

**“Sustainable Water Management
through Common Responsibility enhancement
in Mediterranean River Basins”**

WATER MANAGEMENT IN ITALY
The Water Management Plan of Serchio River District

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Directive 2000/60/EC (WFD) and Directive 2006/118/EC (GWD) has been transposed in Italy by

- ✓ **Legislative Decree No 152 – 3 April 2006** "Environmental Code"
(Text updated with Law No 36 – 25 February 2010)
- ✓ **Law No 13 - 27 February 2009** "Special measures concerning water resources and environmental protection"
- ✓ **Ministerial Decree No 131 - 16 June 2008** Regulation on "Technical criteria for the characterization of water bodies (typing, recognition, analysis of pressures)"
- ✓ **Legislative Decree No 30 of 16 March 2009** "Implementing Directive 2006/118/EC on the protection of groundwater against pollution and deterioration"
- ✓ **Ministerial Decree No 56 - 14 April 2009** Regulation on "Technical criteria for the monitoring of water bodies and the identification of reference conditions for the modification of technical standards by Legislative Decree 3 April 2006, No 152."

The Region of Tuscany has beforehand the implementation of the WFD since 2004



The **Environment Code** identifies:

8 River basin district (including the **District Pilot of Serchio River**)

8 Competent Authorities

The **Law No.13/2009** provides that:

Water Management Plan

(should be drafted no later than December 2009)



The Water Management Plan of
Serchio Pilot River Basin

was approved

on February 24, 2010

by the Steering Committee of the
Serchio Authority

<http://www.autorita.bacinoserchio.it/pianodigestione>

The Water Management Plan

WHAT
INCLUDES



- **Characteristics** of River Basin District
- Summary of significant **pressures and impacts of human activity**
- Description of "**protected areas**"
 - Identification of **monitoring networks** (DGRT 100 of 02/08/2010) and mapping results of monitoring
 - "**States of quality**" and "**environmental objectives**" for surface water and groundwater and protected areas: achieving the quality "good status" (or good ecological potential and good surface water chemical for heavily modified water bodies) not later than 2015
- **Economic analysis** (cost of water use and measures identified)
 - **Programme of measures** (actions to be implemented to achieve the objectives)

CHARACTERISTICS OF THE RIVER BASIN DISTRICT

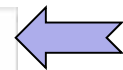
Name of River District	SERCHIO RIVER
Total Area of River District	1.565 km ²
Length of Serchio River	103 km
Maximum altitude	2054 m over level sea
Average altitude	717 m over level sea
Average discharge	46 mc/sec
Minimum discharge	6,50 mc/sec
Maximum discharge	2200 mc/sec
Maximum discharge for return period 200 years	3600 mc/sec
Rainfalls average annual	1.400 mm

Total Population of River District	270.000 inhabitants
Population Density	238,29 inhabitants/km ²
Local Authorities	Province - 3 62 Authorities!!! Municipalities - 36 Others - 21
Land Cover (CLC 2000)	<ul style="list-style-type: none"> ■ Forest e semi natural areas ■ Cropland ■ Urban areas ■ Wetlands ■ Water bodies

PRESSURES AND IMPACTS

PRESSURES AND IMPACTS	SURFACE WATER	POLLUTION POINT SOURCES: <ul style="list-style-type: none"> - Wastewater Treatment Plant - Industrial Areas - IPPC Industry - No-IPPC Industry - Treatment and crushing Plant of building materials
		POLLUTION DIFFUSE SOURCE: <ul style="list-style-type: none"> - Areas without sewage system - Areas vulnerable to nitrates from agricultural sources - Agricultural areas - Dumps and contaminated sites
		SIGNIFICANT WITHDRAWALS OF WATER
		MORPHOLOGICAL ALTERATIONS OF WATERCOURSES
		PLANTS FOR PRODUCTION HYDO-ELECTRIC POWER
		SALT INTRUSION
	GROUNWATER	POLLUTION POINT SOURCES: <ul style="list-style-type: none"> - Quarry - Dumps and contaminated sites
		POLLUTION DIFFUSE SOURCE: <ul style="list-style-type: none"> - Significant withdrawals of water - Anthropogenic alterations to groundwater levels - Salt intrusion

PROTECTED AREAS

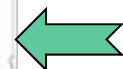
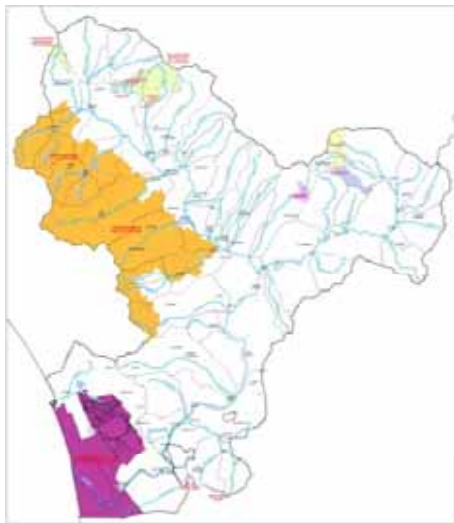
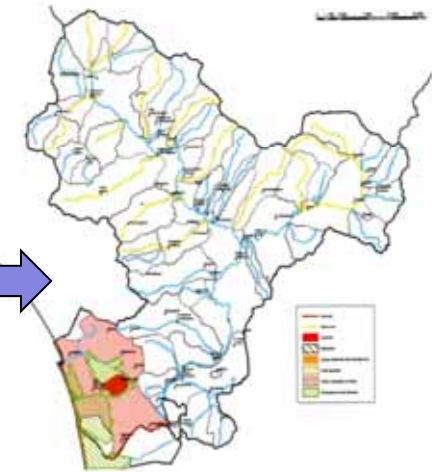
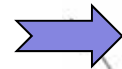


Water for human consumption

- 3 surface water
- 4 groundwater bodies
- over 500 withdrawal (springs - wells)

Water for the protection of aquatic species

- 13 Waters for the life of salmonids
- 2 Waters for the life of cyprinids
- 2 Waters for the life of shellfish
- 1 Bathing area (directive 76/160/CEE)
- 1 Sensitive areas (directive 91/271/CEE)
- 1 area vulnerable to nitrates (directive 91/676/CEE)

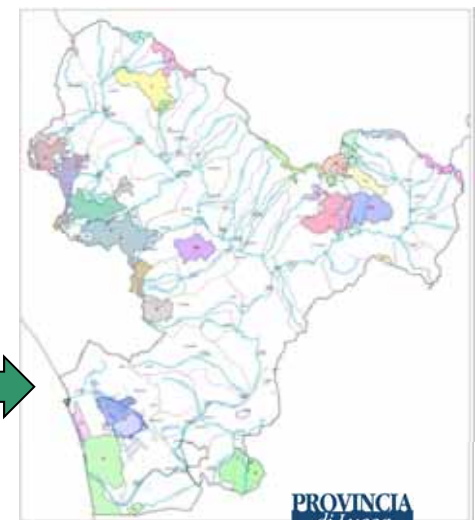
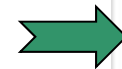


Natural protected areas

- 1 national park
- 2 regional parks
- 8 State wildlife reserves
- 2 local protect areas (ANPIL)

NATURA 2000 Ecological network

- 31 Sites
- 8 wetland areas

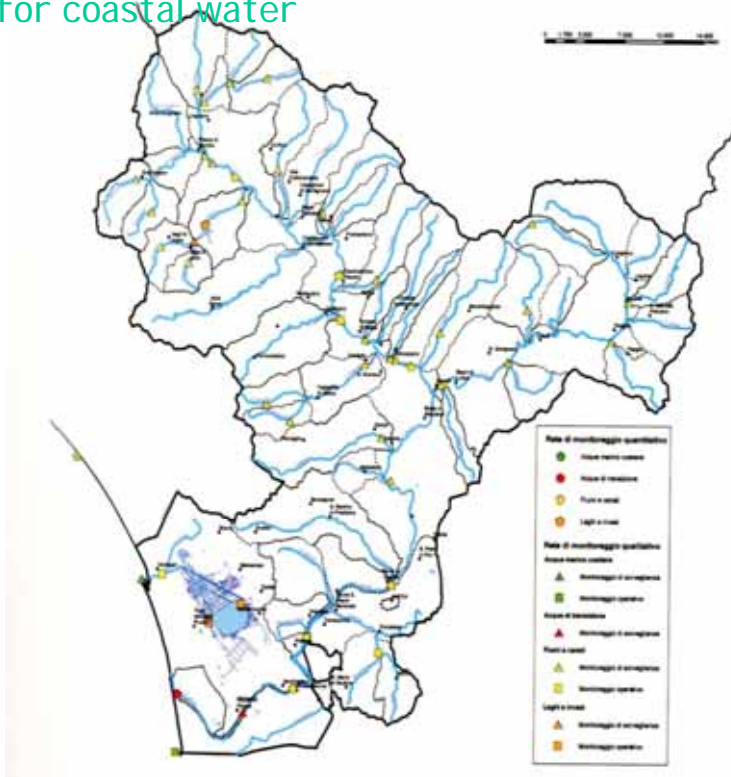


MONITORING NETWORKS

QUALITY AND QUANTITY MONITORING OF SURFACE WATER

NUMBER OF CONTROL POINT

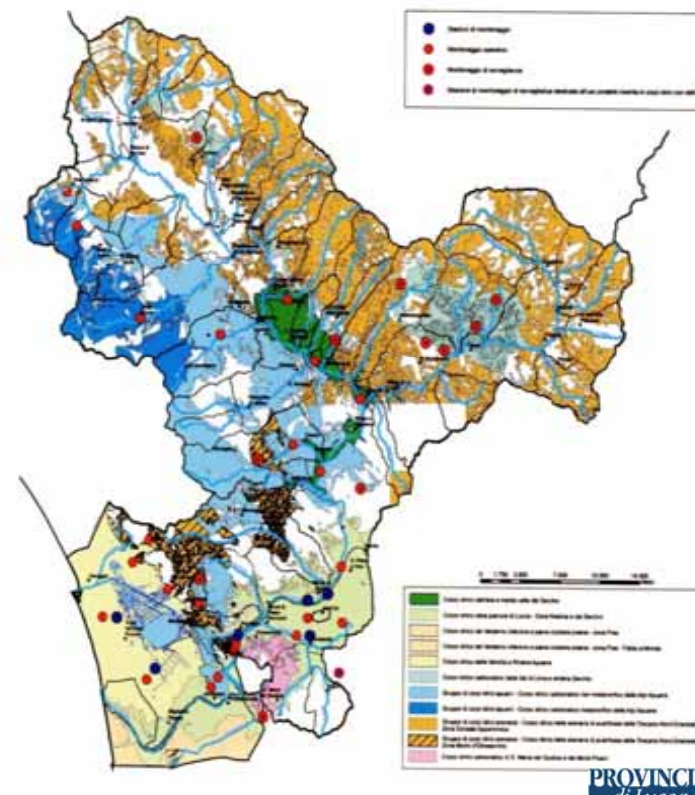
41 in rivers - 5 in lakes - 3 for transitional water
5 for coastal water



QUALITY AND QUANTITY MONITORING OF GROUNDWATER

NUMBER OF CONTROL POINT

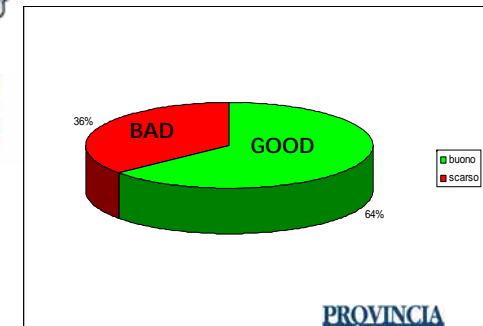
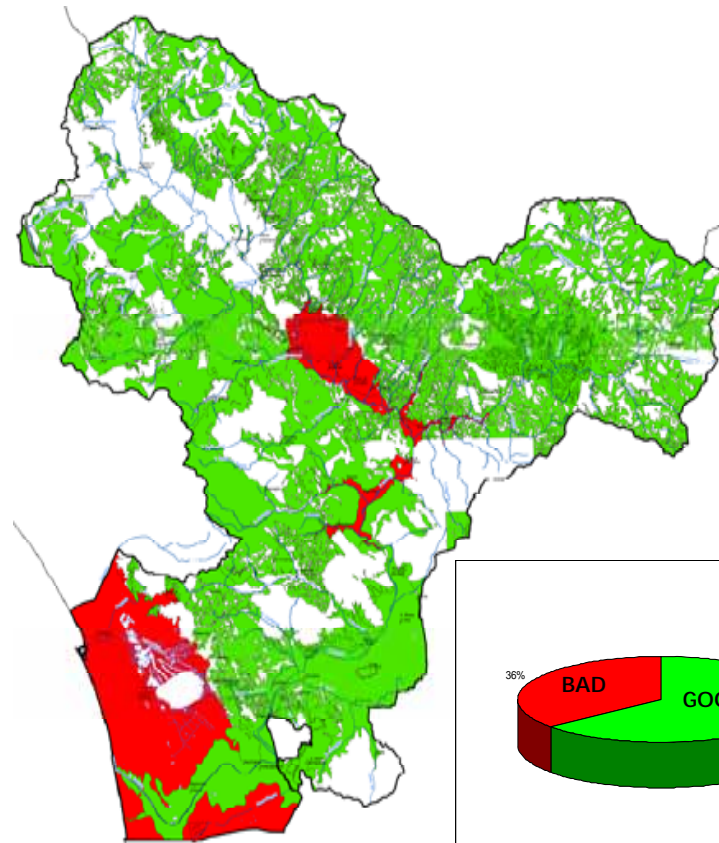
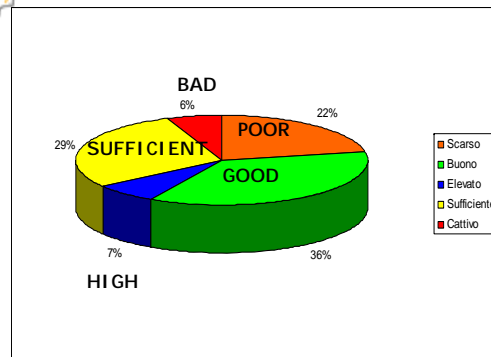
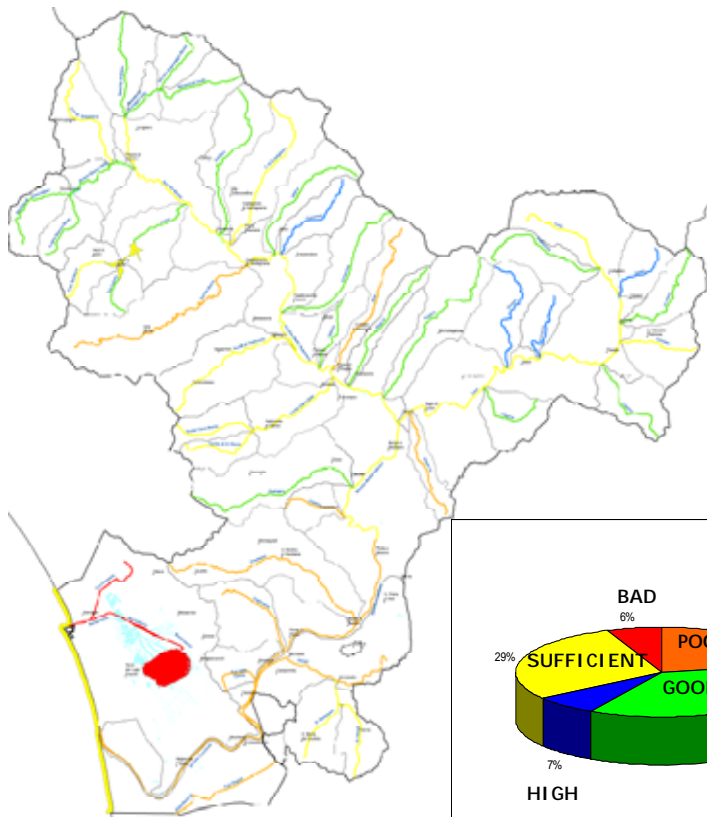
126 point for groundwater



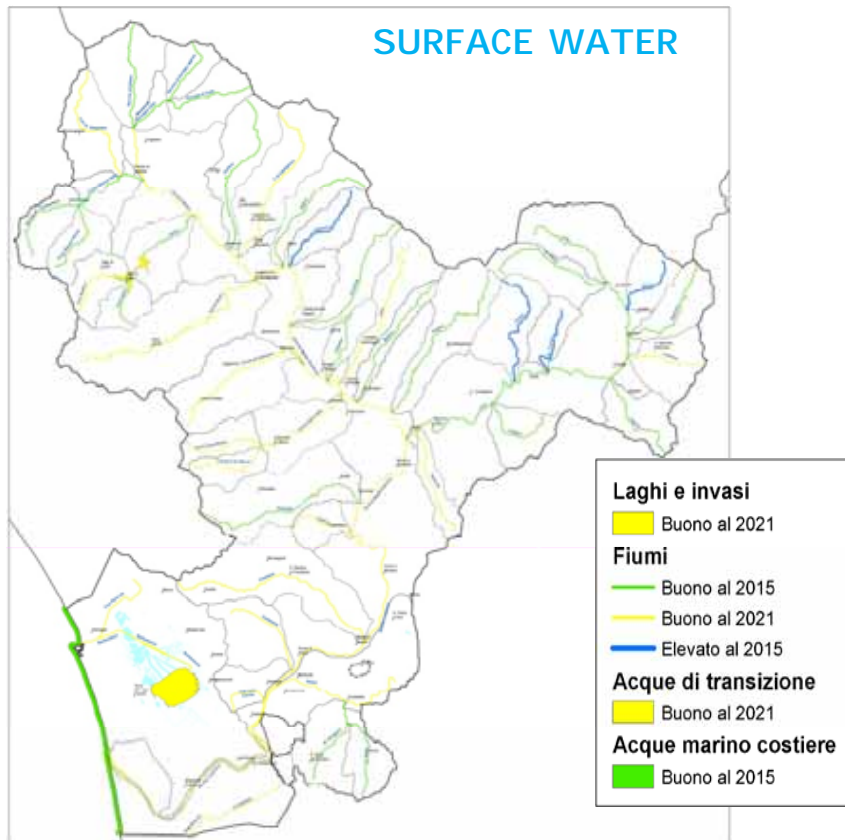
"STATES OF QUALITY" AND "ENVIRONMENTAL OBJECTIVES" FOR SURFACE WATER, GROUNDWATER AND PROTECTED AREAS BY 2015

Total surface water: n. 59

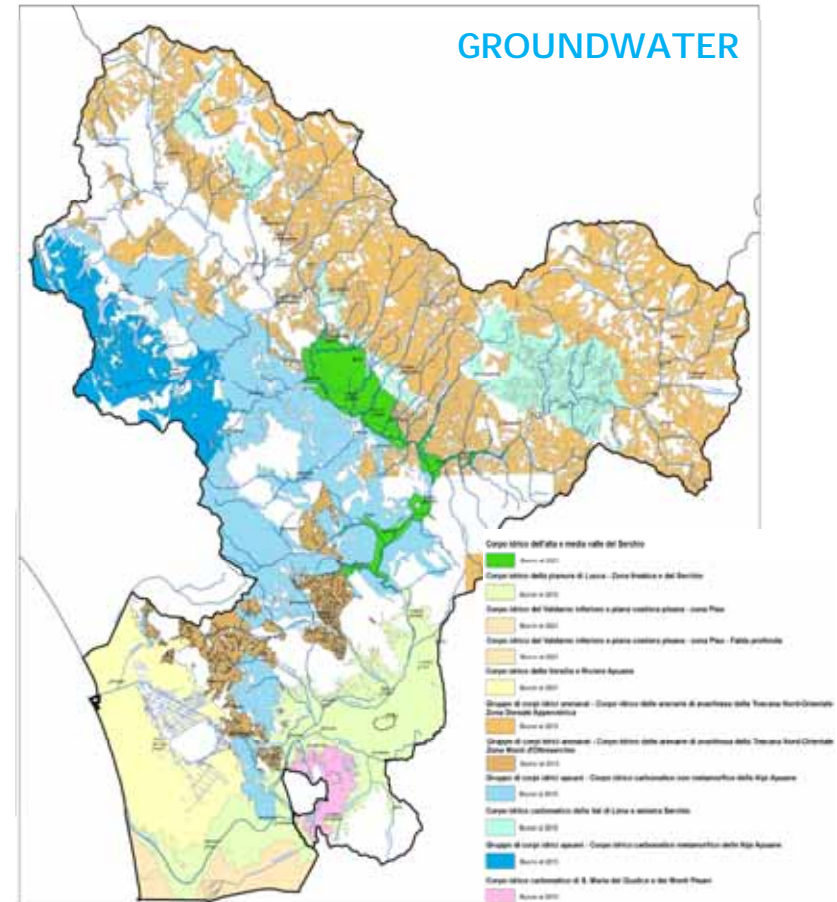
Total of groundwater: n. 11



"STATES OF QUALITY" AND "ENVIRONMENTAL OBJECTIVES" FOR SURFACE WATER, GROUNDWATER AND PROTECTED AREAS BY 2015



49% natural watercourses "good status" at 2015
 31% natural watercourses "good status" at 2021
 9% heavily modified watercourses "good potential" at 2021
 11% artificial watercourses "good potential" at 2021



7 water bodies "good status" at 2015
 4 water bodies "good status" at 2021

ECONOMIC ANALYSIS (COST OF WATER USE AND IDENTIFIED MEASURE)

EVALUATION OF THE LEVEL OF "WATER COST RECOVERY"

- A) IMPORTANCE OF WATER IN THE DISTRICT AND ECONOMIC SECTORS
 - Territory, population, economy
 - Ratio of surplus value and use of water
- B) PUBLIC WATER SERVICES IN THE RIVER DISTRICT
- C) TOOLS FOR COST RECOVERY
 - Tariff in the civil, agricultural and industrial sector
- D) EVALUATION OF THE LEVEL OF COST RECOVERY
- E) EVALUATION OF RESOURCE AND ENVIRONMENTAL COSTS
- F) EVALUATION OF INVESTMENTS



PROGRAMME OF MEASURES

The measures are divided into:

- **Basic measures:** steps necessary to implement the UE legislation (442)

- **Additional measures:** in addition to the basic measures (31)

Type of measures:
 Rules
 Publics Agreements
 Works
 Scientific research , good practices
 Financial tools
 Specifics measures for protected areas
 Other measures

		Norme di piano	Indirizzi vincolanti	Indirizzi non vincolanti
Provvedimenti amministrativi	1 Tutela costi d'acqua in aree protette	X Scheda numero 4		
	2 Salvaguardia acque potabili Serchio			X
	3 ATO			X
	4 Disciplina DMF	X Scheda numero 4		
	5 Rinaturalizzazione aree contigue al corso d'acqua		X	
Accordi negoziati in materia ambientale	6 Gestione vegetazione riparia		X	
	7 Conferma efficacia limitazione Massaciuccoli	X Scheda numero 4		
	8 Bilancio idrico Ansa, Pizzoma, Celetta		X	
	9 Delimitazione limiti	X Scheda numero 4		
Progetti di costruzione	10 Lavori Tecnici subsidenza		X	
	11 Lavori Tecnici svassi in coda di piena		X	
	12 Lavori Tecnici buche di sabbia silona		X	
Progetti di ricerca, sviluppo e dimostrazione	13 Collegamento depuratore Pontretetto			X
	14 Scale pesci per ripristino continuità fluviale		X	
	15 Iqualificazione casello idraulico		X	
	17 Attività di diffusione permanente		X	
	18 Database monitoraggi e scarichi		X	
	19 Monitoraggio fabbisogni irrigui Massaciuccoli		X	
	20 Monitoraggio coltivazioni Massaciuccoli		X	
	21 Modello idrogeologico della piana di Lucca		X	
	22 "Enclosures" lago Massaciuccoli			X
	23 Modello matematico per il trasporto solido del Serchio e del t. Lima		X	
Strumenti fiscali	24 Monitoraggio livelli idraulici invasi Enel		X	
	25 Incentivazioni risparmio idrico		X	
Altre misure opportune	26 Monitoraggi per effetti da cave - miniere - cavaneti ecc.		X	
	27 Individuazione stati qualità corpi idrici		X	
	27 bis Individuazione tendenze evolutive inquinanti		X	
	28 Monitoraggio caratteristiche economiche		X	
Misure per le aree protette	29 Individuazione costi		X	
	30 Verifica perimetrazione nuove aree protette		X	
	31 Monitoraggio Vernacans		X	

Level of constrains:

Regulation

Binding guidelines

Simple guidelines

PUBLIC PARTECIPATION

	Public Participation for SEA and Impact assessment (Dir 2001/42/CE, Dir 92/43/CE)	Public participation in the formation of the Management Plan (Dir 2000/60/CE)
31/03/2009	Scoping Report First-consultation (written comments within 30 days).	I Forums: - Presentation general contents of the Plan - First-questionnaire (written comments within 30 days)
17/04/2009 30/04/2009		I WORKSHOP II WORSHOP
13/05/2009		II Forums: - Presentation general contents of the Plan - Second-questionnaire (written comments within 30 days)
30/05/2009	III Forums: -Presentation Environmental Report	III Forums: - Presentation general contents of the Plan - Start consultation Document's Plan
22/06/2009	ADOPTION of the Management Plan and Environmental Report	
25/09/2009	- Environmental report - request for comments within 60 days. - Communication to Environmental Ministry (for judging environmental compatibility)	-Water Managemnt Plan - request for comments within 6 months. - Communication to Environmental Ministry (for judging environmental compatibility)
22/12/2009	APPROVAL of the Management Plan and Environmental Report	

Thank you!

Ευχαριστώ!

Grazie!

¡Gracias!

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