



WISER

**Water Bodies in Europe:
Integrated Systems to assess Ecological Status and Recovery**

Funded under FP7, Theme 6: Environment (including Climate Change)
Contract No.: 226273

www.wiser.eu

Contents

- A reminder: What WISER is about
- Progress with fieldwork
- Overview of assessment methods
- Database construction
- Cooperation with GIGs
- Dissemination



Contents

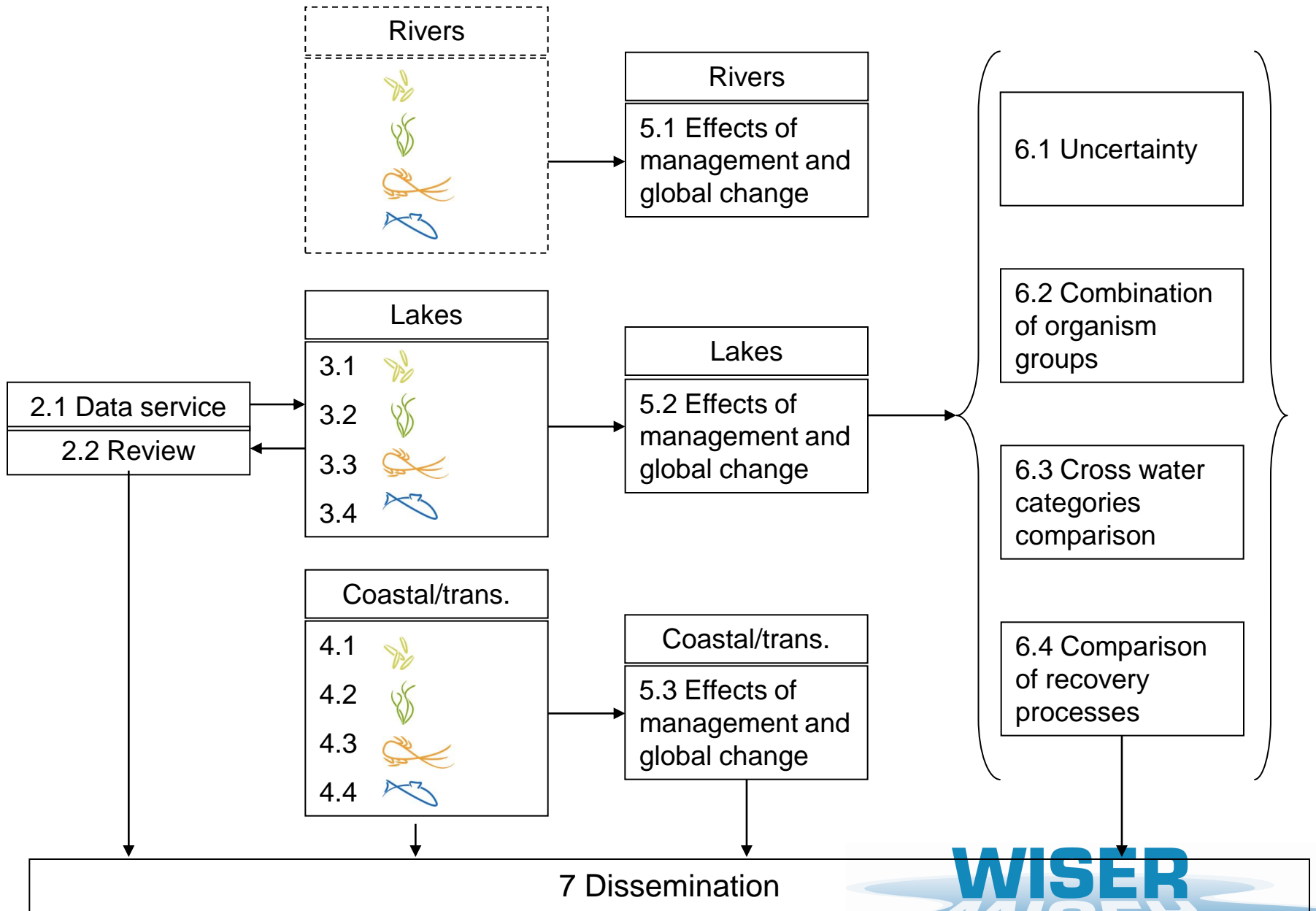
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Specific aims of the project

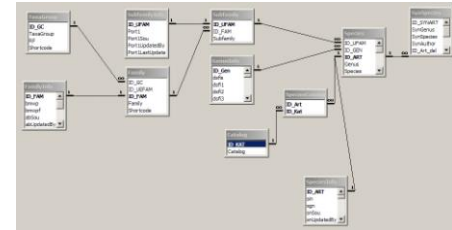
- Which **indicators** are best suited for the assessment of ecological status?
Which are most reliable? Which are redundant?
- How can results of **different organism groups** best be compared, intercalibrated and combined into an integrated appraisal of ecological status?
- How do organism groups respond to **recovery**?
- How is assessment and restoration affected by **global change**?
- How can **uncertainty** be quantified and minimized?

1 Management, coordination and reporting



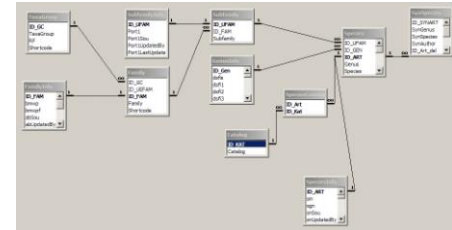
The five challenges and chances of WISER

- Data harmonization – use of many new data sources
- Field sampling: Agreement about common sampling design – comparison of BQEs and water categories
- Common sampling design for uncertainty estimation
- Contribution to remove WFD obstacles – immediate use of results
- Cooperation with GIGs – datasets, sampling, use of results



The five challenges and chances of WISER

- Data harmonization – use of many new data sources
- **Field sampling: Agreement about common sampling design – comparison of BQEs and water categories**
- **Common sampling design for uncertainty estimation**
- Contribution to remove WFD obstacles – immediate use of results
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Lake sampling campaign

PP	MA	AS	BI
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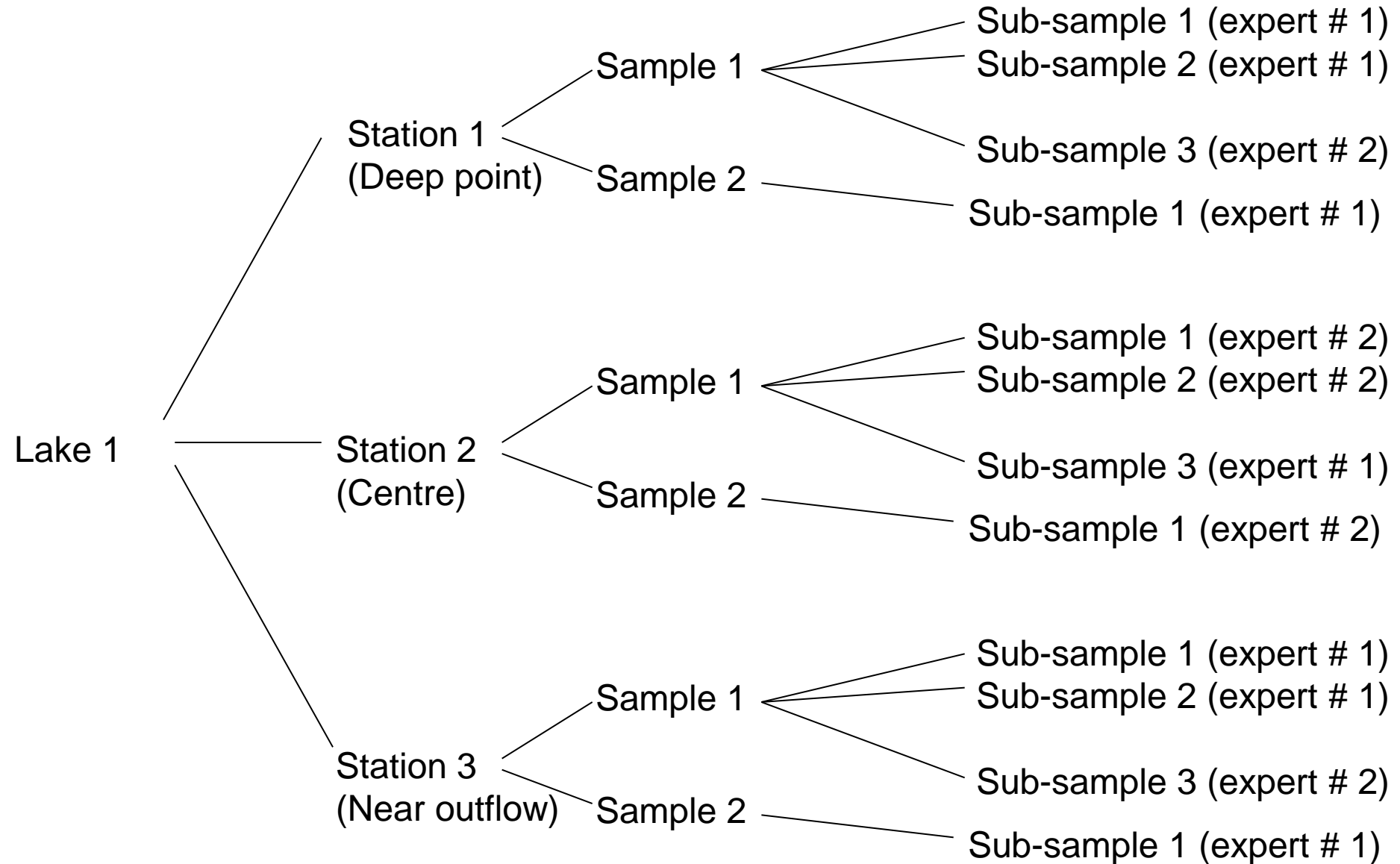


Numer of lakes	31	28	31	23
Number of lakes sampled	31	28	5	15
Number of lakes remaining	0	0	26	8

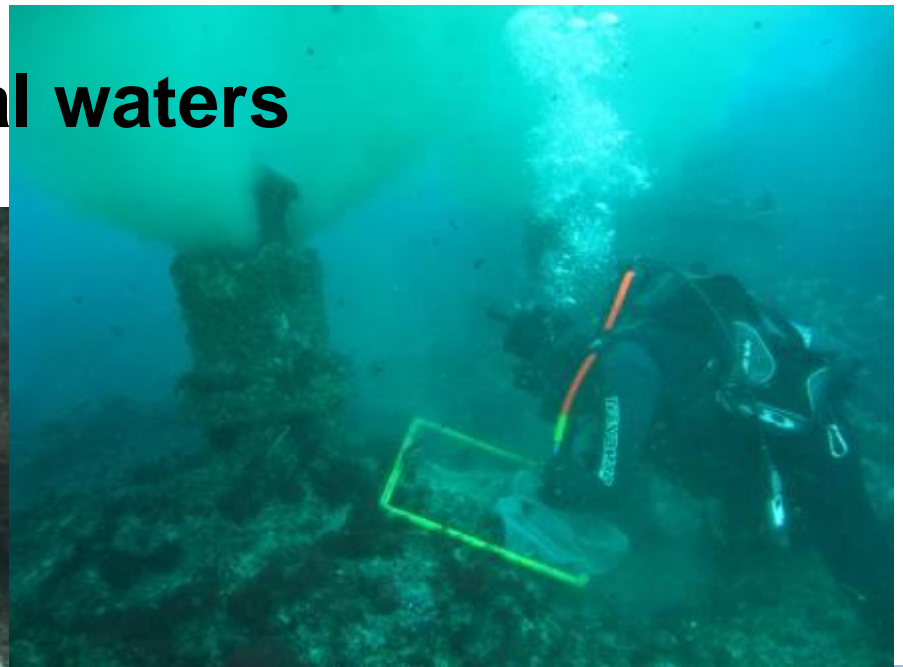
- 18 lakes are sampled for all BQEs
- 90% of sampling will be finished in 2009

Sampling finished in September 2010

Sampling scheme for phytoplankton



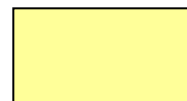
Coastal / transitional waters



Coastal / transitional waters



in progress



to be started

Number of replicate samples (existing data not included)

Location		PP	MA	AS	BI	FI
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Oslofjord/Skagerrak	CW	12				
Orwell & Stour	CW					27
Helsinki Bay	CW	2				
Basque Country	CW	12	18		21	
Mondego	TW	36	6	6	21	27
Balearic Islands	CW	12		18		
Lesina Lagoon	TW	12	18	18	21	27
Varna Bay	TW/CW	12	12			27
Total	TW/CW	108	53	42	63	108

Sampling finished in February 2010

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Overview of assessment methods

- Questionnaire on biological assessment methods - joint activity of IC Steering Group and WISER (Part of the “Guidance on the Intercalibration Process 2008-2011”)
- About 30 minutes to 1 hour work to complete it
- From today on available on www.wiser.eu/questionnaire
- Please return by 1/12/09
- → online database

Questionnaire on biological assessment methods used in national WFD monitoring programmes

Introduction

The European Water Framework Directive (WFD) requires to classify the quality status of rivers, lakes, coastal and transitional waters. The ecological status is evaluated by biological assessment methods using selected biological quality elements, i.e. phytoplankton, benthic flora, benthic invertebrate fauna and fish fauna. The 27 European Member States are in charge of developing these methods, and the classification of good ecological status is harmonised in a Europe-wide intercalibration exercise.

Purpose

Against this background there is a growing need for the exchange of information and data. Therefore, a joint activity was launched between the Intercalibration Steering Group and the EU research project WISER (<http://www.wiser.eu>) to collate consistent data about the national assessment methods used in WFD quality monitoring by the 27 Member States.

Information on the methods is collected by means of this questionnaire. Member States' delegates are asked to provide the requested data on screen and submit the questionnaire's content by email. The

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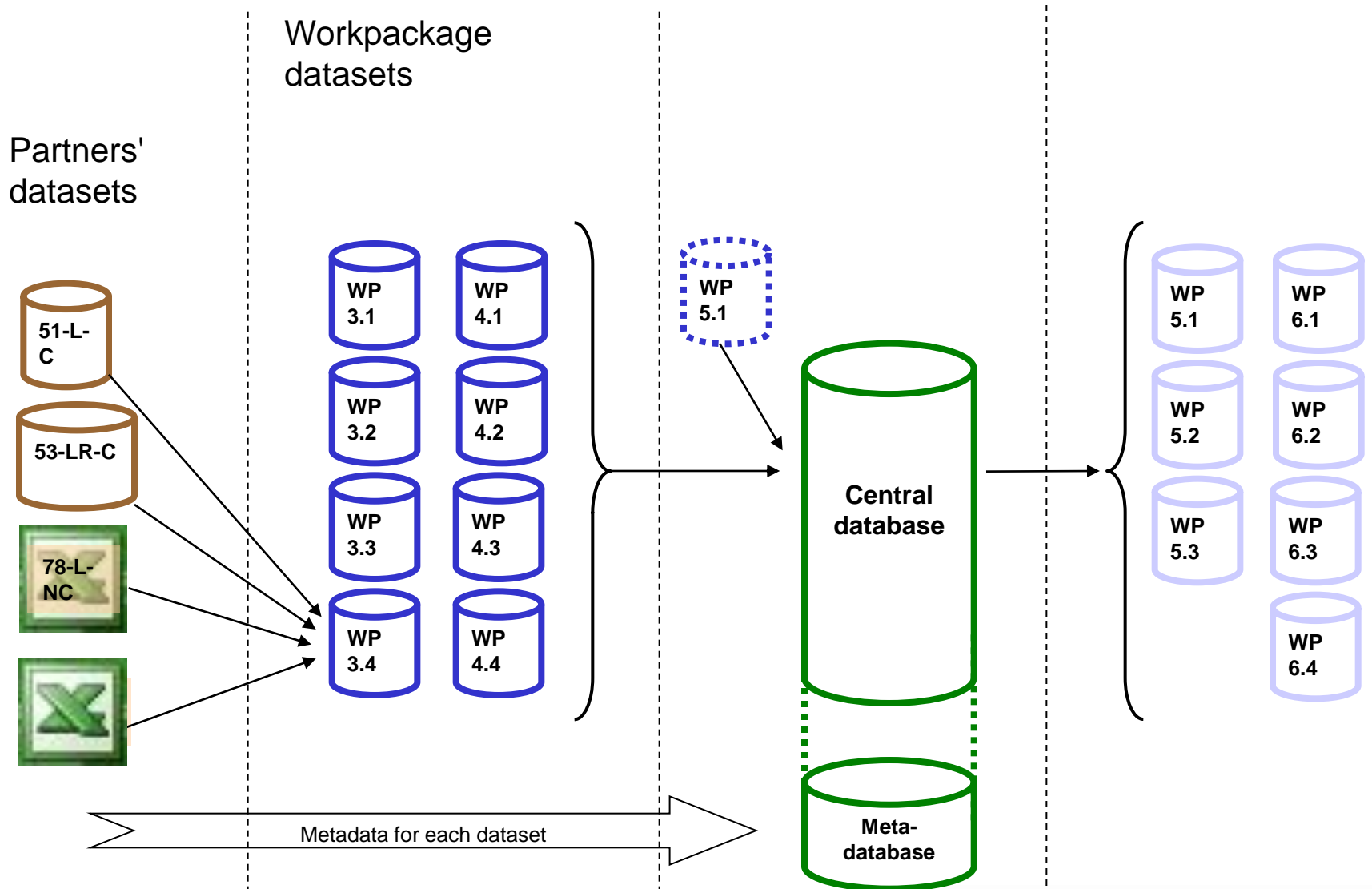
Data bases available

Table 5. List of databases to be used in the project. Category: L = lakes, R = rivers, T = transitional waters, C = coastal waters; Geographical Region: N = Northern Europe, C = Central Europe, B = Baltic, M = Mediterranean, A = Atlantic, E = Eastern Europe, AI = Alpine; Biological Quality Element: PP = phytoplankton, BD = benthic diatoms, PB = phytobenthos, MP = macrophytes, BI = benthic invertebrates, FI = fish, MA = macroalgae, AS = angiosperms.

Database ID	Category				Geographical region							Biological Quality Element						Restored	Database host	Database name			
Abbreviation	L	R	T	C	N	C	B	M	A	E	AI	PP	BD	PB	MP	BI	FI	MA	AS				
1-LR-NA	x	x			X				X			x	x	x	x	x					Y	STOWA	LIMNODATA
2-L-A	x								X			170	215	x	x	274	11				Y	ALTERRA	Naardermeer
3-R-7		x			X	X	X	X	X	X	X		285									ALTERRA	STAR diatoms
4-R-A		x							X			42	225		1800	1800	40			Y	WA R&D, V&V	Vecht catchment	
5-R-A		x							x						400	1100				Y	ALTERRA	Dutch streams	
6-RTC-A		x	x	x					X			495		x		1898	595	100		Y	AZTI	Basque Country catchments	
7-R-7		x			X	X	X	X	X	X	X						15000					BOKU	FIDES (FAME project)
8-R-7		x			X	X	X	X	X	X	X			x		x						BOKU	www.freshwaterecology.info
9-R-C		x				X										178	40					BOKU	Joint Danube Survey 2001 (+2007)
10-R-CAI		x				X					X		x	140		1319	2000			Y	BOKU	National Monitoring data Austria	
11-R-5		x			X	X	X	X			X		281		295	1010	327					BOKU/UDE	STAR database
12-L-CA	x					X			X			1800				12				Y	NERC	Esthwaite Water	
13-RTC-CA		x	x	x		X			X				50	100	150	450	300	x	x	Y	NERC	Frome/Piddle/Poole Harbour	
14-L-NCA	x				X	X			X								1000			Y	NERC	UK lake fish	
15-L-NCA	x				X	X			X							500						NERC	SEPA Loch Invertebrate Surveys
16-L-NCA	x				X	X			X			888										NERC	UK/Ireland Lake Phytoplankton
17-LR-NCA	x	x			X	X			X							45						NERC	ECN lakes and river macroinv.

86-T-M			x					x								x				Y	USALENTO	Macroinvertebrates/italianLagoon	
87-R-M		x						x								2089				Y	USALENTO	RiversDB	
88-L-CMAI	x					x		x			x						100					CEMAGREF	CEMAGREF Lake fish database
89-T-CMA			x			x		x	x								42					CEMAGREF	CEMAGREF Transitional waters Fish
90-R-4		x				x		x	x		x						1200					CEMAGREF	CEMAGREF French River Fish DB
91-R-4		x				x		x	x		x					4000						CEMAGREF	CEMAGREF French River Invert. DB
92-L-CAAI	x					x			x		x	180			60							CEMAGREF	CEMAGREF Lakes DB
93-L-N	x				x										524							SLU	SE_Macrophytes_Lakes
94-T-M			x					x												x		CEAB-CSIC	ACA-CYMO
95-C-M				x				x												x		CEAB-CSIC	ACA-POSI
96-L-N	x				x										x							UCL	Plant microfossil database
97-L-N	x				x										40					Y	SYKE	Regulated lakes macrophytes	
SUM	47	39	14	12	37	49	22	26	38	9	23	65861	10197	2780	9368	90298	28044	17368	3236	31			












Data flow



Status of database development

	DB structure	Inserting data	Final check
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	Lakes			
	Lakes			
	Lakes			(GIG database)
	Lakes			

	CW/TW			
	CW/TW			
	CW/TW			
	TW			

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Contacts with GIGs

Questionnaire (“GIG wish list”)

- Lakes
 - Returned by the lake GIGs before the project start
 - Commented by the WISER consortium in May 2009
- Coastal/transitional waters
 - Circulated by the WISER consortium in May 2009
 - Up to now returned by one GIG





Presence on meetings

- WISER was present on all GIG meetings since March 2009







Data use for mutual benefits

Lakes

 Phytoplankton	Lakes	WISER/GIG data acquisition from countries
 Makrophytes	Lakes	Mismatch between WISER and GIG data acquisition
 Invertebrates	Lakes	WISER use of intercalibration database
 Fish	Lakes	WISER and GIGs use identical database

Coastal / transitional waters

 Phytoplankton	CW/TW	Activities planned for last quarter 2009
 Makroalgae/Ang.	CW/TW	Activities planned for last quarter 2009
 Invertebrates	CW/TW	Large overlap of WISER and GIG databases
 Fish	TW	Large overlap of WISER and GIG databases

Mismatch of intercalibration and WISER schedules

- Intercalibration: Decision of IC option and common metrics by April 2010
- WISER: Most assessment methods to be developed by February 2012
- Solution: All WISER workpackages will suggest common metrics (or other suited methods) by spring 2010, based on:
 - Expert knowledge, reviews
 - Initial evaluation of field data
 - Initial evaluation of existing data
- WISER will then continue to further evaluate and refine these metrics



Mismatch of intercalibration and WISER schedules

- Guidance paper on how to develop assessment methods to be agreed within the WISER consortium by January 2010



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Website (www.wiser.eu)

- Fact sheets sampling sites

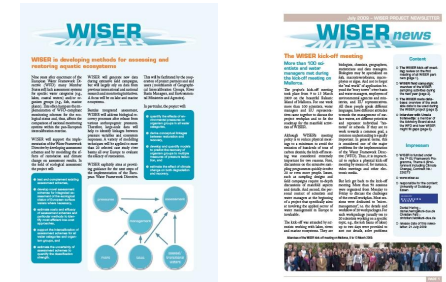
You are here: Home // What we do // Lakes // Roofensee

◀ previous - Roofensee (Germany) - next ▶



Lake name:	Roofensee	Country:	Germany	GIG Region:	CB
GIG Type:	LCB1	Lake code:	DG70	Altitude(m a.s.l.):	60
Area (km ²):	0.54	Mean depth (m):	8.95	Mixing regime:	Stratified
Alkalinity (m eq/l):	----	Retention time (yr):	----	Chlorophyll a (µg/l):	4.54
Total phosphorus (µg/l):	17.1	Eutrophication status:	1 - Low	Hydromorphological status:	1 - Low

- Dissemination materials



- Questionnaire on assessment methods

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- Deliverables (soon to come)



Intranet

The screenshot displays the WISER intranet interface. At the top left is the WISER logo. The main header shows the breadcrumb path: "All / M03_Lakes / 3.1 Phytoplankton". A navigation bar includes "Overview", "Notes", "Contacts", "Calendar", "Documents", "Tasks", and "Web Links". A "Workspaces" sidebar on the left lists various project areas, with "3.1 Phytoplankton" selected. The main content area shows the workspace name, a "View as list" option, and a section for "Documents" containing a list of files such as "WISER_REBECCACodeList070909.xls" and "WISER 3.1 standard method for Chl_final.doc". A "Show more (5)..." link is visible at the bottom right of the document list.

Access will be granted to end-users and GIG convenors



End users...

- 82 end users have been identified and invited
 - Rivers: 7
 - Lakes: 34
 - Coastal/transitional waters: 41
- Questionnaire was sent in early September
- End-users will review deliverables
- End-users have been / will be invited to workshops
- End-users will be invited to the mid-term conference





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