



MANAGEMENT PLAN

of the River Basins
of Thessalia River Basin District

Summary

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**DEVELOPMENT OF RIVER BASIN MANAGEMENT PLANS FOR THE WATER DISTRICT OF THESSALIA,
EPIRUS, WESTERN STEREA ELLADA, IN ACCORDANCE WITH THE DIRECTIVE 2000/60/EC, THE LAW
3199/2003 AND THE P.D. 51/2007**

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**DEVELOPMENT OF THE RIVER BASIN MANAGEMENT PLAN FOR THE WATER DISTRICT OF THESSALIA
(GR08)**

PHASE C, DELIVERABLE 6: SUMMARY - MAPS - DRAWINGS

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1. INTRODUCTION

The 2000/60/EC Directive for the establishment of a framework for Community action in the field of water policy or Water Framework Directive, after a long period of discussion and negotiation between the Member States of the European Union came into force on 22 December 2000.

It is a comprehensive and innovative effort to protect and manage water resources and is the most basic institutional tool introduced in the water sector in the European Union, with similar tools be adopted at international level for many years, reflecting the trend towards integrated environmental planning and sustainable management for long-term protection of all waters (surface and groundwater) and ecosystems.

To achieve this goal River Basin Management Plan has to be established, the content of which is described in Article 13 and Annex VII of 2000/60/EC Directive. Each River Basin Management Plan is a strategic document for the River Basin District to which it refers to and provides the necessary information and instructions for the integrated management of water and ecosystems.

The legislative and institutional framework of the country has been harmonized with 2000/60/EC Directive with various legislative provisions (Law 3199/9-12-2003 and its amendments, Presidential Decree 51/2007, Joint Ministerial Decision 39626/2208/E130, Decision 706/2010 of the National Water Committee, Ministerial Decision 51354/2641/E103/2010, Joint Ministerial Decision 140384/2011, Ministerial Decision 1811 of the Minister of Environment, Energy and Climate Change etc.).

With the Contract signed on 15/10/2010, Special Water Secretariat assigned the preparation of the River Basin Management Plan of Western Sterea, Epirus and Thessalia River Basin Districts, in the Consortium: « G. KARAVOKYRIS & PARTNERS CONSULTING ENGINEERS SA - VASILIS PERLEROS – ENVECO SA ENVIRONMENTAL PROTECTION AND ECONOMICS – ANTZOULATOS GERASIMOS – EPEM S.A. – ENVIRONMENTAL PLANNING, ENGINEERING & MANAGEMENT- OMIKRON ECONOMIC & DEVELOPEMENTAL STUDIES L.T.D – KONSTANTINIDIS ELIAS – TSEKOURAS GEORGIOS – KOTZAGEORGIS GEORGIOS – GKARGKOULAS NIKOLAOS ».

According to Article 5 of Law 4117/5-2-2013, the completed River Basin Management Plan, was approved by the National Water Committee upon the recommendation of the Special Water Secretariat of the Ministry of Environment, Energy and Climate Change, and was published in the Government Gazette (FEK 1004/B/24-04-2013).

2. RIVER BASIN DISTRICT MANAGEMENT PLAN

2.1 Contents of the Management Plan

This document is a summary of the River Basin Management Plan of Thessalia River Basin District (GR08) and the following detailed documentation texts are attached:

Table 1: Documentation texts of Thessalia River Basin District Management Plan

DOCUMENTATION TEXTS	
TEXT 1:	RECORD OF THE COMPETENT AUTHORITIES AND DETERMINATION OF THEIR AREA OF RESPONSIBILITY
TEXT 2:	PROTECTED AREAS
TEXT 3:	ECONOMIC ANALYSIS OF THE WATER USES AND DETERMINATION OF THE CURRENT COST RECOVERY DEGREE FOR THE DIFFERENT WATER SERVICES
TEXT 4:	PRELIMINARY ASSESSMENT OF ALTERNATIVE PROPOSALS FOR FLEXIBLE WATER TARIFF POLICY AND COST RECOVERY MECHANISMS
TEXT 5:	IDENTIFICATION AND TYPOLOGY OF SURFACE WATER BODIES. INITIAL AND FURTHER CHARACTERISATION OF GROUNDWATER BODIES
TEXT 6:	TYPE-SPECIFIC REFERENCE CONDITIONS FOR THE TYPES OF SURFACE WATER BODIES
TEXT 7:	FINAL DESIGNATION OF HEAVILY MODIFIED AND ARTIFICIAL WATER BODIES
TEXT 8:	ANALYSIS OF THE ANTHROPOGENIC PRESSURES AND THEIR IMPACTS ON SURFACE AND GROUNDWATER BODIES
TEXT 9:	EVALUATION AND CLASSIFICATION OF THE QUALITATIVE STATUS (ECOLOGICAL AND CHEMICAL) OF SURFACE WATER BODIES
TEXT 10:	EVALUATION AND CLASSIFICATION OF THE QUALITATIVE (CHEMICAL) AND QUANTITATIVE STATUS OF GROUNDWATER BODIES
TEXT 11:	DETERMINATION OF ENVIRONMENTAL OBJECTIVES INCLUDING "EXEMPTIONS" FROM OBJECTIVES ACHIEVEMENT
TEXT 12:	CATALOGUE OF SCHEDULED AND NEW PROJECTS/ ACTIVITIES/ ALTERNATIONS
TEXT 13:	DRAFT PROGRAMME OF MEASURES (BASIC AND SUPPLEMENTARY) FOR THE PROTECTION AND RECOVERY OF WATER BODIES
TEXT 14:	IMPLEMENTATION REPORT OF THE 2006/118/EC DIRECTIVE "ON THE PROTECTION OF GROUNDWATER AGAINST POLLUTION AND DETERIORATION" AND THE JMD 39626/2208/E130/2009
TEXT 15:	EVALUATION OF THE PROPOSED PROGRAMME OF MEASURES, INCLUDING COST EFFECTIVENESS ANALYSIS
TEXT 16:	PUBLIC CONSULTATION PLAN
TEXT 17:	UPDATED MONITORING PROGRAMMES OF THE QUALITATIVE AND QUANTITATIVE STATUS OF SURFACE AND GROUNDWATER BODIES

DOCUMENTATION TEXTS

TEXT 18:	REVISED PUBLIC CONSULTATION PLAN
TEXT 19:	REPORT WITH THE EVALUATION OF THE CONSULTATION
TEXT 20:	STRATEGIC ENVIRONMENTAL IMPACTS ASSESSMENT (SEIA)
TEXT 21:	DRAUGHT AND WATER SCARCITY MANAGEMENT PLAN

2.2 Strategic Environmental Impacts Assessment

For each River Basin Management Plan an environmental report should be carried out. The environmental report determines whether the Plan and the suggested measures are likely to have a significant environmental effect. The environmental report is called Strategic Environmental Impacts Assessment (SEIA) and is applied under the SEA Directive (2001/42/EC).

The assessment of possible impacts of the RBMP concluded that no negative effects are to be expected in a strategy level. On the contrary, in the majority of cases the suggested plan is considered to greatly improve the current state of water resources, either directly or indirectly and synergistically. This conclusion was to be expected, considering that the RBMP design aims in protecting the biodiversity and address multiple issues regarding the management of water resources. In the supplementary measures of Thessalia RBD a specific group of measures is included in order to achieve the objectives of the WFD concerning the surface and groundwater bodies of Pinios RB. These measures were determined after the examination of different scenarios of measures which are related with the achievement of "Good status" in the groundwater bodies and surface water bodies of the Pinios RB.

Three relevant scenarios are evaluated in the SEIA based on environmental, social, development, and economical criteria such as: the achievement of the targets of the Directory 2000/60/EC, the financial cost, the diversion cost, the added value in the agricultural sector, the impact in the production of hydroelectric power and the social-economic impacts.

From the evaluation that took place it was concluded that the alternative management solution which includes the transportation 250 hm³ of water per year from the upstream part of Acheloos river to the RB of Pinios has clear advantages and constitutes the solution that is chosen to be implemented. It is noted for works and activities that are related with the implement of law 4014/2011 and are examined in the RBMP either as measures or as exceptions should be implemented the forecast according to the legislation for the assessment and evaluation of their impacts in the environment.

2.3 Drought and Water scarcity Management Plan

In the framework of the River Basin Management Plan of the River Basin District of Thessalia, a dedicated Drought and Water Scarcity Management Plan (DWSMP) has been developed, based on the principles of proactive management and planning. The main purpose of the DWSMP was to quantify the drought and water scarcity phenomena in the River Basin District, to assess possible methodologies for the prediction of future events, and to propose adequate response measures for the various risk levels.

3. CONSULTATION PROCESS

The public consultation processes have a key role during preparation, reading and revision of the river basin management plans. In addition to 2000/60/EC Directive, there are requirements for public participation in other EU legislation, especially in the Directive on Strategic Environmental Impacts Assessment (Directive 2001/42/EK, SEIA).

The consultation period of the River Basin Management Plans, with a minimum duration of 6 months, began on the **15th of October 2011** and was completed in two phases:

- **Phase A'**

Until **29 of February 2012** the following were discussed:

1. Report on the consultation measures to be taken,
2. Catalogue of stakeholders,
3. Overview of the significant water management issues

- **Phase B'**

On the **2nd of May 2012**, the documentation texts of Thessalia River Basin District Management Plan were published on the on the consultation website of the Greek River Basin Managements Plans (<http://wfd.opengov.gr>).

During Phase B of the consultation the following were discussed:

1. River Basin Management Plan of Thessalia River Basin District,
2. Strategic Environmental Impacts Assessment (SEIA)

On the **31st of October 2012**, Special Water Secretariat announced the completion of the public consultation of the Draft River Basin Management Plan of Thessalia River Basin District.

On April 2013, the consultation of SEIA, which had been sent by the Special Service of Environment of YPEKA to competent authorities to provide advice, was completed.

4. THESSALIA RIVER BASIN DISTRICT

4.1 River basins

Thessalia River Basin District consists of two River Basins: the **Pinios River Basin (GR16)** and the **Almyros – Piliou River Basin (GR17)** . (Annex 1, Map 1: River Basin District - Overview of Thessalia).

4.2 Anthropogenic characteristics

4.2.1 Administrative status

Thessalia River Basin District includes almost the entire Region of Thessalia, small parts of the Region of Sterea Ellada and very small parts of the Regions of Western and Central Macedonia.

Its population, according to 1991 census was 730.945 inhabitants and according to the 2001 census was 750.445, indicating an increase of 2.7%. According to the census of 2011 the population of the River Basin District is 732.762 inhabitants indicating a decrease of 2.3% compared with the 2001 census.

4.2.2 Land Uses

Thessalia River Basin District includes the biggest lowland area in Greece that is under intense irrigation. There is also the industrial area of Volos city which is one of the biggest and oldest metal industries of the country. Moreover, Volos by itself constitutes an important urban center with significant infrastructure of high technology for transportation (road network, railway and harbor). Besides the Larissa and Volos main urban centers, Thessalia River Basin District includes the smaller Trikala and Karditsa cities and about other 32 semi-urban centers that are directly involved with agricultural activities.

The River Basin of Pinios is mainly covered by crops (51% of the total area), while the area covered by forests is also important (34% of the total area). Pasture is 12% of the total area while urban areas are only 2% of the total area.

The River Basin of Almyros – Pilio is heavily forested (56% of the total area), while important part of the area is covered by crops (37% of the total area). Pasture is 4% of the total area while urban areas cover just 3%.

4.2.3 Major water uses

Water uses are distinguished in water supply, irrigation, livestock and industry. The total annual demand for all uses is about 1318 106 m³, with the bulk coming from irrigation, which amounts to

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Thessalia River Basin District (GR08)

about 1200 106 m³ (91%). Regarding to other uses the demand for water supply amounts to 91 106 m³ (6.9%), for industry 15 106 m³ (1%) and for livestock to 12 106 m³ (1%) per year.

About 84% of total annual demand (about 1110 106 m³) derives from abstractions from groundwater bodies through boreholes exploitation to meet mainly the water demand for irrigation. About 120 106 m³ derives from water transfer outside River Basin District (Plastira Reservoir) used to supplement the water supply needs for both irrigation and drinking water of Karditsa greater area.

5. COMPETENT AUTHORITIES

The competent authorities of Thessalia River Basin District, are presented in the following table (Annex 1, Map 2: Map of Competent Authorities).

Table 2: Competent Authorities and areas of responsibility

	River Basin	Percentage of area in every Region	Competent Decentralized Authority	National Competent Authority
Thessalia River Basin District (GR08)	Pinios (GR16)	Thessalia (89,97%), Western Macedonia (1,76%), Central Macedonia (1,04%), Stereia Ellada (7,19%), Epirus (0,04%)	Thessalia	Special Secretariat for Water / YPEKA
	Almyrou-Piliou Streams (GR17)	Thessalia (99,96%), Stereia Ellada (0,04%)	Thessalia	Special Secretariat for Water / YPEKA

6. DESIGNATION OF WATER BODIES

6.1 Surface water bodies

The surface water bodies within a river basin district were identified as falling within either one of the following surface water categories: rivers, lakes, transitional waters or coastal waters (Annex I, Map 3:Categories of Surface Water Bodies) In the River Basin District of Thessalia all surface water body types are identified, with the exemption of the transitional waters(Annex I, Map 4: Types of Surface Water Bodies) .

6.1.1 Rivers

In the River Basin District of Thessalia seventy-two (72) rivers are identified and their respective typology is shown in the following table.

Table 3: River water body typology

RW Typology	Description	Number of RW in RBD of Thessalia
NgL0	Great lowland and rivers with relatively smooth slope (< 1.2 ‰), which flow in the region of the Southern Aegean Sea	7
NgL1	Great lowland rivers with relatively steel slope (> 1.2 ‰), which flow in the region of the Southern Aegean Sea	2
NmL0	Medium lowland rivers with relatively smooth slope (< 1.2 ‰), which flow in the region of the Southern Aegean Sea	9
NmL1	Medium lowland rivers with relatively steep slope (> 1.2 ‰), which flow in the region of the Southern Aegean Sea	14
NsL0	Small lowland and semi-mountainous rivers with relatively steep slope (> 1.2 ‰), which flow in the region of the Southern Aegean Sea	7
NsL1	Small lowland and semi-mountainous rivers with relatively steep slope (> 1.2 ‰), which flow in the region of the Southern Aegean Sea	27
NsH1	Small highland and mountainous rivers with relatively steep slope (> 1.2 ‰), which flow in the region of the North Aegean Sea	1
SsL1	Small lowland and semi-mountainous rivers with relatively steep slope (> 1.2 ‰), which flow in the region of the Southern Aegean Sea	5

6.1.2 Lakes

In the River Basin District of Thessalia there are three water bodies in the category of lakes, Karla lake, Smokovo Reservoir and Argyropouliou lake. Karla lake is identified as L-M5/7A type and the other two as L-M8 type.

6.1.3 Coastal waters

In the River Basin District of Thessalia there are seven (7) coastal waters identified.

The statistical characteristics of surface water bodies of RBD of Thessalia (08), as these were identified per category, are presented in the table below.

Table 4: Statistical characteristics of surface water bodies of RBD of Thessalia

Type of WB	Number	Characteristic size	Minimum	Mean	Maximum	Total
Rivers	72	Length (km)	2.33	19.27	66.47	1,387
Lakes	3	Surface (km ²)	0.49	15.11	34.93	45.3
Coastal waters	7	Surface (km ²)	19.69	134.12	592.78	938.8

6.2 Groundwater bodies

Initial characterization of groundwater bodies was performed in order to assess their uses and the degree to which they are at risk of failing to meet the objectives (Annex 1, Map 5: Map of Groundwater Bodies).

For those groundwater bodies to which significant problems or trends for deterioration of their quantitative or qualitative status were identified or they are characterised by increased importance for local economy, or/and for the environment, further characterization was performed.

Thirty- two (32) GWBs are designated at the RBD of Thessalia (08) and for twelve (12) of them, “further characterization” was carried out.

The statistical characteristics of the groundwater bodies identified in the RBD of Thessalia (08), are presented in the table below.

Table 5: Statistical characteristics of groundwater bodies of RBD of Thessalia

Type of WB	Number	Minimum area (km ²)	Maximum area (km ²)	Total area (km ²)
GWBs	32	37.11	1262	12,550

6.3 Heavily modified water bodies (HMWB) and Artificial water bodies (AWB)

Artificial and heavily modified water bodies resulted from human activities necessary in order to meet a variety of human needs and activities, such as flood protection, water storage for irrigation and drinking-water supply, navigation etc.

Four (4) heavily modified water bodies and four (4) artificial water bodies are identified from a total of eighty – two (82) surface water bodies (rivers, lakes and coastal waters) in RBD of Thessalia (08).

In the context of the current RBMP the identified heavily modified water bodies are treated like surface water bodies that most closely resemble the HMWBs, i.e. the environmental objective corresponds to the “good ecological and chemical status“.

6.4 Protected Areas

The register of protected areas of the RBD of Thessalia, specified under Article 6 of the WFD, includes the following types of protected areas.

6.4.1 Areas designated for the abstraction of water intended for human consumption

The GWBs of Systima Ekkaras-Velesioton, Systima Narthakiou-Vryision, Systima Koziaka, Systima Paliosamarinas-Voulas, Systima Damasiou-Titanou, Systima Kato Olympou-Ossas, Systima Kranias-Elassonos are included to this type of protected areas that are being used for the abstraction of water intended for human consumption of the population of the RBD of Thessalia (08). No surface water bodies are included in this type of protected areas (Annex 1, Map 7.1:Protected areas:Drinking Water Protection Areas) .

6.4.2 Bodies of water designated as recreational waters including areas designated as bathing waters under the Directive 2006/7/EC

In RBD of Thessalia (08) sixty-seven (67) areas are designated as bathing waters under the Directive 2006/7/EC of which six (6) are identified at the Pinios River Basin (GR16) and sixty one (61) at the Almyros-Piliou River Basin

6.4.3 Nutrient- sensitive areas (Annex 1, Map 7.3: Protected areas: Nutrient - sensitive areas)

Areas vulnerable to nitrates from agricultural sources under Directive 91/676/EEC

Pedio Thessalias is a new area designated as vulnerable to nitrates from agricultural sources in the RBD of Thessalia (08), according to the RBMP of Thessalia. This area constitutes an expansion of the existing vulnerable zone and is proposed to be included to the registry of vulnerable areas to nitrates from agricultural sources and it seems to be connected with all the GWBs in the RBD of Thessalia except for the Systimata Piliou.

Areas designated as sensitive under Directive 91/271/EEC

One area has been identified as sensitive of eutrophication (Annex II, A, a, Common Ministerial Decree 5673/400/1997) in the RBD of Thessalia (08) and it is the coastal waters of Pagassitikos Kolpos kai Ormos Volou.

6.4.4 Areas designated for the protection of habitats or species

Twenty seven (27) areas are included in the NATURA 2000 Network where the maintenance or improvement of the status of water (surface and groundwater) is an important factor in their protection. Eleven (11) of them, are Special Areas of Conservation (SAC), fourteen (14) are Special Protection Areas (SPA) and two (2) are protected as both SAC and SPA (Annex 1, Map 7.4: Protected areas: Habitats & Birds protection areas)

6.4.5 Areas designated for the protection of economically significant aquatic species

Two (2) areas are designated for the protection of economically significant aquatic species. The first one is the Potamos Portaikos river and the second one is the coastal waters of Kentriko tmima akton Thessalias (Delta Pineiou) (Annex 1, Map 7.2: Protected areas: Economically significant aquatic species - protection areas & Recreational waters).

7. ANALYSIS OF PRESSURES IN WATER BODIES

The estimation of pressures in the water bodies takes into consideration recorded pressures as a whole (pollution, water abstraction, morphological changes etc), in order to comprehend the most significant management problems and failures in each river basin as well as to clarify the way pressures impact water bodies separately.

Urban Wastewater

In the RBD of Thessalia operate 15 Wastewater Treatment Plants (WWTP), four (4) of which serve the population in the Priority B agglomeration and eleven (11) serve the population in the Priority C agglomeration.

Moreover, twenty seven (27) Priority C agglomerations are not connected with existing WWTP and about 20 agglomerations with less than 2000 are not connected to existing WWTP.

Industry

In the River Basin District (RBD) of Thessalia 651 industrial plants have been recorded. The 412 industrial plants (almost 63% of the total number) are located to the River Basin of Pinios. Among those, 21 are IPPC facilities according to the Directive 2001/8/EC and only 7 of them are located within the boundaries of industrial zones. There are three industrial zones, Larissa, Volos and Karditsa industrial zones.

Livestock Farming

In all Regional Units of the RBD of Thessalia there is a significant number of cattle farm units (about 65% of livestock farming units) and the rest is pig farm units and poultry farm units. There is only one pig farm unit that is IPPC facility. The majority of the farm units is concentrated in the Pinios River Basin.

Landfill Sites – Uncontrolled Waste Dumping Sites

In the RBD of Thessalia operate 51 Landfills, 13 of which are located in Karditsa Regional unit, 12 in Larissa Regional unit, 6 in Magnisia Regional unit and 20 in Trikala Regional unit. The majority of them (77%) is located within the Pinios River Basin. All landfills are closed but most of them are not rehabilitated. All of them have the permission for rehabilitation.

In the RBD of Thessalia operate four (4) sanitary landfills (Larissa, Trikala, Volos, Argalasti). Larissa landfill serves the whole regional unit, the Trikala landfill serves the Trikala and Karditsa regional

units, the Volos landfill serves most of the Magnisia regional units and Argalasti landfill serves most of the broader area of Pilio.

Mines – Quarry

In the RBD of Thessalia the number of sites is 29. Most of them (72%) are located in the Pinios River Basin. The mining activity is mostly concentrated in quarries where aggregate is collected.

Aquacultures

In the RBD of Thessalia there is not any significant number of aquacultures. Most of the units concentrate in the Trikala Regional unit and refer to the fresh water aquacultures.

Agriculture

In the river basin of Thessalia organic load exceeds 10kg/ha/yr where over 90% derives from livestock farming. The nitrogen load exceeds 5kg/ha/yr where over 60 % derives from livestock farming and the rest from urban waste and agricultural activity. The phosphorus load is estimated about 0.5kg/ha/yr where over 70% derives from agricultural activity.

In order to co-evaluate the different categories of pressures in **surface waters** and finally estimate total pressure, pressure intensity criteria have been determined. Taking into account total pressure in each sub-basin as well as the connection between sub-basins and water bodies, the characterization of water bodies has been carried out concerning the possibility to achieve the environmental objectives of the WFD, while simultaneously the causes of failure have been assessed.

Over 50% of the river water bodies is very possible that they will not achieve the environmental objectives of the WFD whereas for lake and coastal water bodies it is less than 30%. The main reason for not achieving the environmental objectives of the WFD seems to be agriculture, which compounds water receiver's eutrophication and deoxygenation phenomena. At the same time, industrial activity that has been recorded in the RBD, may result in the receiver's pollution with priority substances, which have a negative impact in the chemical status of the receiver, and special pollutants, which affect the ecological status of the water bodies.

Pressures in **groundwater bodies** affect their natural function, which according to the Directive 2000/60/EC can be described and determined through their quantitative and chemical status. Because of the existence of an important number of karstic groundwater systems in the RBD of Thessalia, an extended and intense water abstraction occurs today through boreholes exploitation (about 30,000 to 35,000) in order to meet the needs of irrigation demand. Ten (10) GWBs out of 32, face significant quantitative issues given that for many years the over abstraction has led to the

gradual reduction of the permanent groundwater reserves. As far as the chemical status is concerned, the point and diffuse pollutants affect significantly only four (4) GWBs that appear to have high concentrations of nitrates.

The following maps present the pressure analysis elements identified in the Western Sterea Ellada River Basin District:

- Annex 1, Map 12: Point pressures
- Annex 1, Map 13: Diffuse Pressures on Surface Water Bodies

8. STATUS OF WATER BODIES

8.1 Assessment and classification of status of surface water bodies

Surface water body status is determined by its ecological and chemical status. “Good surface water status” is defined as the status achieved by a surface water body when both its ecological status and its chemical status are at least “good”.

8.1.1 Surface water bodies ecological status

Ecological status mainly concerns biological parameters, depending on WB category, and secondly general physico-chemical conditions or other parameters (specific pollutants).

The surface WBs that will not achieve “good” status by 2015, are estimated in forty-nine (49) in the Thessalia RBD from a total of is seventy two (72) (Annex 1, Map 8: Ecological status & ecological potential of Surface Water Bodies). Specifically:

- The ecological status of thirteen (13) rivers, with total length 197.61 km, which corresponds to 14.24% of total length of all rivers of the RBD, is classified as “good ecological status”, while the ecological status of forty-nine (49) rivers, with total length 974.38 km, which corresponds to 70% of total length of all rivers of RBD is classified as less than good ecological status. Due to the lack of data, ecological status of ten (10) rivers was not determined.
- The ecological status of the Techniti Limni Argyropouliou, with a surface of 0.49 km², is classified as “moderate” whereas the ecological status of Techniti Limni Karlas and Techniti Limni Smokovou is characterized as “Unknown”.
- The ecological status of five (5) coastal waters, with total surface 312.71 km², which corresponds to 33.31% of total surface of all coastal waters of RBD, is classified as “high or good ecological status”, when the ecological status of two (2) coastal waters, with total surface 626.15 km², which corresponds to 66.7% of surface of all coastal waters of RBD is classified as less than good ecological status.

8.1.2 Surface water bodies chemical status

Chemical status is directly related to the presence of priority substances in surface waters (Annex 1, Map 9: Chemical Status of Surface Water Bodies) and can be characterized as:

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- **“Good”**, when all parameters meet the Environmental Quality Standards set out in Common Ministerial Decree 51354/2641/E103/2010, Annex 1, Part A.
- **"Failing to achieve good"**, when even one of the parameters does not meet the Environmental Quality Standards set out in Common Ministerial Decree 51354/2641/E103/2010, Annex 1, Part A.

Due to the lack of data related to the monitoring of priority substances in the WBs of RBD of Thessalia, the chemical status of many WBs is characterized as “unknown”. Specifically:

- The chemical status of twenty seven (27) rivers, with total length 400.86 km, which means 29% of total length of all rivers of RBD, is classified as “good chemical status”. Due to the lack of data, the chemical status of forty (40) rivers is not classified in any of the two classes.
- The chemical status of the Techniti Limni Argyropouliou is classified as “moderate” whereas the chemical status of Techniti Limni Karlas and Techniti Limni Smokovou is characterized as “Unknown”.

The chemical status of two (2) coastal waters, with total surface 626.15 km², which corresponds to 66.69% of total surface of all coastal waters of RBD, is classified as “less than good status”, when the chemical status of five (5) coastal waters, with total surface 312.71 km², which corresponds to 33.3% of surface of all coastal waters of RBD is classified as “Unknown” chemical status due to the lack of data.

The results of the classification of ecological and chemical status for each surface water body, are presented in the table below.

Table 6: Classification of surface water bodies status of the RBD of Thessalia

WB category	WB code	WB name	Ecological status	Chemical Status	Total Status
RW	GR0816R000000062A	1T	Unknown	Below Good	Unknown
RW	GR0816R000000064A	7T	Unknown	Unknown	Unknown
RW	GR0816R000000163N	AMYROS P.	Poor	Unknown	Poor
RW	GR0816R000101001N	ZILIANA P.	Moderate	Good	Moderate
RW	GR0816R000200003N	PINEIOS P. 2	Moderate	Unknown	Moderate
RW	GR0816R000200004N	PINEIOS P. 3	Poor	Unknown	Poor
RW	GR0816R000200005N	PINEIOS P. 4	Poor	Good	Poor
RW	GR0816R000200015N	PINEIOS P. 5	Poor	Good	Poor
RW	GR0816R000200016A	PINEIOS P. 7	Good	Unknown	Unknown

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WB category	WB code	WB name	Ecological status	Chemical Status	Total Status
RW	GR0816R000200017H	PINEIOS P. 6	Poor	Unknown	Poor
RW	GR0816R000200020N	PINEIOS P. 8	Moderate	Unknown	Moderate
RW	GR0816R000200021N	PINEIOS P. 9	Poor	Good	Poor
RW	GR0816R000200022N	PINEIOS P. 10	Moderate	Good	Moderate
RW	GR0816R000200039N	PINEIOS P. 11	Poor	Below Good	Poor
RW	GR0816R000200053N	PINEIOS P. 12	Moderate	Good	Moderate
RW	GR0816R000200056N	ION P. 1	Moderate	Unknown	Moderate
RW	GR0816R000200060N	ION P. 2	Unknown	Good	Unknown
RW	GR0816R000201002N	PINEIOS P. 1	Poor	Below Good	Poor
RW	GR0816R000202006N	TITARISIOS P. 1	Poor	Good	Poor
RW	GR0816R000202007N	TITARISIOS P. 2	Poor	Unknown	Poor
RW	GR0816R000202013N	TITARISIOS P. 3	Poor	Unknown	Poor
RW	GR0816R000202014N	TITARISIOS P. 4	Good	Unknown	Unknown
RW	GR0816R000202108N	SMOLIOTIKO R.	Good	Good	Good
RW	GR0816R000202209N	KARKATSELI R.	Good	Unknown	Unknown
RW	GR0816R000202310N	ELASSONITIKOS P.	Moderate	Good	Moderate
RW	GR0816R000202411N	XERIAS R.	Good	Unknown	Unknown
RW	GR0816R000202512N	TITARISIOS P. - PARAPOTAMOS LIANOPOTAMOS	Poor	Unknown	Poor
RW	GR0816R000204018H	KOUSMPASANIOTIKO R. 1	Unknown	Unknown	Unknown
RW	GR0816R000204019N	KOUSMPASANIOTIKO R. 2	Poor	Unknown	Poor
RW	GR0816R000206023N	ENIPEFS P. 1	Poor	Good	Poor
RW	GR0816R000206036N	ENIPEFS P. 2	Poor	Unknown	Poor
RW	GR0816R000206037N	ENIPEFS P. 3	Poor	Unknown	Poor
RW	GR0816R000206038N	ENIPEFS P. 4	Moderate	Unknown	Moderate
RW	GR0816R000206124N	KALENTZIS P. 1	Poor	Good	Poor
RW	GR0816R000206125N	KALENTZIS P. 2	Poor	Below Good	Poor
RW	GR0816R000206226N	SOFADITIS P. 1	Poor	Unknown	Poor
RW	GR0816R000206227N	FARSALLOTIS P. 1	Poor	Unknown	Poor
RW	GR0816R000206228N	MAKRYREMA	Poor	Unknown	Poor
RW	GR0816R000206229N	FARSALLOTIS P. 2	Poor	Unknown	Poor
RW	GR0816R000206230N	SOFADITIS P. 2	Unknown	Unknown	Unknown
RW	GR0816R000206231H	SOFADITIS P. 3	Poor	Good	Poor

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WB category	WB code	WB name	Ecological status	Chemical Status	Total Status
RW	GR0816R000206232N	SMOKOVITIKO R.	Moderate	Good	Moderate
RW	GR0816R000206233N	TSATSORREMA	Moderate	Good	Moderate
RW	GR0816R000206234N	PAPOUSA R.	Moderate	Good	Moderate
RW	GR0816R000206235A	TAFROS XYNIADAS	Good	Unknown	Unknown
RW	GR0816R000208040N	MEGA REMA 1	Poor	Unknown	Poor
RW	GR0816R000208041N	MEGA REMA 2	Poor	Unknown	Poor
RW	GR0816R000210042N	LITHAIOS P. 1	Moderate	Unknown	Moderate
RW	GR0816R000210045H	LITHAIOS P. 2	Poor	Good	Poor
RW	GR0816R000210046N	LITHAIOS P. 3	Poor	Unknown	Poor
RW	GR0816R000210047N	LITHAIOS P. 4	Moderate	Below Good	Moderate
RW	GR0816R000210143N	NEOCHORITIS P.	Poor	Unknown	Poor
RW	GR0816R000210144N	NEOCHORITIS P. - PARAPOTAMOS	Good	Good	Good
RW	GR0816R000212048N	PAMISOS P. 1	Poor	Unknown	Poor
RW	GR0816R000212049N	PAMISOS P. 2	Good	Unknown	Unknown
RW	GR0816R000214050N	DYTIKI KOITI TRIKALON	Poor	Good	Poor
RW	GR0816R000216051N	PORTAIKOS P. 1	Poor	Unknown	Poor
RW	GR0816R000216052N	PORTAIKOS P. 2	Good	Unknown	Unknown
RW	GR0816R000218054N	MALAKASIoTIKO R.	Good	Good	Good
RW	GR0816R000218155N	KLEINOVITIKOS P.	Good	Good	Good
RW	GR0816R000220057N	TRANO POTAMI	Moderate	Good	Moderate
RW	GR0816R000222058N	GKREMOS R.	Good	Unknown	Unknown
RW	GR0816R000224059N	XIROPOTAMOS	Good	Good	Good
RW	GR0816R000301061N	DERMPINAS R.	Moderate	Good	Moderate
RW	GR0817R000101065N	XIROLAKKAS R.	Moderate	Good	Moderate
RW	GR0817R000301066N	POURI R.	Moderate	Good	Moderate
RW	GR0817R000501067N	RAKOPOTAMO	Moderate	Good	Moderate
RW	GR0817R000701068N	LACHANORREMA	Unknown	Unknown	Unknown
RW	GR0817R000901069N	CHOLOREMMA	Unknown	Unknown	Unknown
RW	GR0817R001101070N	XERIAS ALMYROU R.	Unknown	Unknown	Unknown
RW	GR0817R001301071N	PLATANOREMMA R.	Unknown	Unknown	Unknown
RW	GR0817R001501072N	XIROREMMA R.	Unknown	Unknown	Unknown
LW	GR0816L000000002H	TECHNITI LIMNI KARLAS	Unknown	Unknown	Unknown
LW	GR0816L000000003H	TECHNITI LIMNI	Unknown	Unknown	Unknown

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WB category	WB code	WB name	Ecological status	Chemical Status	Total Status
		SMOKOVOU			
LW	GR0816L000000001H	TECHNITI LIMNI ARGYROPOULIOU	Moderate	Below Good	Moderate
CW	GR0816C0001N	VOREIO TMIMA AKTON THESSALIAS	High	Unknown	Unknown
CW	GR0816C0002N	KENTRIKO TMIMA AKTON THESSALIAS (DELTA PINEIOU)	High	Unknown	Unknown
CW	GR0817C0003N	NOTIO TMIMA AKTON THESSALIAS	High	Unknown	Unknown
CW	GR0817C0004N	THALASSA PILIOU	High	Unknown	Unknown
CW	GR0817C0006N	PAGASSITIKOS KOLPOS	Moderate	Below Good	Unknown
CW	GR0817C0005N	STENA SKIATHOU	High	Unknown	Moderate
CW	GR0817C0007H	ORMOS VOLOU	Moderate	Below Good	Moderate

8.2 Assessment and classification of groundwater bodies status

The overall groundwater status is determined by the poorer of its quantitative status and its chemical status. As “good groundwater status” is determined a groundwater status when both its quantitative status and its chemical status are at least “good”.

8.2.1 Groundwater bodies quantitative status

The quantitative status of ten (10) GWBs is classified as “Poor”. The surface of these WBs covers about 3777 km², corresponding to 30% of the total groundwater surface of the RBD of Thessalia (Annex 1, Map 6.1: Quantitative Status of Ground Water Bodies).

8.2.2 Groundwater bodies chemical status

The chemical status of four (4) GWBs is classified as “Poor”. The surface of these WBs covers about 2,946 km², corresponding to 23.5% of the total groundwater surface of the RBD of Thessalia (Annex 1, Map 6.2: Chemical Status of Ground Water Bodies).

The results of the classification of quantitative and chemical status for each GWB are presented in the table below.

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Table 7: Quantitative – qualitative (chemical) status for each GWB in RBD of Thessalia

RB code	WB code	WB name	Quantitative status	Chemical status
GR16	GR0800010	SYSTIMA KOZIAKA	Good	Good
GR16	GR0800020	SYSTIMA PALIOSAMARINAS-VOULAS	Good	Good
GR16	GR0800030	SYSTIMA PEDIADAS NOTIODYTIKIS THESSALIAS	Poor	Poor
GR16	GR0800040	SYSTIMA SARANTAPOROU	Good	Good
GR16	GR0800050	SYSTIMA KRANIAS-ELASSONOS	Good	Good
GR16	GR0800060	SYSTIMA POTAMIAS	Good	Good
GR16	GR0800070	SYSTIMA DAMASIOU-TITANOU	Good	Good
GR16	GR0800080	SYSTIMA FYLLIOU-ORFANON	Poor	Good
GR16	GR0800100	SYSTIMA EKKARAS-VELESIOTON	Poor	Good
GR16	GR0800110	SYSTIMA LARISAS-KARLAS	Poor	Good
GR16	GR0800120	SYSTIMA KATO OLYMPOU-OSSAS	Good	Good
GR16	GR0800130	SYSTIMA TAOUSANIS-KALOU NEROU	Poor	Poor
GR16	GR0800180	SYSTIMA NARTHAKIOU-VRYSION	Poor	Good
GR16	GR0800190	SYSTIMA CHASION-ANTICHASION	Good	Good
GR16	GR0800200	SYSTIMA XYNIADOS	Poor	Good
GR16	GR0800210	SYSTIMA ELASSONAS-TSARITSANIS	Good	Good
GR16	GR0800220	SYSTIMA KONOU TITARISIOU	Poor	Good
GR16	GR0800230	SYSTIMA KONOU PINEIOU-PORTAIKOU- PAMISOU	Good	Good
GR16	GR0800240	SYSTIMA YDROFORION CHASION- FARKADONAS	Good	Good
GR16	GR0800250	SYSTIMA YDROFORION KATO OLYMPOU- SARANTAPOROU	Good	Good
GR16	GR0800260	SYSTIMA YDROFORION MAKRYCHORIOU- SYKOURIOU	Poor	Good
GR16	GR0800270	SYSTIMA YDROFORION MAVROVOUNIOU- OSSAS	Good	Good
GR16	GR0800290	SYSTIMA YDROFORION ANO ROU ENIPEA	Good	Poor
GR16	GR0800300	SYSTIMA YDROFORION XYNIADAS- KEDROU	Good	Good
GR16	GR0800310	SYSTIMA YDROFORION ELATIS-RENTINAS	Good	Good
GR16	GR0800320	SYSTIMA YDROFORION MALAKASIOTIKOU REMATOS	Good	Good
GR17	GR0800090	LOFODES SYSTIMA ALMYROU- VELESTINOY	Good	Good
GR17	GR0800140	SYSTIMA ALMYROU	Poor	Poor
GR17	GR0800150	SYSTIMA MAVROVOUNIOU-KARLAS	Good	Good
GR17	GR0800160	SYSTIMA ORTHRYOS	Good	Good
GR17	GR0800170	SYSTIMATA PILIOU	Good	Good
GR17	GR0800280	SYSTIMA YDROFORION N.ANCHIALOU- N.IONIAS	Good	Good

8.3 Heavily modified and Artificial water bodies status

The results of the classification of status for each heavily modified and artificial water body are presented in the table below.

Table 8: Classification AWB status of RBD of Thessalia

WB category	WB code	WB name	Ecological status	Chemical Status
RW	GR0816R000000062A	1T	Unknown	Below Good
RW	GR0816R000000064A	7T	Unknown	Unknown
RW	GR0816R000200016A	PINEIOS P. 7	Good	Unknown
RW	GR0816R000200017H	PINEIOS P. 6	Poor	Unknown
RW	GR0816R000204018H	KOUSMPASANIOTIKO R. 1	Unknown	Unknown
RW	GR0816R000206231H	SOFADITIS P. 3	Poor	Good
RW	GR0816R000206235A	TAFROS XYNIADAS	Good	Unknown
RW	GR0816R000210045H	LITHAIOS P. 2	Poor	Good
LW	GR0816L000000002H	TECHNITI LIMNI KARLAS	Unknown	Unknown
LW	GR0816L000000003H	TECHNITI LIMNI SMOKOVOU	Unknown	Unknown
LW	GR0816L000000001H	TECHNITI LIMNI ARGYROPOULIOU	Moderate	Good
CW	GR0817C0007H	ORMOS VOLOU	Moderate	Below Good

8.4 Classification results of WBs status of the RBD of Thessalia

The number and the percentage of the WBs that will meet the environmental objectives of the WFD, as well as those that will fail to achieve a “good” status, as a result of any type of pressure (point and/or diffuse sources of pollution, abstraction, etc.) for all the WB categories (rivers, lakes, coastal, groundwater), are presented in the table below.

Table 9: Statistical data of WB status of the RBD of Thessalia

Type of WB	Status								
	Number of WBs			WB Percentage			Surface or length Percentage		
	High or Good	Less than good*	Unknown	High or Good	Less than good*	Unknown	High or Good	Less than good*	Unknown
Rivers	5	49	18	7%	68%	25%	6,64%	70,22%	23,14%
Lakes	0	1	2	0%	33%	67%	0,00%	1,09%	98,91%
Coastal Waters	0	2	5	0%	29%	71%	0,00%	66,69%	33,31%
Groundwaters	21	11	0	66%	34%	0%	65,97%	34,03%	0,00%

*“Less than good” corresponds to surface WBs status that may be “moderate”, or “poor”, or “bad”, or “bad” one for GWBs.

8.5 Monitoring Program

8.5.1 Monitoring of surface waters

Officially established monitoring program for surface waters

The monitoring programme included in the Common Ministerial Decree 140384/2011 provides for the river water bodies of the RBD of Thessalia in total fifty seven (57) monitoring sites; twenty four (24) for surveillance and thirty three (33) for operational monitoring; for the lake water bodies in total two (2) monitoring sites, both for surveillance; and finally for coastal water bodies in total five (5) monitoring sites; one for surveillance and four (4) for operational monitoring (Annex 1, Map 10.1: Existing Monitoring Network Surface Water Bodies(J. M. D.140384/2011)).

Updated Monitoring program for surface waters

The design of the Updated Monitoring Programme for surface waters was based on the new information obtained under the RBMP, i.e. new water bodies, the analysis of anthropogenic pressures and their impact, the determination of the ecological and chemical status of surface waters and the inventory of protected areas. This programme is optimised both in terms of the monitoring sites selected, as well as the type of the programme, the parameters monitored and their frequency of monitoring.

The updated monitoring program of the RBD of Thessalia includes for the river water bodies of the RBD of Thessalia in total fifty seven (57) monitoring sites; fifty four(54) for operational and three (3) for surveillance monitoring; for the lake water bodies in total two (3) monitoring sites, two (2) for operational and one for surveillance monitoring; and finally for coastal water bodies in total six (6) monitoring sites, all for operational monitoring (Annex 1, Map 10.2: Updated Monitoring Network of Surface Water Bodies (Proposed By The R.B.M.P.)).

8.5.2 Monitoring of groundwaters

Officially established monitoring program for groundwaters

The monitoring programme of the Common Ministerial Decree 140384/2011 includes one hundred and fifteen (115) sites in total; sixty two (62) for operational and fifty three (53) for surveillance monitoring, for the groundwaters of the RBD of Thessalia (Annex1, Map 11.1: Existing Monitoring Network Groundwater Bodies(J. M. D.140384/2011)).

Updated Monitoring program for groundwaters

The design of the Updated Monitoring programme for groundwaters is formed on the basis of the officially established monitoring programme as well as the data elaborated under the RBMP and specifically, the characterization of GWBs, the analysis of anthropogenic pressures and their impacts, the inventory of protected areas, and the status classification of GWBs.

The updated monitoring programme of RBD of Thessalia includes one hundred and fourteen (114) monitoring sites in total; sixty two (62) for operational and fifty two (52) for surveillance monitoring (Annex 1, Map 11.2: Updated Monitoring Network of Groundwater Bodies (Proposed By The R.B.M.P.)

9. ECONOMIC ANALYSIS OF WATER USES

The economic analysis of water uses is realized in accordance with the provisions of the Directive. It contains:

1. Estimate of the current financial, environmental and resource cost of water
2. Calculation of the current cost recovery rate
3. Discussion of flexible pricing policies that offer incentives for efficient use of water resources and for the achievement of the environmental objectives of the Directive

Three categories of costs are incorporated:

- Financial cost, including operational and maintenance costs, capital costs, administrative costs.
- Resource costs, defined as opportunity costs for the alternative uses of water, in cases where a water body is exploited beyond the rate of its natural replacement
- Environmental cost, defined as economic cost due to the environmental damage caused

Total cost is estimated for each water use per cubic meter as the sum of the individual cost elements.

The general formula for calculating the cost recovery rate for water services used was:

$$\text{CRR} = \frac{\text{TR} - \text{Subsidy}}{\text{TC}} * 100\%$$

where CRR is the Cost Recovery Rate, TR the total revenues (in €/year),

Subsidy the total amount of subsidies paid to the water service, and TC the economic costs (in €/year) of the water service provided.

The results of the cost analysis are summarized as follows:

Financial cost

1. It is 1,740 €/m³ consumed for refined water providers
2. Non-refined water providers face a much lower financial cost equal to 0,050 €/ m³ consumed.

Resource and environmental cost

On average, for the whole of the water department:

1. The environmental cost is for refined water for domestic use equal to 0,005 €/ m³ and equal to 0,094 €/ m³ consumed for irrigation purposes.

2. The resource cost is low equal to 0,008 €/ m³ for refined water for domestic use and equal to 0,017€/ m³ consumed for irrigation purposes.

Total cost, average revenue and recovery rate

1. Total cost is 1,753 €/ m³ for refined water for domestic use and its recovery rate is 88,5%, with a corresponding average revenue of 1,551€/ m³.
2. For non-refined irrigation water total cost equals to 0,160 €/ m³ consumed. Its recovery rate is low equaling 17,2 %.

The overall objective for future pricing policies is to contribute in achieving qualitative and quantitative upgrading of water resources. Two conditions are to be respected:

1. Cost should be recovered to a satisfactory level
2. The new pricing policies should not create or exacerbate conditions of water poverty in low income households or households living in regions of water scarcity

In parallel, it is considered necessary that exemptions are recognized on the basis of mainly social criteria (eg., school or health institutions or multi-member households).

10. ENVIRONMENTAL OBJECTIVES – EXEMPTIONS

In Article 4 and specifically the paragraphs 4.4, 4.5, 4.6 and 4.7 of the WFD, a list of possible exemptions from the environmental objectives is provided and a description of the terms and processes for their application. The types of exemptions are:

- Article 4.4: An extended deadline
- Article 4.5: A less stringent objective
- Article 4.6: Temporary deterioration in status
- Article 4.7: New Modifications- Activities

Implementation of Article 4.4 (extended deadline) exemption, is proposed fifty three (53) surface WBs and eleven (11) GWBs from the total WBs of the RBD of Thessalia that are included in the list of “exemptions”. The extended deadline for every water body that consists an “exemption” is based on a justification and it depends on the nature of the problem. The type and the exemption justification, the year of achievement of environmental objectives for each WB exempted are presented in the table below.

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Table 10: Measures and estimated year of environmental objectives achievement for each water body exempted

WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0800030	Systema pediadas Notiodytikis Thessalias	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S050, WD08S120, WD08S130, WD08S150, WD08S160, WD08S170, WD08S200, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0800080	Systema Fylliou- Orfanon	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S120, WD08S150, WD08S170, WD08S230, WD08S320, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0800100	Systema Ekkaras-Velesioton	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S120, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0800110	Systema Larisas-Karlas	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S050, WD08S070, WD08S120, WD08S150, WD08S170, WD08S180, WD08S230, WD08S270, WD08S330, WD08S340, WD08S350, WD08S390, WD08S400, WD08S410
GR0800130	Systema Taousanis-Kalou Nerou	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S120, WD08S150, WD08S160, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0800140	Systema Almyrou	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S010, WD08S010, WD08S020, WD08S020, WD08S030, WD08S040, WD08S050, WD08S100, WD08S110, WD08S120, WD08S150, WD08S170, WD08S210, WD08S230, WD08S300, WD08S330, WD08S340, WD08S350
GR0800180	Systema Narthakiou-Vrysion	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S120, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0800200	Systema Xyniados	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350

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Thessalia River Basin District (GR08)

WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0800220	Systima konou Titarisiou	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S050, WD08S120, WD08S150, WD08S170, WD08S230, WD08S260, WD08S310, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0800260	Systima ydroforion Makrychoriou-Sykouriou	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S050, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0800290	Systima ydroforion ano rou Enipea	Art. 4.4	Technical feasibility	2027	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B100, WD08B110, WD08B120, WD08B130, WD08B140, WD08B150, WD08B170, WD08B180, WD08B200, WD08B210, WD08B220, WD08B230, WD08B240, WD08B250, WD08B290, WD08B310, WD08B320, WD08B330, WD08B340, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S240, WD08S250, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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Thessalia River Basin District (GR08)

WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816L000000001H	TECHNITI LIMNI ARGYROPOULIOU	Art. 4.4	Technical feasibiity	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350
GR0816R0000000062A	1T	Art. 4.4	Technical feasibiity	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000000163N	AMYROS P.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000101001N	ZILIANA P.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000200003N	PINEIOS P. 2	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000200004N	PINEIOS P. 3	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000200005N	PINEIOS P. 4	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000200015N	PINEIOS P. 5	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000200017H	PINEIOS P. 6	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S270, WD08S330, WD08S340, WD08S350, WD08S360, WD08S380, WD08S400, WD08S410
GR0816R000200020N	PINEIOS P. 8	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000200021N	PINEIOS P. 9	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000200022N	PINEIOS P. 10	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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Thessalia River Basin District (GR08)

WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000200039N	PINEIOS P. 11	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S370, WD08S400, WD08S410
GR0816R000200053N	PINEIOS P. 12	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000200056N	ION P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350
GR0816R000201002N	PINEIOS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S370, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000202006N	TITARISIOS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000202007N	TITARISIOS P. 2	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000202013N	TITARISIOS P. 3	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350
GR0816R000202310N	ELASSONITIKOS P.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000202512N	TITARISIOS P. - PARAPOTAMOS LIANOPOTAMOS	Art. 4.4	Technical feasibiity	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350
GR0816R000204019N	KOUSMPASANIOTIKO R. 2	Art. 4.4	Technical feasibiity	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000206023N	ENIPEFS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S370, WD08S400, WD08S410
GR0816R000206036N	ENIPEFS P. 2	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000206037N	ENIPEFS P. 3	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000206038N	ENIPEFS P. 4	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000206124N	KALENTZIS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000206125N	KALENTZIS P. 2	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S380, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000206226N	SOFADITIS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000206227N	FARSALIOTIS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000206228N	MAKRYREMMA	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000206229N	FARSALIOTIS P. 2	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000206231H	SOFADITIS P. 3	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S360, WD08S400, WD08S410
GR0816R000206232N	SMOKOVITIKO R.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000206233N	TSATSORREMA	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350
GR0816R000206234N	PAPOUSA R.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000208040N	MEGA REMA 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000208041N	MEGA REMA 2	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000210042N	LITHAIOS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000210045H	LITHAIOS P. 2	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S380, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000210046N	LITHAIOS P. 3	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S380, WD08S400, WD08S410
GR0816R000210047N	LITHAIOS P. 4	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000210143N	NEOCHORITIS P.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0816R000212048N	PAMISOS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000214050N	DYTIKI KOITI TRIKALON	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S380, WD08S400, WD08S410
GR0816R000216051N	PORTAIKOS P. 1	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0816R000220057N	TRANO POTAMI	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350
GR0816R000301061N	DERMPINAS R.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0817C0006N	Pagassitikos Kolpos	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S010, WD08S010, WD08S020, WD08S020, WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S370
GR0817C0007H	Ormos Volou	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S010, WD08S020, WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0817R000101065N	XIROLAKKAS R.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S010, WD08S010, WD08S020, WD08S020, WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410
GR0817R000301066N	POURI R.	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S010, WD08S010, WD08S020, WD08S020, WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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WB code	WB name	Type of exemption	Justification	Year of achievement	Basic measures	Supplementary measures
GR0817R000501067N	RAKOPOTAMO	Art. 4.4	Technical feasibility	2021	WD08B010, WD08B020, WD08B030, WD08B040, WD08B050, WD08B060, WD08B070, WD08B080, WD08B090, WD08B110, WD08B120, WD08B130, WD08B160, WD08B170, WD08B180, WD08B190, WD08B200, WD08B210, WD08B230, WD08B240, WD08B250, WD08B260, WD08B270, WD08B280, WD08B290, WD08B300, WD08B310, WD08B320, WD08B330, WD08B340, WD08B350, WD08B360, WD08B370, WD08B380, WD08B390, WD08B400	WD08S010, WD08S010, WD08S020, WD08S020, WD08S030, WD08S040, WD08S150, WD08S170, WD08S230, WD08S330, WD08S340, WD08S350, WD08S400, WD08S410

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In conclusion, for fifty three (53) WBs the year of environmental objectives achievement is estimated the year 2021, while for eleven (11) the year 2027 (see Table 10).

Table 11: Number of WBs per year of achievement of environmental objectives for each WBs category

WB category	Year of achievement of environmental objectives		
	2015	2021	2027
Rivers	22	50	0
Lakes	2	1	0
Coastal	5	2	0
Groundwater	21	0	11

The results of the application of exemption, per WB category in RBD of Thessalia, are presented below.

Table 12: Rivers exemption

Type of Exemption	% percentage of WBs total length	Justification	% percentage of WBs of each justification	Comments
Article 4.4	73%	1) Technical infeasibility 2) disproportionate cost 3) natural conditions	1) 100% 2) 0% 3) 0%	
Article 4.5	0%	1) Technical infeasibility 2) disproportionate cost	1) 0% 2) 0%	
Article 4.6	0%	1) natural causes (floods, droughts) 2) unforeseen circumstances 3) accidents	1) 0% 2) 0% 3) 0%	
Article 4.7	5%	1) new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater 2) New sustainable human development activities	1) 5% 2) 0%	

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Table 13: Lakes exemption

Type of Exemption	% percentage of WBs total surface	Justification	% percentage of WBs of each justification	Comments
Article 4.4	1.1%	1) Technical infeasibility 2) disproportionate cost 3) natural conditions	1) 100%- 2) 0% 3) 0%	
Article 4.5	0%	1) Technical infeasibility 2) disproportionate cost	1) 0% 2) 0%	
Article 4.6	0%	1) natural causes (floods, droughts) 2) unforeseen circumstances 3) accidents	1) 0% 2) 0% 3) 0%	
Article 4.7	5%	1) new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater 2) New sustainable human development activities	1) 5% 2) 0%	

Table 14: Coastal WBs exemption

Type of Exemption	% percentage of WBs total surface	Justification	% percentage of WBs of each justification	Comments
Article 4.4	67%	1) Technical infeasibility 2) disproportionate cost 3) natural conditions	1) 100% 2) 0% 3) 0%	
Article 4.5	0%	1) Technical infeasibility 2) disproportionate cost	1) 0% 2) 0%	
Article 4.6	0%	1) natural causes (floods, droughts) 2) unforeseen circumstances 3) accidents	1) 0% 2) 0% 3) 0%	
Article 4.7	5%	1) new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater 2) New sustainable human development activities	1) 5% 2) 0%	

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Table 15: GWBs exemption

Type of Exemption	% percentage of WBs total length	Justification	% percentage of WBs of each justification	Comments
Article 4.4	34%	1) Technical infeasibility 2) disproportionate cost 3) natural conditions	1) 100% 2) 0% 3) 0%	
Article 4.5	0%	1) Technical infeasibility 2) disproportionate cost	1) 0% 2) 0%	
Article 4.6	0%	1) natural causes (floods, droughts) 2) unforeseen circumstances 3) accidents	1) 0% 2) 0% 3) 0%	
Article 4.7	5%	1) new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater 2) New sustainable human development activities	1) 5% 2) 0%	

In the River Basin Management Plan of Thessalia, there are no any future projects and activities, that are expected to be completed by 2015 and their impact can be important for the achievement of environmental objectives of specific water bodies.

Programmed or new projects that had not been examined for their compatibility with the WFD guidelines or as exemptions according to Article 4.7, they are examined under the procedure for Environmental Permitting.

Table 16: New activities and related WBs

Name of Programmed or new project	Reason for evaluating the project	Implementation of Art. 4.7 and Affected Water Bodies
Dam in Agiokampos, "Livadotopos" in Larissa regional unit	Flooding / River Discontinuity / Runoff Reduction or Flow Regulation / HMWB/AWB Creation / Canalisation/ Reduction of groundwater flow	YES, POURI R. (GR0817R000301066N)
Agioneriou Dam in Larissa regional unit	Flooding / River Discontinuity / Runoff Reduction or Flow Regulation / HMWB/AWB Creation / Canalisation/ Reduction of groundwater flow	YES, ELASSONITIKOS P. (GR0816R000202310N)
Neoxoriti Dam in Trikala regional unit	Flooding / River Discontinuity / Runoff Reduction or Flow Regulation / HMWB/AWB Creation / Canalisation/ Reduction of groundwater flow	YES, NEOXORITIS P. (GR0816R000210143N)

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Name of Programmed or new project	Reason for evaluating the project	Implementation of Art. 4.7 and Affected Water Bodies
Pylis Dam in Trikala regional unit	Flooding / River Discontinuity / Runoff Reduction or Flow Regulation / HMWB/AWB Creation / Canalisation/ Reduction of groundwater flow	YES, PORTAIKOS P. 2 (GR0816R000216052N)

11. PROGRAMME OF MEASURES

The program of measures is the key element of the River Basin Management Plan for the achievement of the 2000/60/EC Directive objectives. The measures are divided into basic and supplementary:

- **Basic measures** result from the implementation of national and European legislation on water protection, including 2000/60/EC Directive and the overall environmental policy and these measures at least should be included in the Programme of Measures.
- **Supplementary measures** include measures designed and implemented in addition to the basic measures.

In Thessalia River Basin District, **it is proposed to be implemented by 2027, eighty one (81) measures, thirty -nine (39) basic and forty-one (41) supplementary.**

Proposed Basic Measures for Thessalia RBD are presented in the table below:

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Table 17: Basic measures of Thessalia RBD

CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
WD08B010	Measures to implement the cost recovery principle	Adaptation of pricing policies so as to avoid waste of water and serve in a flexible way the objective of environmental sustainability.	Formulation of a common pricing policy for refined water for domestic use in order to curb wasting water and gradually recover the cost of water, taking into account social and environmental parameters.
WD08B020	Measures to promote an efficient and sustainable water use	Implementation of Water Safety Plans in big Municipal Enterprises for Water Supply and Sewerage (such as Larisa, Trikala, Karditsa, Volos, Farsala, Tyrnavos and Almyros).	<p>The Water Safety Plans are a holistic approach related to the qualitative management of water from the water source to the distribution, adopting the principle of multiple barriers and focusing on the need for implementation of control measures in all links of the water supply chain. The Specifications for the implementation of the Water Safety Plans were developed in the framework of the project “Technical Support to the General Secretariat for Water of the Ministry of Environment, Energy and Climate Change for the recording of the problems for the implementation of the Directive 98/83/EC on the quality of drinking water in Greece and investigation of possibilities for the adoption of Water Safety Plans”, which was funded by the Operational Programme “Environment and Sustainable Development” (OPESD) and completed by 2011.</p> <p>It is proposed to implement the Water Safety Plans in big Municipal Enterprises for Water Supply and Sewerage, such as these of Larisa, Trikala, Karditsa, Volos, Farsala, Tyrnavos and Almyros, aiming at safeguarding public health and adopting and implementing good practices in the drinking water supply network, through the minimization of pollutants in the drinking water and especially at its source, the right water treatment and distribution to water supply networks regardless the size of these networks.</p>
WD08B030	Measures to promote an efficient and sustainable water use	Promotion of efficient water management technologies in industry	Encouragement of the conservation and recycle of water in water consuming industries with consumption greater than 50.000 m ³ /year.
WD08B040	Measures to promote an efficient and sustainable water use	Specifications and incentives concerning the sustainable stormwater management.	This measure refers to the conduction of a specifications manual for the stormwater collection and reuse, as well as to the motivation for installing rainwater collection tanks in households and in hotel units, especially in regions where the water demand is increased during the touristic period.
WD08B050	Measures to promote an efficient and sustainable water use	Development of the legislative framework and of Program of Measures for	The potential for water saving at residences has been investigated in the framework of the project “Technical Support to the General Secretariat for Water for the preparation of a Programme of Measures and of the Institutional framework for Residential Water savings”, funded by the OPESD.

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
		residential water saving	<p>The implementation of residential water saving programs leads to the promotion of new technologies for water reuse and conservation. The relevant study, which has been completed, indicated that simple interventions in the household equipment can achieve important water savings (at least 30% in individual households and around 10% in total). The Ministry of Environment, Energy and Climate Change, through the General Secretariat for Water, started examining the development of an Institutional Framework and Program of Measures for residential water savings.</p> <p>The measures promoted are of institutional, regulatory, financial και demonstrating character. The New Building Code foresees already the installation of water saving equipment (which will be specified by decisions of the Minister of Environment, Energy and Climate Change) in new residences.</p>
WD08B060	Measures to promote an efficient and sustainable water use	Reorganization / Rationalization of the institutional framework for the operation of the collective irrigation networks management bodies.	<p>The framework for the operation of the Land Reclamation Organisations was enacted in 1958 and since then has been amended / supplemented by a series of acts. Nowadays, these organizations have, in their great majority, serious malfunctions due partly to the non implementation of the legislative framework for the operation and partly to the outdated organisational structure.</p> <p>The measure refers to the formulation of proposals and institutional changes associated with the upgrade of operation and the update of the insitutional framework of Local Land Reclamation Organisations / General Land Reclamation Organisations, so that they are adapted to the current administrative structure of the State and that the irrigation water management is substantially improved.</p> <p>Towards this direction, the Directorate for Utilization of Land Reclamation Projects and Equipment of the Ministry of Rural Development and Food has already elaborated a relevant legislative regulation, which has been sent to the Ministry of Interior for consultation with all competent Ministries.</p>
WD08B070	Measures to promote an efficient and sustainable water use	Strengthening of the actions to reduce losses in collective irrigation networks.	<p>It is necessary to: (1) optimize the irrigation programme through the cooperation of the Local Land Reclamation Organization with the farmers, so that the irrigation during the hours of the day with a very high temperature is avoided. If necessary, it is also suggested to update the irrigation programmes after recommendation of the Regional Authority and in collaboration with the supervising department of the Local Land Reclamation Organization. It is noted that the Local Land Reclamation Organizations are already obliged by the existing legislative framework to develop timeschedules and irrigation programme.</p> <p>(2) The water transfer infrastructure should be maintained at a high standard, under the care of</p>

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
			the Regional Authority and (3) The controls aiming at ensuring the proper implementation of the irrigation programmes should be intensified. It is proposed that the controls are conducted by the Body that supervises the Local Land Reclamation Organizations.
WD08B080	Measures to promote an efficient and sustainable water use	Drafting of a Technical Specifications Manual for the implementation of the reuse methods	Drafting of a Technical Specifications Manual for the implementation of the reuse methods foreseen in the Common Ministerial Decision 145116/2.3.2011 (OJ 354B) where the following will be indicatively determined: <ul style="list-style-type: none"> A) The description of the potential reuse methods, in which cases the implementation of each method is recommended, the minimum implementation requirements for each method, as well as the proper and effective Implementation practices. B) The reuse study and application procedures, i.e. the successive approach stages (expression of intent - preliminary study, Environmental Impact Assessment Study, Consultation of interested Parties, Technical implementation study, Licensing, Pilot implementation, implementation), as well as the specification of responsibilities of the stakeholders.
WD08B090	Measures to meet the requirements of Article 7 (drinking water)	Conduction / Update of the Water Supply Masterplan by the Municipal Enterprises for Water Supply and Sewerage.	Conduction of the Masterplans regarding water supply, where the water resources are going to be determined. Those water resources are going to cover the water supply needs in a medium/long term basis. The appropriate protection measures are going to be implemented in time and the necessary external aqueducts are going to be designed in primary level. It is proposed that the Masterplans are going to be conducted by the Municipal Enterprises for Water and Sewerage, as the most pertinent body to this subject. The Masterplans must be conducted according to the RBMPs concerning the water bodies status and the rest program of measures. For this reason it must be assented by the competent Water Directorate.
WD08B100	Measures to meet the requirements of Article 7 (drinking water)	Detailed delineation of protection zones of groundwater abstraction points (springs, boreholes) for drinking water abstractions > 1.000.000 m ³ per year	Detailed delineation of protection zones of groundwater abstraction points (springs, drillings) for drinking water abstractions > 1.000.000 m ³ per year (Municipalities of Sofades, Almyros, Volos-N.Ionia, Gianouli, Larisa, Tyrnavos, Farsala, Kalambaka, Trikala and Mouzaki). The elaboration of special hydrogeological studies, after the completion of which the detailed delineation will be feasible, is a prerequisite.
WD08B110	Measures to meet the	Projects for restoration /	The measure refers to the restoration of old damaged water pipes and to the reinforcement of

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
	requirements of Article 7 (drinking water)	reinforcement of external water supply network	external water supply reservoirs in order to cover increased water supply demand. Some projects concerning the improvement / expansion of the water supply network in new agglomerations or growing municipalities have already been integrated in the OPESD. These projects, aiming at the effective covering of the increasing water needs in agglomerations and municipalities, are priority projects for the implementation of the Directive. Indicatively, such projects for the areas of Nea Achialos are integrated in OPESD. The competent authorities are held responsible for the promotion of them as well as of all similar projects.
WD08B120	Measures to meet the requirements of Article 7 (drinking water)	Actions for the modernization of the water supply network operation for big urban agglomerations of the water district. Leakages control.	The control of leakages in the water supply networks aims at detecting leaks and preventing great losses of water. It is supported by the OPESD, in the framework of the Priority Axis 2 "Water Resources Protection and Management", within the Invitation 2.6 "Leakages Minimization projects in problematic urban water supply networks", with a budget of 60 million Euros and a time horizon for project implementation until 2015. Leakages of any type due to defective connections or damages on pipelines, illegal connections, measurement errors, due to defective water meters or merely the absence of water meters, contribute to a non-pricing of water, which the Municipal Enterprises for Water Supply and Sewerage have estimated to be between 35 % and 70%. Methods for the detection of water losses in water distribution networks should be implemented under the responsibility of the Municipal Enterprises for Water Supply and Sewerage on an on-going basis. The detection should be followed by the repair and restore of the proper operation. The installation of water meters and/or replacement of the defective ones should be promoted. Projects involving such actions have already been integrated in the OPESD. However, such actions must be generalized as a priority in all Municipal Enterprises for Water Supply and Sewerage, where losses in the water distribution network of more than 50% occur. Indicatively, such projects for the Municipal Enterprises for Water Supply and Sewerage of Municipality of Trikala, Larisa and Volos area are integrated in the OPESD and should be promoted with responsibility of the competent authorities. In order to extend such actions to other Municipal Enterprises for Water Supply and Sewerage, initially the losses on networks should be recorded by the respective Municipal Enterprises under the supervision of the Direction of Water and the area priorities should be set, so that similar projects can be launched within the next programming period.
WD08B125	Measures to meet the requirements of Article	Protection of water abstraction areas from	Designation of a protection area around the surface water bodies that are being used for water supply, where no Water Safety Plan is being applied. These areas will be designated by the

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
	7 (drinking water)	surface water bodies for water supply	<p>conduction of special studies.</p> <p>Until those studies are finished, in case of a permission request regarding either new projects and/or activities in the River Basin of the particular WB or the discharge of their wastewater in the RB, the Competent Authorities that are responsible for the environmental permitting should consider the impact of the abovementioned activities on the quality of the surface water, aiming at the preservation of the quality on the current levels.</p> <p>For the WBs that are designated for the abstraction of drinking water, during the environmental permission of the projects regarding the utilization of the water resources, the developer of the project should deliver to the competent authorities the following:</p> <ul style="list-style-type: none"> • Detailed plan of the areas designated for the protection of water, • Regulatory framework of the abovementioned designation and of the permitted activities
WD08B130	Measures to meet the requirements of Article 7 (drinking water)	Delineation of protection zones for drinking water abstraction works	<p>In the drinking water abstraction infrastructure (drillings, springs, wells), and until the completion of the specific hydrogeological studies, temporary protection zones of water abstraction points are defined as follows:</p> <ul style="list-style-type: none"> ❖ <u>Zone of absolute protection I</u>: 10-20 m around the abstraction site. ❖ <u>Zone of controlled protection II</u>: defined depending on the type of aquifer as follows: <ul style="list-style-type: none"> • Karstic systems: 600 m upstream and both sides (recharge area) and 300m downstream of water abstraction site. • Fractured systems: 400 m upstream and on both sides (recharge area) and 200m downstream of water abstraction site. • Granular unconfined systems: perimeter with radius of 400m • Granular confined or semi-confined aquifers: perimeter with radius of 300m <p>For the karstic and fractured systems in case no data is available regarding the piezometric level or the recharge area, a protection zone with radius equal to the abovementioned upstream distance is implemented.</p> ❖ <u>Zone of protection III</u>: It refers to the recharge basin of the abstraction site and can be determined only by the aforementioned hydrogeological study. <p>Activities in principle prohibited by zone:</p> <ul style="list-style-type: none"> ❖ <u>Protection zone I (absolute protection)</u>: The zone, which protects the immediate environment of the abstraction from pollution, is characterized as zone of full ban. Within this zone, all activities are prohibited, with the exception of the necessary works for the operation and maintenance of the water abstraction works.

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
			<ul style="list-style-type: none"> ❖ <u>Protection zone II (controlled)</u>: This zone protects the drinking water mainly from the microbiological pollution (50-day zone) and from the pollution cause by human activities or works that are dangerous due to their proximity with the abstraction site. Within this zone, all activities with high polluting risk, such as (indicatively) intensive agricultural activities using pesticides – agrochemicals, livestock facilities, industrial – handicraft facilities, facilities for treatment or transfer of wastewater or solid waste, garages, quarrying and mining activities, cemeteries, and generally any relevant activity that can be a potential pollution source equal or greater than the aforementioned, are prohibited. ❖ <u>Protection zone III (supervised)</u>: It surrounds the zones I and II and develops throughout the recharge basin that feeds the underground aquifer from which the abstraction is supplied. In Zone III the existing legislation on water protection applies. <p>The specifications for the aforementioned hydrogeological studies will be determined by the competent authorities, under the coordination of the General Secretariat for Water.</p>
WD08B140	Measures to meet the requirements of Article 7 (drinking water)	Protection of the groundwater systems included in the register of drinking water protected areas and definition of the protection legislative framework.	<p>First, for the installation of new activities the prohibitions of the protection zone II of groundwater abstraction points for drinking with the exception of cemeteries, garages and parkings, and quarrying activities, are implemented.</p> <p>The installation of new activities may be permitted in specific locations after the submission of the hydrogeological study or report, depending on the size and category of the activity and after the positive decision issued by the competent Water Direction.</p> <p>Determination of the legislative protection framework, where the measures for the protection of the groundwater systems included in the register of protected areas will be adopted in detail.</p>
WD08B150	Measures for control of surface water and groundwater abstractions	Installation of groundwater abstraction monitoring systems.	<p>This measure requires the gradual installation of water meters in all forms of groundwater abstraction (boreholes, wells or spring water diversions) from which a volume of water equal to or greater than 10m³ per day is abstracted, for the monitoring and control of groundwater abstractions. This measure refers to all individuals and legal entities responsible for the operation of abstraction (e.g. Municipal Water and Sewerage Companies, Municipalities, Irrigation Boards, individuals). The cost of the necessary associated equipment will be covered by the abovementioned persons or entities, while it is possible to provide incentives for the implementation of the measure. The persons or entities responsible shall be obliged to declare the start of operation of the metering equipment to the relevant Water Directorate while large users</p>

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
			(Municipal Water and Sewerage Companies, municipalities, industries, collective irrigation networks) are obliged to report to the Water Directorate the measurement data on the quantities annually abstracted within the first ten days of October of each year.
WD08B160	Measures to control the abstractions of surface water and groundwater	Monitoring of surface water abstractions for water supply, irrigation and other uses from large consumers.	This measure refers to abstractions greater than 10 m ³ per day and includes the installation or modernization of existing recording equipment (water meters, water level loggers, etc.) at surface water abstraction projects. The associated necessary equipment will be determined upon issuing of a new water use license or renewal of an existing one and the relevant cost will be covered by the individual or entity that performs the abstraction of water; it is possible to provide suitable incentives for the implementation of this measure. The person or entity responsible shall be obliged to declare the start of operation of the metering equipment to the relevant Water Directorate. The measurements of the quantities of water abstracted annually will be communicated to the Water Directorate during the first ten days of October of each year.
WD08B170	Measures to control the abstractions of surface water and groundwater	Update of the Ministerial Decision Φ16/6631/1989 on the lower and upper limits of necessary quantities of irrigation water.	The Ministerial Decision Φ16/6631/1989 defined minimum and maximum necessary quantities for rational use of irrigation water, per category of crop and per River Basin District. These limits were calculated on a monthly basis for the period April - September and can also be applied cumulatively. The calculation of the necessary quantities was done by means of the Blaney – Griddle method. The update of the abovementioned Ministerial Decision is proposed, taking into account meteorological data from 1989 onwards, as well as the provisions of the River Basin Management Plans.
WD08B180	Measures to control the abstractions of surface water and groundwater	Creation of a common registry of licensed water abstractions through the process of issuing water use licenses.	This measure refers to the unification of the basic information collected by the Water Directorates when issuing water use licenses, mainly in relation to the location of the abstraction, the quantities abstracted and the water body affected, as well as information on the accountable person or persons, so that a rationalization of controls required for compliance with the terms and conditions of each license may be achieved. The information which should be included in the registry will be determined by SSW in cooperation with the Water Directorates. The registry will be available to the regional authorities so as to facilitate the necessary checks provided for such projects.
WD08B190	Measures to control the abstractions of surface water and groundwater	Establishment of criteria to determine the limit of total abstractions per surface water body.	This measure is aimed at investigating the possibility of establishing a methodology and criteria for determining environmental flows downstream of major water projects based on the results of the National Monitoring Network on the status of surface water bodies in the country and having as goal the development of specific standards.
WD08B200	Measures to control the abstractions of	Revaluation of the legislative framework for	The provisions of JMD 43504/2005 (Government Gazette No. 1784 B') and other relevant regulations should be revised in order to, among other things, (a) examine the compatibility of any

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
	surface water and groundwater	water use licensing and construction of water resources development works.	water development project with the provisions of the River Basin Management Plan at an early stage for the timely information of stakeholders, and (b) to investigate the licensing procedure of water use for geothermal purposes
WD08B210	Measures to control the abstractions of surface water and groundwater	Prohibition of constructing new water abstraction works (boreholes, wells, etc.) for new water uses and for extending existing water use licenses within: <ul style="list-style-type: none"> • Groundwater bodies with quantitative status classified as “poor” • Areas serviced by collective irrigation networks • Protection zones (zones I and II) of potable water abstraction works. 	In GWBs which have been determined to be in poor quantitative status, within areas serviced by collective irrigation networks and within the protection zones of drinking water abstraction points, new drilling should be forbidden in order to avoid further deterioration of their status and to protect these GWBs. This rule excludes special cases with priority to drinking water use projects and projects which can lead to a measurable decrease of abstraction from GWBs. Such projects will be reviewed and approved by the competent Water Directorate after submission of a documented hydrogeological desk study for abstractions less than 10 m ³ /day or a full hydrogeological study for abstractions greater than 10 m ³ /day. The technical specifications for the aforementioned hydrogeological studies will be determined by the competent authorities under the coordination of SSW. Within areas of collective irrigation networks, new borehole licenses may be granted to reinforce the collective irrigation network towards greenhouse water supply, protection against frost and other uses excluding irrigation.
WD08B220	Measures to control the artificial recharge of GWBs	Investigation of the conditions for application of artificial recharge of groundwater bodies as a measure to enhance the quantitative status and protect the quality of GWBs.	<p>The artificial recharge of groundwater aquifers is an essential tool for addressing the quantitative reduction or qualitative degradation of GWBs which is caused by the various pressures on groundwater such as over-pumping, contamination, etc. This is an environmental action taking advantage of natural underground reservoirs, formed in the subsoil, for storing good quality water during the winter period to be available for use during the summer period of increasing demands. The implementation of artificial recharge aims to enhance the quantitative and qualitative upgrading of GWBs. The measure is also important due to its contribution to the mitigation and gradual repelling of the seawater intrusion front in coastal aquifers. The effectiveness of artificial recharge is determined by several factors such as the determination of the storage capacity of aquifers, the water availability in sufficient quantity for the needs of the application and in the desired quality compatible or better than the quality of the recharged groundwater body.</p> <p>The artificial recharge procedures described are based on the exploitation of good quality surface water and are not related to artificial recharge foreseen by the JMD 145116/8.3.2011 (Government Gazette No. 354 B'). For the implementation of artificial recharge applications it will</p>

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
			<p>be necessary to conduct a specific hydrogeological study which will investigate the depth of the aquifer, the presence or absence of superimposed strata, the hydraulic conductivity and the depth of enrichment. This study will incorporate the detailed design of the recharge program, the appropriate method and the best implementation procedures.</p> <p>Technical specifications for these Hydrogeological Studies of artificial recharge will be determined by the Special Secretariat for Water (SSW).</p>
WD08B230	Measures for point source pollution	Promoting the design of central treatment units for agricultural and animal waste	Originally the preparation of techno-economic studies and studies of scope per Regional Unit are recommended in order to investigate the sustainability for agricultural and animal waste as well as their preliminary location so as to allow launching of their construction.
WD08B240	Measures for point source pollution	Defining terms and conditions for connection of industries to sewerage networks / acception of industrial wastes in WWTP	The management bodies of the sewerage networks and WWTP will have to issue sewerage networks operation rules or revise the existing ones in order to define the conditions for connection of industries to sewerage networks and/or terms for the reception of industrial wastes in WWTP. For the issuance of such regulations the opinion of the Water Directorate is required. The operating rules will be communicated to the Water Directorate, to the Special Secretariat for Water as well as to the competent for the relevant controls authorities of the Region.
WD08B250	Measures for point source pollution	Establishment/settlement of emission limit values, in RBD level, regarding the priority substances and the other pollutants established in the Joint Ministerial Decision 51354/2641/E103/2010 as well as the Physicochemical parameters related to the quality objectives designated in the River Basin Management Plans.	<p>The aim of this measure is the designation of emission limit values for the priority substances and the other pollutants that are established in the Joint Ministerial Decision 51354/2641/E103/2010 and affect the surface water bodies. During the designation of the emission limit values, attention should be paid to the following:</p> <ul style="list-style-type: none"> i The Environmental Quality Standards that are designated in terms of Annual Average concentration by the Joint Ministerial Decision 51354/2641/E103/2010. ii. The Guidance 91/271/EEC. iii. The dilution during the summer period, when the river discharge is minimum and also the dilution when the wastewater discharge from the industries or from other activities is maximum. iv. The sensitivity of the area. v. The daily and annual estimated pollution load of the companies. vi. The concentration of the basic parameters of the pollution load. vii. The correlation with the protected areas for drinking water. <p>The Emission Limit Values will be the maximum values and the wastewater of the industries or other activities developed in the RBD should conform to them in every case.</p> <p>Originally the Water Directorates should determine the rivers basins that are priority for their regions and then to price the activities that are essential in order to be implemented the</p>

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
			appropriate researches and surveys in the next managing period.
WD08B260	Measures for point source pollution	Specification of criteria for licensing new / expansion of existing aquaculture units.	During the licensing process of new or the expansion of existing aquaculture units in water bodies whose status is characterized as bad, it must be demonstrated that in the immediate area of the units' installation, the status of the water bodies is good according to the Directive 2000/60/EC. The classification of the water bodies' status as bad is presumed by the Water Management Plans and the results of the National Monitoring Program of JMD 140384 (GG 2017/B/9.92011), which is in progress.
WD08B270	Measures for point source pollution	Specification of the process to control and designate zones for aquacultures in inland waters.	This measure refers to establishing special specifications and issuing a regulatory act for the designation of zones for the development of inland waters aquaculture, implementation of operation checks (frequency, intensity, infrastructure, waste), imposition of sanctions and fines in case of environmental conditions violations and / or illegal operation. The co-operation of the Special Secretariat for Water with the competent authorities of the Ministry of Rural Development and Food is required as well as with the competent authorities for environmental licensing.
WD08B280	Measures for point source pollution	Enhancement of the periodical audits of the coastal waters that are being pressured from stormwater outfalls and other pollution sources.	The monitoring program of the Directorate of Health and Social Care in every Regional Unit should be reviewed in order to expand the sampling period and therefore concentrate in coastal water bodies that are being pressured from stormwater outfalls and other pollution sources. The final aim is the adoption of a special program of periodical audits of the water that ends up to the sea. The sampling programming will be performed in collaboration with the Competent Division responsible for Waters and according to the provisions of the RBD Management Plans. The sampling results will be communicated to the abovementioned Division.
WD08B290	Measures for point source pollution	Modernization of national legislation on the management of urban and industrial waste waters	The Ministerial Decision E1b/221/1965 on the management of urban and industrial waste waters and its subsequent amendments was and still is even today, the basic institutional framework that governs the disposal of urban sewage and industrial and municipal waste waters. The Ministerial Decision E1b/221/1965 was characterized as an innovative institutional framework at its time, which, however, does not cover for the modern environmental policy. The relevant provisions of Articles 2, 7, 8, 12 and 14 of the Health Act No E1b/221/1965 (GG B'138) as amended, have already been repealed, while Article 59 of the Greek Law 4042/2012 describes its universal abolition, which however poses ambiguity on an eventual legal loophole. After co evaluating the above mentioned, the establishment of a modern legal framework for the management of urban and industrial waste water is proposed.
WD08B300	Measures for point source pollution	Development of a regulatory framework / guidelines for monitoring water quality in	In the context of environmental licensing according to the Greek law 1650/86 as amended and in force with the Greek law .3010/2002 as well as protection and management of water bodies in accordance with the Greek law 3199/2003 and Presidential Decree 51/2007 the systematic

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
		aquaculture units	<p>monitoring of water quality in aquaculture units is provided for.</p> <p>The competent authorities for issuing environmental terms and water use licenses usually apply the JMD No. 46399/1352/27-6-1986 " Quality required of surface water that are intended for : «drinking water», «bathing», «fish life in freshwater» and « shellfish waters », measuring methods, sampling frequency and analysis of surface water intended for drinking water, in compliance with the instructions of the Council of the European Communities 75/440/EEC, 76/160/EEC, 78/659/EEC, 79/923/EEC and 79/869/EEC" even though it does not relate with the fish life in the sea. It has also been observed that the decisions issued do not include unified terms as to monitoring the parameters for all the units. In this context it is proposed to issue unified guidelines defining the parameters of water and sediment that should be monitored at regular time intervals in aquaculture units of coastal and inland waters in order to protect and maintain the status of the water bodies.</p>
WD08B310	Measures for point source pollution	Instruction of an institutional framework for the licensing of sewage tanks transport.	<p>There is a need to adopt an integrated legal framework that will govern the licensing of tanker trucks that transport sewage, as the existing legal framework, does not require licensing for the work of collection and transportation of urban waste. According to an earlier decision of the Ministry of Infrastructure, Transport and Networks, the licensing of tanker trucks that transport sewage only required the issuance of a vehicle registration document, which only determines traffic issues.</p> <p>Severe problems arise from unmonitored management and uncontrollable disposal of urban waste transferred by the tanks to protected areas, biotopes, water bodies, surface water drains or sewers, landfills, fields etc. due to lack of a control mechanism .</p> <p>The measure involves the creation of a regulatory framework for the licensing of tanker trucks transporting sewage that will define special measures for the positioning and control of the tanker trucks. Indicatively: electronic monitoring for each tank, a register of licensed tanks, provision for crosschecking with industries in the area, provision for the expansion of the inspectors' network (defining the competent monitoring services and imposing strict penalties for environmental violations, (e.g. immediate collectable fines and escalation of the above with license withdraw and vehicle seizure), involvement of the municipalities, confirmation of the disposal of transported waste to a WWTP.</p>
WD08B320	Measures for diffuse source pollution	Gradual, selective conversion of conventional crops to organic	<p>Encouragement and support (Technical & Scientific) of producers that implement conventional cultivation techniques towards conversion of crops to organic, primarily in vulnerable areas of the Directive 91/676/EEC.</p>

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
WD08B330	Measures for diffuse source pollution	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.	The agricultural reuse of sludge is subject to the provisions of Directive 86/278/EK which has been incorporated to the National Law with the JMD 80568/4225/91 and amended by the JMD 114218/97 (GG-1016/B/17-11-97). The Public Consultation being completed in January 2012, the Draft Common Ministerial Decision entitled «Measures, conditions and procedures for the use of sludge which derives from domestic and urban sewage treatment as well as some wastewater, in compliance with the provisions of Council Directive 86/278/EEC of the European Communities » has been drafted thereafter. This Draft modernizes and expands the scope of JMD 80568/4225/91 and aims to maximize utilization of sludge and specifically to increase the potential applications of sludge in the form of soil enhancer in agriculture, forestry, urban and suburban green sites and landscape planning. Adoption of a modern institutional framework that will promote viability in the management of sludge and reduce the amount disposed in landfills is recommended.
WD08B340	Measures for diffuse source pollution	Development of specialized tools for the rational use of fertilizers and water	Development of specialized tools for the determination of fertilizer treatment, in the pattern of the program «Recording of nutrients, heavy metals and Hydrodynamic Properties of Soils for the rational use of fertilizers and water and Production of Safe Products» of the Region of Central Macedonia to be applied to the nutrient- zones under Directive 91/676/EEC.
WD08B350	Measures to confront the negative effects on water status	Set up of an institutional framework for the determination of the terms of protection of inland recreational waters according to Article 6 of the WFD – Temporary regulation for new projects in inland water bodies that are included in the list of protected areas as recreational waters.	The measure refers to the adoption of the necessary regulations that will contain the main criteria for the determination of the recreational waters according to Article 6 of the WFD in the inland waters and will determine the terms, the limitations and the conditions for the development of projects and activities on them. Until the enactment of the above institutional framework and the specification of the above terms, restrictions and conditions in inland water bodies included in the list of protected areas as recreational waters, the installation of small Hydroelectric projects and other projects of water intake is temporarily suspended. In special cases the Water Directorate may authorize the installation of water intake and small hydroelectric projects in those areas if it is proved that the water body status is not affected, in accordance with the provisions of Article 4 of the WFD and also if the project feasibility is co evaluated with the existing and / or planned recreational activities. In this case the opinion of the Water Council of the Decentralized Administration is required.
WD08B360	Measures to confront the negative effects on water status	Determination of selected areas suitable for material abstraction for technical project needs.	This measure deals with the problem of arbitrary interventions in streams across the whole country, in a rational and environmentally friendly way. The aim of the measure is to confront the hydromorphological pressures of the abovementioned WBs The conduction of a special study in every RB of the RBD is proposed, with the following main subjects:

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
			<p>A) Determination of sediment concentration areas along the broad riverbed of the stream. B) Estimation of the available quantities in every region. C) Ecological evaluation per region with emphasis on the habitat types (structure, conservation status), on the flora species (herbaceous, shrubby and arboreal with emphasis on the arboreal in good conservation status) and on fauna habitats. D) Hierarchy of the concentration areas regarding the potential of material extraction taking into account the abovementioned.</p> <p>The study is proposed to be done with the responsibility on the competent Water Directorate of each RB. An assessment should be done regarding the need for Strategic Environmental Impact Assessment.</p> <p>The measure aims at the management of the sediment yield and at the regulation of the material extraction from stream bed, in a manner that both the sustainable exploitation of the resource and the maximum protection of the ecosystems developed on the WBs are ensured. It also aims at the protection of the coastline against erosion.</p> <ul style="list-style-type: none"> • . • The implementation of this measure will be done as it is described below: <p>Phase I (short-term): Modernization of the legislative framework for material abstraction for technical project needs of the bed of water bodies, torrents and streams. For more about determination of selected areas suitable for material abstraction you can see also 42279/24/24.11.1938 (ΦΕΚ Β' 267)</p> <p>Phase II (short-term): The Ministry of Environment, Energy and Climate Change will compose the specifications for a preliminary assessment per River Basin District, where the main criteria for distinguishing the three (3) zones of sediment deposition will be configured:</p> <p><u>Zone I:</u> Zone of high capacity regarding sediment deposition, where sediment abstractions will be allowed.</p> <p><u>Zone II:</u> Zone of medium capacity regarding sediment deposition, where sediment abstractions will be allowed under specific conditions.</p> <p><u>Zone III:</u> Zone of low capacity regarding sediment deposition, where sediment abstraction will not be allowed.</p> <p>The criteria for distinguishing the abovementioned zones will mainly be hydromorphological, environmental and techno-economic as well as criteria for the management of the flood risk.</p>

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
			<p>Phase II (medium-term): Conduction of a preliminary study per RB for the designation of the sediment deposition zones, according to the specifications that were defined in Phase I and to the conditions for the permitting for sediment extraction in zones I and II. The dynamics of the physical deposition process and the sediment transport should be co evaluated with the conditions required per zone. In protected areas the above study is properly adjusted in order to meet the requirements of the provisions according to which the institutionalization of the requirements was done, if such requirements exist.</p> <p>For the protection of the bed of the water bodies, until the aforementioned are implemented no more new aggregate abstractions are allowed in the following areas:</p> <ul style="list-style-type: none"> ● From the shore and the riparian zone of lakes, ● From the areas where technical structures are located (e.g. bridges, dams, drainage or irrigation ditches) and in a distance of 500m upstream and 500m downstream of the structure, <p>unless it is otherwise specified in the environmental permission of other projects or other existing provisions, or some other reasons regarding the protection or the maintenance of existing projects exists. Concerning the aggregate abstraction works, the position and the amount of abstracted material should be determined during the permitting procedure as well as the method and the timing of works.</p>
WD08B370	Measures to prevent pollutant discharge directly into the Groundwater Bodies.	Creation of a single register of regions of wastewater disposal either through irrigation or through artificial recharge (Government Gazette 354/B/08.03.2011)	Under the current institutional framework for the reuse of treated wastewater either through irrigation or through artificial recharge, the Water Directorate of the Decentralized Administration decides after the submission of the design study. The measure regards the creation of a registry of disposal areas, that will include the details of the body responsible for the construction of the project, the basic technical specifications, the Water Body affected as well as any additional monitoring measure and any data collected from monitoring that was possibly asked during the permitting procedure and was delivered to the Water Directorate. The determination of the information that should be included in the register will be determined from the Special Secretariat for Water in collaboration with the Water Directorates. The register will be available to the competent audit authorities of the Regional Unit in order to facilitate the programmed necessary audits of these projects.
WD08B380	Special measures for Priority Substances and other pollutants.	Register of pollution sources (emissions, discharges and leaks).	According to the first paragraph of Article 5 of «List of emissions, discharges and leaks» of the JMD 51354/2641/E103 (GG 1909B/8.12.2010)« The Water Divisions of the Regions, based on information collected in accordance with Articles 5 and 11 of PD 51/2007, Regulation (EC) No 166/2006 and other available data, compile for each Water District or part of that District within

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CODE OF MEASURE	CATEGORY	NAME OF MEASURE	DESCRIPTION
			<p>their administrative boundaries, a List of emissions, discharges and leaks for all priority substances and pollutants listed in Part A of Annex I of this Decision, including their concentrations in sediment and biota, as appropriate.»</p> <p>In particular, in the context of developing a list of emissions, discharges and leaks setting up a register of pollution sources is proposed. This will include:</p> <ul style="list-style-type: none"> a) registration of installations, activities and uses constituting sources of release for priority substances and specific pollutants in order to set up the relevant register, b) the description of the waste that is discharged regularly from specific sources accompanied by the chemical analysis of that waste, c) issuing circulars and other information actions for the staff of the competent departments for licensing and control d) updating the relevant licenses to various facilities. <p>The register will include the list of emissions, discharges and leaks for all priority substances and pollutants set out in Appendix I to JMD 51354/2641/E103/2010 in accordance with the provisions of Article 5 of the JMD. The register records the potential sources of pollution and forms the basis for an action plan to reduce the above mentioned substances if the increased concentrations of certain substances are due to anthropogenic causes or natural processes it should be investigated in the context of that measure.</p> <p>In addition, the register will assist the licensing authorities with locating all the bound plants and to proceed with the modification of the environmental licenses, where necessary and other relevant requirements deriving from the legislation.</p>

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Proposed Supplementary Measures for Thessalia RBD are presented in the table below:

Table 18: Supplementary measures of Thessalia RBD

CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
WD08S010	Administrative measures	Prohibition of irrigation during the midday hours (12:00 – 17:00), when there is bright sunshine and air temperature above 35°C.	Prohibition of irrigation during the midday hours (12:00 – 17:00), when there is bright sunshine and air temperature above 35°C.
WD08S020	Administrative measures	Setting up from Regional Organization of Land Reclamation (TOEB) of a reliable irrigation program, which includes audits concerning its correct implementation from the users (farmers).	Setting up from Regional Organization of Land Reclamation (TOEB) of a reliable irrigation program, which includes audits concerning its correct implementation from the users (farmers).
WD08S030	Economic or tax measures	Adaptation of accounting systems of water providers	Application of common principles for recording and estimating the cost of water by water providers. It will contribute to improved reliability. It has been found that (a) there is incompatibility among systems used by different providers (b) there is not systematic recording of revenue and expenditure items by water service. Furthermore, resource and environmental costs should be internalized. Use of information processing technology is a precondition. For irrigation water provided by private installations of the producers, provision should be made for estimating resource and environmental costs to be paid.
WD08S040	Economic or tax measures	Introduction of systems benchmarking cost data by provider to a common standard in order to pinpoint areas of lagging performance	Disclosure of water cost data to promote awareness by the public. Data should include comparative cost standing of providers
WD08S050	Environmental agreements after negotiations	Promotion of voluntary agreements with significant water consumers (Public Enterprise for Water and Sewerage, collective irrigation networks, industries) that	Communication with significant water consumers (Public Enterprise for Water and Sewerage, collective irrigation networks, industries) that consume large quantities of groundwater (>300.000m ³ /year) and pollute Groundwater Bodies in order to adopt specific initiatives and Code of Conduct.

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CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
		consume large quantities of water or pollute Groundwater Bodies in order to adopt a Code of Conduct.	
WD08S060	Emission control	Establishing sinkholes protection rules	Establishing standards for the protection of existing active or inactive sinkholes with prohibition for polluting activities and especially any activities that dispose wastewater directly to sinks. The sinkholes drain closed basins and measures must be taken to protect and improve the quality of water that is drained, such as: 1. Incentives to farmers to replace crops with organic cultivation, 2. Incentives for tertiary treatment of wastewater 3. Strict controls on compliance of the environmental conditions on the existing units.
WD08S070	Emission control	Establishment of a specific action program of technical and regulatory measures to protect the groundwater aquifer of the area Kileler (Stefanovikio etc.) by the presence of total and hexavalent chromium.	It is suggested to investigate the quality deterioration of the groundwater of the area with chromium and other trace elements. Both the possible physical origin (elevated natural background) and the correlation with human activities (industry, agriculture, etc.) will be considered. Suggestion of alternative water supply of settlements with good quality groundwater.
WD08S080	Emission control	Special protection measures in areas of water bodies where there are geothermal and mineral waters.	The special protection measures for geothermal and thermal water are combined and adapted to the existing statutory framework and protection. First of all are applied the prohibitions of controlled zone II for protection of points of groundwater abstraction for drinking. The installation of new activities may be permitted in specific locations after submitting hydrogeological study or report, depending on the size and type of activity, and after positive opinion issued by the Water Directorate.
WD08S090	Emission control	Investigative monitoring program of quality state in groundwater bodies and surface bodies in areas of existing landfills.	It is proposed to investigate the quality status of surface water and groundwater at the perimeter of the area of existing landfills.
WD08S100	Emission control	Set in principle restriction zones for drilling new wells for new water uses and extensions of permits for	Coastal water bodies which have been determined to be in poor condition due to brackish quality or show local salination caused by human pressures (over-pumping) restrictive measures are taken for new construction of abstraction projects (boreholes,

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CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
		existing use in coastal groundwater bodies where salination phenomena are observed.	<p>wells) of groundwater. Restrictive measures are taken for the expansion of existing licenses as well.</p> <p>Until the precise zoning of restriction zones based on specific hydrogeological studies that should be drawn up, it is suggested to set the following coastal zones for prohibiting of drilling new wells for new water uses and extensions of existing licenses:</p> <p>For karstic systems: 300 m.</p> <p>For granular unconfined aquifers: 200m.</p> <p>For granular confined or semi-confined aquifers: 100m.</p> <p>The abovementioned distances are measured from the coast.</p> <p>In special cases (eg drinking water, drilling for aquaculture and desalination) can be given permission for drilling a new borehole after submitting hydrogeological study or report and approval by the Water Directorate. The above refer to the whole underground water body, and not only to the spatial position of a new drilling.</p> <p>These restrictions are intended to limit the expansion of seawater intrusion in coastal systems .Where coastal karstic systems with extensive natural salination through regulatory decisions , the restriction zones may be extended further with the responsibility of Water Directorates because it concerns the whole underground body and not only the spatial location of possible new drilling project.</p> <p>The zones with restrictions or prohibitions for drilling projects will be defined by a specific hydrogeological study.</p> <p>Prohibition excludes special circumstances related to project execution for irrigation using potable water and other special occasions such as drilling for aquaculture, wells pumping water for desalination plants etc. In such cases, authorization is upon substantiated hydrogeological study which will be examined and approved by the relevant Water Directorate.</p> <p>The specifications for the aforementioned hydrogeological studies will be determined by the contact authorities under the coordination of Special Secretariat for Water.</p>
WD08S110	Emission control	Definition and demarcation of areas of water bodies showing poor quality due to seawater intrusion situation or presenting	For coastal water bodies that are in poor condition due to brackish quality or show local salination should be drawn special hydrogeological studies to precisely define the boundaries for prevention of abstraction and new extensions of the salination front, so in that area to take measures for the gradual restoration through not only prohibiting new drillings, but also through reduction or even remove of existing abstraction in use , giving

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CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
		local salination.	priority to finding alternatives water sources for irrigation needs. The specifications for the aforementioned hydrogeological studies will be determined by the contact authorities under the coordination of Special Secretariat for Water.
WD08S120	Abstractions Control	In-situ inspections to licensed abstractions (large consumers) at least 2 times per year.	Periodic inspections (at least 2 per year) Water Division to licensed abstractions (especially large consumers) for control of abstractions and installed recording system pumped volumes.
WD08S130	Abstractions Control	Installing operating valve in artesian wells	Valve or pipe fitting pressure balance or any other appropriate means for controlling discharge of artesian wells during the wet periods, sometimes discharge it throughout the year underground confined aquifers creating problems for quantitative aptitude in irrigation - potable water period.
WD08S140	Abstractions Control	Systematic monitoring of quality state in Licensed abstractions wells in ground water bodies with high natural background level (chlorides, sulphates)	Annual review for qualitative status changes of groundwater in ground water bodies with high natural background levels (eg chlorides , sulphates). The annual verification of qualitative status of groundwater is to check the possible extension zone characterized by high concentrations of this natural background level and the possible increase or decrease the concentrations of the element that causes it . The Water Division with evaluate of the data resulting from the annual quality audits will have the opportunity to take the necessary measures according to the potential deterioration or improvement status.
WD08S150	Demand management measures	Encouraging and strengthening of extension methods localized irrigation (drip irrigation) receptive irrigation methods such plantations.	Expansion of micro-irrigation in total irrigated tree crops and increase the percentage receptive of such systems other extensive crops (strawberries, asparagus, tree crops, etc.).
WD08S160	Efficiency and reuse measures	Modernization of existing tertiary pipelines to irrigation networks.	As a first step of realization proposed study which will explore the possibility of replacing existing pipes open tertiary irrigation pipes under pressure. Should be taken into account through a cost - benefit both the financial and environmental benefits. The implementation of the measure is proposed to start from those parts of the network with the greatest losses, the reduction of which would endanger the corresponding groundwater bodies.
WD08S170	Efficiency and reuse measures	Program Subsidies / Incentives for Recycling of gray water.	It is proposed to start program grants for installation of gray water recycling systems in homes, camps, schools, stadiums and hotels in order to irrigate gardens, and using the toilet.

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CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
WD08S180	Construction Projects	Construction of enhancement works for the drinking water supply system in the broader area of Volos city, Phase A	The project refers to the drilling and exploitation of 28 new boreholes in order to achieve the abolition of the existing boreholes for irrigation use. Also, five boreholes of the existing network of the Municipal Enterprise for Water Supply and Sewerage in the broader area of Volos municipality will be used. The project involves also the construction of a network for collecting the discharges from the boreholes, the construction of two pumping stations and the construction of a conveyance pipeline that transfers water to the existing Armata reservoir of the Municipal Enterprise for Water Supply and Sewerage in the broader area of Volos municipality.
WD08S190	Construction Projects	Construction of Dam and Reservoir at the location "Agiokampos-Livadotopos", Larisa Regional Unit	Construction of Dam, 33.5m high from the river bed of Pouri stream. Reservoir Storage volume is equal to 4.4 MCM. Environmental flow of 101 l/sec.
WD08S200	Construction Projects	Drinking Water Supply System from Smokovos Reservoir to the eastern side of Karditsa Regional Unit.	Drinking Water Supply works for the coverage of the increasing demand of the villages located at eastern side of Karditsa Regional Unit.
WD08S210	Construction Projects	Water Abstraction Weir and Reservoir at the location of Xirias, Municipality of Almyros, Regional Unit of Magnisia.	The project refers to the following works: <ul style="list-style-type: none"> - Water Abstraction Weir, 3m high and 100m long - Connector canal, 1720m long - Off stream reservoir of 3.824 MCM near the stream of Xiria. FSL +177. - Conveyance canal from the reservoir to the irrigated area - Irrigated area of 640ha - Environmental flow of 0.58 m³/year
WD08S220	Construction Projects	Operation of Panagiotiko Dam – Water Treatment Plant and Conveyance System (from Milina to Trikeri), Magnisia Regional Unit	The measure refers to the completion of the Water Treatment Plant and Conveyance System (from Milina to Trikeri) for the coverage of the irrigation demand. The works are today under construction.
WD08S230	Emission control	Efficient management of wastewater from agglomerations with a population peak <2000.	Implementation of guidelines of the Special Secretariat for Water on proper wastewater management practices for agglomerations with equivalent population <2,000.
WD08S240	Construction	Kaklitzorema Dam at the location	Dam of 44m height, crest length of 292m and FSL +383m. Reservoir Storage Volume of 1.7

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CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
	Projects	of Dilofos, Larisa Regional Unit	MCM for the irrigation of 294ha. Environmental flow of 3l/s.
WD08S250	Construction Projects	Narthaki Dam, Larisa Regional Unit.	Rockfill dam with central clay core of 28m height and crest length of 245.5 m and FSL +261m. Reservoir Storage Volume of 0.53 MCM. Irrigated area of 600ha.
WD08S260	Construction Projects	Deleria Dam, Larisa Regional Unit	Dam of 60m height, crest length of 338m and MWL +384m. Annual average abstraction of 6.1MCM. Irrigated area of 1300ha. Environmental flow of 55l/s.
WD08S270	Construction Projects	Construction of conveyance and distribution systems for irrigation use supplied from Karla lake, Magnisia Regional Unit – Phase A	<p>The measure involves the following works:</p> <ul style="list-style-type: none"> a) civil works for the supply of irrigation canals and reservoirs from Karla Lake (sites in the broader area of Larisa) b) conveyance system (two pumping stations, force mains, and one reservoir) c) irrigation distribution system which differentiates between a closed pipe system (three pumping stations, closed pipe distribution system, drainage ditch system and rural road network) and an open channel irrigation system. <p>Irrigation water demand is estimated at 47 MCM and covers an area of 8440 ha. Given that the source of water supply of Karla Lake is Pinios River and it takes place only during winter time, water abstraction from the river during summertime is avoided and thus the measure contributes to the improvement of the river status for the section downstream of the abstraction point and so on. Moreover, the implement of the measure aims to rationalize the consumption for irrigation use and thus to hinder the over abstraction from groundwater system.</p>
WD08S280	Construction Projects	Agioneri Dam, Larisa Regional Unit	Dam 48m high, with crest length of 195m. Reservoir Storage Volume of 13.7 MCM and FSL at +250m. Irrigated area of 2000ha in the broader areas of Elassona and Tsaritsanis. The minimum environmental flow is designated at 204 l/s and it is calculated based on the average runoff value of July and August according to the EIA of the Dam. The construction of the dam stopped in 2006 due to the exhaustion of the scheduled funding of the project. The diversion tunnel and spillway have been constructed. The safe irrigation abstraction at annual level is estimated at 8 MCM.
WD08S290	Construction Projects	Litheos Dam, Trikala Regional Unit	Irrigation Dam with crest length of 526m and 32m high (FSL = +330.13m) for an irrigated area of 600ha. Environmental flow of 20l/s. Under construction. Reliable Irrigation Abstraction at annual level is estimated at 2.8 MCM.

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CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
WD08S300	Construction Projects	Dam at Mavromati Stream, Municipality of Sourpi, Magnisia Regional Unit	<p>The measure includes the following works:</p> <ul style="list-style-type: none"> - Dam 48m high, and reservoir storage capacity of 1.2hm³ - Abstraction for drinking water supply for the municipalities of Sourpi and Pteleou - Environmental flow of 5l/s.
WD08S310	Artificial recharge of ground water bodies	Artificial recharge of karstic limestone System Titarissios - Pinios River in the area of Tirnavos.	This subject includes a first phase completion of the hydrogeological study of the artificial recharge of karstic aquifer Damasio-Titanos from river flow of Titarissios.
WD08S320	Artificial recharge of ground water bodies	Projects artificial recharge of karstic system Hypereia, Orphana in border of Larisa's and Karditsa's Prefecture (karstic system Fyllio - Orphana).	The subject involves the study of artificial recharge projects aquifers of the region between Fyllio mountain, of hill Htouris, Lefki, Hypereia, Orphana in border of Larisa's and Karditsa's Prefecture.
WD08S330	Educational measures	Information and awareness of the public for issues concerning the use and management of water resources	A continuous enlightenment campaign of consumers is proposed with the emphasis placed upon the meaning of rational management of the resource, as well as the continuous informing of consumers and the public, regarding the occasional conditions of the current balance of water and the need for the measures taken at the time.
WD08S340	Educational measures	Organization of one day events regarding new technologies, modern agricultural techniques, environmental protection issues, fertility of agricultural soils etc.	The organization by the Agricultural Economy and Veterinary Services of one day events, twice annually, with invited speakers, such as veterinary doctors, professors of agricultural sciences, biologists, technical staff of agricultural machinery agencies, soil experts, etc. The proposed measure aims at the enlightenment of producers and their encouragement to adopt best practices which will enable them to carry out their activities and which will improve their productivity and performance of agricultural holdings, highlighting at the same time the necessity of protecting the agricultural environment and preserving soil resources and the sustainable use of natural resources.
WD08S350	Research, development & demonstration programmes	Establishment and organisation of innovative agricultural estates – Pilot estates.	The participation of 2 – 3 agricultural producers from every regional unit of the particular Water District in scientific programmes and technical assistance in the organisation and management of farms, utilising state of the art technologies and techniques, applying in an exemplary manner the various measures of the code of Good Agricultural Practice Code and Cross Compliance, utilising the various financial programmes etc., aiming at the mobilisation of the rest of the producers in order to adopt and apply the same procedures and methods.

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CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
WD08S360	Research, development & demonstration programmes	Application of Special Research Programme in certain water bodies (HMWB) whose hydromorphological alterations do not constitute change of their morphological characteristics but mainly control of supply.	<p>For the Water Bodies whose hydromorphological alteration concerns to control of supply, such as the parts of river WBs downstream of dams, a more targeted examination of the potential of achieving a good ecological status is proposed during this management period. More specifically, the installation of monitoring stations to these water bodies is proposed, aiming at the examination of the “substantial alterations” which makes unfeasible the achievement of good ecological status (for other reasons except pollution) and therefore a definite answer to the question of whether the specific WBs are Highly Modified.</p> <p>The HMWBs that are proposed to be included in a targeted research program concern to a) HMWBs whose hydromorphological alteration doesn't refer to morphological alteration but mostly to main flow regulation, b) HMWBs that don't have a monitoring station according to the JMD 140384/2011</p> <p>Those highly modified water bodies are:</p> <ol style="list-style-type: none"> 1) Sofaditis P.3 (GR0816R000206231H) – river HMWB directly downstream of Smokovo dam. 2) Pinios P.6 (GR0816R000200017H) – part of the river in Larissa city. <p>It is necessary that a sampling campaign takes place in two (2) different points (one point per WB) twice a year. The total duration of the program will be three years.</p>
WD08S370	Research, development & demonstration programmes	Implementation of Special Control Programme for active substances which are contained in agrochemicals and which have been banned.	<p>It is proposed to carry out such a programme for specific substances. The aforementioned substances will be subjected to investigation, in case they are not included in the National Monitoring Programme. Sampling will take place in five (5) points (one point per water body) twice a year, during April and July. The total duration of the program is three years. It is proposed that monitoring should be carried out in Pinios river (estuary and downstream of Karditsa), in Karla lake, in Pagasitikos and in Enipeas.</p>
WD08S380	Other measures	Stream delineation in suburban areas of Larissa, Trikala and Karditsa cities.	<p>This measure consists of the implementation of Article 5 of the Law 3010/2002 (Government Gazette 91/A/25.4.2002). It concerns the conduction of a special study regarding the ditch delineation in suburban areas and it includes a hydrological study, an environmental study and a topographic survey in appropriate scale, aiming at the institutional treatment of the inadequate protection of the wetland systems, of the hydromorphological pressures and of the shrinkage of the riparian zone.</p> <p>This measure aims at the facilitation of the management and protection of the riparian zone by implementing modes of action and prioritization of the necessary actions of the</p>

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CODE OF MEASURE:	CATEGORY:	NAME OF MEASURE:	DESCRIPTION:
			competent authorities for the management of the areas next to streams and the Water Bodies related to them. It regards the river WBs that are located in or close to the suburban areas of Larissa, Trikala and Karditsa cities.
WD08S390	Construction Projects	Gyrtoni Hydraulic Gate at Pinios River, Larisa Regional Unit.	Hydraulic gate at Pinios river, with reservoir storage volume of 6 MCM. The aim of the measure is to cover the irrigation demand of the broader area (supply of Karla lake, supply of smaller reservoirs located within the Larisa Regional Unit, and irrigation of riverside areas performed directly from the river and from Gyrtoni reservoir) and simultaneously to ensure the conservation of the environmental flow downstream of the dam.
WD08S400	Construction Projects	Completion of the conveyance system for water transfer of 250 MCM from Acheloos river to the Pinios River Basin	The measure involves the Petrotou-Drakotripas tunnel for water transfer and the low regulating Mouzaki dam located at the river basin of Pamisos River.
WD08S410	Construction Projects	Development of new irrigation schemes for the replacement of water abstraction through boreholes in Pinios River Basin	The measure refers to the required conveyance and irrigation distribution system for the usage of the transferred water of 250MCM from Acheloos river.

Additionally, in the Thessalia River Basin District Management Plan, **actions** related to the implementation of European Directives are also included. Also, **supportive activities** have been identified, which are not measures of the River Basin Management Plan, although contributing to deliver its objectives.

The **implementation cost** of the proposed **supplementary measures** is estimated to **614.4 M€**.

For the **proposed supplementary measures** a **Cost Effectiveness Analysis (CEA)** was carried out.

The CEA is used for assessing the cost-effectiveness of potential measures for achieving the environmental objectives set out in the Directive, and in particular for making judgments about the most cost effective program of measures and assessing the cost-effectiveness of alternative measures.

The analysis included the following parameters: 1. degree of effect, 2. number of relevant Water Bodies, 3. Geographical level of implementation. These parameters received an appropriate rating and the rate of effectiveness was estimated. By taking into account the discounted cost of the measures, a **factor of economic efficiency** was calculated. In this way the group of the most effective measures was identified.

Additionally, the plan has two key issues (restrictions) to address:

- the limited remaining time period until the year 2015 and
- the limited financial capacity of the country at least until the year 2015.

So there was an emphasis on selecting complementary measures with low cost (so high coefficient efficiency) and immediate implementation (by 2015).

It is estimated that 33 of 41 supplementary measures have zero or low cost of implementation. 7 supplementary measures have cost below 100.000€ and 1 of them costs between 100 and 250 thousands €

ADDITIONAL MEASURES TO ACHIEVE THE OBJECTIVES OF THE DIRECTIVE IN SURFACE AND UNDERGROUND WATER BODIES IN PINIOS RIVER BASIN

In order to achieve the objectives of the Directive regarding the status of the surface and ground water bodies of Pinios River Basin some additional complementary measures are required.

From the analysis made in the individual deliverables that make up the Management plan of the River Basins of Western Sterea Ellada and Thessalia River Basin Districts, the following conclusions for both Pinios and Acheloos River Basins were made:

A. River Basin of Acheloos

- The Ground Water Bodies (GWBs) do not confront overexploitation problems. There is not recorded pumping of non-renewable quantities in GWB.
- The Surface Water Bodies (SWBs) do not also face overexploitation problems, although irrigation is done primarily with surface waters.
- The river system of Acheloos, especially in the middle basin, is set for the production of hydropower (Kremasta, Kastaki Stratos) .
- The river, transitional and coastal water bodies in the lower basin – in the estuary of Acheloos, is a broad area of high ecological importance (Natura, Ramsar).
- The same system is also an important resource of wealth – for both extensive and intensive fish farming.

B. River Basin of Pinios

- A significant number of Ground Water Bodies is under intense overexploitation which has contributed in many cases to quality deterioration.
- Many surface water bodies are also facing overexploitation. The exploitation is related to abstractions during the irrigation period, which mostly coincides with the period of low flow of the rivers. As a result, there are extremely low to almost zero in some cases, summer discharges in rivers bodies. To these low discharges contributes the overexploitation of groundwater, since the summer discharges in the river water bodies of Pinios basin stems from groundwater bodies. It is estimated that the average summer abstraction from all surface bodies of the basin is around 260 hm³ per year. In order not to prevent the achievement of good ecological status of the river water bodies, this amount must not exceed 160 hm³ per year. This means that the total summer overexploitation volume from surface water bodies was estimated to approximately 100 hm³ per year.
- The average annual volume of over-exploitation of GWBs was estimated on an annual basis, approximately to 120-150 hm³. Reduction of abstractions in the levels of 120-150 hm³ per year would theoretically stabilize the piezometric level at current levels. The gradual restoration of the groundwater aquifers includes the further reduction of the pumping volume to about 300 hm³ per year.

- It is estimated that the amount of groundwater that has been removed from the permanent underground water resources of the River basin of Pinios from the mid 1980s until nowadays, based on existing measurement data level, is at least 3.000 hm³. It is estimated that in order to replenish the underground water resources, even if the overpumping of 300 million m³ per year stops today, 50-60 years from today will be needed.
- Based on the above, the achievement of the environmental objectives of the Directive relating to good ecological status in surface and good quantitative status of groundwater bodies requires the reduction of the abstraction from surface water bodies during the summer months by about 100 hm³ per year and the reduction of the abstraction from groundwater bodies by 300 hm³ per year. These amounts are counterbalanced with the deficit of the current supply - demand equilibrium, to meet the irrigation demand in the basin of Pinios which is estimated at about 65 hm³ per year. Therefore it is estimated that if no other measure of quantitative management is implemented in the basin of Pinios, the average annual deficit will be approximately 465 hm³.

Agriculture scenarios

A special study on agricultural development policies over the next 20 years is conducted in the RBD's of Western Sterea Ellada and Thessalia.

This particular study considers the consequences of the agricultural development, which is consistent with the guidelines of the new Common Agricultural Policy (2013-2020). Two (2) basic scenarios are conducted. The first one includes the adaptation of the CAP and is in general characterized as realistic. The second one is a high growth scenario, which combines the restructuring of the crops of the irrigated areas in both RBD's and requires significant public and private investments. Taking into account the current conditions, the second scenario is estimated as ambitious and is not really possible to happen.

It is estimated that in the River Basin District of Western Sterea Ellada the water resources availability is sufficient to cover the needs according to both the first and the second scenarios. This volume of water is not expected to cause problems in the status of both surface and groundwater bodies provided that good agricultural practices in terms of fertilizing, plant protection and waste management will be implemented.

In Thessalia River Basin District under the current conditions of the water resources, it is not possible to cover the water needs that stem from the two alternative scenarios regarding agricultural development. The abstraction of water from surface and groundwater bodies seems necessary and

this leads to the deterioration of the status of the water bodies and consequently to the failure of achievement of the environmental objectives of the Directive.

Regarding the quantitative management scenarios which were examined for Thessalia River Basin District, it is considered as more realistic that irrigated land is going to decrease. It should be noted that this option conflicts with the conclusions of the special study on agricultural policy, where it seems that there is a trend for further increase of the irrigated land and some benefits resulting from this. However, it appeared that more reliable conclusions will be exported in future updates of the management plan, when there will be experience from the implementation of the CAP.

Environmental requirements

Achieving sustainable exploitation of surface and groundwater bodies requires the identification of threshold values for the environmental requirements of these bodies. First of all, two levels of environmental requirements for surface and groundwater bodies are examined:

- Surface Water Bodies (SWBs)

(a) Average Environmental Requirements where the maximum acceptable abstraction of surface flow for the summer period equals to 50 % of the available flow.

(b) High Environmental Requirements where the maximum acceptable abstraction of surface flow for the summer period equals to 30 % of the available flow.

- Groundwater Bodies (GWBs)

(a) Average Environmental Requirements where the total abstraction from renewable resources of GWBs in the River Basin of Pinios must not exceed 300 hm³ per year, in order to achieve a slow and gradual restoration of the aquifers. This restoration is estimated to take place in about 60 years.

(b) High Environmental Requirements where abstraction from renewable resources of GWBs in the River Basin of Pinios must not exceed 200-250 hm³ per year aiming to the gradual restoration of the aquifers. This restoration is estimated to take place in about 50 years.

Alternative scenarios to encounter deficiency

Taking into account both the existing supply-demand equilibrium in the River Basins of Acheloos and Pinios and the scenarios for the development of agriculture in the respective River Basins, this report considers alternative water management approaches in order to encounter the deficiency in Pinios River Basin and to achieve the environmental objectives of the Directive. One of these alternative approaches is also the water transfer from the upper basin of Acheloos River.

The parameters involved in the composition of the different management scenarios are:

- Reduction of Irrigation Consumption per acre (common for all scenarios of water management)
- Construction of reservoirs in order to use the winter runoff water in Thessaly
- Water transportation from Acheloos basin or reduction of irrigated land

The restructuring of the crops following the guidelines of the Common Agricultural Policy and the national policy is an exogenous constant parameter.

The comparative evaluation of the potential management scenarios demonstrated three (3) management scenarios for further benchmarking, in order to implement them in the near future and to meet the average environmental requirements for surface and groundwater bodies in the Pinios River Basin. These are:

- 1) Scenario based (a) to reduced irrigation consumption per acre, equal to almost 450 m³/acre/year, (b) to the completion of the construction projects regarding reservoirs for winter runoff storage in Thessalia RB, and (c) to the reduction of the irrigated land from the current 2.5 million acres to about 550.000 acres, in order to supply sufficient water to cover the average environmental requirements of the water bodies.
- 2) Scenario based (a) to reduced irrigation consumption per acre, equal to almost 450 m³/acre/year, (b) to the completion of the construction projects regarding reservoirs for winter runoff storage in Thessalia RB and (c) to the reduction of the irrigated land from the current 2.5 million acres to about 270.000 acres, in order to supply sufficient water to cover the average environmental requirements of the water bodies.
- 3) Scenario based (a) to reduced irrigation consumption per acre, equal to 450 m³/acre/year, (b) to the completion of the construction projects regarding reservoirs for winter runoff storage in Thessalia RB and (c) to the water transfer of a quantity equal to 250 hm³ from Acheloos river to Pinios River Basin, in order to sufficiently cover the irrigation needs of the existing 2,500,000 acres as well as the average environmental requirements of the water bodies.

After the consultation of both the Management Plans and the Strategic Environmental Impact Assessments of the River Basin Districts of Western Sterea Ellada and Thessalia and taking into account the Joint Ministerial Decision approving the Strategic Environmental Impact Assessment of the Management plan of the River Basin District of Western Sterea Ellada, scenario 3 is chosen as the

most suitable in order to achieve the environmental objectives of the Directive in Surface (SWBs) and Ground Water Bodies (GWBs). The scenario includes the reduction of the irrigation water consumption per acre at a target price of 450 cubic meters per year to maintain the same irrigated land in Pinios River Basin as it is today, the completion of the construction projects, but not the additional projects regarding winter runoff storage and finally water transfer of 250 million cubic meters per year from Acheloos river. The alternative package of additional measures accompanying the selected scenario water management is included in the program of measures of Thessalia and Western Sterea Ellada. More specifically, the alternative package of additional measures is included in the program of supplementary measures of the Western Sterea Ellada River Basin District, through the measures WD04S350 and WD04S360 with names " Completion of the conveyance system for water transfer of 250 MCM from Acheloos river to the Pinios River Basin " and " Development of new irrigation schemes for the replacement of water abstraction via boreholes for irrigation use within Pinios River Basin " and in the program of supplementary measures of Thessalia River Basin District through the measures WD08S400 and WD08S410 with names " Completion of the conveyance system for water transfer of 250 MCM from Acheloos river to the Pinios River Basin " and " Development of new irrigation schemes for the replacement of water abstraction via boreholes for irrigation use within Pinios River Basin ". In the following table those two measures are being presented.

Table 19: Package of Additional Measures (Scenario 3 chosen) - Water transfer from Acheloos river

Measure Category	Measure Name	Measure Description
Construction projects	Completion of the conveyance system for water transfer of 250 MCM from Acheloos river to the Pinios River Basin	The measure involves the Petrotou-Drakotripas tunnel for water transfer and the low regulating Mouzaki dam located at the river basin of Pamisos River
Construction projects	Development of new irrigation schemes for the replacement of water abstraction via boreholes for irrigation use within Pinios River Basin	The measure refers to the required conveyance and irrigation distribution system for the usage of the transferred water of 250MCM from Acheloos river.

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