called **Artificial Water Bodies** (AWB).

In all the cases of heavily modified and artificial water bodies that were examined, their conversion into natural water bodies was deemed impossible or disadvantageous in terms of cost. Therefore, out of the 100 in total surface water bodies that have been identified in the framework of this study for the River basin district of Eastern Peloponnese (RBD 03), 10 are finally characterized as heavily modified WB.

Table 8-7. Summarized picture of the heavily modified and artificial water bodies in the river basin district of Eastern Peloponnese (RBD 03)

Type	Number of WBs	HMWBs (number, %)	AWBs (number, %)

Rivers	80	9 (11.2%)	-
Lakes	1	1 (100%)	-
Coastal	13	-	-
Transitional	6	-	-
Total	**97**	**10 (10.3%)**	**-**

8.3 Groundwater Bodies (GB)

The following tables present the identified chemical and quantitative status of each groundwater body and the existing pollution trends or level drop due to over-abstraction. These tables also cite the water bodies that present increased values of natural substratum, and the new increased values of the Highest Acceptable Values of the natural substratum.

Table 8-8. Table of quantitative – chemical status of groundwater bodies - Tripoli Plateau Basin (GR30)

GB's Code	GB's Name	Quantitative status	Chemical Status	Trend of level drop	Trend of pollution increase	Local exceedances of trace elements	Highest Acceptable Value due to increased values of the natural
GR0300010	Body of Kandila	Good	Good	No	Local (NO3)	Fe, Pb	
GR0300030	Body of Tripoli Plateau	Good	Bad (SO4: 2 - 189, NO3: 9- 434 mg/l)	No	Local (SO4, NO3)	-	

Table 8-9. Table of quantitative – chemical status of groundwater bodies – Stream Basin of Argolikos Gulf (GR31)

GB's Code	GB's Name	Quantitative status	Chemical Status	Trend of level drop	Trend of pollution increase	Local exceedances of trace elements	New increased Highest Acceptable Value due to increased values of the natural substratum
GR0300020	Body of East Arcadia-W. Argolida	Good	Good	No	-	Cu	Cl=300 mg/l
GR0300040	Body of Argoliko Pedio	Bad	Bad (Cl: 10 - 2099, SO4: 15 - 334, NO3: 5 - 248 mg/l)	Yes	-	Fe, Mn, Cu, Al	
GR0300050	Body of Mavrovouni - Didimoi	Good	Bad (Cl: 19 - 938, SO4:	Yes	Local (Cl, SO4, NO3)	-	Cl=950 mg/l

GB's Code	GB's Name	Quantitative status	Chemical Status	Trend of level drop	Trend of pollution increase	Local exceedances of trace elements	New increased Highest Acceptable Value due to increased values of the natural substratum
			11 - 216, NO3: 5 - 257 mg/l)				
GR0300060	Body of Trizinia	Bad	Bad (Cl: 32 - 1716, SO4: 47 - 289, NO3: 6 - 146 mg/l)	Yes	Local (Cl, SO4, NO3)	Cu, Pb, B, Fe, Al	
GR0300070	Body of Ermioni	Good	Bad (Cl: 75 - 1419 mg/l)	Yes	-	-	
GR0300080	Body of Portoheli	Bad	Bad (Cl: 73 - 412, SO4: 50 - 226, NO3: 19 - 49 mg/l)	Yes	Local (Cl, SO4, NO3)	Fe, Cr, Al,	
GR0300090	Body of Astros	Good	Bad (Cl: 14 - 14086, SO4: 13 - 414, NO3: 5 - 74 mg/l)	Yes	-	Cu	
GR0300100	Body of Parnonas	Good	Good	No	No	Cu	Cl=2500 mg/l SO4= 1050 mg/l
GR0300110	Body of Zarakas - Monemvasia	Good	Good	No	No		Cl=1800 mg/l
GR0300120	Body of S.E. Lakonia	Good	Good	No	No	-	Cl=750 mg/l
GR0300130	Body of Neapoli	Bad	Bad (Cl: 59 - 6, NO3: 627 - 50 mg/l)	Yes	Local (Cl, NO3)	Fe, Cu	
GR0300140	Body of Kithira	Good	Good	No	No	-	
GR0300150	Body of Asopos - Glikovrisi	Bad	Bad (Cl: 14 - 1383, NO3: 5 - 62 mg/l)	Yes	Local (Cl, NO3)	-	

Table 8-10. Table of quantitative – chemical status of groundwater bodies – Evrotas River Basin (GR33)

GB's Code	GB's Name	Quantitative status	Chemical Status	Trend of level drop	Trend of pollution increase	Local exceedances of trace elements	New increased Highest Acceptable Value due to increased values of the natural substratum
GR0300160	Body of Geraki - Gkoritsa	Good	Good	No	Local (Cl)	Fe, Al	
GR0300170	Body of Elos - Vasilopotamos	Good	Good	No	-	Cu	
GR0300180	Body of Skala	Good	Good	No	-	-	
GR0300190	Body of Krokees - Githio	Good	Good	No	No	-	Cl=900 mg/l SO4= 480 mg/l
GR0300200	Body of Vardounias r. (Platis r.)	Good	Good	Yes	-		Cl=750 mg/l
GR0300210	Body of Skoutari	Good	Good	No	No	Cu	Cl=1850 mg/l SO4= 250 mg/l
GR0300220	Body of e. Taigetos – Agia Marina	Good	Good	No	No	-	
GR0300230	Body of Evrotas	Good	Bad (NO3: 5 - 99 mg/l)	Yes	-	Mn,	
GR0300240	Body of Ag. Petros - Voutianoi	Good	Good	No	No		
GR0300250	Body of Zorou - Sellasia	Good	Good	No	No		
GR0300260	Body of Pellana - Skortsino	Good	Good	No	No	-	
GR0300270	Body of Kollines - Vlahokerasia	Good	Good	No	No		

8.4 Registry of Protected Areas

In accordance with Directive 2000/60/EC for the establishment of a framework of community action in the water policy sector, the member states shall ensure the establishment of a registry or registries 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.

The table below presents the number of Protected Areas classified per type.

Table 8-11. Number of areas per type of protected area, River Basin & RBD

Type of Protected Area	River Basin 30	River Basin 31	River Basin 33	TOTAL
Water bodies designated for water withdrawal	-	1	2	**3**
Economically significant aquatic species	-	3	1	**4**
Recreational waters	-	77	11	**88**
Sensitive areas	-	-	-	**-**
Easily-affected areas	-	1	-	**1**
Protected Natural Areas	1	17	2	**20**
Total	**1**	**99**	**16**	**116**

8.5 Monitoring Network

In accordance with the requirement of Article 8 of Directive 2000/60/EC, Article 8 of Law 3199/2003 (GG 280/A/9-12-03) and Article 11 of Presidential Decree 51/2007 (GG 54/A/8-3-07), the Joint Ministerial Decision, No οικ. 140384 (GG 2017/B/9-9-11), which established the National Monitoring Network of surface and groundwater bodies, was issued.

Surface Water Bodies

Tripoli Plateau Basin (GR30) does not have river water bodies meeting the criteria of Directive 60/2000/EC, thus there is no such monitoring network. In the Stream Basin of Argolikos Gulf (GR31), the network consists of 13 monitoring sites in rivers, out of which 4 are for surveillance and 9 for operational monitoring. In Evrotas River Basin (GR33), the network consists of 9 monitoring sites in rivers, out of which 8 are for surveillance and 1 is for operational monitoring. As regards lake Water Bodies, there are no monitoring sites. In Tripoli Plateau Basin (GR30), there are no monitoring stations at coastal WBs. In the Stream Basin of Argolikos Gulf (GR31), the network consists of 3 monitoring sites, out of which one (Hydra-Dokos-Spetses Passage) is for surveillance and 2 (Argolikos Gulf) for operational monitoring. In Evrotas River Basin (GR33), the network consists of 2 surveillance monitoring sites (Coats of Lakonikos Gulf). In said River basin district there are no transitional water monitoring stations.

In the framework of preparing the Management Plan, the update of the JMD monitoring network was proposed. In RBD 03 surveillance monitoring is proposed for 10% of the river WBs, whilst separately surveillance monitoring is proposed for River Basins 30, 31 & 33 for 0%, 16% & 6% respectively. 100% of lakes, 33% of transitional and 23% of coastal WBs of RBD03 are included in the surveillance monitoring program. In RBD 03 operational monitoring is proposed for 22.5% of the river WBs, whilst separately for River Basins 30, 31 & 33 operational monitoring is proposed for 0%, 29% & 18% of the WBs respectively. The rate of WBs proposed to be encompassed in the operational monitoring program is higher in River Basin 31 than River Basins 30 and 33. Exploratory monitoring relates to 9 river WBs in River Basin 33.

Table 8-12. Total summarized information of the surface Water Bodies monitoring network

TOTAL NETWORK	RB 30		RB 31		RB 33		RBD 03	
	Number of WBs	% of WBs	Number of WBs	% of WBs	Number of WBs	% of WBs	Number of WBs	% of WBs
Rivers	0	-	14	45%	19	39%	**33**	**41%**
Lakes	1	100%	0	-	0	-	**1**	**100%**
Transitional	0	-	3	60%	1	100%	**4**	**67%**
Coastal	0	-	3	27%	1	50%	**4**	**31%**
Total	**1**	**100%**	**20**	**42.5%**	**21**	**40.4%**	**44**	**44%**

Groundwater Bodies

In the Stream Basin of Tripoli Plateau (GR30), the network consists of 9 monitoring sites. In the Stream Basin of Argolikos Gulf (GR31) the network consists of 81 monitoring sites, out of which 2 are for surveillance at the groundwater bodies of Potamos and Livadi, and 79 are for operational monitoring. In Evrotas River Basin (GR33), the network consists of 33 monitoring sites, out of which 11 are for surveillance and 22 are for operational monitoring. This number also includes two sites located within the boundaries of Evrotas River Basin but they belong to the groundwater Body of Elos - Vasilopotamos (GR0300170) that extends geographically outside the basin's boundaries but it is included in it. In the framework of preparing the Management Plan the update of the JMD monitoring network was proposed. Table 8-13 presents the total number of monitoring stations per River Basin and the percentage of surveillance and operational monitoring per River Basin.

Table 8-13. Summarized data of the surveillance monitoring network

GROUNDWATER BODIES	RB 30		RB 31		RB 33		RBD 03	
	Number of stations	% of stations	Number of stations	% of stations	Number of stations	% of stations	Number of stations	% of stations
Surveillance	0	0%	5	5.4%	19	44.2%	24	16.6%
Operational	9	100%	88	94.5%	24	55.8	121	83.4%
TOTAL	**9**	**100%**	**93**	**100%**	**43**	**100%**	**145**	**100%**

9 ECONOMIC ANALYSIS OF WATER USES

The Directive separates the services from water uses by defining the water services as the total of the processes intervening between natural water resources and the uses. On the basis of this definition, water services are any acts which change the main characteristics of the naturally available water and the water disposed after each use. It is noted that on the basis of the Directive's definition, water uses encompass all water services as well as any activities having a significant impact on its status. This definition covers almost the entire spectrum of human activities, i.e. agriculture, households, industries, navigation, protection from floods, power generation.

The water services for which a cost estimate is made are:

- Water supply / sewage Refined or clean potable water,
- Irrigation, Non-refined water

The cost recovery levels per provider of water services and per use (Supply of water and Irrigation) were estimated. On a first level, the financial cost recovery level is estimated and then the total cost encompassing the environmental cost and the natural resource cost.

Water Supply

At a River basin district Level, the total revenues for the DEYAs (Municipal and Sewage Company) (see Annex I of Tables) amount to €12.6 m., without the special duty of 80% and to €15.3 m. if included. For Municipalities the revenues from the supply of water were estimated at €8.8 m. The total revenues from the supply of water in the river basin district 03 were estimated at €24.1 m. The average revenues per m^3 of water for the entire Water Supply was estimated at €0.7 €/m^3, whilst for the DEYA €0.95/m^3 and for Municipalities €0.5/m^3.

The revenues for the DEYAs (Municipal Corporations for Water Supply and Sewage) in River Basin 30 amount to €2.9 m., without the special duty of 80% and to €3.5 m. if included. To the contrary, in the Municipalities of River Basin 30, the revenues were estimated at €0.8 m. In other words, the total revenues from the supply of water in RBD 03 were estimated at €4.3 m. The average revenues per m^3 of water for the entire Water Supply was estimated at €0.68/m^3, whilst for the DEYA €0.86/m^3 and for Municipalities €0.35/m^3.

The revenues for the DEYAs (Municipal Corporations for Water Supply and Sewage) in River Basin 31 amount to €6.9 m., without the special duty of 80% and to €8.4 m. if included. To the contrary, in the Municipalities DEYA of Basin 31, the revenues were estimated at €6.7 m. In other words, the total revenues from the supply of water in RBD 03 were estimated at €15.1 m. The average revenues per m^3 of water for the entire Water Supply was estimated at € 0.68/m^3, whilst for the DEYA €1.03/m^3 and for Municipalities €0.48/m^3.

The revenues for the DEYAs (Municipal and Sewage Company) in River Basin 33 amount to €2.8 m., without the special duty of 80% and to €3.3 m. if included. To the contrary, in the Municipalities of river Basin 33, the revenues were estimated at €1.4 m. In other words, the

total revenues from the supply of water in RBD 03 were estimated at €4.7 m. The average revenues per m^3 of water for the entire Water Supply was estimated at €0.72/m^3, whilst for the DEYA €0.85/m^3 and for Municipalities €0.53/m^3.

For the river basin district 03 with respect to the total water supply, the total financial cost recovery amounts to 60%, whilst the total cost recovery to 56%. The respective figures for the DEYA are 77% and 74%, whilst for the Municipalities are 37% and 33%.

Irrigation

In the entire RBD 03 the revenues from the Organized Irrigation are €3.36 m. (i.e. the average revenues per m^3 are €0.07), out of which €2.86 m. correspond to River Basin 31 and €0.5 m. to River Basin 33. It is ascertained that as regards the total organized Irrigation in RBD 03, the financial cost recovery amounts to 57.6%, whilst the total cost recovery to 56.7%, i.e. at very low levels for the specific use. For the non-organized irrigation the financial cost recovery is assumingly 100%, whilst the total recovery is zero. The data of the table below show that as regards both total and organized Irrigation, a relatively low financial and total cost recovery is observed in River Basin 33 and very high in River Basin 31.

The financial cost recovery in Organized Irrigation in River Basin 31 amounts to 65.5% whilst total cost recovery to 63.9%. The analytical data show substantial differentiation among the various providers. In particular, the recovery varies from 40% to 75%. The financial and total cost recovery in organized Irrigation in River Basin 33 amounts to 34.2%. The analytical data show substantial differentiation among the various providers. In particular, recovery varies from 25% to 65%.

10 ENVIRONMENTAL OBJECTIVES – EXEMPTIONS

10.1 Identification of exemptions

The determination of objectives pursuant to the Directive entails the usage of the different options cited in Article 4. Through the process of specifying the objectives, not only is the status of all surface and groundwater bodies identified but also the achievement timeline of the objective of the Directive. Exemptions form an integral part of the environmental objectives laid down in Article 4. The relevant terms and the procedures are described in paragraphs 4.3, 4.4, 4.5, 4.6 and 4.7 of Directive 2000/60/EC. Exemptions vary from small scale provisional exemptions to long-term deviations from the objective of "good status until 2015" and have the following forms:

- Deadline extension: extension of the deadline for achieving the good status until 2021 or 2027 the latest (2nd and 3rd revision of the Management Plans) or whenever the natural conditions allow after 2027 (article 4.4).
- Determination of less strict environmental objectives under certain conditions, i.e. if it has been proved that the water bodies have been influenced to such extent by human activity that the achievement of environmental objectives is impossible or disproportionally cost-consuming (paragraph 4.3 and 4.5).
- Temporary deterioration in status arising from natural causes or force majeure or extraordinary conditions that could not have been foreseen when all conditions precedent under Article 4 are applicable (paragraph 4.6).
- New modifications of the natural characteristics of a body of surface water or modifications of the level of groundwater as a result of a new sustainable human activity (including the modification from - high to good status) (paragraph 4.7).

Table 10-1. Surface Water Bodies to be exempted in RBD 03

No	Basin	Code	WB	Type of WB*	Existing status	Year of achieving the good status	Applied measures	Exemption justification
1	**31**	GR0331R000201019H	INAHOS R.	R	■ Unknown	**2021** *(Article 4.3)* *(Article 4.4)*	**5.04.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
2	**31**	GR0331R000202020H	XERIAS R.	R	■ Unknown	**2021** *(Article 4.3)* *(Article 4.4)*	**5.04.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
3	**31**	GR0331R000202021N	XERIAS R.	R	■ Unknown	**2021** *(Article 4.4)*	**5.04.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
4	**31**	GR0331R000203023H	INAHOS R.	R	■ Unknown	**2021** *(Article 4.3)* *(Article 4.4)*	**5.04.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
5	**31**	GR0331R000204024H	DERVENI STR.	R	■ Unknown	**2021** *(Article 4.3)* *(Article 4.4)*	**5.04.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's

No	Basin	Code	WB	Type of WB*	Existing status	Year of achieving the good status	Applied measures	Exemption justification
								status since a longer period is required for applying the proposed measures and implementing the required technical projects.
6	**31**	GR0331R000204025N	DERVENI STR.	R	Unknown	**2021** *(Article 4.4)*	**5.04.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
7	**31**	GR0331R000205027H	INAHOS R.	R	Unknown	**2021** *(Article 4.3)* *(Article 4.4)*	**5.04.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
8	**31**	GR0331R000205028N	INAHOS R.	R	Unknown	**2021** *(Article 4.4)*	**5.04.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
9	**31**	GR0331C0001N	ARGOLIKOS GULF	C	Moderate	**2021** *(Article 4.4)*	**18.20.ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
10	**33**	GR0333R000201006H	EVROTAS R.	R	Moderate	**2021** *(Article 4.5)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11,**	Changes in the hydromorphological characteristics of the HMWB necessary to

No	Basin	Code	WB	Type of WB*	Existing status	Year of achieving the good status	Applied measures	Exemption justification
							7.03, 16.02	achieve good ecological status would have a significant negative impact on the protection of the area from floods. The environmental objective set for the WB is less strict of the moderate ecological potential since the prerequisites under **Article 4.5** of the WFD are fulfilled.
11	**33**	GR0333R000201007N	EVROTAS R.	R	Moderate	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
12	**33**	GR0333R000201008N	EVROTAS R.	R	Poor	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,11.15**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
13	**33**	GR0333R000201009N	EVROTAS R.	R	Poor	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11, 8.02,18.19**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
14	**33**	GR0333R000201010N	EVROTAS R.	R	Moderate	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,11.15**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and

No	Basin	Code	WB	Type of WB*	Existing status	Year of achieving the good status	Applied measures	Exemption justification
								implementing the required technical projects.
15	**33**	GR0333R000202011N	RASINA STR.	R	Poor	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11, 18.19**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
16	**33**	GR0333R000202014N	RASINA STR.	R	Poor	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11, 18.19**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
17	**33**	GR0333R000203017N	EVROTAS R.	R	Moderate	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11, 18.19,11.15**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
18	**33**	GR0333R000203018N	EVROTAS R.	R	Moderate	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11, 18.19,11.15,18.19**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
19	**33**	GR0333R000205021N	EVROTAS R.	R	Moderate	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11, 18.19,11.15**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for

No	Basin	Code	WB	Type of WB*	Existing status	Year of achieving the good status	Applied measures	Exemption justification
								applying the proposed measures and implementing the required technical projects.
20	**33**	GR0333R000207025N	EVROTAS R.	R	Moderate	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11, 18.19,11.15,8.02 9.02**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.
21	**33**	GR0333R000209029N	EVROTAS R.	R	Poor	**2021** *(Article 4.4)*	**ΟΣ_ΥΔ03_8, ΟΣ_ΥΔ03_9, ΟΣ_ΥΔ03_10,1.11, 18.19,11.15**	The environmental objective set is the good ecological status. It is not reasonably possible to achieve all required improvements of the WB's status since a longer period is required for applying the proposed measures and implementing the required technical projects.

**R: Rivers, C: Coastal WBs, T: Transitional WBs, L: Lakes*

Table 10-2. Groundwater Bodies to be exempted in RBD 03

No	Basin	Code	WB	Existing status	Year of achieving the good status	Applied measures	Exemption justification
1	30	GR0300030	Body of Tripoli Plateau	Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_1,8.03	A longer period is required for the recovery of the groundwater body

No	Basin	Code	WB	Existing status	Year of achieving the good status	Applied measures	Exemption justification
2	31	GR0300040	Body of Argoliko Pedio	■ Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_6,8.03, 0Σ_ΥΔ03_7	A longer period is required for the recovery of the groundwater body A longer period is required for the implementation of the required technical works.
3	31	GR0300050	Body of Mavrovouni - Didimoi	■ Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_6,8.03, 0Σ_ΥΔ03_7,8.09, 0Σ_ΥΔ03_5	A longer period is required for the recovery of the groundwater body A longer period is required for the implementation of the required technical works.
4	31	GR0300060	Body of Trizinia	■ Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_6, 0Σ_ΥΔ03_7,8.03, 14.03	A longer period is required for the recovery of the groundwater body A longer period is required for the implementation of the required technical works.
5	31	GR0300080	Body of Portoheli	■ Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_6, 0Σ_ΥΔ03_7	A longer period is required for the recovery of the groundwater body A longer period is required for the implementation of the required technical works.
6	31	GR0300090	Body of Astros	■ Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_6, 0Σ_ΥΔ03_7,8.03 14.01,18.18	A longer period is required for the recovery of the groundwater body A longer period is required for the implementation of the required technical works.
7	31	GR0300130	Body of Neapoli	■ Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_6, 0Σ_ΥΔ03_7	A longer period is required for the recovery of the groundwater body A longer period is required for the implementation of the required technical works.

No	Basin	Code	WB	Existing status	Year of achieving the good status	Applied measures	Exemption justification
8	31	GR0300150	Body of Asopos - Glikovrisi	■ Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_6, 0Σ_ΥΔ03_7, 14.03	A longer period is required for the recovery of the groundwater body A longer period is required for the implementation of the required technical works.
9	33	GR0300230	Body of Evrotas	■ Bad	After 2027 *(Article 4.4)*	8.03	A longer period is required for the recovery of the groundwater body A longer time period is required for the implementation of the required technical works.
10	31	GR0300070	Body of Ermioni	■ Bad	After 2027 *(Article 4.4)*	0Σ_ΥΔ03_6, 0Σ_ΥΔ03_7,8.03	A longer period is required for the recovery of the groundwater body A longer period is required for the implementation of the required technical works.

Table 10-3 Number and % of River Water Bodies per type of exemption in RBD 03

Exemption	% percentage of WBs total surface that consists exemption	Justification	% percentage of WBs of each justification	Comments
Article 4.4	23%	Technical infeasibility	100%	
Article 4.5	2%	Technical infeasibility	100%	

Table 10-4 Number and % of Coastal Water Bodies per type of exemption in the RBD 03

Exemption	% percentage of WBs total surface that consists exemption	Justification	% percentage of WBs of each justification	Comments
Article 4.4	9.1%	Technical infeasibility	100%	

Table 10-5 Number and % of Groundwater Bodies per type of exemption in RBD 03

Exemption	% percentage of WBs total surface that consists exemption	Justification	% percentage of WBs of each justification	Comments
Article 4.4	37%	Technical infeasibility	100%	

10.2 Scheduled and new projects – activities – modifications

The main scheduled new projects and their potential impact on the achievement of the environmental objectives of the Water Bodies are shown in the following tables per RB.

Table 10-6. Table of new projects and activities in Tripoli Plateau Basin

No	Project/ Activity	Summary description	Influenced WB
1	**Irrigation networks in Taka lake**	The reservoir of Taka lake has been constructed within the boundaries of Taka dried lake to collect a part of the area's precipitates. These waters are destined for the irrigation of 24,000 stremmas of rural land in the southern section of the plain of Mantinia. The reservoir covers an area of 1,300 stremmas and its useful capacity is 12 mil. m^3.	The works influence the Groundwater Bodies of Tripoli Plateau (GR0300030) and of East Arcadia-W. Argolida (GR0300030). The quantitative status of the body of Tripoli Plateau is good, whilst the chemical status is bad with a pollutant increasing trend, a fact which may be the reason for deviation from the environmental objectives of 2015

No	Project/ Activity	Summary description	Influenced WB

Table 10-7. Summarized table of important scheduled projects in the Stream Basin of Argolikos Gulf

No	Project/ Activity	Summary description	Influenced WB
1	**Transfer and distribution of irrigation water from Anavalos networks to Koutsopodi, Mikines, Monastiraki, Fihtio, Honikas, Aerodromio, Elliniko and Municipality of Mideas of Argolida**	The project which is currently under construction concerns an area of around 60,000 stremmas. The project includes the extension of the existing irrigation networks in the areas of the Municipal Units of Koutsopodi, Mikines, Midea, Argos, Lerna, Asini on the basis of the 1981 study. The following will be constructed: ducts of a length of 67.0 km approximately, three large pumping stations on the central canal of Anavalos, fourteen smaller intermediate pumping stations and twelve reservoirs.	The water bodies influenced from the project's implementation are groundwater bodies (GBs); in particular, the GBs of: East Arcadia - W. Argolida (GR0300020), Argoliko Pedio (GR0300040) and Arachneo (GR0200200). Abstraction from the body of East Arcadia - W. Argolida will be increased, whilst abstraction from the bodies of Argoliko Pedio and Arachneo will be reduced.
2	**Works of transfer and distribution of irrigation water from Anavalos networks to the Municipal Units of Asklipeio and Epidaurus of the Region of Argolida.**	The project concerns the irrigation of a gross surface of around 27,000 stremmas. It includes the construction of irrigation networks in the areas of Agios Dimitrios, Arkadiko, Ligourio, Dimena, Old and New Epidaurus in the Municipal Units of Asklipeio and Epidaurus. The network's supply will be 2,500 m^3/hour. Ducts of a total length of 32 km approximately, 3 pumping stations and three reservoirs with a capacity of 15,000 m^3 will be constructed.	The water bodies influenced from the project's implementation are groundwater bodies (GBs); in particular, the GBs of: East Arcadia - W. Argolida (GR0300020), Mavrovouni-Didimoi (GR0300050) and Arachneo (GR0200200). Upon implementation of the project, abstraction from the body of East Arcadia - W. Argolida will be increased, whilst abstraction from the bodies of Mavrovouni-Didimoi and Arachneo will be reduced.
3	**Works of transfer and distribution of irrigation water from the networks of Anavalos to the Municipality of Ermionida in Argolida.**	The project is currently at the implementation stage of the Preliminary Study. It is going to serve the rural lands in the Municipality of Ermionida. The duct's alignment is 45 km long approximately and the duct is expected to serve the local irrigation needs of lands of 22,000 stremmas approximately.	The water bodies influenced from the project's implementation are groundwater bodies (GBs); in particular, the GBs of: East Arcadia - W. Argolida (GR0300020), Portoheli (GR0300080) and Ermioni (GR0300070). Upon implementation of the project, abstraction from the body of East Arcadia - W. Argolida will be increased, whilst abstraction from the bodies of Portoheli and Ermioni will be reduced.

No	Project/ Activity	Summary description	Influenced WB
4	**Works of transfer and distribution of irrigation water from the Anavalos networks to the Municipality of North Kinouria in Arcadia.**	The project's characteristics are based on the Final Studies of Land Improvement Works of the area of Argoliko Pedio and on a preliminary study of the areas of Astros, Kinouria – Asini and Iria, YPDE, 1981. The project will serve rural lands in the Municipality of North Kinouria from the spring of Kiverio (Anavalos). It is expected to serve the local irrigation needs of lands of 30,000 stremmas approximately.	The water bodies influenced from the project's implementation are groundwater bodies (GBs); in particular, the GBs of: East Arcadia - W. Argolida (GR0300020), Astros (GR0300090) and Parnonas (GR0300100
5	**Water supply projects with utilization, treatment and softening of water from Ag. Georgios spring (Anavalos) in view of producing drinking water for Nafplio, Argos and other areas of Argolida**	The project concerns construction of necessary installations and networks for the treatment and softening of water of Agios Georgios spring supplying Anavalos project, and the production of drinking water for the cities of Nafplio, Argos and other areas of Argolida. This project is proposed by the Municipal and Sewage Company (DEYA) of Nafplio and Argos for the purpose of dealing with an eventual drought in the future. The extent of the areas to be supplied as well as the final cost of the project has not been specified explicitly.	The water bodies influenced from the project's implementation are groundwater bodies (GBs); in particular, the GBs of: East Arcadia - W. Argolida (GR0300020) and Argoliko Pedio (GR0300040).
6	**Dam at the river basin of Roros – Tzertzelia to River Rados**	The purpose of the examined project is the withdrawal of surface water mainly in order to meet the irrigation needs of MU Kranidi, Ermioni, and Communities Iria and Karnezaiika of the MU Asini. Water supply problems in the area are expected to be more acute in the future, due to the high touristic and residential development of the area. Based on the "Study of low dam of the river basin Roros – Tzertzelia of the Department of Argolida" the project will be constructed at River Rados in the area of Tzertzelia, at a distance of 16 km from the sea, at the junction of Tracheia and Pelei branches, and is expected to withhold approximately 40% of river runoffs. Secondarily, the project will also meet irrigation needs at Iria valley.	The WBs influenced by the project is the river WB of Rados (GR0331R003300031N) and the GBs of Mavrovouni-Didimoi (GR0300050) and the body of Ermioni (GR0300070). Upon construction of the dam, the river water body, 25 km long approximately, will be separated in two water bodies, one upstream the reservoir and one downstream; the body will be directly affected by the dam's operation since it will be subject to a regulated flow regime. In addition, a new lake water body will be created, i.e. the reservoir.
7	**Dam at Tanos River and irrigation networks**	River Tanos dam will be constructed at Elatos location, in the semi-mountainous area of the Municipality of North Kynouria. In this location the upstream basin extends to around 5 km2. The project, based on the "Environmental Impact Assessment of the Dam of Tanos" (MRDF Irrigation Water Protection Department, 2007) aims at improved satisfaction of irrigation needs and the development of productive irrigated cultivations with estimated restructuring of cultivations. The construction of the dam will enable the	The WBs influenced by the project is the river WB of Tanos river (GR0331R001900014N), as well as the groundwater body of Astros (GR0300090). Upon construction of the dam, the river water body, 12.5 km long approximately, will be separated in two water bodies, one upstream the reservoir and one downstream; the body will be directly affected by the dam's operation. In addition, a new lake water body will be created, i.e. the reservoir of Tanos river

No	Project/ Activity	Summary description	Influenced WB
		utilization of winter and summer runoffs of River Tanos, which will be stored at a reservoir with a capacity of 4.2 million m^3. It is foreseen that the reservoir water will be transferred through a duct to Astros valley, where the collective irrigation networks will be developed. The development of irrigation networks concerns Astros valley for Agios Andreas settlement, with total gross area of approximately 30,000 stremmas, of which approximately 9,100 stremmas of net area will be irrigated by closed irrigation network. The exact setting of boundaries of the irrigated perimeter must be updated, if combined with the irrigation works from Anavalos springs, as provided for by the land improvement works study of the Ministry of Public Works (1981).	
8	**Conservation reservoir Karatzas**	The project under construction aims at utilizing surface water potential of the area, in view of covering the water supply and irrigation needs in the area. The location of the conservation reservoir is S-SE of Karatzas settlement, at a distance of about 550 m. The project also includes the construction of two diversion dams. One of them is constructed at the north branch of the main drain torrent of Karatzas basin at a naturally formed narrow passage, and the other is constructed at the southern branch of the torrent. Moreover, the project includes construction of two transport ducts from dams to the conservation reservoir, with useful capacity of approximately 440,000 m^3 and free surface area at the top water level of about 49.5 stremmas. A speed refinery will be built in a village near the conservation reservoir which will receive the collected water, treat it properly to improve its quality, so that it may then be supplied for drinking purposes through the external pipe network to settlements Karatzas, Agia Eleni and Ano Fanari at the MU of Trizina.	The influenced bodies are the river of Rados (GR0331R003300031N) where the torrent from where water is abstracted ends up and the GB of Mavrovouni-Didimoi (GR0300050).

Table 10-8. Table of new projects and activities in Evrotas River Basin

No	Project/ Activity	Summary description	Influenced WB
1	**Aqueduct for the transfer of water from Evrotas and Vasilopotamos springs to address the salinization of Elos areas and extension to the plains of Molaoi and Asopos in Lakonia**	The project includes construction of 4 pumping stations, 3 reservoirs, water pipelines from Vasilopotamos springs to the pumping stations, reservoirs and the implementation areas (Asterion – Glikovrisi and Papadianika – Plitra) and finally the opening of 160 wells of artificial recharge of the groundwater body of Asopos – Glikovrisi. The body's drainage capacity is 5,000 m^3/hour and is foreseen for a 7-month abstraction with total annual abstraction of 25 mil. m^3.	The WBs influenced is Evrotas river (GR0333R000201007N), and the groundwater bodies of Skala (GR0300180) and Asopos – Glikovrisi (GR0300150). The abstractions from the WBs of Evrotas and Skala will be increased, whilst the project's purpose is to reduce the abstraction from the groundwater body of Asopos – Glikovrisi.
2	**Kelefina Dam**	The project concerns the construction of a dam at Oenous or Kelefina stream, 43 m. high, of reservoir area at around 1.2 km^2 and with a capacity of 15 million m^3. Based on the "Study of Kelefina dam, of the Dep. of Lakonia – Water resources management study, MRDF Directorate of Technical Designs and Structures, 2009", rural areas of 32,000 stremmas are to be irrigated at the Municipal Units of Oenounta and Spartiates, out of which around only 17,000 stremmas are currently irrigated. Upon construction of the reservoir the spring, which currently supplies the Communities of Sellasia, Vresthena and Vrontamas with water, will be flooded.	The WBs influenced by the dam's construction is the water body of Inountas river (GR0333R000210034N), whilst the downstream surface water bodies of Evrotas are indirectly influenced. Upon construction of the dam, the river water body, 13.6 km long approximately, will be separated in two water bodies, one upstream the reservoir and one downstream; the body will be directly affected by the dam's operation. In addition, a new body of lake water will be created, i.e. the reservoir.

No	Project/ Activity	Summary description	Influenced WB
3	**Water Supply of East Mani from Agia Marina springs**	The project concerns the water supply of the settlements of the Municipality of East Mani from Agia Marina springs via a duct on the basis of the "Study for the Water Supply of Mani" of the former water supply association of Githio – Etilo – East Mani & Sminos. This project started with a reconnaissance study in 2000 and is presently financed by the Municipality of East Mani. It concerns the replacement of the existing ducts and in many cases the re-alignment of the works.	The water bodies influenced from the project's construction are the groundwater body of East Taigetos – Agia Marina (GR0300220) from where more water will be abstracted (Ag. Marina springs) and the body of Vardounias r. (Platis r., GR0300200) and Skoutari (GR0300210) where the water abstraction currently made through wells will be reduced.

11 PROGRAM OF MEASURES

The Program of Measures forms a part of the River Basin Management Plan. It forms the "mechanism" of achievement of the environmental objectives set out in the Management Plan. Their division into basic and supplementary measures forms two levels of interventions: a) at a first level (basic measures) those actions stipulated by the Community legislation on environmental protection are organized, as well as the key actions laid down in Directive 2000/60/EC. The first level ensures the essential requirements for the protection of the water bodies by preventing their deterioration; b) at a second level (supplementary measures) the additional actions necessary for those water bodies whose environmental objections may not be achieved by 2015 are identified.

The program of Basic measures forms a tool for the protection of all water resources. In particular, the proposed measures are applicable to all water bodies and not only to those WBs under protection, pursuant to the WFD. In this manner, protection of the total water resources is ensured (e.g. small streams that do not meet the criteria of Directive 2000/60/EC for being characterized as WBs).

Apart from the main Community Directives the implementation of 38 other basic measures is proposed in RBD of Eastern Peloponnese. In total, in RBD 03 the implementation of 27 different supplementary measures in 54 different WB is proposed. These measures are often implemented in more than one WBs. In this case they are in fact different measures since they pertain to a different WB with different characteristics and a differentiation in their implementation is often observed. Therefore, in RBD 03, 131 supplementary measures are proposed for implementation and are assessed.

With respect to the supplementary measures a cost – efficiency analysis has been made in line with the Directive's requirements. The implementation cost of the supplementary measures amounts to €159.1 million.

Besides the Program of Measures, in the framework of preparing the Management Plans, some other actions are proposed that may be implemented in addition to supplementary measures. They pertain to various environmental actions that resulted from the consultation. They do not form the object of the management plan but they are recorded in order to facilitate the coordination of competent services and towards the direction of the general policy of environmental protection.

Table 11-1. Program of Basic Directive Measures

Κωδικός	ΟΔΗΓΙΑ
BM01	Bathing Waters (Directives 76/160/EEC, 2006/7/EC)
BM02	Protection of wild birds (Directive 79/409/EC) and Natura 2000 areas (Directives 92/43/EC -2009/147/EC)
BM03	Drinking Water (Directives 80/778/EC, 98/83/EC)
BM04	Environmental Impact of Projects / Activities (Directives 85/337/EC , 97/11/EC , 2003/35/EK, 2009/31/EC)
BM06	Prevention - Pollution Control (Directives 96/61/EC, 2008/1/EC , 2010/75/EU)
BM07	Protection from Nitrate (Directive 91/676/EC)
BM08	Pesticides (Instructions 91/414/EC, 1107/2009, 2009/128/EC)
BM09	Control of major-accident hazards involving dangerous substances - SEVESO (Instructions 96/82/EC, 2003/105/EC)
BM10	Sludge treatment plants (Directive 86/278/EC)
BM11	Urban Waste water Treatment (Directive 91/271/EC)
OM01	Directive on priority substances (2008/105/EC), as incorporated by GG 1909/8-12-2010
OM02	Directive to protect groundwater (2006/118/EC) as incorporated by KYA 39626/2208/E130/2009 (GG B' 2075) and the requirements of Article 14 of PD 51/2007
OM03	Directive 2006/11/EC on pollution caused by certain dangerous substances

Table 11-2. Program of others Basic Measures

CODE	Name of Measure
OM04-1	Customization of pricing policy in a flexible and efficient way in order to serve as primary target the environmental sustainability and avoid water wastage.
OM05-1	Implementation of Water Safety Plans in Large Municipal Water and Sewage Companies (DEYA). (RBD03: DEYA NAFPLIO, DEYA SPARTI, DEYA TRIPOLI)
OM05-2	Introduction of institutional framework and program of measures for water conservation in households.
OM05-3	Works for the rehabilitation / enhancement of existing water supply networks.
OM05-4	Actions to enhance the operation of water supply networks of large agglomerations of the RBD. Leakage control.
OM05-5	Reorganization / rationalization of the institutional framework for the operation of management authorities of collective irrigation systems.
OM05-6	Actions to enhance the operation of water supply networks of large agglomerations of the RBD. Leakage control.
OM06-1	Compilation / Update of the water supply Masterplans from Municipal Water and Sewage Companies (DEYA).
OM06-2	Protection of abstraction works for drinking water from surface water bodies.
OM06-3	Detailed delineation of protection zones for groundwater abstraction points (springs, wells) for drinking water abstractions > 1.000.000m3 per year.
OM06-4	Designation of protection zones of works for the abstraction of drinking water.
OM06-5	Prohibition of new works for the exploitation of groundwater bodies (wells, wells , etc) for new water uses and the expansion of existing water use permits : • In areas with GWB in bad quantitative status • Within areas of collective irrigation systems • Within the protection zones (I and II) of works for the abstraction of drinking water.
OM06-6	Protection of GWBs included in the register of protected areas as drinking water areas and instruction of institutional framework for their protection.
OM06-7	Investigation of conditions for implementing artificial recharge in groundwater bodies, as a mean of quantitative enhancement and qualitative protection of GWBs.
OM07-1	Installation of monitoring systems to record groundwater bodies abstractions.
OM07-2	Recording of surface water abstractions for water supply, irrigation and other uses by big consumers (abstractions over $10m^3$/day).
OM07-3	Update of the Decision F16/6631/1989 which specifies the minimum and maximum limits of necessary quantities of irrigation water.
OM07-4	Creation of a homogenous registry of licensed abstractions through the process of licensing water uses.
OM07-5	Establishment of criteria to determine limits of total abstractions for each water body.
OM07-6	Review of the regulatory framework for licensing water uses and execution of water resources exploitation works.
OM08-1	Creation of a homogenous registry of disposal area for wastewater, either through irrigation or through artificial recharge (FEK354/B/08.03.2011).
OM08-2	Compilation of technical specifications manual for the implementation of different reuse methods.
OM09-1	Promotion of planning central treatment units of agricultural and animal wastes
OM09-2	Set up of a registry of pollution sources (emissions, discharges and leaks).

CODE	Name of Measure
OM09-3	Defining terms and conditions for connection of industries to sewerage networks / reception of industrial wastes in WWTP.
OM09-4	Instruction / designation of limits for emissions at basin level for priority substances and other pollutants of KYA 51354/2641/E103/2010 as well as for physicochemist parameters in relation to quality objectives specified in river basin management plans.
OM09-5	Specification of criteria for licensing new / expansion of existing aquaculture units.
OM09-6	Specification of the process to control and designate zones for aquacultures in inland waters
OM09-7	Modernization of national legislation on the management of urban and industrial waste waters.
OM09-8	Development of a regulatory framework / guidelines for monitoring water quality in aquaculture units.
OM09-9	Instruction of an institutional framework for the licensing of tanks that transport sewage.
OM10-1	Stepwise, selective conversion of conventional to organic farming.
OM10-2	Modernization of the institutional framework for sludge management from waste water treatment plants with emphasis on expanding the scope of its applications and review the quality characteristics of the applied sludge.
OM10-3	Development of specialized tools for the rational use of fertilizers and water.
OM11-1	Training institutional framework determining the terms of protection of inland recreational waters Article 6 of Directive 2000/60/EC - Temporary setting for new projects in inland water bodies included as recreational waters in the Register of protected areas required under Article 6 of Directive 2000/60 / EC.
OM11-2	Determination of selected areas for taking materials for the needs of construction projects.
OM14-1	Design and implementation of centralized reporting and management system of pollution from accidents / natural causes.
OM14-2	Strengthening the synergy of the river basin management plans with the plans to cope with large scale technological accidents (SATAME) for facilities included in the IPPC and SEVESO Directives.

TABLE 11-3. HORIZONTAL SUPPLEMENTARY MEASURES FOR GROUNDWATER BODIES

Measure Category	Measure Code	Title	Description	Groundwater Body for implementation of the measure	Competent Authority
Pollutant emission control	ΟΣ_ΥΔ03_1	Protection rules for sinkholes	Establishment of protection zones around existing active and inactive sinkholes, in aim to control polluting pressures. Specific care must be taken for activities that lead at direct disposal of wastewater into sinkholes. The sinkholes drain closed basins and the measures for the protection and improvement of the quality of water drained may include: 1. Incentives to promote organic farming. 2. Motivation for promotion of tertiary wastewater treatment where applied. 3. Inspections to existing facilities in aim to enforce the compliance with the environmental terms. This measure addresses the pollution of karstic groundwater bodies which apart from the dissolution of pollutants have no other self-cleaning mechanism.	Body of Kandila (GR0300010) Body of East Arcadia-W. Argolida (GR0300020) Body of Tripoli Plateau (GR0300030) Body of Parnonas (GR0300100) Body of Zarakas - Monemvasia (GR0300110) Body of Asopos – Glikovrisi (GR0300150)	MEECC (SSW) / MRDF / DECENTRALIZED ADMINISTRATION
Pollutant emission control	ΟΣ_ΥΔ03_2	Special protection measures in areas of GB where geothermal hot springs are found	The special protection measures for geothermal hot springs are adjusted and combined with the existing institutional framework for their protection. Firstly the prohibitions of zone II, for the protection of groundwater abstraction points for drinking water, are applied.	-	MEECC (SSW) / MINISTRY OF TOURISM
Pollutant emission control	ΟΣ_ΥΔ03_3	Program of investigatory monitoring of the qualitative status in groundwater and surface bodies in the areas of the existing landfill	The investigation of the qualitative status of surface and groundwater in the perimeter of HYTA's area. The program will be drawn up by the Directorate for Water of the Decentralized Administration and will be implemented either by the Region or the HYTA Operators.	-	DECENTRALIZED ADMINISTRATION / REGION / HYTA OPERATORS

Measure Category	Measure Code	Title	Description	Groundwater Body for implementation of the measure	Competent Authority
Abstraction control	ΟΣ_ΥΔ03_4	Installation of a functional valve in artesian wells	Installation of a functional valve or a pipe to balance pressure or any other suitable way to control the outflow of artesian wells, during periods of time that they are not used, several times pressurized water field discharge throughout the year creating problems of quantitative sufficiency during the irrigation and drinking water abstraction period.	Body of Elos - Vasilopotamos (GR0300170)	REGION / DECENTRALIZED ADMINISTRATION
Abstraction control	ΟΣ_ΥΔ03_5	Control of the qualitative status of licensed water-abstraction projects in water bodies with high values in natural substratum (chlorides, sulfates)	Annual control of the qualitative status of groundwater in the GBs presenting increased values in the concentrations of some elements (e.g. chlorides, sulfates) attributed to the natural substratum. The annual control of the qualitative status of groundwater is made in order to ascertain the possible extension of the zone characterized by high concentrations due to natural substratum as well as the possible increase or decrease of concentrations of the element causing it. The Directorates for Water by means of assessing the information arising from the annual quality controls will be able to take the necessary measures depending on the potential deterioration or improvement of the status.	Body of East Arcadia-W. Argolida (GR0300020)Body of Mavrovouni - Didimoi (GR0300050)Body of Parnonas (GR0300100)Body of Zarakas - Monemvasia (GR0300110)Body of S.E. Lakonia (GR0300120)Body of Krokees - Githio (GR0300190)Body of Skoutari (GR0300210)	REGION / DECENTRALIZED ADMINISTRATION

Measure Category	Measure Code	Title	Description	Groundwater Body for implementation of the measure	Competent Authority
Pollutant emission control	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed	In coastal groundwater bodies with a poor quality status owed to seawater intrusion or phenomena of local seawater intrusion that derive from human pressures, prohibitive and / or restrictive measures are obtained for the construction of new projects of groundwater abstractions and the extension of environmental permits for existing water uses. Until the precise definition of principle restriction zones on the basis of the special hydrogeological studies that shall be drawn up, it is proposed to establish the following coastal zones where the drilling of new wells for new water uses is prohibited and where the licenses for existing uses will be extended: - For karstic systems: 300m, - For granules of free piezometric surface: 200m, - For granules sub-pressure: 100m, In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat.	Body of Argoliko Pedio (GR0300040)Body of Mavrovouni-Didimoi (GR0300050)Body of Trizinia (GR0300060)Body of Ermioni (GR0300070)Body of Portoheli (GR0300080)Body of Astros (GR0300090)Body of East Arcadia-W. Argolida (GR0300020)Body of Parnonas (GR0300100)Body of Zarakas - Monemvasia (GR0300110)Body of S.E. Lakonia (GR0300120)Body of Skoutari (GR0300210)Body of Neapoli (GR0300130)Body of Asopos - Glikovrisi (GR0300150)Body of Krokees - Githio (GR0300190)Body of Vardounias r. (Platis r.) (GR0300200)	MEECC (SSW) / DECENTRALIZED ADMINISTRATION

Measure Category	Measure Code	Title	Description	Groundwater Body for implementation of the measure	Competent Authority
Pollutant emission control	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion	For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irigation. The specifications for the above mentioned hydrogeological surveys are to be determined from competent authorities under the coordination of the Special Secretariat of Water.	Body of Argoliko Pedio (GR0300040)Body of Mavrovouni-Didimoi (GR0300050)Body of Trizinia (GR0300060)Body of Ermioni (GR0300070)Body of Portoheli (GR0300080)Body of Astros (GR0300090)Body of East Arcadia-W. Argolida (GR0300020)Body of Parnonas (GR0300100)Body of Zarakas - Monemvasia (GR0300110)Body of S.E. Lakonia (GR0300120) Body of Skoutari (GR0300210)Body of Neapoli (GR0300130)Body of Asopos - Glikovrisi (GR0300150)Body of Krokees - Githio (GR0300190)Body of Vardounias r. (Platis r.) (GR0300200)	DECENTRALIZED ADMINISTRATION (DIRECTORATE FOR WATER) / REGION

Table 11-4. Horizontal Supplementary Measures for Surface Water Bodies

Category of Measure	Code of Measure	Title	Description	Competent Authority
Educational measures	ΟΣ_ΥΔ03_8	Information and awareness of the public on water issues	Constant public information is proposed as well as placing emphasis on the rational management of resources and the constant information of water users and of the public on the current conditions of the water balance on the island of Lefkada and the necessity of measures that are each time set into force on said island.	MEECC (SSW) / MRDF / DECENTRALIZED ADMINISTRATION
Educational measures	ΟΣ_ΥΔ03_9	Organization of information meetings on new technologies, modern irrigation techniques, environmental protection issues, fertility of land, etc.	The Regional Agricultural and Animal Health Services should organize two information meetings every inviting as speakers, agronomists, veterinarians, professors of agricultural sciences, biologists, technical staff from agricultural supplies and machinery trading companies, soil specialists, etc. This measure aims at raising the awareness of producers and encouraging them to adopt best practices that will facilitate them in their work, improving productivity and performance of agricultural exploitations, and underlining at the same time the need of protecting the environment and conserving the fertility of rural lands and the sustainable use of natural resources.	MRDF / REGION
Recreation and restoration of wetlands areas	ΟΣ_ΥΔ03_10	Preparation of a study at a river basin level for the impact of dams on the free movement of anadromous and catadromous fish fauna species and for the identification of the best treatment methods and practices	The study shall use the literature about fish fauna, the data resulting from the monitoring program to be applied until the end of the managing period, and it shall also include any data resulting from any possibly necessary supplementary sampling and site observations in order to define the list of the fish fauna species, their ecology and movements. It is considered a significant measure because it is directly associated with the Biological Quality Elements (BQE) of the fish fauna, which -pursuant to the WFD- are an assessment tool of the ecological status of river water bodies and do not currently participate in the classification of WBs, due to insufficient scientific and technical maturity. The measure aims at investigating the impact of the discontinuity of the river WB on the populations of anadromous and catadromous fish fauna species, the contribution to the development of an assessment indicator of the ecological status of the bodies of river waters having as BQE the fish fauna and the identification of general and special measures addressing any impact.	MEECC (SSW) / DAMS OPERATORS / REGION

Category of Measure	Code of Measure	Title	Description	Competent Authority
Economic or fiscal measures	ΟΣ_ΥΔ03_11	Reform accounting systems of water providers	Configuration and application of a uniform calculation method and recording the cost of water supply by water providers, to strengthen the credibility of its estimation. Based on the available data it is indicated that (a) The way of reporting and recording cost categories is highly non-uniform and (b) there is no systematic recording costs and revenue per service (water supply and sewage with / without WWTP). Finally, the environmental and resource costs should be aggregated, with suitable methodologies. Prerequisite for this is the computerization of water supply. The configuration and application of a uniform method of recording the cost of water concerns the providers of irrigation water, in the context of which the calculation of environmental costs and the costs of the resources with suitable methodologies is essential - even to the ones served by private pumping stations. Prerequisite for the application is the elementary computerization of the providers. An annual publication of the total cost of water supply and the degree of recovery to raise awareness of the public is recommended. The disclosure is to be made in a simplified manner and provide the opportunity to the users to compare the costs.	MEECC (SSW)

Table 11-5. Supplementary Measures
Table of assessment of supplementary measures in Tripoli Plateau Basin

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0330L000000001H	TAKA ARTIF. LAKE	L	■ Unknown	Abstraction control	8.01	Reduction of water abstraction for irrigation through improvement of irrigation systems, development of crop rotation, balancing of abstractions and availability of resources Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Moderate	Moderate		Reduction of water abstraction for irrigation through improvement of irrigation systems, development of crop rotation, balancing of abstractions and availability of resources.
GR0330L000000001H	TAKA ARTIF. LAKE	L	■ Unknown	Abstraction control	8.02	On-site inspections at authorized/ licensed water abstractions Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Moderate	Negligible		Systematic organization of water abstraction inspections by the competent authorities for irrigation of rural lands from TAKA artificial lake upon completion of the construction of the irrigation networks. The quantity of abstracted water should not exceed the limit set by the respective study of the project, whereas consideration should be given to scenarios of water scarcity and drought drafted in this management study.
GR0330L000000001H	TAKA ARTIF. LAKE	L	■ Unknown	Demand management measures	9.02	Replacement of block and spray irrigation methods by drip irrigation method Competent Authority: Land Improvement Local Organization for irrigation system from Taka Art. Lake	-	Long-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Large	Negligible		Such replacement may significantly reduce the current squandering of irrigation water. Quite approximately, it may be considered that 70% of land currently irrigated by block irrigation and 80% of spray irrigated land may be drip irrigated. The benefits from the replacement of block irrigation by drip irrigation, in terms of water quantity, correspond to 40%, whereas those from the replacement of spray by drip irrigation correspond to 30%.
GR0330L000000001H	TAKA ARTIF. LAKE	L	■ Unknown	Structural construction works	11.02	New organized irrigation networks Competent Authority: MRDF	-	Long-term	Large	**23,500,000 €**	**0 €**	**23,500,000 €**	Moderate	Moderate	Moderate		The reservoir has been constructed, the irrigation networks are at an advanced stage of studies (EIA) and under accession for funding. The project of the irrigation networks has not been implemented up to present, it is, however, at a mature design stage and has been included in a financing program. The project includes works of transfer and distribution of water in the area around the reservoir. The net rural land where the irrigation networks will be developed is around 24,000 stremmas, and the total length of the irrigation network is estimated at 82 km.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300010	Body of Kandila	GW	■ Good (Local trend)	Structural construction works	11.17	Construction of appropriate drainage works Competent Authority: Region	-	Long-term	Medium	**1,500,000 €**	**0 €**	**1,500,000 €**	Moderate	Moderate	Negligible		Construction of appropriate drainage works in the flat section ensuring: a) water discharging in the sinkhole with simultaneous cleaning of the water canal to the sinkhole; b) feeding of the underground aquifer of the flat section; c) possibility of using them as an irrigation network. Appropriate drainage works should be constructed in the flat section ensuring a significant rural area on the one hand, and on the other the water drainage in the sink with simultaneous cleaning of the water canal to the sinkhole as well as the feeding of the aquifer of the flat section.
GR0300010	Body of Kandila	GW	■ Good (Local trend)	Pollutant emission controls	ΟΣ_ΥΔ03_1	Preparation of protection rules for sinkholes Competent Authority: MEECC (SSW) / MRDF / Decentralized Administration	-	Medium-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		Establishment of protection zones for the existing Vlaherna sinkhole by prohibiting pollution-creating activities and especially any activity of direct disposal of wastewater into sinkholes. The sinkholes drain closed basins and the measures for the protection and improvement of the quality of water drained may include: 1. Incentives to promote organic farming. 2. Motivation for promotion of tertiary wastewater treatment where applied. 3. Inspections to existing facilities in aim to enforce the compliance with the environmental terms. This measure addresses the pollution of karstic groundwater bodies which apart from the dissolution of pollutants have no other self-cleaning mechanism.
GR0300030	Body of Tripoli Plateau	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_1	Preparation of protection rules for sinkholes Competent Authority: MEECC (SSW) / MRDF / Decentralized Administration	Exemption	Medium-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Negligible	Negligible		Establishment of protection zones for existing sinkholes that contribute to the surface drainage of the body of Tripoli Plateau (Nestani, Milia, Neochori, etc.) by prohibiting pollution-creating activities and especially any activity of direct disposal of wastewater into sinkholes. The sinkholes drain closed basins and the measures for the protection and improvement of the quality of water drained may include: 1. Incentives to promote organic farming. 2. Motivation for promotion of tertiary wastewater treatment where applied. 3. Inspections to existing facilities in aim to enforce the compliance with the environmental terms. This measure addresses the pollution of karstic groundwater bodies which apart from the dissolution of pollutants have no other self-cleaning mechanism for the protection of the karstic GB of East Arcadia - W. Argolida

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300030	Body of Tripoli Plateau	GW	■ Bad	Abstraction control	8.03	Reduction or replacement of groundwater abstraction with abstraction from a surface WB or from another groundwater body or artificial body (conservation reservoir, dam) Competent Authority: Region / Decentralized Administration (Direct. for Water)	Exemption	Medium-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		Reduction of water abstraction with supplementary coverage of the water supply needs from wells in Sagka area. The exploitation of the wells in Sagka area will serve a part of the water supply needs of the area of Tripoli. Part of the water supply is currently covered by wells of the body of Tripoli Plateau which is in bad qualitative status.

Table of assessment of supplementary measures in the Stream Basin of Argolikos Gulf

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0331R000700001A	MARIORREMA STR.	R	■ Unknown	Recreation and restoration of wetlands areas	7.03	Enhancement of monitoring facilities for biotic and abiotic parameters of river estuary, in view of identifying the ecological flow at the river estuary based on biotic and abiotic indicators of the transitional WB Competent Authority: Region	-	Medium-term	Medium	**15,000 €**	**0 €**	**15,000 €**	Negligible	Negligible	Negligible		Identification of the ecological flow at the estuary of Mariorema stream on the basis of biotic and abiotic indicators of the transitional WB of Vivario Lagoon (EVROTAS DELTA). The identification of ecological flow consists in defining minimum flow, which would ensure the smooth function of the ecosystem as this is expressed by biotic and abiotic parameters.
GR0331R000700001A	MARIORREMA STR.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		A study is proposed in order to investigate the feasibility and possibility of connecting the WWTP of Skala - Vlachioti (required to be constructed) and the sewage network with the settlements located at the basins of certain water bodies, e.g. Elos, Mirtea, Asterion, Agios Andreas, etc.
GR0331R000700002H	MARIORREMA STR.	R	■ Unknown	Recreation and restoration of wetlands areas	7.03	Enhancement of monitoring facilities for biotic and abiotic parameters of river estuary, in view of identifying the ecological flow at the river estuary based on biotic and abiotic indicators of the transitional WB Competent Authority: Region	-	Medium-term	Medium	**15,000 €**	**0 €**	**15,000 €**	Negligible	Negligible	Negligible		Identification of the ecological flow at the estuary of Mariorema stream on the basis of biotic and abiotic indicators of the transitional WB of Vivario Lagoon (EVROTAS DELTA). The identification of ecological flow consists in defining minimum flow, which would ensure the smooth function of the ecosystem as this is expressed by biotic and abiotic parameters.
GR0331R000700002H	MARIORREMA STR.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		A study is proposed in order to investigate the feasibility and possibility of connecting the WWTP of Skala - Vlachioti (required to be constructed) and the sewage network with the settlements located at the basins of certain water bodies, e.g. Elos, Mirtea, Asterion, Agios Andreas, etc.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0331R000700004N	MARIORREMA STR.	R	■ Unknown	Legislative Measures	1.11	Penalties for illegal sand-extraction Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0331R000700004N	MARIORREMA STR.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomeration) Competent Authority: Region	-	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		A study is proposed in order to investigate the feasibility and possibility of connecting the WWTP of Skala - Vlachioti (required to be constructed) and the sewage network with the settlements located at the basins of certain water bodies, e.g. Elos, Mirtea, Asterion, Agios Andreas, etc.
GR0331R000201019H	INAHOS R.	R	■ Moderate	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority : Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (textile industries, production of jams, jellies, puree from fruits or fruits with shell, production of juices from fruit and vegetables, production of soups and other nutrition products-extracts and broths of meat, fish and aquatic invertebrates) are assessed to be of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0331R000203023H	INAHOS R.	R	■ Moderate	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority : Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (production of jams, jellies, puree, pulps from fruits or fruits with shell) are assessed to be of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0331R000205027H	INAHOS R.	R	■ Moderate	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority : Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (production of fruit and vegetable juices) are assessed to be of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0331R000205028N	INAHOS R.	R	Moderate	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority : Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (production of jams, jellies, puree, pulps from fruits or fruits with shell) are assessed to be of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0331R000202020H	XERIAS R.	R	Unknown	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority : Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (liquid milk and cream processing, construction of bricks, tiles and building products from terra-cotta and clay) are assessed to be of moderate intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0331R000202021N	XERIAS R.	R	Unknown	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority : Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (production of jams, jellies, puree, pulps from fruits or fruits with shell, production of cookies and rusks, production of preserved confectionary items) are assessed to be of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0331R000202022N	XERIAS R.	R	Unknown	Legislative Measures	1.11	Penalties for illegal sand-extraction Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0331R000204024H	DERVENI STR.	R	Unknown	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority : Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (production of fruit and vegetable juices and concrete production) are assessed to be of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0331T0004N	VIVARI LAGOON (EVROTAS DELTA)	T	■ Unknown	Works of research, development & presentation (of best practices)	16.01	Enhancement of infrastructures monitoring the biotic and abiotic parameters of lagoons Competent Authority : Region	-	Medium-term	Medium	**10,000 €**	**0 €**	**10,000 €**	Negligible	Negligible	Negligible		A study is proposed, the scope of which would be the monitoring of abiotic and biotic parameters of the lagoon along with utilization of previous monitoring programs implemented in the area. The aim is to understand the function of the lagoon and to draft specific measures.
GR0331T0004N	VIVARI LAGOON (EVROTAS DELTA)	T	■ Unknown	Works of research, development & presentation (of best practices)	16.02	Enhancement of infrastructures monitoring waters, inflow of fresh water as well as the movement and behavior of streams Competent Authority: Region	-	Medium-term	Medium	**10,000 €**	**0 €**	**10,000 €**	Negligible	Negligible	Negligible		A study is proposed, the scope of which would be to monitor the water flow to the lagoon and in particular the inflow of freshwater and the behavior of streams. The aim is to understand the function of the lagoon and to draft specific measures.
GR0331T0005N	MOUSTOU WETLAND	T	■ Unknown	Environmental agreements after negotiation	4.01	Elaboration of study examining the possibility and success rate of concluding environmental agreements between State authorities (MEECC) and land owners. Competent Authority: MEECC	-	Short-term	Medium	**50,000 €**	**0 €**	**50,000 €**	Moderate	Negligible	Large		From the results of the above study, the following might arise: 1) “Moustos Wetland” agreements with nearby land owners 2) Agreement with farmers on the application of extensive measures in conjunction with economic incentives for them.
GR0331T0005N	MOUSTOU WETLAND	T	■ Unknown	Existing infrastructure rehabilitation works	13.08	Upgrade, modernization and cleaning of the irrigation network and systems and abolition of the open channels to prevent the transfer of pesticides and fertilizers to the wetland Competent Authorities: Region of Peloponnese – Managing Authority of Parnonas mountain and Moustou wetland	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Negligible	Negligible		Upgrade, modernization and cleaning of the irrigation network and systems and abolition of the open channels to prevent the transfer of pesticides and fertilizers to the wetland
GR0331T0005N	MOUSTOU WETLAND	T	■ Unknown	Works of research, development & presentation (of best practices)	16.01	Enhancement of infrastructures monitoring the biotic and abiotic parameters of Moustou Wetland Competent Authority : Region	-	Medium-term	Medium	**10,000 €**	**0 €**	**10,000 €**	Negligible	Negligible	Negligible		A study is proposed, the scope of which would be the monitoring of abiotic and biotic parameters of the lagoon along with utilization of previous monitoring programs implemented in the area. The aim is to understand the function of the lagoon and to draft specific measures.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0331T0005N	MOUSTOU WETLAND	T	■ Unknown	Works of research, development & presentation (of best practices)	16.02	Enhancement of infrastructures monitoring waters, inflow of fresh water as well as the movement and behavior of streams Competent Authority: Region	-	Medium-term	Medium	**10,000 €**	**0 €**	**10,000 €**	Negligible	Negligible	Negligible		A study is proposed, the scope of which would be to monitor the water flow to the lagoon and in particular the inflow of freshwater and the behavior of streams. The aim is to understand the function of the lagoon and to draft specific measures.
GR0331C0001N	ARGOLIKOS GULF	C	■ Moderate	Other relevant measures	18.20	Correlation with the measures of the surface WBs with estuaries in the Argolikos Gulf (Competent Authorities: S. respective measures of the surface WBs)	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Negligible	Moderate		Correlation with the measures of the surface WBs with estuaries in Argolikos Gulf
GR0331R000204025N	DERVENI STR.	R	■ Unknown	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority : Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (oil production and uncontrolled waste dumping sites) are assessed to be of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Pollutant emission controls	ΟΣ_ΥΔ03_1	Protection rules for sinkholes. Competent Authority: MEECC (SSW) / MRDF / Decentralized Administration	-	Medium-term	Large	**0 €**	**0 €**	**0 €**	Negligible	Moderate	Moderate		Establishment of protection zones for the existing sinkholes of the body of East Arcadia - W. Argolida (Levidi, Taka, Kapsia, Nestani, Milia, Neochori, etc.) by prohibiting pollution-creating activities and especially any activity of direct disposal of wastewater into sinkholes. The sinkholes drain closed basins and the measures for the protection and improvement of the quality of water drained may include: 1. Incentives to promote organic farming. 2. Motivation for promotion of tertiary wastewater treatment where applied. 3. Inspections to existing facilities in aim to enforce the compliance with the environmental terms. This measure addresses the pollution of karstic groundwater bodies which apart from the dissolution of pollutants have no other self-cleaning mechanism for the protection of the karstic GB of East Arcadia - W. Argolida
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Pollutant emission controls	5.14	Bundle of measures of Argolikos Gulf's springs. Removal of the cemetery located upstream Lerni spring Competent Authority: Region	-	Long-term	Large	**200,000 €**	**0 €**	**200,000 €**	Negligible	Large	Negligible		The cemetery's presence upstream Lerni springs, used for water supply purposes, contributes to the pollution of groundwater. It is necessary to protect the area upstream the springs by means of removing the cemetery.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Abstraction control	8.09	Bundle of measures of Argolikos Gulf's springs. Investigation of the possibility of drilling wells in areas of the body in line with the "Hydrogeological Feasibility Study for Water Supply of the Prefecture of Argolida from Groundwater" IGME-TEDK of Argolida 2008 Competent Authority: Regional Association of Municipalities of Peloponnese / Decentralized Administration (Direct. for Water)	-	Long-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Negligible		The Hydrogeological Feasibility Study for Water Supply of the Prefecture of Argolida from Groundwater (IGME-TEDK of Argolida) proposes the areas where the possibility of drilling wells should be investigated.
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Abstraction control	8.10	Bundle of measures of Argolikos Gulf's springs. Organization and implementation of systematic monitoring of the discharges of springs (Anavalos in Kiverio, Kefalari, Lerni, Kroi) and of all abstractions (wells, pumping stations, canals) Competent Authority: Decentralized Administration (Direct. for Water)	-	Medium-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Moderate	Moderate		Aiming at the more rational management of the significant groundwater potential of the springs (Anavalos in Kiverio, Kefalari, Lerni, Kroi) systematic monitoring of the discharges of springs and of all abstractions (wells, pumping stations, canals) is required.
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Abstraction control	8.03	Bundle of measures of Argolikos Gulf's springs. Reduction or replacement of groundwater abstraction with abstraction from a surface WB or from another groundwater body or artificial body (conservation reservoir, dam) Competent Authority: Region / Decentralized Administration (Direct. for Water)	-	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		It is proposed to look into the possibility of irrigating the lands in the area of Lerni from Anavalos springs (lower quality) and disposing the water from Lerni spring (good water quality) for water supply purposes.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Structural construction works	11.19	Bundle of measures of Argolikos Gulf's springs. The pumping systems dispersed around Lerni spring could be transferred to the adjacent building of the pumping station of Kefalari Land Improvement Local Organization Competent Authority: Kefalari Land Improvement Local Organization	-	Medium-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Moderate	Negligible		For the protection of water abstraction works, a transfer of the systems in the building of Kefalari Land Improvement Local Organization is proposed.
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Existing infrastructure rehabilitation works	13.09	Bundle of measures of Argolikos Gulf's springs. Completion of maintenance works/ projects for Anavalos dam Competent Authority: MRDF	-	Long-term	Medium	**6,850,000 €**	**0 €**	**6,850,000 €**	Negligible	Negligible	Negligible	RURAL DEVELOPMENT PROGRAM OF GREECE 2007-2013	The works concern the installation of pumps, new transformer, level automation system and installation of three gates and mechanisms, new hydraulic part, repairs of structural elements of the dam. The Rural Development Program 2007-2013 includes the action "Upgrade of pumping station & dam of Anavalos, Prefecture of Argolida", with a budget of 6,850,000€.
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Other relevant measures	18.17	Bundle of measures of Argolikos Gulf's springs. Elaboration of an update study of the existing works and studies of the irrigation and water supply needs associated with Anavalos, Lerni and Kefalovriso springs. Competent Authority: Region	-	Long-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Negligible	Negligible	Negligible		The existing irrigation and water supply works were originally designed in the "Final Studies of Land Improvement Works in the Area of Argoliko Pedio, Ministry of Public Works, 1981". An update of the existing works and studies of the irrigation and water supply needs associated with the springs of Anavalos, Lerni and Kefalovriso is required.
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Abstraction control	ΟΣ_ΥΔ03_5	Control of the qualitative status of licensed water-abstraction projects in water bodies with high values of the natural substratum (chlorides, sulfates) Competent Authority: Region / Decentralized Administration	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		Annual control of the qualitative status of groundwater in the GBs presenting increased values in the concentrations of some elements (e.g. chlorides, sulfates) attributed to the natural substratum. The annual control of the qualitative status of groundwater is made in order to ascertain the possible extension of the zone characterized by high concentrations due to natural substratum as well as the possible increase or decrease of concentrations of the element causing it. The Directorates for Water by means of assessing the information arising from the annual quality controls will be able to take the necessary measures depending on the potential deterioration or improvement of the status.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Pollutant emission controls	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed Competent Authority: MEECC (SWS) / Decentralized Administration	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		In coastal GWBs that are in bad qualitative status due to seawater intrusion caused by human pressures (over-pumping) restrictive measures are taken for drilling new boreholes and wells for new water uses and the expansion of existing water abstractions. Until the precise delineation of the restriction zones as result of specific hydrogeological studies which should be compiled, drilling of new boreholes for new water uses and extensions of abstraction of groundwater for existing water uses is restricted in the following zones: For karstic systems: 300m, for granular free piezometric surface systems: 200m, for granular under pressure piezometric surface systems: 100m. In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates because. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat.
GR0300020	Body of East Arcadia - W. Argolida	GW	■ Good (Local trend)	Pollutant emission controls	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion Competent Authority: Decentralized Administration (Direct. for Water) / Region	-	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irrigation.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300040	Body of Argoliko Pedio	GW	■ Bad	Abstraction control	8.03	Bundle of measures of Argolikos Gulf's springs. Reduction or replacement of groundwater abstraction with abstraction from a surface WB or from another groundwater body or artificial body (conservation reservoir, dam) Competent Authority : Region/ Decentralized Administration (Direct. for Water)	Exemption	Medium-term	Medium	**23,500,000 €**	**0 €**	**23,500,000 €**	Large	Moderate	Negligible	RURAL DEVELOPMENT PROGRAM OF GREECE 2007-2013	Replacement of groundwater abstraction with water from the springs of the water body of East Arcadia - W. Argolida. Reduction of the abstraction of groundwater from the water body of Argoliko Pedio and replacing it with spring water from the water body of East Arcadia - W. Argolida: - Completion of the irrigation networks from Anavalos springs. The project "Transfer and distribution of irrigation water from Anavalos networks to Koutsopodi, Mikines, Monastiraki, Fihtio, Honikas, Aerodromio, Elliniko and Municipality of Mideas of Argolida" is under construction. The act is included in the Rural Development Program 2007-2013, with a budget of € 17,500,000. - Water supply works in Argolida from Anavalos springs. Nafplio Municipal and Sewage Company submitted in 2011 an application for the funding of O.P. "ENVIRONMENT AND SUSTAINABLE DEVELOPMENT" 2007-2013 in the Priority Axis "WATER RESOURCES PROTECTION AND MANAGEMENT" for the "Water Supply of the Prefecture of Argolida (Refinery/ Purification Facilities – Distribution Networks)", of public expenditure of € 6,000,000.
GR0300040	Body of Argoliko Pedio	GW	■ Bad	Artificial recharge of aquifers	14.03	Bundle of measures of Argolikos Gulf's springs. Implementation of artificial recharge program Competent Authority: Region / MRDF	Exemption	Short-term	Large	**0 €**	**120,000 €**	**120,000 €**	Moderate	Moderate	Negligible		Continuation of implementation of artificial recharge program in Argoliko Pedio and Asini - Drepano. Encouragement of farmers to further participate in the program. The implementation cost concerns the artificial recharge per year (40,000€/year).

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300040	Body of Argoliko Pedio	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed Competent Authority: MEECC (SWS) / Decentralized Administration	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		In coastal GWBs that are in bad qualitative status due to seawater intrusion caused by human pressures (over-pumping) restrictive measures are taken for drilling new boreholes and wells for new water uses and the expansion of existing water abstractions. Until the precise delineation of the restriction zones as result of specific hydrogeological studies which should be compiled, drilling of new boreholes for new water uses and extensions of abstraction of groundwater for existing water uses is restricted in the following zones: For granular free piezometric surface systems: 200m, for granular under pressure piezometric surface systems: 100m. In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates because. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat
GR0300040	Body of Argoliko Pedio	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion Competent Authority: Decentralized Administration (Direct. for Water) / Region	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irrigation.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300050	Body of Mavrovouni - Didimoi	GW	■ Bad	Abstraction control	8.03	Bundle of measures of Argolikos Gulf's springs. Reduction or replacement of groundwater abstraction with abstraction from a surface WB or from another groundwater body or technical project (conservation reservoir, dam) Competent Authority : Region / Decentralized Administration (Direct. for Water)	Exemption	Medium-term	Large	**9,000,000 €**	**0 €**	**9,000,000 €**	Large	Moderate	Negligible	RURAL DEVELOPMENT PROGRAM OF GREECE 2007-2013	Replacement of groundwater abstraction with the implementation of the project "Works of transfer and distribution of irrigation water from the networks of Anavalos to the Municipalities of Asklipeio and Epidaurus of the Prefecture of Argolida". Upon implementation of the project, the abstraction from the Body of Mavrovouni-Didimoi will be reduced and the body's further deterioration will be prevented. The act "Works of transfer and distribution of irrigation water from the networks of Anavalos to the Municipalities of Asklipeio and Epidaurus of the Prefecture of Argolida" is encompassed in the Rural Development Program 2007-2013, of a budget of € 9,000,000. The project concerns the irrigation of a gross surface of around 27,000 stremmas. It includes the construction of irrigation networks in the areas of Agios Dimitrios, Arkadiko, Ligourio, Dimena, Old and New Epidaurus in the Municipal Unities of Asklipeio and Epidaurus. The network's supply will be 2,500 m^3/hour. Ducts of a total length of 32 km approximately, 3 pumping stations and three reservoirs of capacity of 15,000 m^3 will be constructed.
GR0300050	Body of Mavrovouni - Didimoi	GW	■ Bad	Abstraction control	8.09	Bundle of measures of Argolikos Gulf's springs. Investigation of the possibility of drilling wells in the water body in line with the "Hydrogeological Feasibility Study for Water Supply of the Prefecture of Argolida from Groundwater" IGME-TEDK of Argolida 2008 Competent Authority: Regional Association of Municipalities of Peloponnese/Decentralized Administration (Direct. for Water)	Exemption	Long-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Negligible		The Hydrogeological Feasibility Study for the Water Supply of the Prefecture of Argolida from Groundwater (IGME-TEDK of Argolida) lists the areas where the possibility of drilling wells should be investigated.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300050	Body of Mavrovouni - Didimoi	GW	■ Bad	Abstraction control	ΟΣ_ΥΔ03_5	Control of the qualitative status of licensed water-abstraction projects in water bodies with high values in the natural substratum (chlorides, sulfates). Competent Authority: Region / Decentralized Administration	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		Annual control of the qualitative status of groundwater in the GBs presenting increased values in the concentrations of some elements (e.g. chlorides, sulfates) attributed to the natural substratum. The annual control of the qualitative status of groundwater is made in order to ascertain the possible extension of the zone characterized by high concentrations due to natural substratum as well as the possible increase or decrease of concentrations of the element causing it. The Directorates for Water by means of assessing the information arising from the annual quality controls will be able to take the necessary measures depending on the potential deterioration or improvement of the status.
GR0300050	Body of Mavrovouni - Didimoi	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed Competent Authority: MEECC (SWS) / Decentralized Administration	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		In coastal GWBs that are in bad qualitative status due to seawater intrusion caused by human pressures (over-pumping) restrictive measures are taken for drilling new boreholes and wells for new water uses and the expansion of existing water abstractions. Until the precise delineation of the restriction zones as result of specific hydrogeological studies which should be compiled, drilling of new boreholes for new water uses and extensions of abstraction of groundwater for existing water uses is restricted in the following zones: For karstic systems: 300m, for granular free piezometric surface systems: 200m, for granular under pressure piezometric surface systems: 100m. In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates because. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300050	Body of Mavrovouni - Didimoi	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion Competent Authority: Decentralized Administration (Direct. for Water) / Region	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irrigation.
GR0300060	Body of Trizinia	GW	■ Bad	Abstraction control	8.03	Investigation of the possibility of replacing groundwater abstraction with abstraction from a surface WB with the construction of conservation reservoirs or dams Competent Authority: Region / Decentralized Administration (Direct. for Water)	Exemption	Medium-term	Medium	**1,500,000 €**	**0 €**	**1,500,000 €**	Negligible	Negligible	Moderate	Completion of C/R project by the Region of Attica	The GB is in bad status. Groundwater abstraction should be replaced with surface water abstraction from projects, i.e. Karatzas conservation reservoir under construction. In this way, the GB's status will be improved. The project of Karatzas conservation reservoir under construction aims at exploiting the surface water potential of the area so that it fully serves the water supply and irrigation needs of the area.
GR0300060	Body of Trizinia	GW	■ Bad	Artificial recharge of aquifers	14.03	Implementation of artificial recharge program Competent Authority: MRDF	Exemption	Long-term	Medium	**50,000 €**	**0 €**	**50,000 €**	Moderate	Moderate	Negligible		Implementation of artificial recharge program (Hydrogeological study on artificial recharge of underground aquifers of Trizinia, Dep. of Piraeus, MRDF – K. Bezes, 1999). The scope includes the study of artificial recharge works of the GB of Trizinia through surface flooding – filtration from runoffs of Diavologefyro and Koumoundouros streams

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300060	Body of Trizinia	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed Competent Authority: MEECC (SWS) / Decentralized Administration	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		In coastal GWBs that are in bad qualitative status due to seawater intrusion caused by human pressures (over-pumping) restrictive measures are taken for drilling new boreholes and wells for new water uses and the expansion of existing water abstractions. Until the precise delineation of the restriction zones as result of specific hydrogeological studies which should be compiled, drilling of new boreholes for new water uses and extensions of abstraction of groundwater for existing water uses is restricted in the following zones: For granular free piezometric surface systems: 200m. In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates because. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat
GR0300060	Body of Trizinia	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion Competent Authority: Decentralized Administration (Direct. for Water) / Region	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irrigation.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300070	Body of Ermioni	GW	■ Bad	Abstraction control	8.03	Bundle of measures for Anavalos. Reduction or replacement of groundwater abstraction with abstraction from a surface WB or from another groundwater body or artificial body (conservation reservoir, dam) Competent Authority: Region / Decentralized Administration (Direct. for Water)	Exemption	Medium-term	Large	**12,000,000 €**	**0 €**	**12,000,000 €**	Large	Moderate	Negligible	RURAL DEVELOPMENT PROGRAM OF GREECE 2007-2013	Transfer and distribution works of irrigation water from the networks of Anavalos to the Municipality of Ermionida. The cost relates to the expenditure of the study "Works of transfer and distribution of irrigation water from the networks of Anavalos to the Municipality of Ermionida". By means of this project the abstraction of water from the WB's zone is replaced, with the aim to improve its qualitative and quantitative status.
GR0300070	Body of Ermioni	GW	■ Bad	Other relevant measures	8.03	Reduction or replacement of groundwater abstraction with abstraction from a surface WB or from another groundwater body or artificial body (conservation reservoir, dam) Competent Authority: Region / Decentralized Administration (Direct. for Water)	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Negligible	Negligible	Moderate		Completion of the study for replacement of the abstraction of groundwater with surface water with the construction of a conservation reservoir or dams. The GB is in good status but it presents trends of level drop and increase of pollutants. Investigation is suggested for the replacement of groundwater abstraction with surface water from projects, i.e. conservation reservoirs or dams (e.g. dam of Roros, Tzertzelia which is at the phase of preliminary study). As a consequence, deterioration of the GB's quantitative status will be prevented.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300070	Body of Ermioni	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed Competent Authority: MEECC (SWS) / Decentralized Administration	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		In coastal GWBs that are in bad qualitative status due to seawater intrusion caused by human pressures (over-pumping) restrictive measures are taken for drilling new boreholes and wells for new water uses and the expansion of existing water abstractions. Until the precise delineation of the restriction zones as result of specific hydrogeological studies which should be compiled, drilling of new boreholes for new water uses and extensions of abstraction of groundwater for existing water uses is restricted in the following zones: For karstic systems: 300m, for granular free piezometric surface systems: 200m, for granular under pressure piezometric surface systems: 100m. In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates because. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat.
GR0300070	Body of Ermioni	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion Competent Authority: Decentralized Administration (Direct. for Water) / Region	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irrigation.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300080	Body of Portoheli	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed Competent Authority: MEECC (SWS) / Decentralized Administration	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		In coastal GWBs that are in bad qualitative status due to seawater intrusion caused by human pressures (over-pumping) restrictive measures are taken for drilling new boreholes and wells for new water uses and the expansion of existing water abstractions. Until the precise delineation of the restriction zones as result of specific hydrogeological studies which should be compiled, drilling of new boreholes for new water uses and extensions of abstraction of groundwater for existing water uses is restricted in the following zones: For granular free piezometric surface systems: 200m, for granular under pressure piezometric surface systems: 100m. In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates because. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat
GR0300080	Body of Portoheli	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion Competent Authority: Decentralized Administration (Direct. for Water) / Region	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irrigation.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300090	Body of Astros	GW	■ Bad	Abstraction control	8.03	Reduction or replacement of groundwater abstraction with abstraction from a surface WB or from another groundwater body or artificial body (conservation reservoir, dam) Competent Authority : Region / Decentralized Administration (Direct. for Water)	Exemption	Medium-term	Medium	**28.500.000 €**	**0 €**	**28.500.000 €**	Negligible	Negligible	Moderate		Investigation of the possibility of replacing groundwater with surface water abstraction through construction of conservation reservoirs or dams The GB is of bad status but it presents trends of level drop and increase of pollutants. Investigation is suggested for the replacement of the abstraction of groundwater with surface water from projects, i.e. conservation reservoirs or dams (e.g. dam of Tanos). In this manner deterioration of the GB's quantitative status will be prevented. The dam in Tanos river has a capacity of 4.2 mil. m^3. The reservoir's waters will be transferred via a duct to the plain of Astros, where the collective irrigation networks will be developed. The EIS of Tanos dam is currently under approval.
GR0300090	Body of Astros	GW	■ Bad	Artificial recharge of aquifers	14.01	Bundle of measures of Argolikos Gulf's springs. Artificial recharge of aquifers through transfer of water Competent Authority: MRDF	Exemption	Short-term	Medium	**30.000 €**	**0 €**	**30.000 €**	Negligible	Negligible	Negligible		Assessment – elaboration of study for the implementation of artificial recharge with water transfer from Anavalos. Examination of possibility to transfer water from Anavalos and implement artificial recharge at the GB in view of improving its quantitative and qualitative status.
GR0300090	Body of Astros	GW	■ Bad	Other relevant measures	18.18	Bundle of measures of Argolikos Gulf's springs. Update of an old proposal (Final Studies of Land Improvement Works in the area of Argoliko Pedio, YPDE, 1981) for satisfaction of the irrigation needs of Astros Kinouria, by transferring water from Anavalos Competent Authority: MRDF	Exemption	Long-term	Medium	**50.000 €**	**0 €**	**50.000 €**	Negligible	Negligible	Negligible		Investigation of the possibility of transferring water from Anavalos for satisfaction of the irrigation needs of Astros in Kinouria, as it was initially proposed in the studies of Land Improvement Works of the Area of Argoliko Pedio.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300090	Body of Astros	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed Competent Authority: MEECC (SWS) / Decentralized Administration	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		In coastal GWBs that are in bad qualitative status due to seawater intrusion caused by human pressures (over-pumping) restrictive measures are taken for drilling new boreholes and wells for new water uses and the expansion of existing water abstractions. Until the precise delineation of the restriction zones as result of specific hydrogeological studies which should be compiled, drilling of new boreholes for new water uses and extensions of abstraction of groundwater for existing water uses is restricted in the following zones: For granular free piezometric surface systems: 200m, for granular under pressure piezometric surface systems: 100m. In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates because. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat
GR0300090	Body of Astros	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion Competent Authority: Decentralized Administration (Direct. for Water) / Region	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irrigation.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300150	Body of Asopos - Glikovrisi	GW	■ Bad	Artificial recharge of aquifers	14.03	Implementation of artificial recharge program Competent Authority: Region	Exemption	Long-term	Medium	**46,400,000 €**	**0 €**	**46,400,000 €**	Negligible	Negligible	Negligible	RURAL DEVELOPMENT PROGRAM OF GREECE 2007-2013	Implementation of artificial recharge based on the study "Water transfer duct from Evrotas and Vasilopotamos springs to address seawater intrusion in areas of the M. of Elos and extension to valleys of Molai and Asopos of Lakonia. Hydrogeological study – Suggestions on artificial recharge" (Region of Peloponnese). The implementation of artificial recharge will enable gradual rehabilitation of the GB due to reduction of pumping and enhancement of its supply.

Table of assessment of supplementary measures in Evrotas River Basin

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000300001N	PLATIS R.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**4,000 €**	**0 €**	**4,000 €**	Negligible	Negligible	Negligible		Investigation of the feasibility and possibility of expanding the construction of a sewage network in the settlements of Plati river basin and their connection with Githio WWTP. A study is proposed to investigate the feasibility and possibility of connecting Githio WWTP (under tendering) and the sewage network with the settlements located at the basins of certain water bodies of Plati river.
GR0333R000300002N	PLATIS R.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**4,000 €**	**0 €**	**4,000 €**	Negligible	Negligible	Negligible		A study is proposed to investigate the feasibility and possibility of connecting Githio WWTP (under tendering) and the sewage network with the settlements located at the basins of certain water bodies of Plati river.
GR0333R000300003N	PLATIS R.	R	■ Unknown	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000300003N	PLATIS R.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**4,000 €**	**0 €**	**4,000 €**	Negligible	Negligible	Negligible		A study is proposed to investigate the feasibility and possibility of connecting Githio WWTP (under tendering) and the sewage network with the settlements located at the basins of certain water bodies of Plati river.
GR0333R000300004N	PLATIS R.	R	■ Unknown	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000300004N	PLATIS R.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**4,000 €**	**0 €**	**4,000 €**	Negligible	Negligible	Negligible		A study is proposed to investigate the feasibility and possibility of connecting Githio WWTP (under tendering) and the sewage network with the settlements located at the basins of certain water bodies of Plati river.
GR0333R000300005N	PLATIS R.	R	■ Unknown	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000300005N	PLATIS R.	R	■ Unknown	Structural construction works	11.03	Inspection of keeping the ecological flow downstream the water abstraction location of dam as per article 16(3e) of the Special Framework of Planning and Sustainable Development for Renewable Energy Sources (SFPSD-RES) Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Negligible	Negligible		The WB is of unknown ecological status whilst in its basin a Small Hydropower Plant (MYHE) is operated by HYDROBAT POWER GENERATION S.A. It is proposed to check the environmental terms of the MYHE, pursuant to article 16 of SFPSD-RES. The identification and preservation of the required ecological flow ensures the unhindered function of the ecosystem of the river and contributes to the upgrade of the WB's ecological status. In accordance with the SFPSD-RES, the minimum required ecological water flow remaining at the natural bed of the water stream, directly downstream to the water abstraction project of the Small Hydropower Plant, must be considered to be the largest of the rates given below, unless a requirement of its increase is substantiated and justified by the requirements of the downstream ecosystem (existence of important ecosystem): - 30% of average flow during summer months June-July-August or - 50% of average flow of September or - 30 lt/sec in any case.
GR0333R000300005N	PLATIS R.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**4,000 €**	**0 €**	**4,000 €**	Negligible	Negligible	Negligible		A study is proposed to investigate the feasibility and possibility of connecting Githio WWTP (under tendering) and the sewage network with the settlements located at the basins of certain water bodies of Plati river.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000201006H	EVROTAS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000201006H	EVROTAS R.	R	Moderate	Recreation and restoration of wetlands areas	7.03	Enhancement of monitoring facilities/ infrastructure for biotic and abiotic parameters of river estuary, in view of identifying the ecological flow at the river estuary based on biotic and abiotic indicators of the transitional WB Competent Authority: Region	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Negligible	Negligible	Negligible		The estuary of the river WB is a significant wetland ecosystem, the protection of which requires knowledge of all biotic and abiotic parameters enabling the comprehension of their function. A study should be carried out, the scope of which would be the observation/ monitoring of abiotic and biotic parameters of the transitional body and the utilization of previous monitoring programs implemented in the area.
GR0333R000201006H	EVROTAS R.	R	Moderate	Works of research, development & presentation (of best practices)	16.02	Enhancement of infrastructures monitoring waters, inflow of fresh water as well as the movement and behavior of streams Competent Authority: Region	Exemption	Medium-term	Medium	**10,000 €**	**0 €**	**10,000 €**	Negligible	Negligible	Negligible		A study should be carried out, the scope of which would be to monitor the flow of water to the wetlands of Evrotas estuaries and in particular the inflow of freshwater as well as the behavior of streams. The aim is to understand the function of the lagoon and to draft specific measures.
GR0333R000201007N	EVROTAS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000201008N	EVROTAS R.	R	Poor	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomeration) Competent Authority: Region	Exemption	Short-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		Application of SWS guidelines as regards proper wastewater management practice for agglomerations with <2000 PE. The feasibility and possibility of constructing a sewage network in the agglomerations of the river basin of the downwards flow of Evrotas river and their connection with Skala – Vlachioti WWTP should be investigated.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000201009N	EVROTAS R.	R	Poor	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000201009N	EVROTAS R.	R	Poor	Abstraction control	8.02	On-site inspections at authorized/ licensed water abstractions Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Moderate	Negligible		On-site inspections from a licensed water abstraction at Vrodamas dam. Systematic organization of water abstraction inspections by the competent authorities for irrigation of rural lands from Vrodamas dam. The quantity of abstracted water should not exceed the limit set by the respective study of the project, whereas consideration should be given to scenarios of water scarcity and drought drafted in this management study.
GR0333R000201009N	EVROTAS R.	R	Poor	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	Exemption	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Hg – Fe recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000201010N	EVROTAS R.	R	Poor	Structural construction works	11.15	Rational waste-water management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	Exemption	Short-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		Application of SWS guidelines as regards proper wastewater management practice for agglomerations with <2000 PE. The feasibility and possibility of constructing a sewage network in the agglomerations of the river basin of the downwards flow of Evrotas river and their connection with Skala – Vlachioti WWTP should be investigated.
GR0333R000202011N	RASINA STR.	R	Poor	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000202011N	RASINA STR.	R	Poor	Other relevant measures	18.19	Further investigation as regards the measurements and the causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	Exemption	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Ni-Pb and Hg – Fe recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000202014N	RASINA STR.	R	Poor	Legislative Measures	1.11	Penalties for illegal sand-extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000202014N	RASINA STR.	R	Poor	Other relevant measures	18.19	Further investigation as regards the measurements and the causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	Exemption	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Ni-Pb and Hg – Fe recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000202015N	RASINA STR.	R	Good	Structural construction works	11.03	Inspection of keeping the ecological flow downstream the water abstraction location of dam as per article 16(3e) of the Special Framework of Planning and Sustainable Development for Renewable Energy Sources (SFPSD-RES) Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Negligible	Negligible		The WB is of unknown ecological status whilst in its basin a Small Hydropower Plant (MYHE) is operated by HYDROBAT POWER GENERATION S.A. It is proposed to check the environmental terms of the MYHE, pursuant to article 16 of SFPSD-RES. The identification and preservation of the required ecological flow ensures the unhindered function of the ecosystem of the river and contributes to the upgrade of the WB's ecological status. In accordance with the SFPSD-RES, the minimum required ecological water flow remaining at the natural bed of the water stream, directly downstream to the water abstraction project of the Small Hydropower Plant, must be considered to be the largest of the rates given below, unless a requirement of its increase is substantiated and justified by the requirements of the downstream ecosystem (existence of important ecosystem): - 30% of average flow during summer months June-July-August or - 50% of average flow of September or - 30 lt/sec in any case.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000202015N	RASINA STR.	R	Good	Other relevant measures	18.19	Further investigation as regards the measurements and the causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Ni-Pb and Hg – Fe recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000202112N	GERAKARI STR.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and the causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Ba and V recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000203017N	EVROTAS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000203017N	EVROTAS R.	R	Moderate	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	Exemption	Long-term	Large	**2,500 €**	**0 €**	**2,500 €**	Negligible	Negligible	Negligible		A study should be carried out to investigate the feasibility and possibility of constructing a sewage network in the agglomeration of the basin of the middle flow of Evrotas river and its connection with Sparta WWTP.
GR0333R000203017N	EVROTAS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and the causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	Exemption	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Hg recorded in the WB. Investigation for any natural processes of production of the above pollutant from geological formations of the specific area.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000203018N	EVROTAS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000203018N	EVROTAS R.	R	Moderate	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority: Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is moderate whilst the pressures from significant industrial and processing plants (juice production, food processing and cheese factories) are of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0333R000203018N	EVROTAS R.	R	Moderate	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	Exemption	Long-term	Large	**2,500 €**	**0 €**	**2,500 €**	Negligible	Negligible	Negligible		A study should be carried out to investigate the feasibility and possibility of constructing a sewage network in the settlements of the river basin of the middle flow of Evrotas river and their connection with Sparta WWTP.
GR0333R000203018N	EVROTAS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	Exemption	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive heavy metals (Ba, Fe, Ni, Pb, Cr, V) and hazardous substances of priority, e.g. Hg, recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000205021N	EVROTAS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000205021N	EVROTAS R.	R	Moderate	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	Exemption	Long-term	Large	**2,500 €**	**0 €**	**2,500 €**	Negligible	Negligible	Negligible		A study should be carried out to investigate the feasibility and possibility of constructing a sewage network in the settlements of the river basin of the middle flow of Evrotas river and their connection with Sparta WWTP.
GR0333R000205021N	EVROTAS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	Exemption	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive heavy metals (Ba, Fe, Ni, Pb, Cr, V) and hazardous substances of priority, e.g. Hg, recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000207025N	EVROTAS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000207025N	EVROTAS R.	R	Moderate	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority: Region	Exemption	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is moderate whilst the pressures from significant industrial and processing plants (juice production) are of high intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0333R000207025N	EVROTAS R.	R	Moderate	Abstraction control	8.02	On-site inspections at authorized/ licensed water abstractions Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Moderate	Negligible		On-site inspections of the licensed water abstraction from Evrotas River for the irrigation of Zaharias dam Land Improvement Local Organization. Systematic organization of inspections of the water abstracted from Zaharias dam by the competent authorities for irrigation of rural lands from the specific WB of Evrotas. The quantity of abstracted water should not exceed the limit set by the respective study of the project, whereas consideration should be given to scenarios of water scarcity and drought plans drafted in this management study.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000207025N	EVROTAS R.	R	Moderate	Demand management measures	9.02	Replacement of block and spray irrigation methods by drip irrigation method Competent Authorities: MRDF, Zaharias dam Land Improvement Local Organization	Exemption	Long-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Large	Negligible		Such replacement may significantly reduce the current squandering of irrigation water. Quite approximately, it may be considered that 70% of land currently irrigated by block irrigation and 80% of spray irrigated land may be drip irrigated. The benefits from the replacement of block irrigation by drip irrigation, in terms of water quantity, correspond to 40%, whereas those from the replacement of spray by drip irrigation correspond to 30%.
GR0333R000207025N	EVROTAS R.	R	Moderate	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	Exemption	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		A study should be carried out to investigate the feasibility and possibility of constructing a sewage network in the agglomerations of the river basin of the downward flow of Evrotas river and their connection with Skala-Vlachioti WWTP.
GR0333R000207025N	EVROTAS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	Exemption	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive heavy metals (Ba, Fe, Ni, Pb, Cr, V) and hazardous substances of priority, e.g. Hg, recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000209029N	EVROTAS R.	R	Poor	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000209029N	EVROTAS R.	R	Poor	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	Exemption	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		A study should be carried out to investigate the feasibility and possibility of constructing a sewage network in the agglomerations of the river basin of the downward flow of Evrotas river and their connection with Skala-Vlachioti WWTP.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000209029N	EVROTAS R.	R	■ Poor	Other relevant measures	18.19	Further investigation as regards the measurements and the causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	Exemption	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive heavy metals (Ba, Fe, Ni, Pb, Cr, V) and hazardous substances of priority, e.g. Hg, recorded in the WB. Investigation for any natural processes of production of the above pollutants from geological formations of the specific area.
GR0333R000206022N	KALIVES STR.	R	■ Unknown	Pollutant emission controls	5.04	Inspections on the observance of disposal limits to the WB from adjacent processing plants Competent Authority: Region	-	Short-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Negligible		The status of the WB under examination is unknown whilst the pressures from significant industrial and processing plants (meet processing plants) are of moderate intensity. More rigorous inspections of such plants as regards disposal limits may prevent exceeding incidents, resulting in the improvement of the status of the WB.
GR0333R000206022N	KALIVES STR.	R	■ Unknown	Abstraction control	8.02	On-site inspections at authorized/ licensed water abstractions Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Moderate	Negligible		Systematic organization of inspections of the water abstracted from the Land Improvement Local Organization of Kalivia, Soha by the competent authorities for irrigation of rural lands from the specific WB of Evrotas River. The quantity of abstracted water should not exceed the limit set by the respective study of the project, whereas consideration should be given to scenarios of water scarcity and drought drafted in this management study.
GR0333R000206022N	KALIVES STR.	R	■ Unknown	Demand management measures	9.02	Replacement of block and spray irrigation methods by drip irrigation method Competent Authorities : MRDF, TOEV of Kalivia, Soha	-	Long-term	Large	**0 €**	**0 €**	**0 €**	Moderate	Large	Negligible		Such replacement may significantly reduce the current squandering of irrigation water. Quite approximately, it may be considered that 70% of land currently irrigated by block irrigation and 80% of spray irrigated land may be drip irrigated. The benefits from the replacement of block irrigation by drip irrigation, in terms of water quantity, correspond to 40%, whereas those from the replacement of spray by drip irrigation correspond to 30%.
GR0333R000206022N	KALIVES STR.	R	■ Unknown	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		Application of SWS guidelines as regards proper wastewater management practice for agglomerations with <2000 PE. The feasibility and possibility of constructing a sewage network in the agglomerations of the river basin of the downwards flow of Evrotas river and their connection with Sparta WWTP.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000208027N	MAGOULITSA STR.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Hg-Fe recorded in the WB. Investigation for any natural processes of production of the above pollutant from geological formations of the specific area.
GR0333R000210030N	INOUS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000210030N	INOUS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Hg-Fe recorded in the WB. Investigation for any natural processes of production of the above pollutant from geological formations of the specific area.
GR0333R000210034N	INOUS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Hg-Fe recorded in the WB. Investigation for any natural processes of production of the above pollutant from geological formations of the specific area.
GR0333R000214044N	KOLINIATIKO STR.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Cr and Ni recorded in the WB. Investigation for any natural processes of production of the above pollutant from geological formations of the specific area.

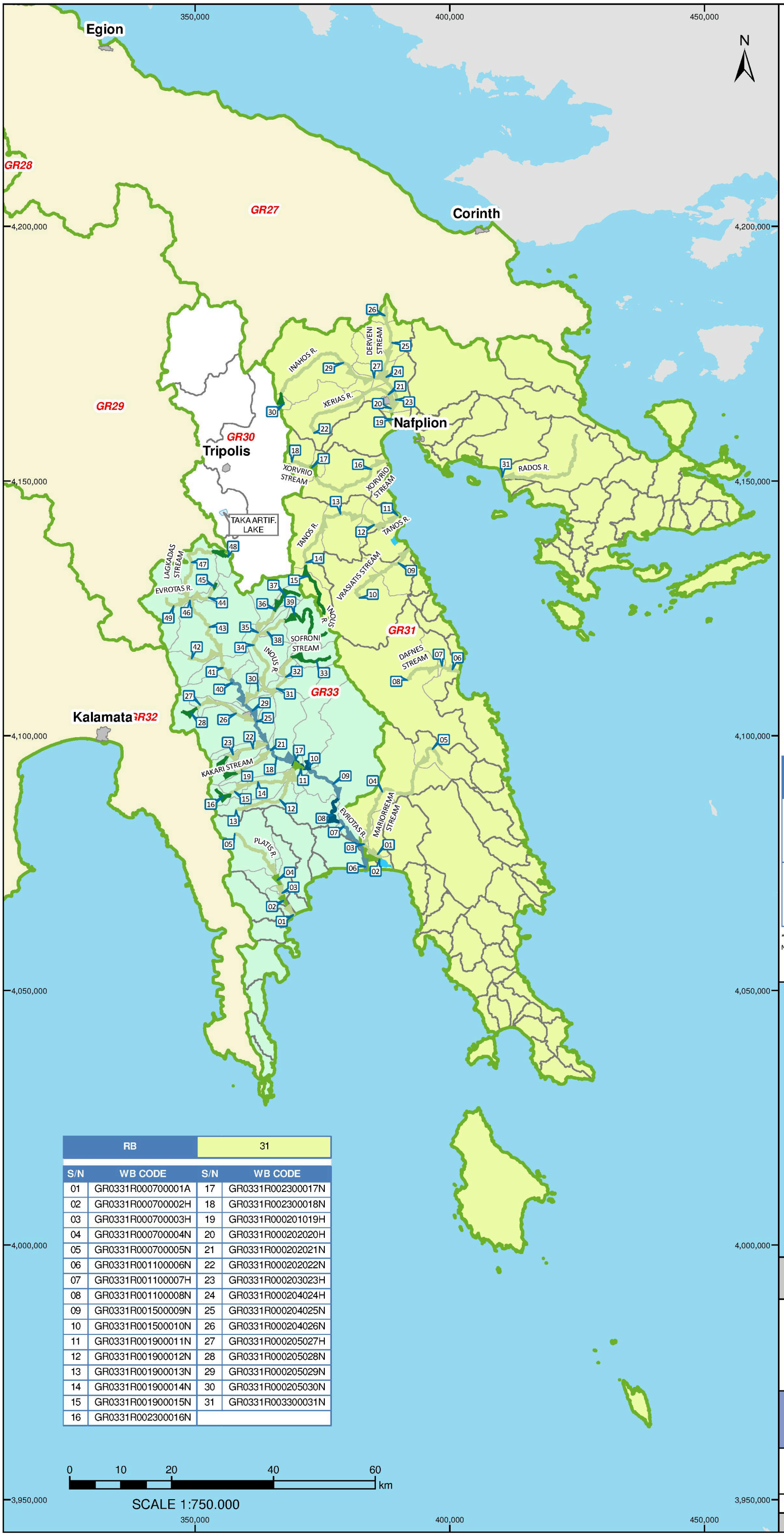
Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000211041N	EVROTAS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000211041N	EVROTAS R.	R	Moderate	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		Application of SWS guidelines as regards proper wastewater management practice for agglomerations with <2000 PE. The feasibility and possibility of constructing a sewage network in the agglomerations of the river basin of the downwards flow of Evrotas river and their connection with Skala-Vlachioti WWTP.
GR0333R000211041N	EVROTAS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Hg-Fe recorded in the WB. Investigation for any natural processes of production of the above pollutant from geological formations of the specific area.
GR0333R000213043N	EVROTAS R.	R	Moderate	Legislative Measures	1.11	Penalties for illegal sand extraction Competent Authority: Region	-	Short-term	Medium	**0 €**	**0 €**	**0 €**	Negligible	Large	Negligible		This is an economic measure aiming at protecting both the WB under examination and the downstream bodies of water (coastal and transitional) due to the sand extraction observed at the specific WB. The WB is of unknown ecological status, whereas the pressure it suffers is of high intensity. Sand extraction causes severe hydromorphological changes in the river, affecting both biotic and abiotic parameters while disturbing the regime of sediments at the coastal body.
GR0333R000213043N	EVROTAS R.	R	Moderate	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		Application of SWS guidelines as regards proper wastewater management practice for agglomerations with <2000 PE. The feasibility and possibility of constructing a sewage network in the agglomerations of the river basin of the downwards flow of Evrotas river and their connection with Skala-Vlachioti WWTP.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0333R000213043N	EVROTAS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Cr and Ni recorded in the WB. Investigation for any natural processes of production of the above pollutant from geological formations of the specific area.
GR0333R000217049N	EVROTAS R.	R	Moderate	Structural construction works	11.15	Rational wastewater management by settlements with population peak <2000 PE (priority D agglomerations) Competent Authority: Region	-	Long-term	Large	**1,500 €**	**0 €**	**1,500 €**	Negligible	Negligible	Negligible		Application of SWS guidelines as regards proper wastewater management practice for agglomerations with <2000 PE. The feasibility and possibility of constructing a sewage network in the agglomerations of the river basin of the downwards flow of Evrotas river and their connection with Skala-Vlachioti WWTP.
GR0333R000217049N	EVROTAS R.	R	Moderate	Other relevant measures	18.19	Further investigation as regards the measurements and causes of excessive chemical substances recorded in the WB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Medium	**3,000 €**	**0 €**	**3,000 €**	Negligible	Negligible	Negligible		Further investigation as regards the measurements and causes of excessive Cr and Ni recorded in the WB. Investigation for any natural processes of production of the above pollutant from geological formations of the specific area.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300150	Body of Asopos - Glikovrisi	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_6	Definition of principle restriction zones for drilling new wells for new water uses and extensions of existing uses in coastal groundwater bodies where phenomena of seawater intrusion are observed Competent Authority: MEECC (SWS) / Decentralized Administration	Exemption	Short-term	Medium	**0 €**	**0 €**	**0 €**	Moderate	Moderate	Moderate		In coastal GWBs that are in bad qualitative status due to seawater intrusion caused by human pressures (over-pumping) restrictive measures are taken for drilling new boreholes and wells for new water uses and the expansion of existing water abstractions. Until the precise delineation of the restriction zones as result of specific hydrogeological studies which should be compiled, drilling of new boreholes for new water uses and extensions of abstraction of groundwater for existing water uses is restricted in the following zones: For karstic systems: 300m, for granular free piezometric surface systems: 200m, for granular under pressure piezometric surface systems: 100m. In special cases (eg for drinking water use, aquaculture and desalination facilities) permission for drilling a new borehole can be issued after submission of a hydrogeological report or study and the favorable opinion from the competent Water Directorate. The above mentioned restrictions refer to the exploited groundwater body, and not on the spatial location of the new project of water use. These restrictions are intended to limit the expansion of seawater intrusion in coastal groundwater bodies. In case of coastal karstic groundwater bodies with extensive natural salination, through regulatory decisions, the restriction zones may be extended further with the responsibility of the competent Water Directorates because. The precise boundaries of the zones with restrictions for water abstraction projects will be defined by specific hydrogeological study. From the above mentioned restrictions, specific circumstances with priority abstraction for drinking water use and other special cases such as drilling for aquaculture, pumping water for desalination facilities etc, are excluded. In such cases, permission is accomplished after the submission of a documented hydrogeological study which will be examined and approved by the relevant Water Directorates. The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of the Special Water Secretariat.
GR0300150	Body of Asopos - Glikovrisi	GW	■ Bad	Pollutant emission controls	ΟΣ_ΥΔ03_7	Definition and delimitation of areas of groundwater bodies that have poor quality due to seawater intrusion or exhibit local seawater intrusion Competent Authority: Decentralized Administration (Direct. for Water) / Region	Exemption	Medium-term	Medium	**30,000 €**	**0 €**	**30,000 €**	Moderate	Moderate	Moderate		For the coastal groundwater bodies that have poor quality status owed to seawater intrusion or exhibit local seawater intrusion, special hydrogeological surveys are to be drafted for the precise definition of restriction limits for the drilling of new boreholes and the extension of the seawater intrusion, so measures will be taken for the gradual restoration not only through prohibitions but also through reduction or even elimination of water abstractions for the existing water uses prioritizing the invention of new ways to meet the needs for irrigation.

Code	Water Body	Type of WB	Existing Status	Supplementary Measures			Exemptions	Preparation Time	Efficacy of Measure	Investment Cost	Operation Cost	Total Cost	Social Impact	Financial impact	Environmental impact	Included projects	Comments
GR0300180	Body of Skala	GW	Good (Local trend)	Pollutant emission controls	5.15	Qualitative control of the river that feeds the GB Competent Authority: Decentralized Administration (Direct. for Water)	-	Short-term	Large	**0 €**	**0 €**	**0 €**	Negligible	Negligible	Negligible		Large part of Evrotas River comes through the karstic body of Skala which it supplies through filtration. Protection and quality monitoring of Evrotas River is important because of the direct effect on the quality status of Skala GB.
GR0300230	Body of Evrotas	GW	Bad	Abstraction control	8.03	Reduction or replacement of groundwater abstraction with abstraction from a surface WB or from another groundwater body or artificial body (conservation reservoir, dam) Competent Authority: Region / Decentralized Administration (Direct. for Water)	Exemption	Medium-term	Medium	**2,984,000 €**	**0 €**	**2,984,000 €**	Negligible	Negligible	Moderate	RURAL DEVELOPMENT PROGRAM OF GREECE 2007-2013	Replacement of part of groundwater pumping with Kelefina dam. The project concerns the construction of a dam at Oenous or Kelefina stream, 43 m. high, of reservoir area around 1.2 km^2 and capacity of 15 million m^3. Based on the "Study on Kelefina dam, of the Dep. of Lakonia – Water resources management study", rural areas of 37,000 stremmas are to be irrigated by the Municipal Units of Oenounta and Spartiates, out of which around only 17,000 stremmas are currently irrigated. The construction of the dam will enable the reduction of pumping, since quantities from the reservoir will replace part of abstraction for irrigation that takes place presently from the downstream GB. The action "Study on Kelefina dam, of the Dep. of Lakonia" has been integrated to the Rural Development Program 2007-2013, the budget of which amounts to 2,984,000€.

ANNEX A MAPS OF MANAGEMENT PLAN



LEGEND

- RIVER BASINS
- RIVER SUBBASINS
- WATER BODIES SUBBASINS
- LAKE WB
- TRANSITIONAL WB

RIVER WB

- ImL0
- IsL0
- SsH1
- ImL1
- IsL1
- SsL0
- IsH0
- SmL0
- SsL1
- IsH1
- SmL1

RB	33

S/N	WB CODE	S/N	WB CODE
01	GR0333R000300001N	26	GR0333R000208026N
02	GR0333R000300002N	27	GR0333R000208027N
03	GR0333R000300003N	28	GR0333R000208028N
04	GR0333R000300004N	29	GR0333R000209029N
05	GR0333R000300005N	30	GR0333R000210030N
06	GR0333R000201006H	31	GR0333R000210131N
07	GR0333R000201007N	32	GR0333R000210132N
08	GR0333R000201008N	33	GR0333R000210133N
09	GR0333R000201009N	34	GR0333R000210034N
10	GR0333R000201010N	35	GR0333R000210235N
11	GR0333R000202011N	36	GR0333R000210236N
12	GR0333R000202112N	37	GR0333R000210237N
13	GR0333R000202113N	38	GR0333R000210038N
14	GR0333R000202014N	39	GR0333R000210039N
15	GR0333R000202015N	40	GR0333R000211040N
16	GR0333R000202016N	41	GR0333R000211041N
17	GR0333R000203017N	42	GR0333R000212042N
18	GR0333R000203018N	43	GR0333R000213043N
19	GR0333R000204019N	44	GR0333R000214044N
20	GR0333R000204020N	45	GR0333R000214045N
21	GR0333R000205021N	46	GR0333R000215046N
22	GR0333R000206022N	47	GR0333R000216047N
23	GR0333R000206023N	48	GR0333R000216048N
24	GR0333R000206024N	49	GR0333R000217049N
25	GR0333R000207025N		

RIVER WATER BODIES TYPES

		Small Run off (<100hm³) s	Medium Run off (100~2000hm³) m	High Run off (>2000hm³) g
Mild slope (≤1.2‰) 0	Low altitude (≤700 m) «L»	sL0	mL0	gL0
	High altitude (>700m) «H»	sH0	mH0	gH0
High slope (>1.2‰) 1	Low altitude (≤700 m) «L»	sL1	mL1	gL1
	High altitude (>700 m) «H»	sH1	mH1	gH1

*A Latin letter which symbolizes the biogeographical region enters in front of the code type, N for North Greece, I for the Ionian, S for the Aegean and South Greece.

RB	31

S/N	WB CODE	S/N	WB CODE
01	GR0331R000700001A	17	GR0331R002300017N
02	GR0331R000700002H	18	GR0331R002300018N
03	GR0331R000700003H	19	GR0331R000201019H
04	GR0331R000700004N	20	GR0331R000202020H
05	GR0331R000700005N	21	GR0331R000202021N
06	GR0331R001100006N	22	GR0331R000202022N
07	GR0331R001100007H	23	GR0331R000203023H
08	GR0331R001100008N	24	GR0331R000204024H
09	GR0331R001500009N	25	GR0331R000204025N
10	GR0331R001500010N	26	GR0331R000204026N
11	GR0331R001900011N	27	GR0331R000205027H
12	GR0331R001900012N	28	GR0331R000205028N
13	GR0331R001900013N	29	GR0331R000205029N
14	GR0331R001900014N	30	GR0331R000205030N
15	GR0331R001900015N	31	GR0331R003300031N
16	GR0331R002300016N		

HELLENIC REPUBLIC

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SPECIAL SECRETARIAT FOR WATER

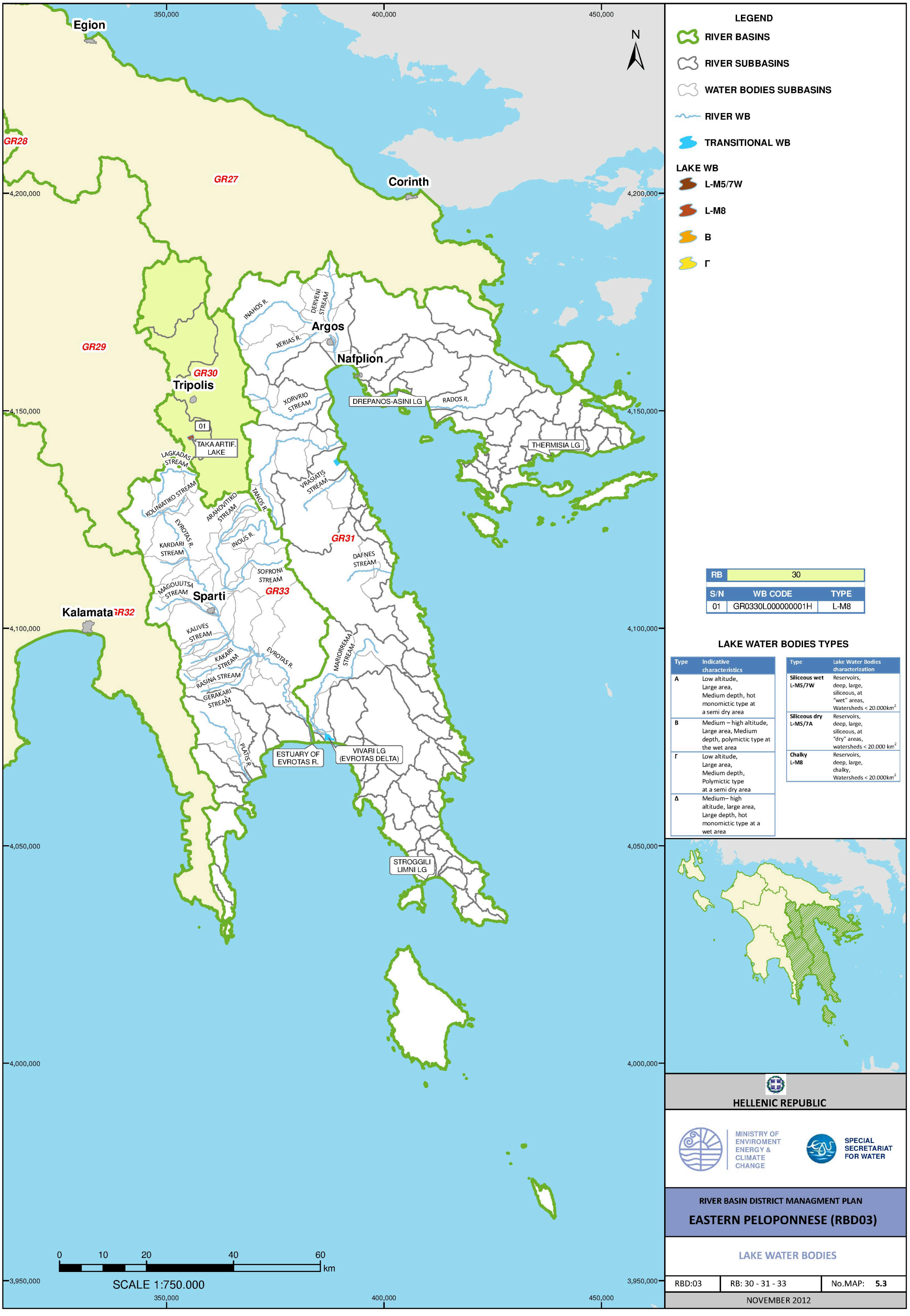
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

RIVER WATER BODIES

RBD:03	RB: 30 - 31 - 33	No.MAP: 4.3

NOVEMBER 2012



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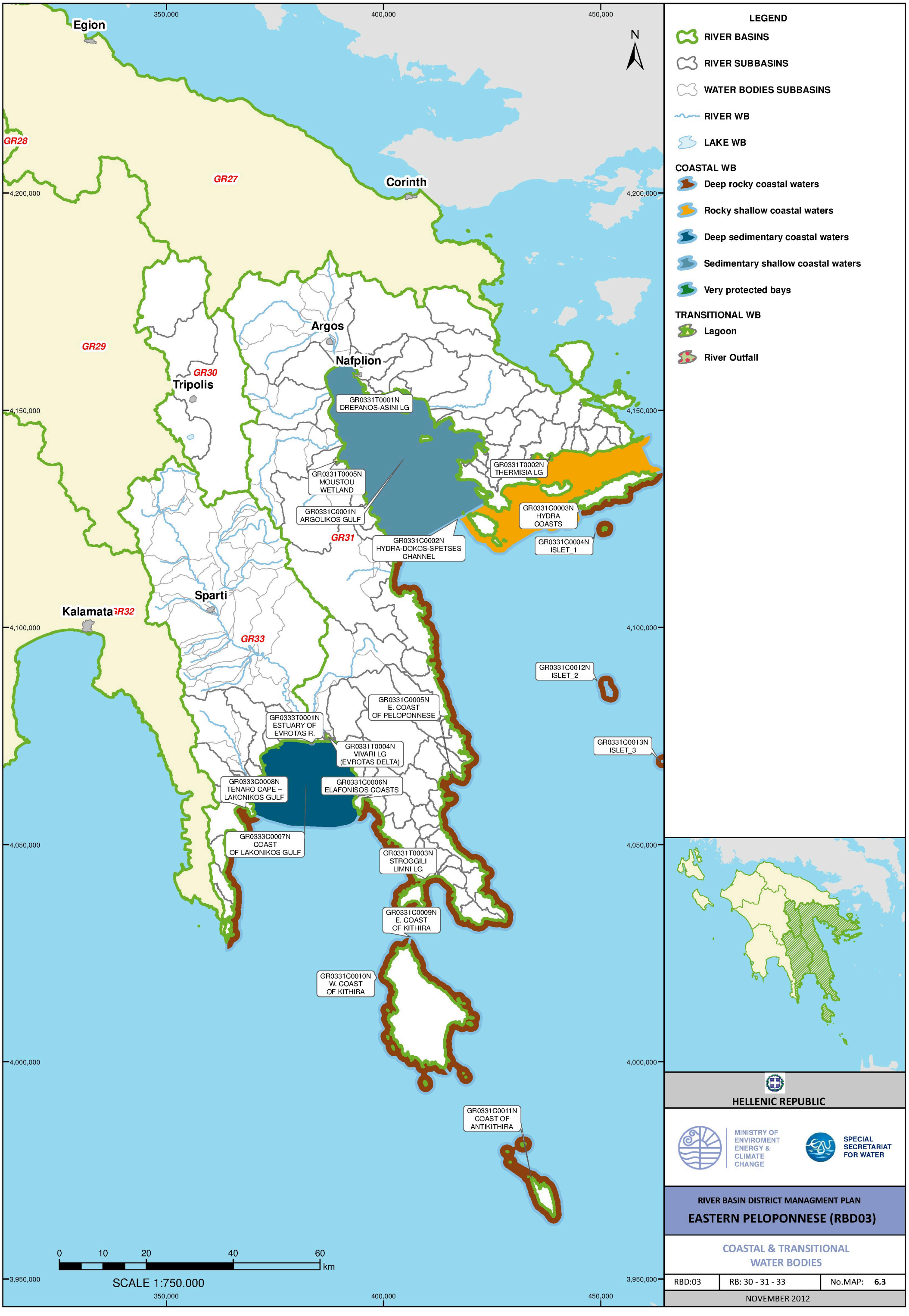
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

LAKE WATER BODIES

RBD:03 | RB: 30 - 31 - 33 | No.MAP: 5.3

NOVEMBER 2012



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SPECIAL SECRETARIAT FOR WATER

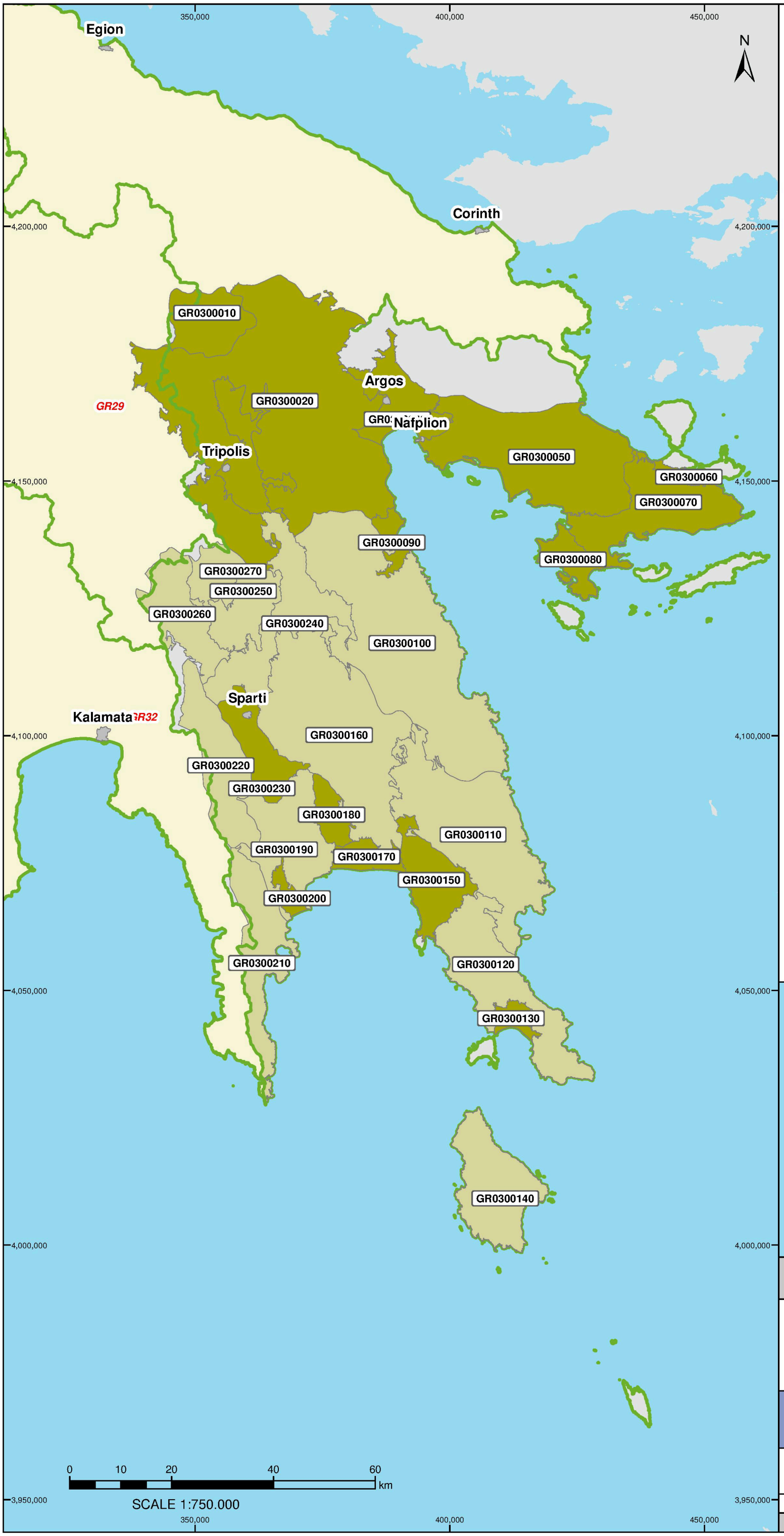
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

COASTAL & TRANSITIONAL WATER BODIES

RBD:03	RB: 30 - 31 - 33	No.MAP: **6.3**

NOVEMBER 2012



LEGEND

RIVER BASINS

GROUNDWATER BODIES

Initial characterisation

Further characterisation

RB	30

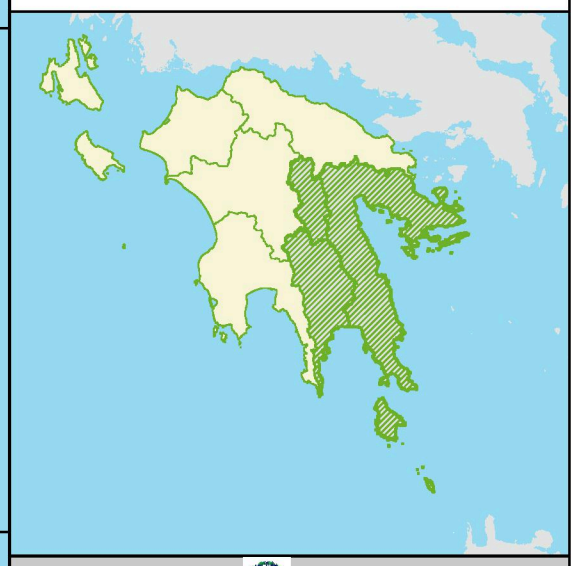
CODE	NAME
GR0300010	Kandila Groundwater Body
GR0300030	Tripoli Plateau Groundwater Body

RB	31

CODE	NAME
GR0300020	East Arcadia-West Argolida Groundwater Body
GR0300040	Argoliko Pedio Groundwater Body
GR0300050	Mavrovouni - Didimoi Groundwater Body
GR0300060	Trizinia Groundwater Body
GR0300070	Ermioni Groundwater Body
GR0300080	Portoheli Groundwater Body
GR0300090	Astros Groundwater Body
GR0300100	Parnonas Groundwater Body
GR0300110	Zarakas - Monemvasia Groundwater Body
GR0300120	South East Lakonia Groundwater Body
GR0300130	Neapoli Groundwater Body
GR0300140	Kithira Groundwater Body
GR0300150	Asopos - Glikovrisi Groundwater Body

RB	33

CODE	NAME
GR0300160	Geraki - Gkoritsa Groundwater Body
GR0300170	Elos - Vasilopotamos Groundwater Body
GR0300180	Skala Groundwater Body
GR0300190	Krokees - Githio Groundwater Body
GR0300200	Vardounias river (Platis river) Groundwater Body
GR0300210	Skoutari Groundwater Body
GR0300220	East Taigetos - Agia Marina Groundwater Body
GR0300230	Evrotas Groundwater Body
GR0300240	Ag. Petros - Voutianoi Groundwater Body
GR0300250	Zorou - Sellasia Groundwater Body
GR0300260	Pellana - Skortsino Groundwater Body
GR0300270	Kollines - Vlahokerasia Groundwater Body



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SPECIAL SECRETARIAT FOR WATER

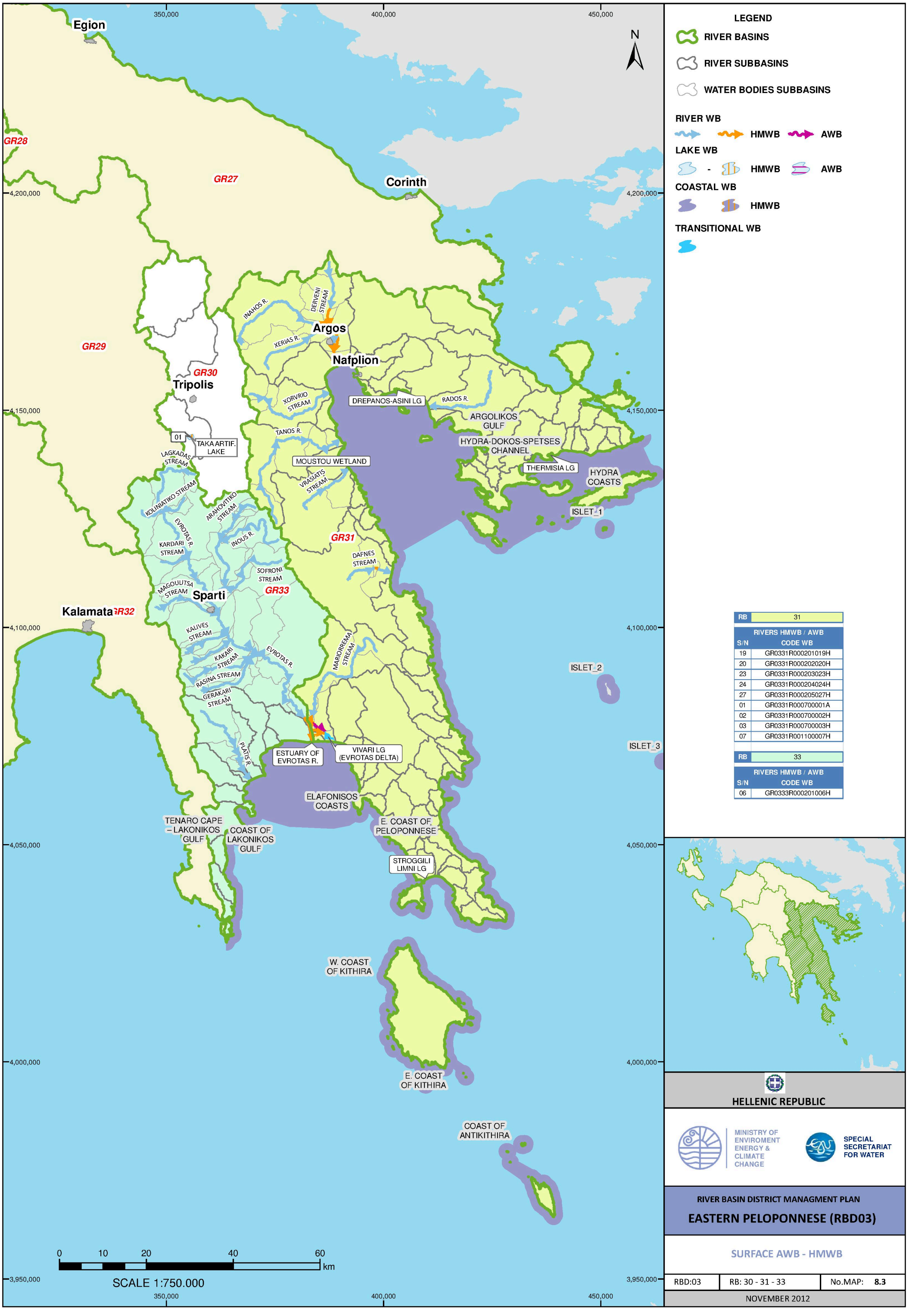
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

GROUNDWATER BODIES

RBD:03	RB: 30 - 31 - 33	No.MAP: **7.3**

NOVEMBER 2012



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SPECIAL SECRETARIAT FOR WATER

RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

SURFACE AWB - HMWB

RBD:03	RB: 30 - 31 - 33	No.MAP: **8.3**

NOVEMBER 2012

LEGEND

RIVER WB
- Rivers
- Rivers with water abstraction

LAKE WB
- Lakes

TRANSITIONAL WB
- Transitional
- Transitional with aquatic species of economic importance

COASTAL WB
- Coastal
- Coastal with aquatic species of economic importance

PROTECTED AREAS
- CORINE Habitats
- Sites of Community Importance (SCI)
- Special Protection Areas (SPA)
- SPASCI
- National Parks
- Landscapes of Outstanding Natural Beauty
- Areas polluted by nitrates
- Bathing waters

GROUNDWATER BODIES
- Groundwaterbodies with water abstraction

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RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

PROTECTED AREAS

RBD:03	RB: 30 - 31 - 33	No.MAP: **9.3**

NOVEMBER 2012


350,000
400,000
450,000
N
Egion
Corinth
GR28
GR27
GR29
GR30
GR32
GR33
GR31
4,200,000
4,150,000
4,100,000
4,050,000
4,000,000
3,950,000
Tripolis
Nafplion
Kalamata
TAKA ARTIF. LAKE
INAHOS R.
XERIAS R.
DERVENI STREAM
XORVRIO STREAM
TANOS R.
RADOS R.
EVROTAS R.
DAFNES STREAM
MARIORREMA STREAM
PLATIS R.
0 10 20 40 60
km
SCALE 1:750.000
LEGEND
Water abstraction
Sand pits
Thermal power stations
Small hydroelectric power plants
Fisheries
Discharge of treated wastewater
Discharge of treated wastewater (Hotels)
Treated waste water discharge in natural recipients
Uncontrolled waste disposal sites
Landfills
Important industries
Desalination plants
Port facilities
Clay pits
Minerals
River Basins
River Subbasins
Water Bodies Subbasins
River WB
Lake WB
Transitional WB
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RIVER BASIN DISTRICT MANAGMENT PLAN
EASTERN PELOPONNESE (RBD03)
POINT SOURCE PRESSURES AT SURFACE WB
RBD:03
RB: 30 - 31 - 33
No.MAP: 10.3
NOVEMBER 2012


350,000
400,000
450,000
N
Egion
Corinth
GR28
GR27
GR29
GR30
GR32
GR33
GR31
4,200,000
4,150,000
4,100,000
4,050,000
4,000,000
3,950,000
GR0300010
GR0300020
GR0300030
GR0300040
GR0300050
GR0300060
GR0300070
GR0300080
GR0300090
GR0300100
GR0300110
GR0300120
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GR0300140
GR0300150
GR0300160
GR0300170
GR0300180
GR0300190
GR0300200
GR0300210
GR0300220
GR0300230
GR0300240
GR0300250
GR0300260
GR0300270
Nafplion
Tripolis
Sparti
Kalamata
0 10 20 40 60
km
SCALE 1:750.000
LEGEND
Water abstraction
Sand pits
Thermal power stations
Small hydroelectric power plants
Fisheries
Discharge of treated wastewater
Discharge of treated wastewater (Hotels)
Treated waste water discharge in natural recipients
Uncontrolled waste disposal sites
Landfills
Important industries
Desalination plants
Port facilities
Clay pits
Minerals
River Basins
Groundwater Bodies
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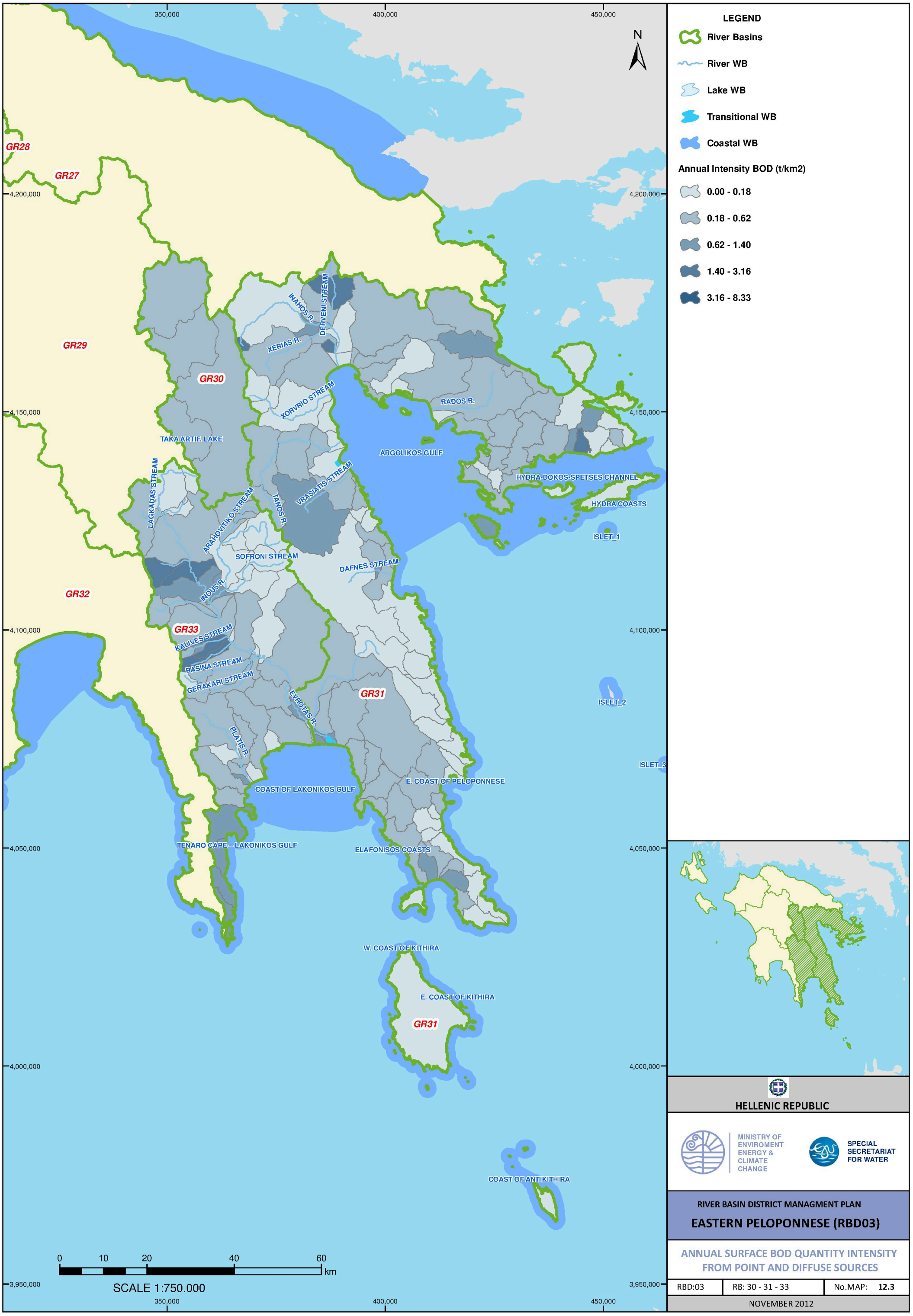
RIVER BASIN DISTRICT MANAGMENT PLAN
EASTERN PELOPONNESE (RBD03)
POINT SOURCE PRESSURES AT GROUNDWATER BODIES
RBD:03
RB: 30 - 31 - 33
No.MAP: 11.3
NOVEMBER 2012



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SPECIAL SECRETARIAT FOR WATER

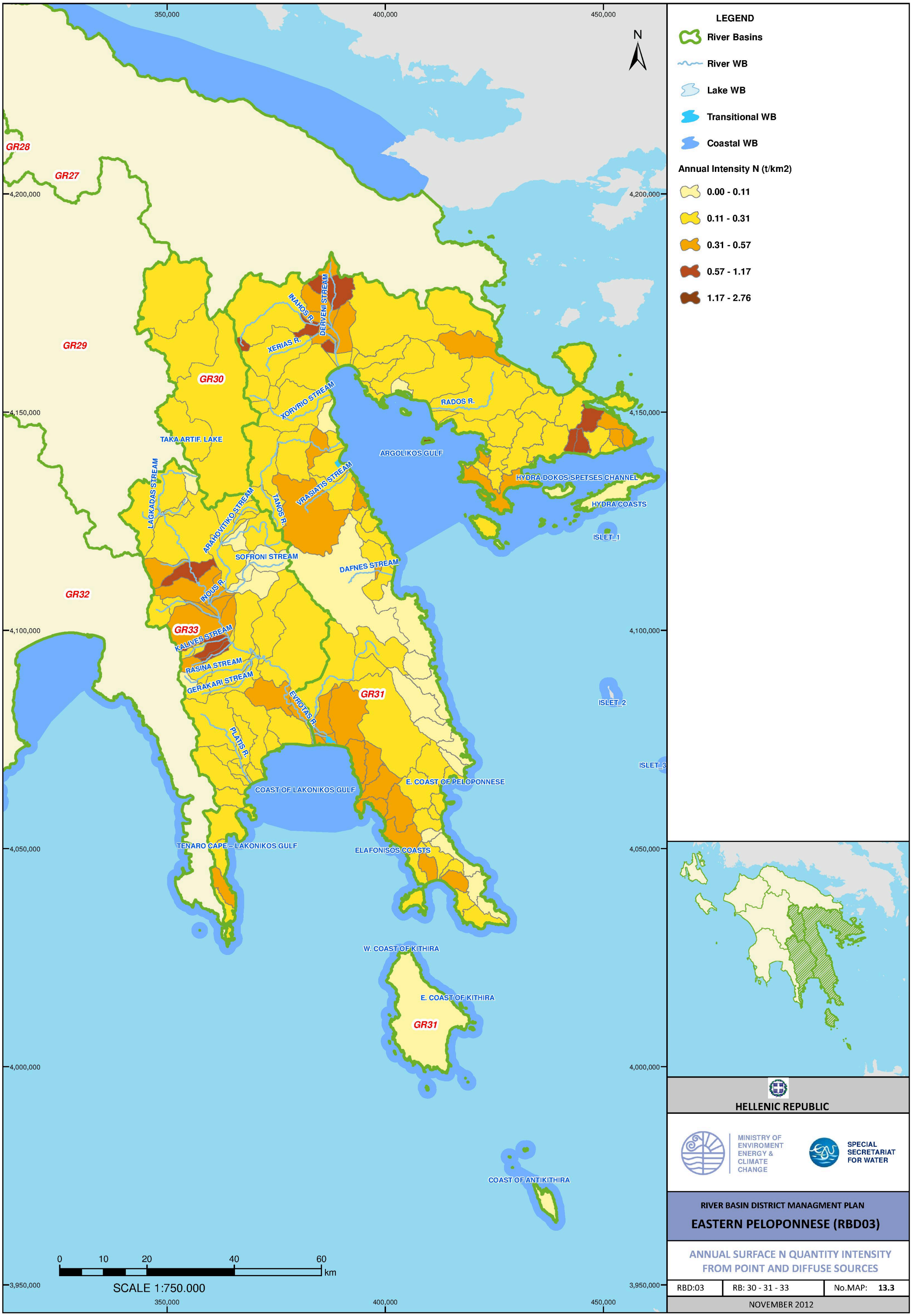
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

ANNUAL SURFACE BOD QUANTITY INTENSITY FROM POINT AND DIFFUSE SOURCES

RBD:03	RB: 30 - 31 - 33	No.MAP: **12.3**

NOVEMBER 2012


350,000
400,000
450,000
N
4,200,000
4,150,000
4,100,000
4,050,000
4,000,000
3,950,000
GR28
GR27
GR29
GR30
GR32
GR33
GR31
INAHOS R.
DERVENI STREAM
XERIAS R.
XORVRIO STREAM
TAKA ARTIF. LAKE
LAGKADAS STREAM
ARAHOVITIKO STREAM
TANOS R.
VRASIATIS STREAM
SOFRONI STREAM
INOUS R.
KALIVES STREAM
RASINA STREAM
GERAKARI STREAM
PLATIS R.
EVROTAS R.
RADOS R.
ARGOLIKOS GULF
HYDRA-DOKOS-SPETSES CHANNEL
HYDRA COASTS
ISLET_1
DAFNES STREAM
ISLET_2
ISLET_3
E. COAST OF PELOPONNESE
COAST OF LAKONIKOS GULF
TENARO CAPE – LAKONIKOS GULF
ELAFONISOS COASTS
W. COAST OF KITHIRA
E. COAST OF KITHIRA
COAST OF ANTIKITHIRA
0 10 20 40 60
km
SCALE 1:750.000
LEGEND
River Basins
River WB
Lake WB
Transitional WB
Coastal WB
Annual Intensity N (t/km2)
0.00 - 0.11
0.11 - 0.31
0.31 - 0.57
0.57 - 1.17
1.17 - 2.76
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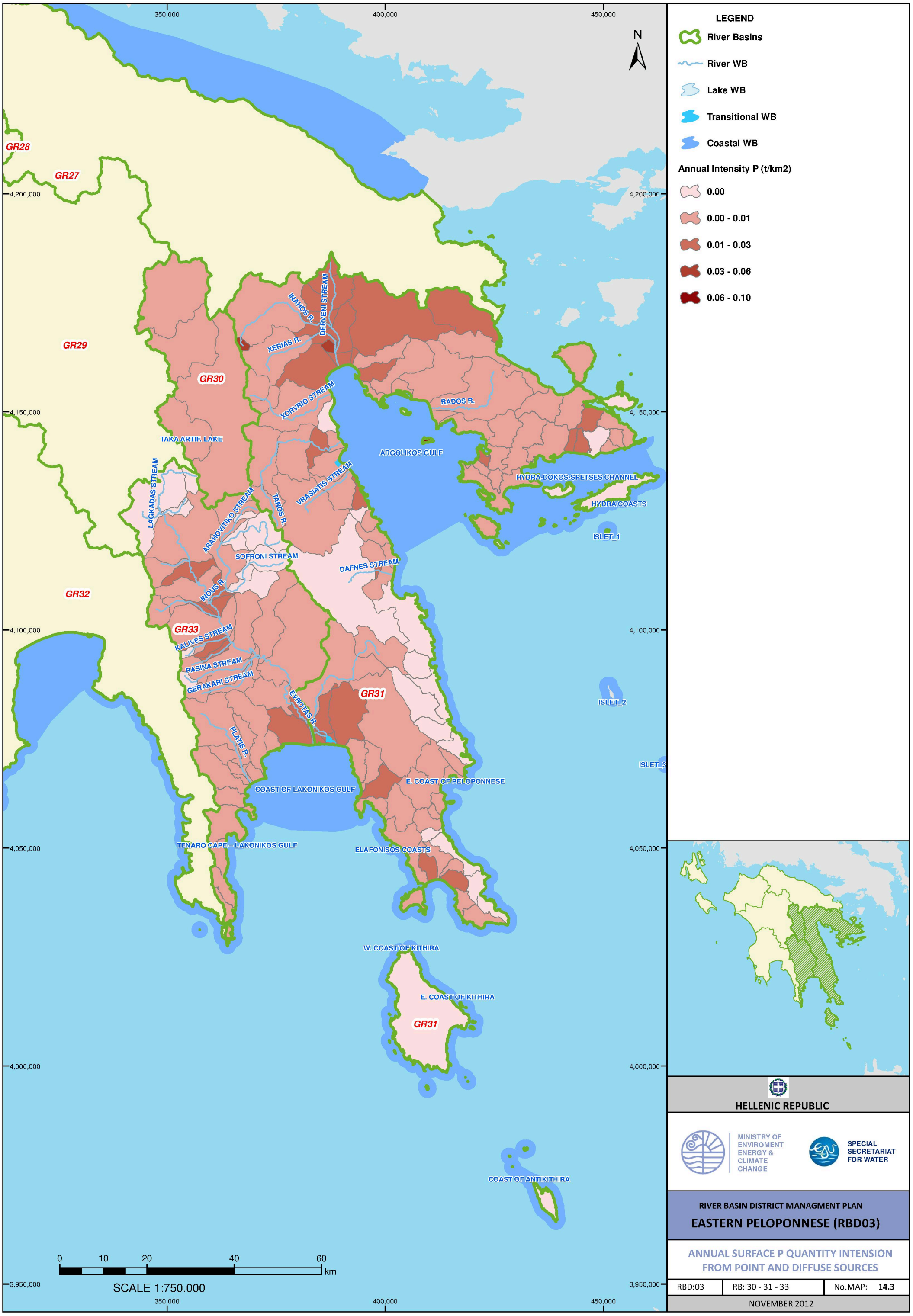
RIVER BASIN DISTRICT MANAGMENT PLAN
EASTERN PELOPONNESE (RBD03)
ANNUAL SURFACE N QUANTITY INTENSITY FROM POINT AND DIFFUSE SOURCES
RBD:03
RB: 30 - 31 - 33
No.MAP: 13.3
NOVEMBER 2012



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MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

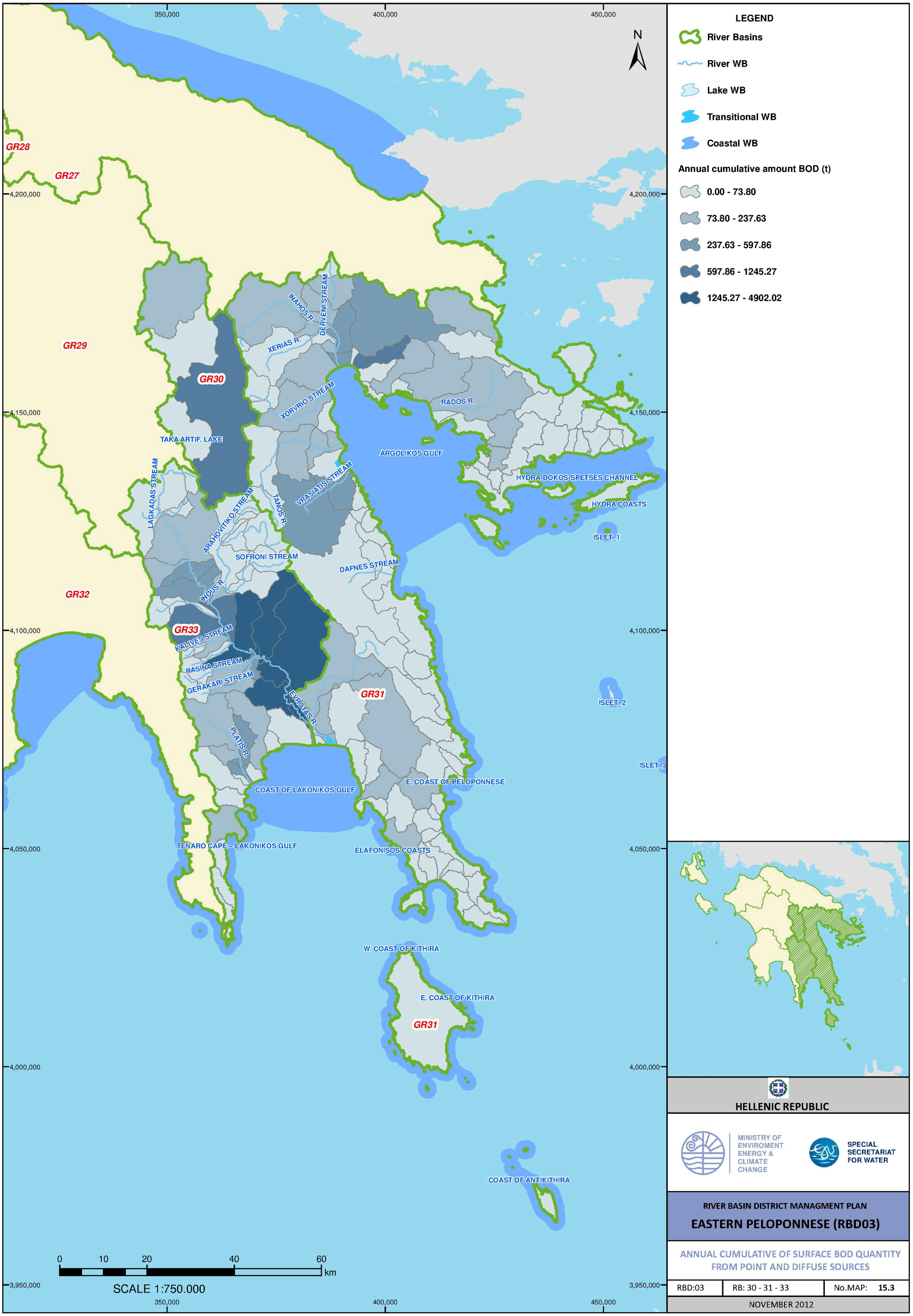
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

ANNUAL SURFACE P QUANTITY INTENSION FROM POINT AND DIFFUSE SOURCES

RBD:03	RB: 30 - 31 - 33	No.MAP: **14.3**

NOVEMBER 2012



HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

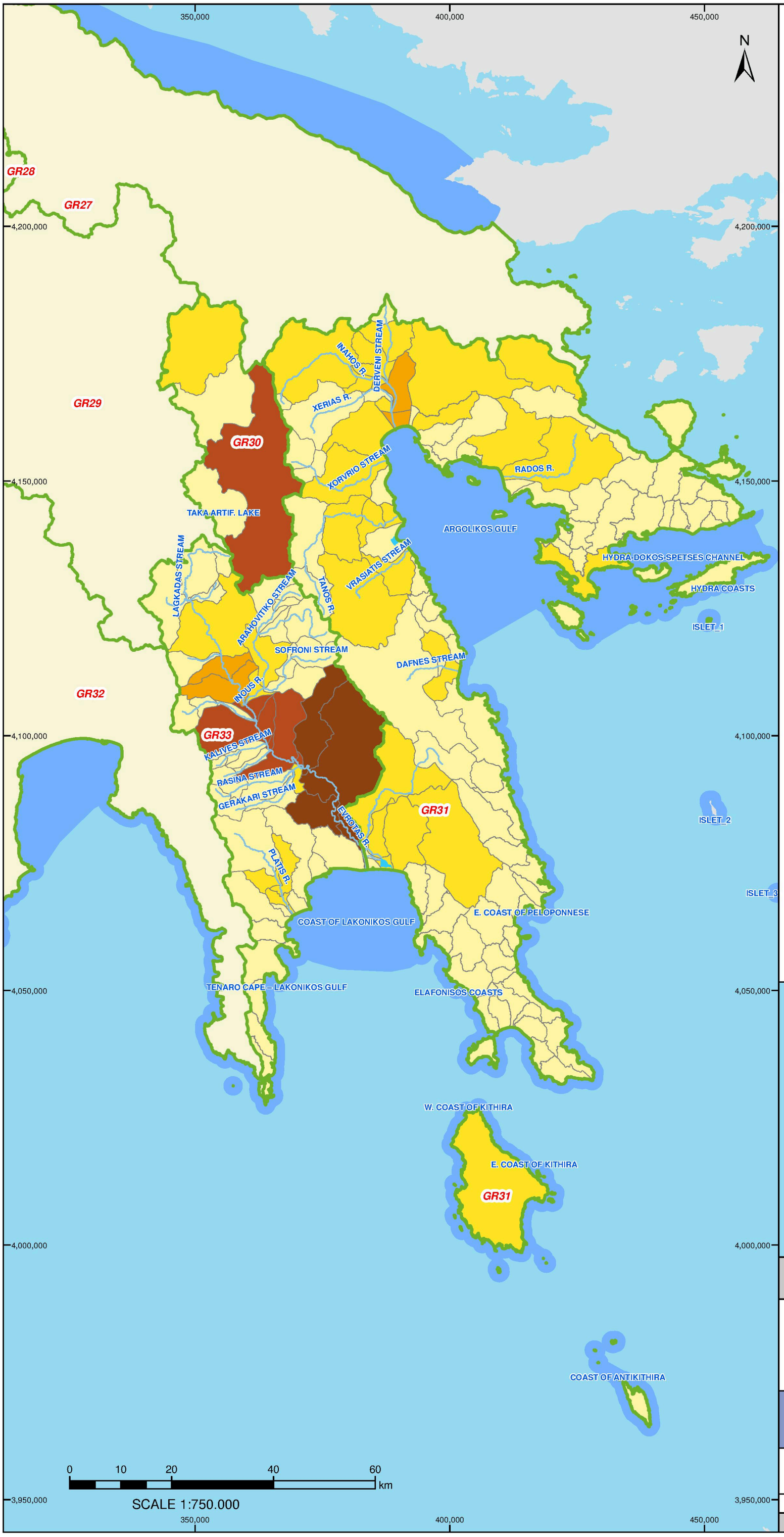
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

ANNUAL CUMULATIVE OF SURFACE BOD QUANTITY FROM POINT AND DIFFUSE SOURCES

RBD:03	RB: 30 - 31 - 33	No.MAP: **15.3**

NOVEMBER 2012



HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

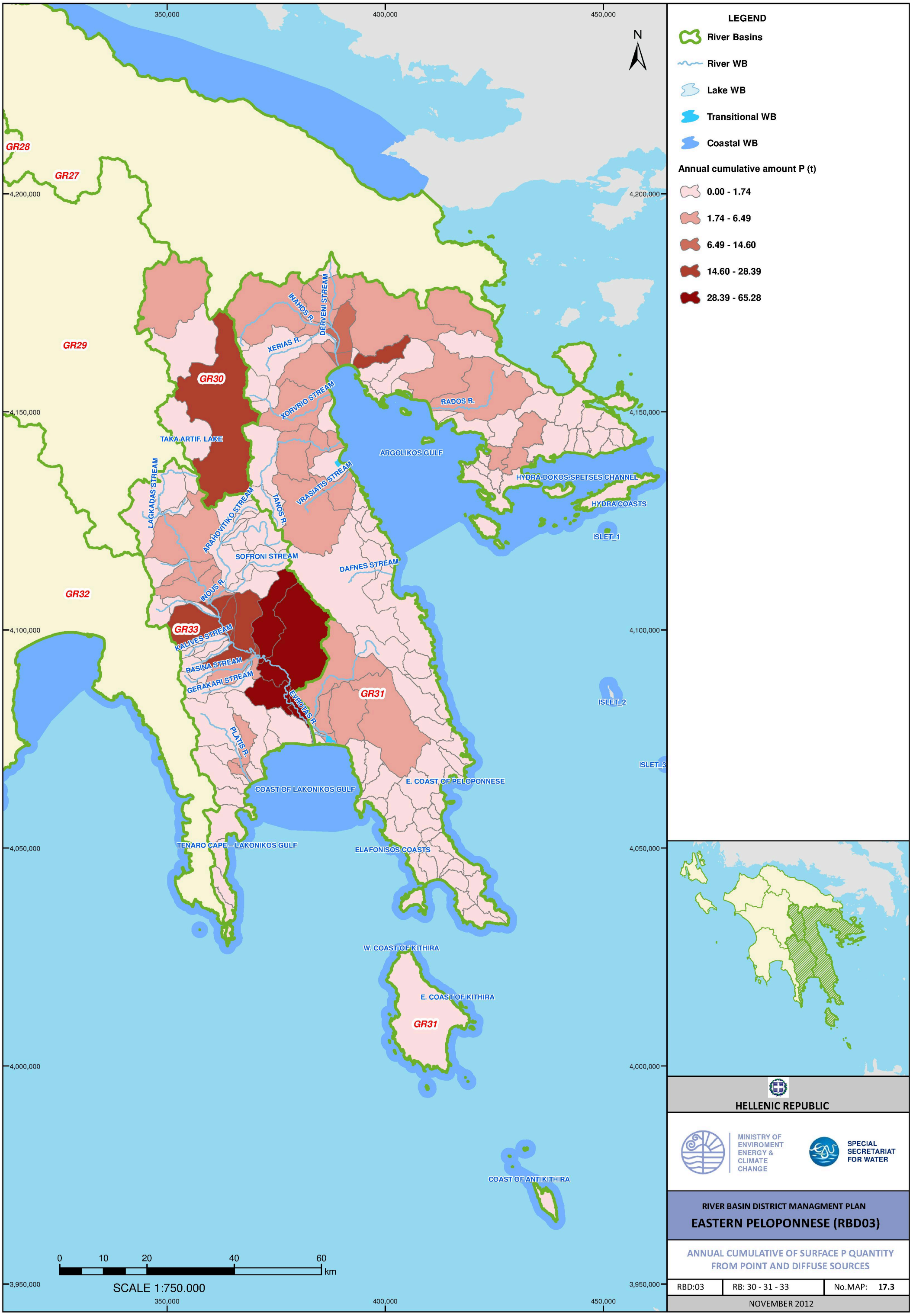
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

ANNUAL CUMULATIVE OF SURFACE N QUANTITY FROM POINT AND DIFFUSE SOURCES

RBD:03	RB: 30 - 31 - 33	No.MAP: **16.3**

NOVEMBER 2012



HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

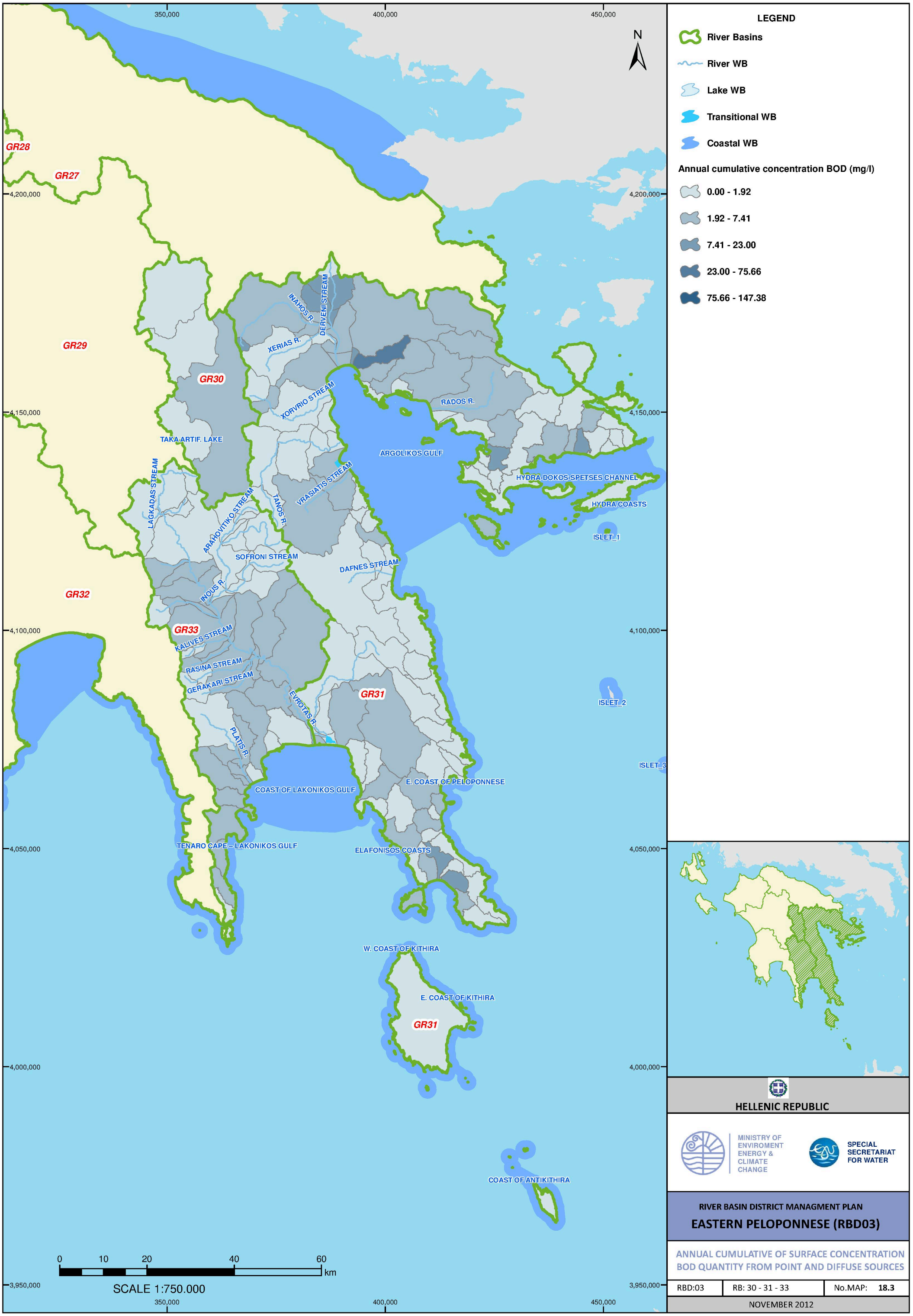
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

ANNUAL CUMULATIVE OF SURFACE P QUANTITY FROM POINT AND DIFFUSE SOURCES

RBD:03	RB: 30 - 31 - 33	No.MAP: **17.3**

NOVEMBER 2012



HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

ANNUAL CUMULATIVE OF SURFACE CONCENTRATION BOD QUANTITY FROM POINT AND DIFFUSE SOURCES

RBD:03	RB: 30 - 31 - 33	No.MAP: **18.3**

NOVEMBER 2012

350,000
400,000
450,000
N
4,200,000
4,150,000
4,100,000
4,050,000
4,000,000
3,950,000
GR28
GR27
GR29
GR30
GR32
GR33
GR31
INAHOS R.
DERVENI STREAM
XERIAS R.
XORVRIO STREAM
TAKA ARTIF. LAKE
LAGKADAS STREAM
ARAHOVITIKO STREAM
TANOS R.
VRASIATIS STREAM
SOFRONI STREAM
DAFNES STREAM
INOUS R.
KALIVES STREAM
RASINA STREAM
GERAKARI STREAM
EVROTAS R.
PLATIS R.
RADOS R.
ARGOLIKOS GULF
HYDRA-DOKOS-SPETSES CHANNEL
HYDRA COASTS
ISLET_1
ISLET_2
ISLET_3
E. COAST OF PELOPONNESE
COAST OF LAKONIKOS GULF
TENARO CAPE – LAKONIKOS GULF
ELAFONISOS COASTS
W. COAST OF KITHIRA
E. COAST OF KITHIRA
COAST OF ANTIKITHIRA
0 10 20 40 60 km
SCALE 1:750.000

LEGEND

- River Basins
- River WB
- Lake WB
- Transitional WB
- Coastal WB

Annual cumulative concentration N (mg/l)

- 0.00 - 0.21
- 0.21 - 0.65
- 0.65 - 1.27
- 1.27 - 2.63
- 2.63 - 5.52

HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

ANNUAL CUMULATIVE OF SURFACE CONCENTRATION N QUANTITY FROM POINT AND DIFFUSE SOURCES

RBD:03	RB: 30 - 31 - 33	No.MAP: **19.3**

NOVEMBER 2012

350,000
400,000
450,000
N
4,200,000
4,150,000
4,100,000
4,050,000
4,000,000
3,950,000
GR28
GR27
GR29
GR30
GR32
GR33
GR31
INAHOS R.
DERVENI STREAM
XERIAS R.
XORVRIO STREAM
TAKA ARTIF. LAKE
LAGKADAS STREAM
ARAHOVITIKO STREAM
TANOS R.
VRASIATIS STREAM
SOFRONI STREAM
INOUS R.
DAFNES STREAM
KALIVES STREAM
RASINA STREAM
GERAKARI STREAM
EVROTAS R.
PLATIS R.
RADOS R.
ARGOLIKOS GULF
HYDRA-DOKOS-SPETSES CHANNEL
HYDRA COASTS
ISLET_1
ISLET_2
ISLET_3
E. COAST OF PELOPONNESE
COAST OF LAKONIKOS GULF
TENARO CAPE – LAKONIKOS GULF
ELAFONISOS COASTS
W. COAST OF KITHIRA
E. COAST OF KITHIRA
COAST OF ANTIKITHIRA
0 10 20 40 60 km
SCALE 1:750.000

LEGEND

- River Basins
- River WB
- Lake WB
- Transitional WB
- Coastal WB

Annual cumulative concentration P (mg/l)

- 0.00 - 0.02
- 0.02 - 0.10
- 0.10 - 0.27
- 0.27 - 0.69
- 0.69 - 1.37

HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

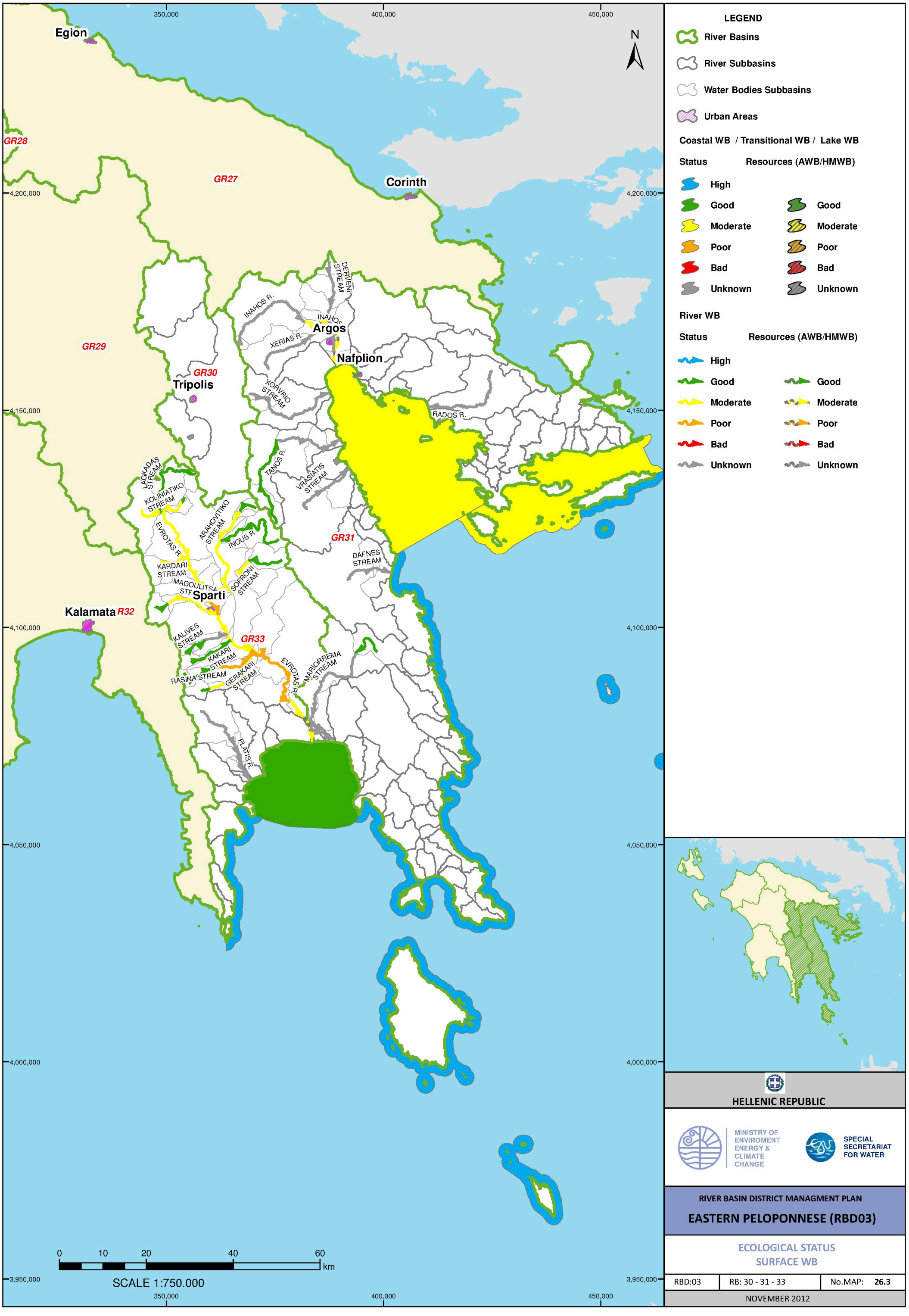
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

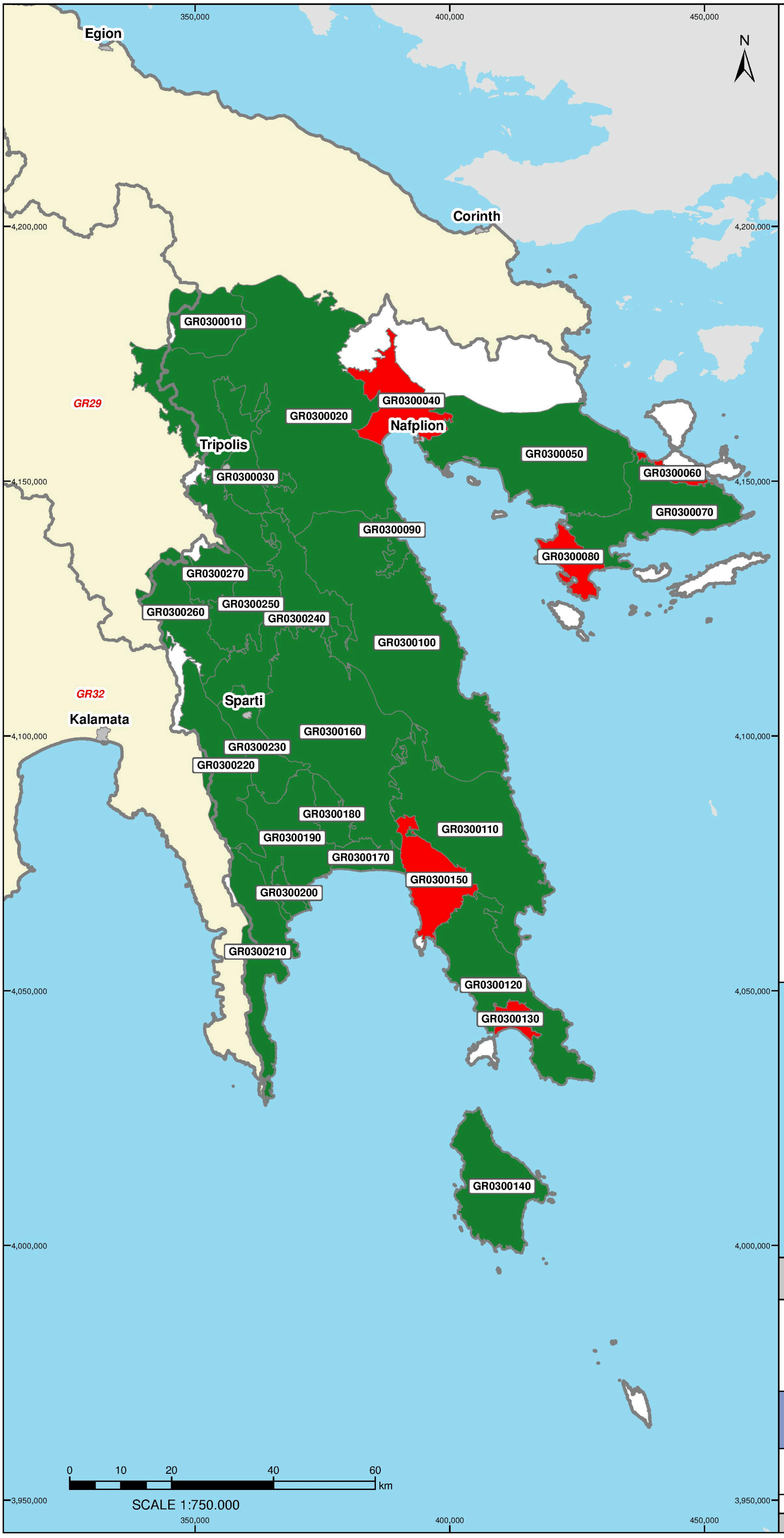
ANNUAL CUMULATIVE OF SURFACE CONCENTRATION P QUANTITY FROM POINT AND DIFFUSE SOURCES

RBD:03	RB: 30 - 31 - 33	No.MAP: **20.3**

NOVEMBER 2012


350,000
400,000
450,000
N
Egion
Corinth
GR28
GR27
GR29
GR30
GR31
GR33
R32
Tripolis
Argos
Nafplion
Sparti
Kalamata
4,200,000
4,150,000
4,100,000
4,050,000
4,000,000
3,950,000
INAHOS R.
DERVENI STREAM
XERIAS R.
XORVRIO STREAM
RADOS R.
LAGKADAS STREAM
KOLINIATIKO STREAM
EVROTAS R.
ARAHOVITIKO STREAM
INOUS R.
TANOS R.
VRASIATIS STREAM
KARDARI STREAM
MAGOULITSA STR
SOFRONI STREAM
DAFNES STREAM
KALIVES STREAM
KAKARI STREAM
RASINA STREAM
GERAKARI STREAM
MARIORREMA STREAM
PLATIS R.
0 10 20 40 60
km
SCALE 1:750.000
LEGEND
River Basins
River Subbasins
Water Bodies Subbasins
Urban Areas
Coastal WB / Transitional WB / Lake WB
Status
Resources (AWB/HMWB)
High
Good
Moderate
Poor
Bad
Unknown
Good
Moderate
Poor
Bad
Unknown
River WB
Status
Resources (AWB/HMWB)
High
Good
Moderate
Poor
Bad
Unknown
Good
Moderate
Poor
Bad
Unknown
HELLENIC REPUBLIC
MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE
SPECIAL SECRETARIAT FOR WATER
RIVER BASIN DISTRICT MANAGMENT PLAN
EASTERN PELOPONNESE (RBD03)
ECOLOGICAL STATUS
SURFACE WB
RBD:03
RB: 30 - 31 - 33
No.MAP: 26.3
NOVEMBER 2012


350,000
400,000
450,000
N
Egion
Corinth
GR28
GR27
4,200,000
GR29
Tripolis
GR30
4,150,000
GR31
GR32
Kalamata
GR33
4,100,000
4,050,000
4,000,000
3,950,000
INAHOS R.
DERVENI STREAM
Argos
XERIAS R.
Nafplion
RADOS R.
XORVRIO STREAM
TANOS R.
LAGKADAS STREAM
KOLINIATIKO STREAM
ARAHOVITIKO STREAM
INOUS R.
VRASIATIS STREAM
DAFNES STREAM
EVROTAS R.
KARDARI STREAM
ISOFRONI STREAM
Sparti
KALIVES STREAM
RASINA STREAM
MARIORREMA STREAM
PLATIS R.
0 10 20 40 60
km
SCALE 1:750.000
LEGEND
River Basins
River Subbasins
Water Bodies Subbasins
Urban Areas
Chemical Status
Lake WB / Transitional WB / Coastal WB
Good
Bad
Unknown
Chemical Status
River WB
Good
Bad
Unknown
HELLENIC REPUBLIC
MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE
SPECIAL SECRETARIAT FOR WATER
RIVER BASIN DISTRICT MANAGMENT PLAN
EASTERN PELOPONNESE (RBD03)
CHEMICAL STATUS OF SURFACE WB
RBD:03
RB: 30 - 31 - 33
No.MAP: 27.3
NOVEMBER 2012



LEGEND

River Basins

Groundwater Bodies Quantative Status

Good

Bad

RB	30

CODE	NAME
GR0300010	Kandila Groundwater Body
GR0300030	Tripoli Plateau Groundwater Body

RB	31

CODE	NAME
GR0300020	East Arcadia-West Argolida Groundwater Body
GR0300040	Argoliko Pedio Groundwater Body
GR0300050	Mavrovouni - Didimoi Groundwater Body
GR0300060	Trizinia Groundwater Body
GR0300070	Ermioni Groundwater Body
GR0300080	Portoheli Groundwater Body
GR0300090	Astros Groundwater Body
GR0300100	Parnonas Groundwater Body
GR0300110	Zarakas - Monemvasia Groundwater Body
GR0300120	South East Lakonia Groundwater Body
GR0300130	Neapoli Groundwater Body
GR0300140	Kithira Groundwater Body
GR0300150	Asopos - Glikovrisi Groundwater Body

RB	33

CODE	NAME
GR0300160	Geraki - Gkoritsa Groundwater Body
GR0300170	Elos - Vasilopotamos Groundwater Body
GR0300180	Skala Groundwater Body
GR0300190	Krokees - Githio Groundwater Body
GR0300200	Vardounias river (Platis river) Groundwater Body
GR0300210	Skoutari Groundwater Body
GR0300220	East Taigetos - Agia Marina Groundwater Body
GR0300230	Evrotas Groundwater Body
GR0300240	Ag. Petros - Voutianoi Groundwater Body
GR0300250	Zorou - Sellasia Groundwater Body
GR0300260	Pellana - Skortsino Groundwater Body
GR0300270	Kollines - Vlahokerasia Groundwater Body

HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

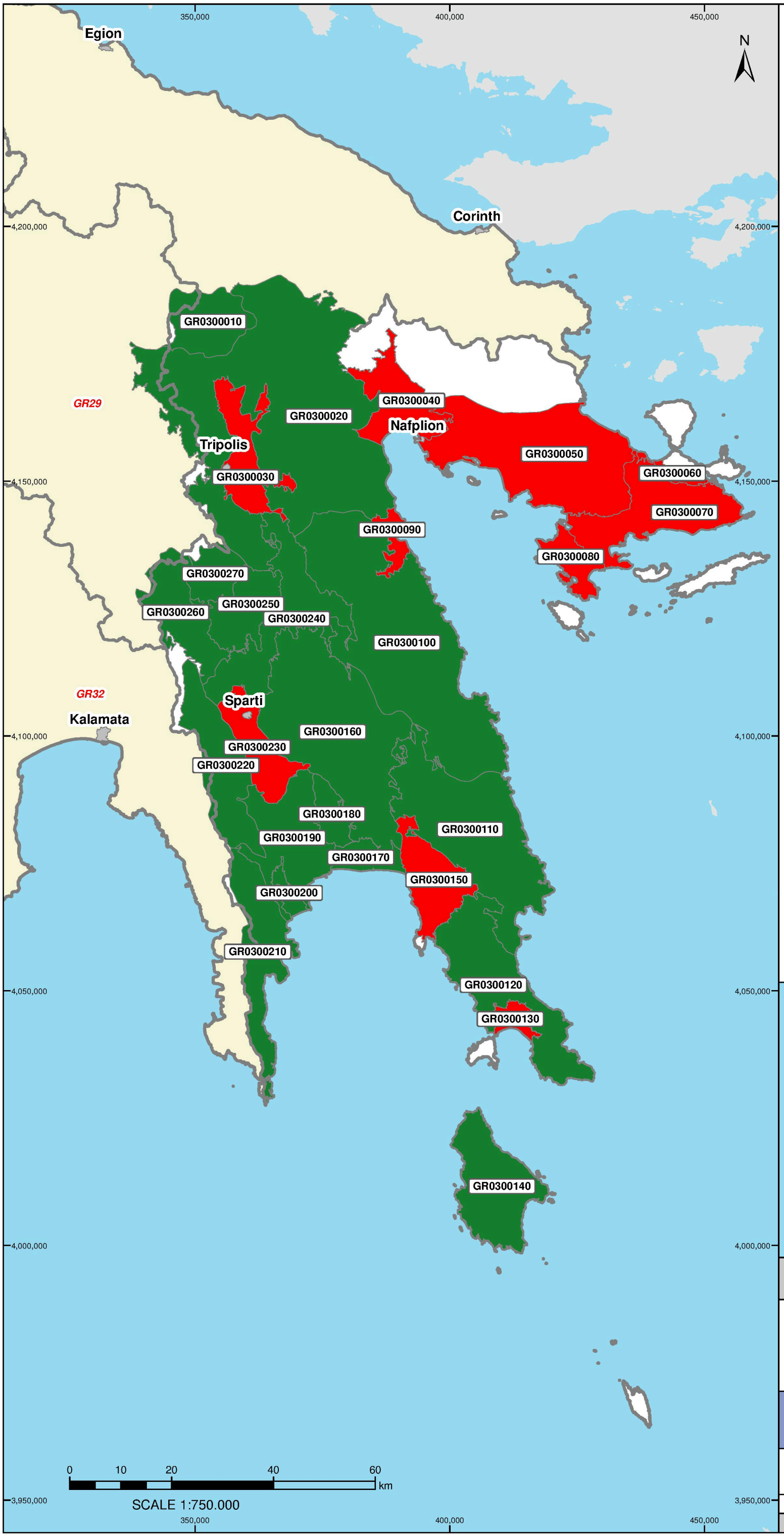
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

QUANTITATIVE STATUS OF GROUNDWATER BODIES

RBD:03	RB: 30 - 31 - 33	No.MAP: **28.3**

NOVEMBER 2012



LEGEND

River Basins

Groundwater Bodies Chemical Status

Good

Bad

RB	30

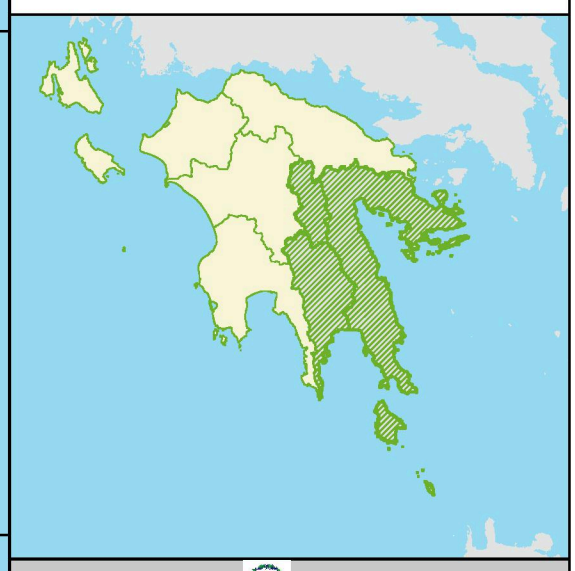
CODE	NAME
GR0300010	Kandila Ground Water Body
GR0300030	Tripoli Plateau Ground Water Body

RB	31

CODE	NAME
GR0300020	East Arcadia-West Argolida Ground Water Body
GR0300040	Argoliko Pedio Ground Water Body
GR0300050	Mavrovouni - Didimoi Ground Water Body
GR0300060	Trizinia Ground Water Body
GR0300070	Ermioni Ground Water Body
GR0300080	Portoheli Ground Water Body
GR0300090	Astros Ground Water Body
GR0300100	Parnonas Ground Water Body
GR0300110	Zarakas - Monemvasia Ground Water Body
GR0300120	South East Lakonia Ground Water Body
GR0300130	Neapoli Ground Water Body
GR0300140	Kithira Ground Water Body
GR0300150	Asopos - Glikovrisi Ground Water Body

RB	33

CODE	NAME
GR0300160	Geraki - Gkoritsa Ground Water Body
GR0300170	Elos - Vasilopotamos Ground Water Body
GR0300180	Skala Ground Water Body
GR0300190	Krokees - Githio Ground Water Body
GR0300200	Vardounias river (Platis river) Ground Water Body
GR0300210	Skoutari Ground Water Body
GR0300220	East Taigetos - Agia Marina Ground Water Body
GR0300230	Evrotas Ground Water Body
GR0300240	Ag. Petros - Voutianoi Ground Water Body
GR0300250	Zorou - Sellasia Ground Water Body
GR0300260	Pellana - Skortsino Ground Water Body
GR0300270	Kollines - Vlahokerasia Ground Water Body



HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

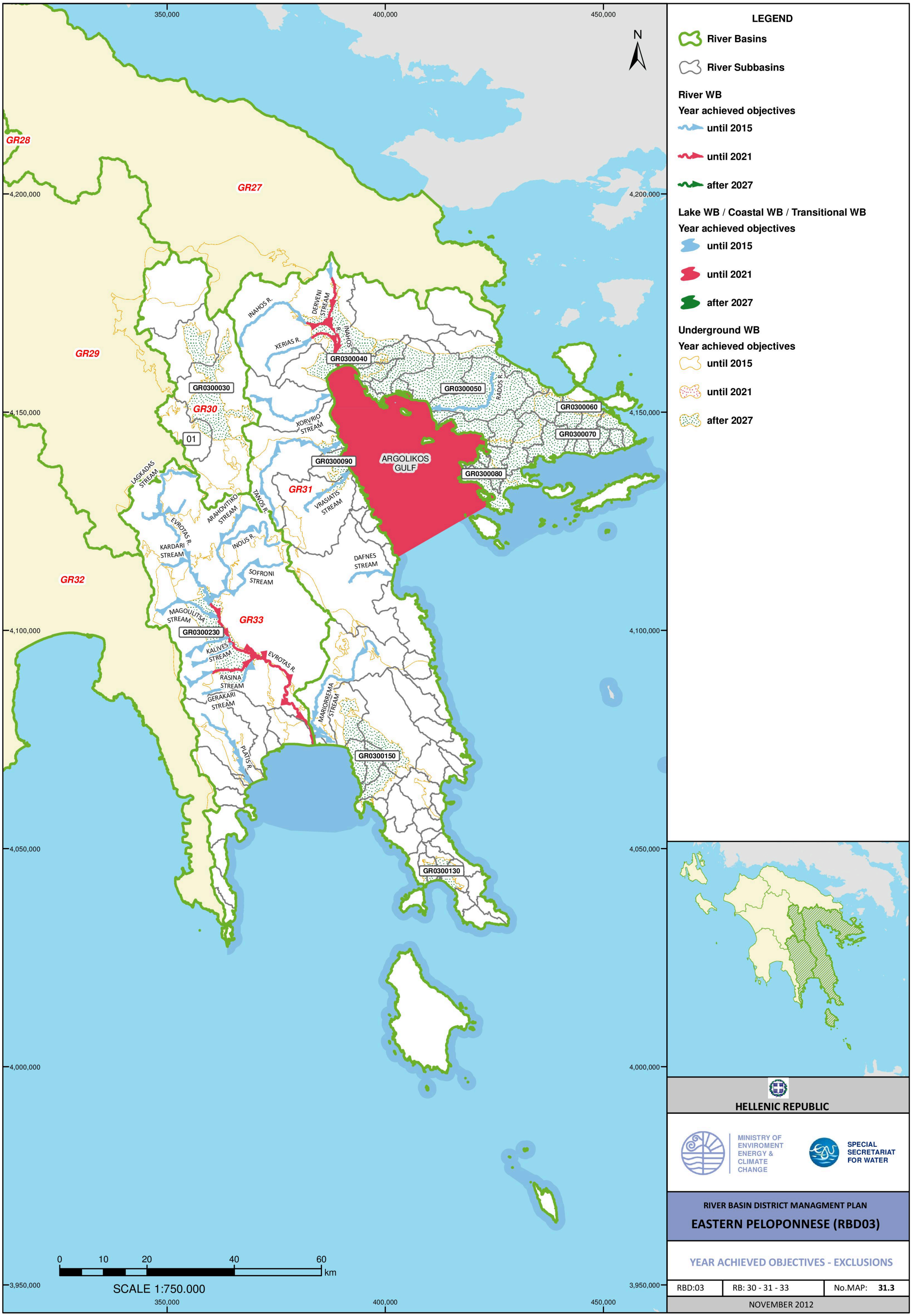
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

CHEMICAL STATUS OF GROUNDWATER BODIES

RBD:03	RB: 30 - 31 - 33	No.MAP: **29.3**

NOVEMBER 2012



LEGEND

- River Basins
- River Subbasins

River WB

Year achieved objectives

- until 2015
- until 2021
- after 2027

Lake WB / Coastal WB / Transitional WB

Year achieved objectives

- until 2015
- until 2021
- after 2027

Underground WB

Year achieved objectives

- until 2015
- until 2021
- after 2027

HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

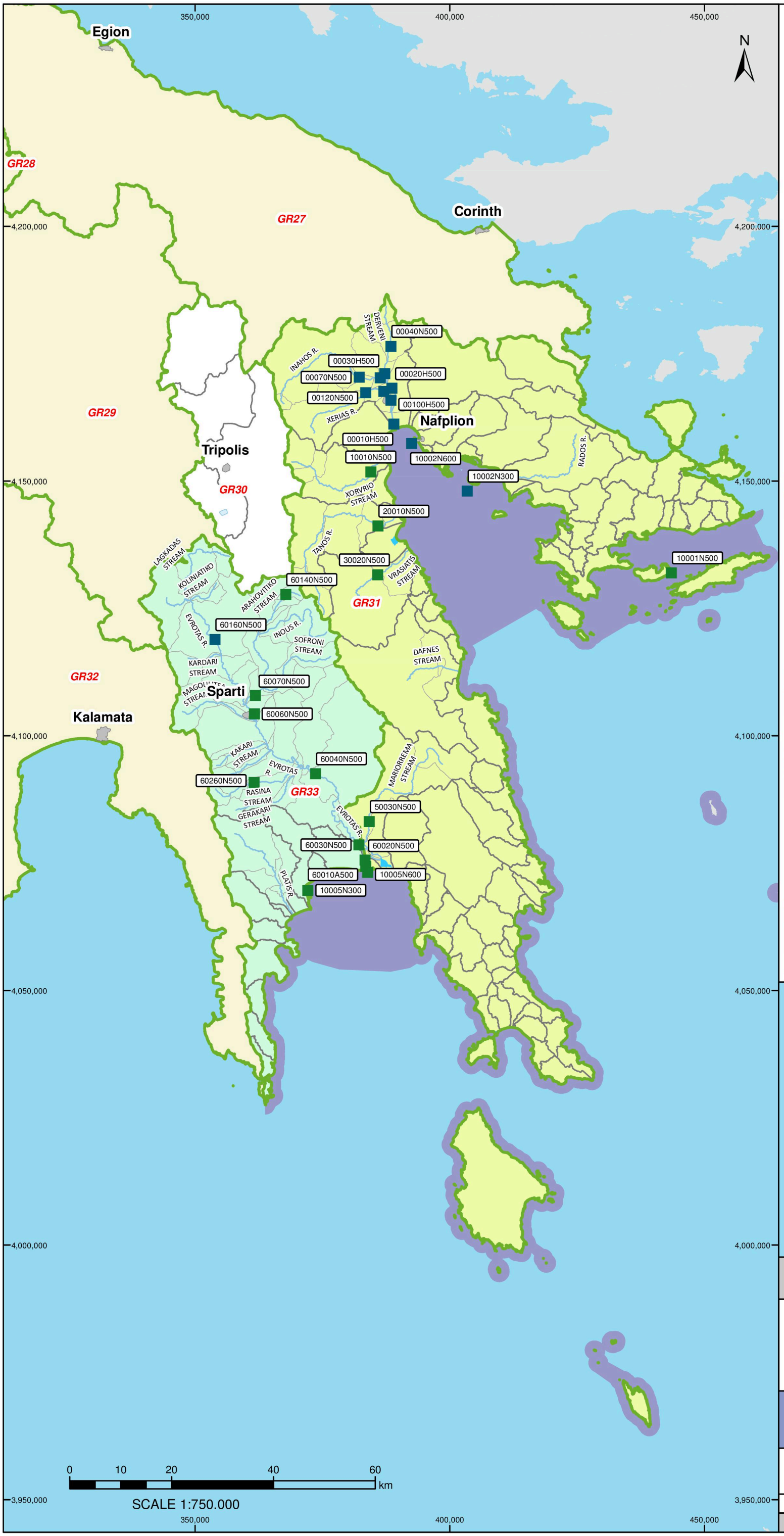
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

YEAR ACHIEVED OBJECTIVES - EXCLUSIONS

RBD:03	RB: 30 - 31 - 33	No.MAP: **31.3**

NOVEMBER 2012



LEGEND

- River Basins
- River Subbasins
- Water Bodies Subbasins
- River WB
- Lake_WB
- Coastal WB
- Transitional WB

Monitoring Stations

- Operational
- Serveillance

RB	31

RIVER WB		
S/N	WB CODE	MONITORING TYPE
00010H500	GR0003000400100010H500	Operational
00020H500	GR0003000400100020H500	Operational
00030H500	GR0003000400100030H500	Operational
00040N500	GR0003000400100040N500	Operational
00060N500	GR0003000400100060N500	Operational
00070N500	GR0003000400100070N500	Operational
00100H500	GR0003000400100100H500	Operational
00110N500	GR0003000400100110N500	Operational
00120N500	GR0003000400100120N500	Operational
10010N500	GR0003000400110010N500	Surveillance
20010N500	GR0003000400120010N500	Surveillance
30020N500	GR0003000400130020N500	Surveillance
50030N500	GR0003000400150030N500	Surveillance

RB	31

COASTAL WB		
S/N	WB CODE	MONITORING TYPE
10002N300	GR000300010002N300	Operational
10002N600	GR000300010002N600	Operational
10001N500	GR000300010001N500	Surveillance

RB	33

RIVER WB		
S/N	WB CODE	MONITORING TYPE
60160N500	GR0003000400160160N500	Operational
60010A500	GR0003000400160010A500	Surveillance
60020N500	GR0003000400160020N500	Surveillance
60030N500	GR0003000400160030N500	Surveillance
60040N500	GR0003000400160040N500	Surveillance
60060N500	GR0003000400160060N500	Surveillance
60070N500	GR0003000400160070N500	Surveillance
60140N500	GR0003000400160140N500	Surveillance
60260N500	GR0003000400160260N500	Surveillance

RB	33

COASTAL WB		
S/N	WB CODE	MONITORING TYPE
10005N300	GR000300010005N300	Surveillance
10005N600	GR000300010005N600	Surveillance

HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

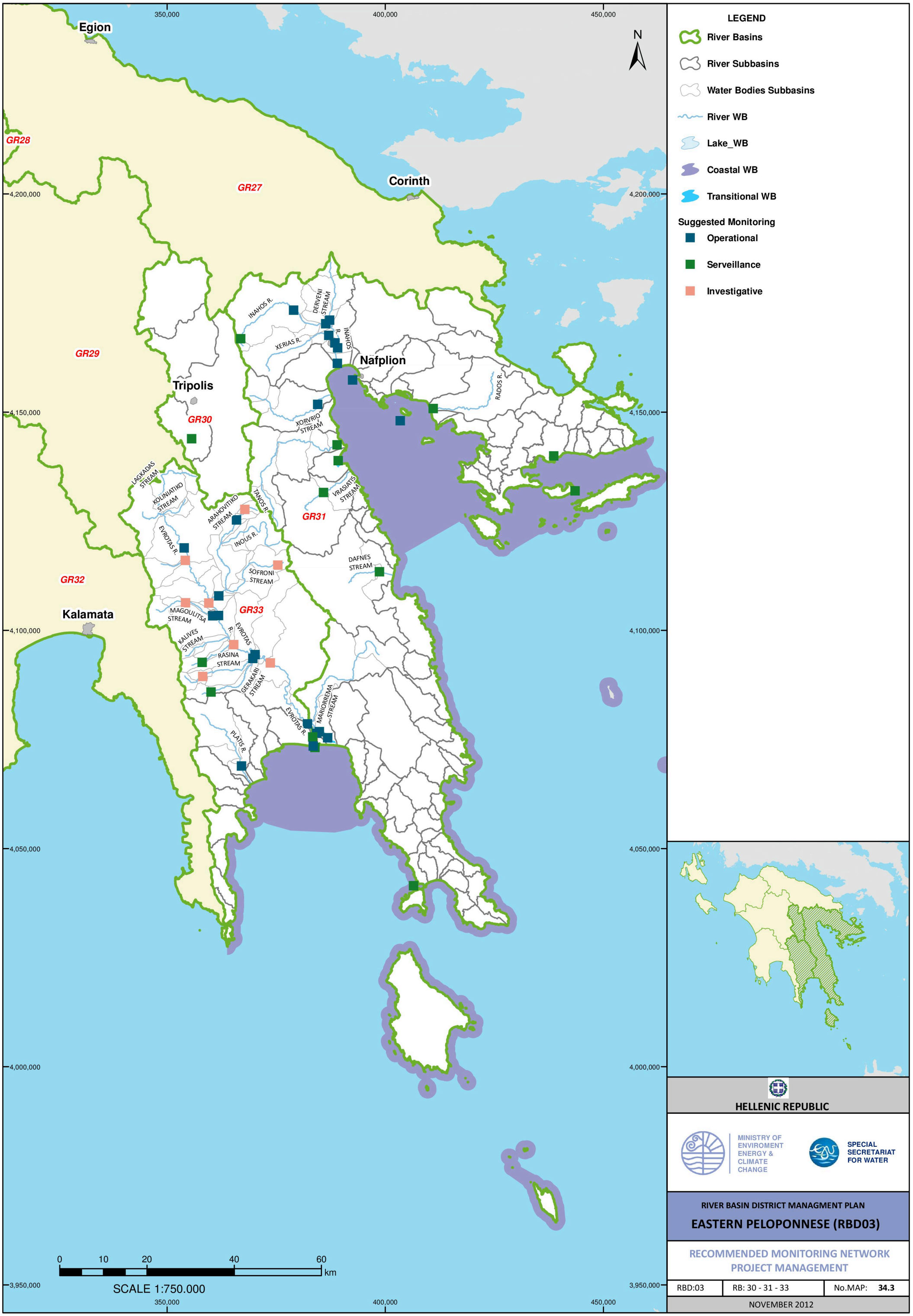
RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

MONITORING NETWORK KYA 140384/2011

RBD:03	RB: 30 - 31 - 33	No.MAP: **33.3**

NOVEMBER 2012



HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

RECOMMENDED MONITORING NETWORK PROJECT MANAGEMENT

RBD:03	RB: 30 - 31 - 33	No.MAP: **34.3**

NOVEMBER 2012

LEGEND

- River Basins
- Groundwater Bodies

Suggested Monitoring

- Operational KYA
- Serveillance KYA
- Operational B' PHASE
- Serveillance B' PHASE

RB	30

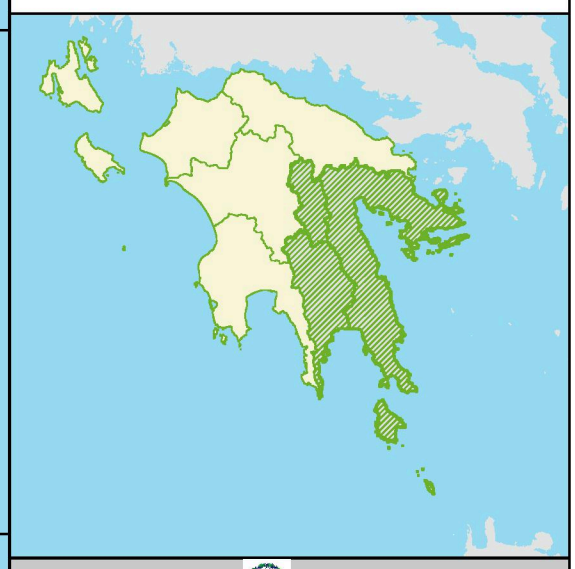
CODE	NAME
GR0300010	Kandila Ground Water Body
GR0300030	Tripoli Plateau Ground Water Body

RB	31

CODE	NAME
GR0300020	East Arcadia-West Argolida Ground Water Body
GR0300040	Argoliko Pedio Ground Water Body
GR0300050	Mavrovouni - Didimoi Ground Water Body
GR0300060	Trizinia Ground Water Body
GR0300070	Ermioni Ground Water Body
GR0300080	Portoheli Ground Water Body
GR0300090	Astros Ground Water Body
GR0300100	Parnonas Ground Water Body
GR0300110	Zarakas - Monemvasia Ground Water Body
GR0300120	South East Lakonia Ground Water Body
GR0300130	Neapoli Ground Water Body
GR0300140	Kithira Ground Water Body
GR0300150	Asopos - Glikovrisi Ground Water Body

RB	33

CODE	NAME
GR0300160	Geraki - Gkoritsa Ground Water Body
GR0300170	Elos - Vasilopotamos Ground Water Body
GR0300180	Skala Ground Water Body
GR0300190	Krokees - Githio Ground Water Body
GR0300200	Vardounias river (Platis river) Ground Water Body
GR0300210	Skoutari Ground Water Body
GR0300220	East Taigetos - Agia Marina Ground Water Body
GR0300230	Evrotas Ground Water Body
GR0300240	Ag. Petros - Voutianoi Ground Water Body
GR0300250	Zorou - Sellasia Ground Water Body
GR0300260	Pellana - Skortsino Ground Water Body
GR0300270	Kollines - Vlahokerasia Ground Water Body



HELLENIC REPUBLIC

MINISTRY OF ENVIROMENT ENERGY & CLIMATE CHANGE

SPECIAL SECRETARIAT FOR WATER

RIVER BASIN DISTRICT MANAGMENT PLAN

EASTERN PELOPONNESE (RBD03)

RECOMMENDED GROUNDWATER MONITORING NETWORK OF RIVER MANAGEMENT PLAN

RBD:03	RB: 29 - 32	No.MAP: **35.3**

NOVEMBER 2012

www.ypeka.gr

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E-mail: info.egy@prv.ypeka.gr

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