



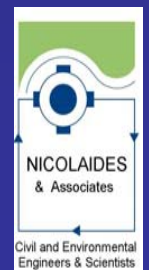
MINISTRY OF AGRICULTURE, NATURAL RESOURCES & ENVIRONMENT
WATER DEVELOPMENT DEPARTMENT



Development of the integrated database

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Scheme Leader Databases
WL | Delft Hydraulics

(Launching Workshop
Lefkosia 9 May 2006)



Integrated Database

- Aspects of integration
 - surface, lakes and groundwater
 - quantity, quality and biology/ecology
 - fresh, transitional and coastal waters
- Why integral?
 - Water system knowledge is required in order to define remedial measures
 - > organisations have to work together on water resources

WFD requirements

- Reporting status of *waterbodies* rather than *locations*.
 - aggregation of data in space and time
 - indices, 5 sw classes and 2 gw classes
 - for testing store relevant measurement data along with quality standards and reference conditions
- ↳ WISE: Water Information System allowing access to the general public
 - Europe Guidance document no 9 on GIS (data model, report formats and protocols)



WATERBODIES AND STATUS

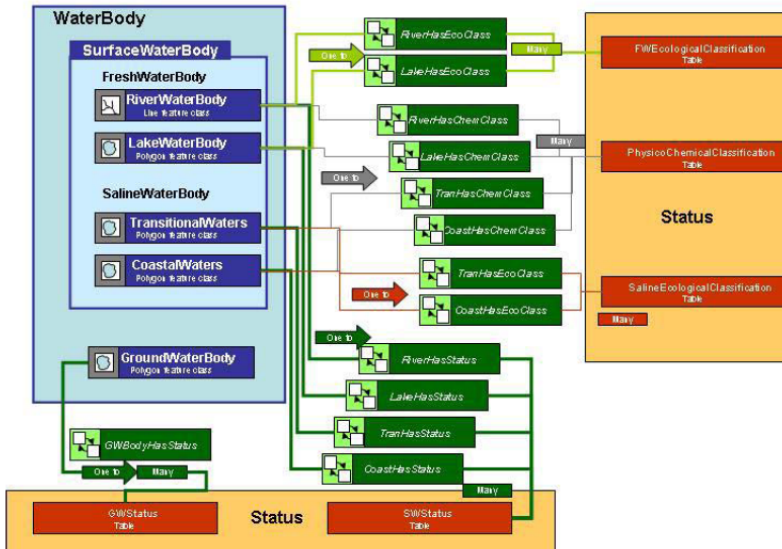


Figure 3.3.3: Water Bodies and Status.

WATERBODIES AND MONITORING

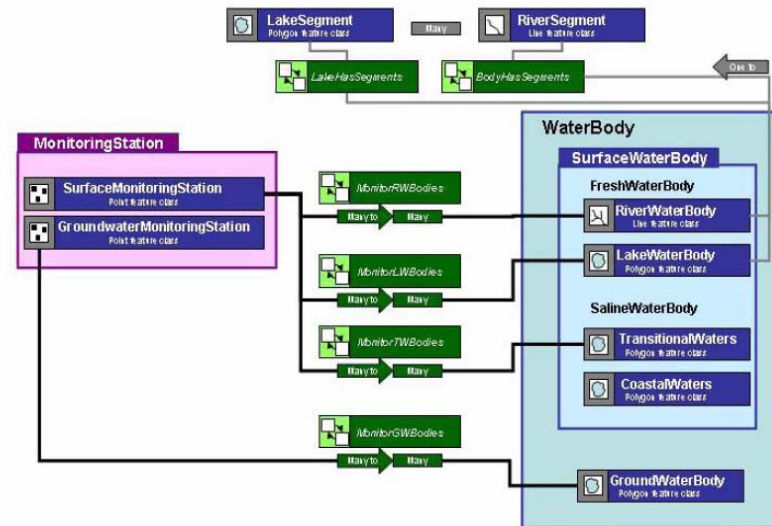


Figure 3.3.2: Water Bodies and Monitoring.

'Own' requirements

- Historical data are included
- Integrate existing databases such as Envis
- Store hydrological, chemical & biological data
- Graphical User Interface (UI)
- User-friendly data entry
- Query on the database through SQL
- Validation and completion of data
- Use quality criteria to assess chemical status
- Statistical and time series analysis
- Handle large amount of data
- Expandable, maintainable
- Data transfer through email or internet
- Presentation of results in tables, reports and graphs
- Report in ArcGIS format (final make-up)

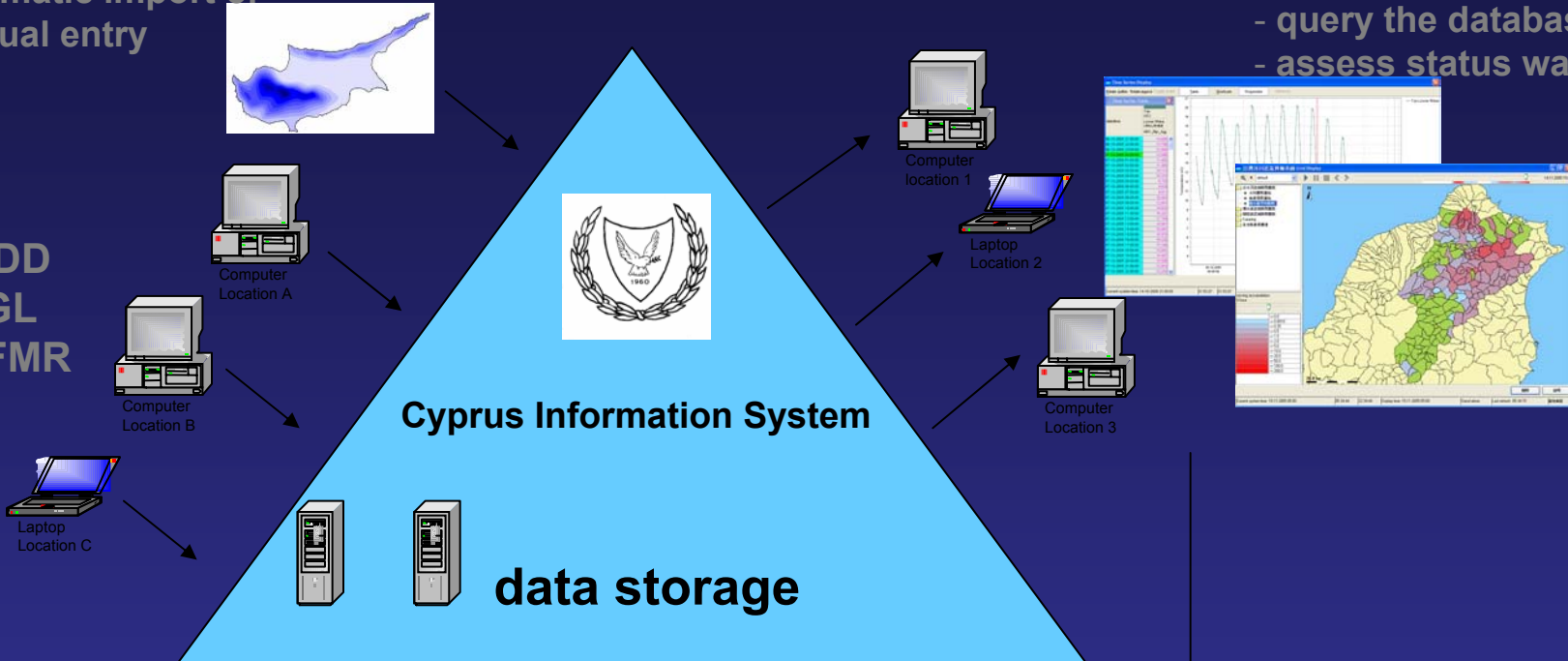
data entry

- external sources
- automatic import or
- manual entry

data analysis

- validation & completion
- statistical & time series
- query the database
- assess status water bodies

WDD
SGL
DFMR

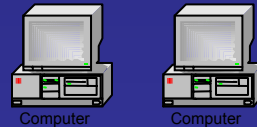


system models

- forecasting
- impacts of pressures
- effects of measures

reporting

- internet
- ArcGIS files
- reports of analysis



Map point and click

Water Information System
for Europe

Water Framework Directive - Prototype for Reporting

Home ▶ Map View ▶ Manage Submissions ▶ Intercalibration ▶ Help ▶ Log out

[Home](#) > [Map View](#)

Layers

Click layer for metadata

i

ARTICLE 3

RIVER BASIN DISTRICTS

MAIN RIVERS

MAIN LAKES

GROUND WATERS

COASTAL WATERS

TRANSITIONAL WATERS

ARTICLE 5

SURFACE WATER BODIES

GROUND WATER BODIES

PROTECTED AREAS

MONITORING SITES

INTERCALIBRATION SITES

OTHER

CCM CATCHMENTS

CCM LAKES

WFD Reporting Data Map Member State Report - Microsoft Internet Explorer provided by WRc Group

Selected River Basin Districts

Name	International	Size (km ²)	Prime Competent Authority	More Competent Authorities	View Map
Kymijoki-Gulf of Finland	No	57074		None	View Map

Internet

Mapping interface

Water Information System for Europe

Water Framework Directive - Prototype for Reporting

Home Map View Manage Submissions Intercalibration Help Log out

Map View

Layers

Click layer for metadata

submit

ARTICLE 3

- RIVER BASIN DISTRICTS
- MAIN RIVERS
- MAIN LAKES
- GROUND WATERS
- COASTAL WATERS
- TRANSITIONAL WATERS

ARTICLE 5

- SURFACE WATER BODIES
- GROUND WATER BODIES
- PROTECTED AREAS

MONITORING SITES

- INTERCALIBRATION SITES

OTHER

- CCM CATCHMENTS
- CCM LAKES

Legend

























- CCM Lakes
- Protected Areas
- Ground Water Bodies
- Surface Water Bodies
- River Basin Districts
- River Sites
- Lake Sites
- Transitional Sites
- Coastal Sites
- Settlements
- Major Cities
- Country Border

Submissions stats


Home > Statistics Options > Submissions Status Report

User : public

Submission Status Report

Member State	Submission Status for Article 3	No. of RBDs Defined for Article 3	Number of International RBDs	Average size km ²	Submission Status for Article 5	No. of RBDs Submitted for Article 5
 Austria	COMPLETE	3	3	27960.33		0
 Belgium	COMPLETE	7	6	4378.29	OK	0
 Cyprus	COMPLETE	1	0	11015.00		0
 Czech republic	COMPLETE	0	0	Unknown		0
 Denmark	COMPLETE	13	1	3332.38		0
 Estonia	COMPLETE	3	2	14620.00		0
 Finland	COMPLETE	8	1	46350.88		0
 France	COMPLETE	13	6	49443.62		0
 Germany	COMPLETE	10	8	37687.20		0
 Greece	INCOMPLETE	0	0	Unknown		0
 Hungary	COMPLETE	1	1	801463.00		0
 Ireland	COMPLETE	6	2	Unknown		0
 Italy	INCOMPLETE	8	0	15920.13		0
 Latvia	INCOMPLETE	0	0	Unknown		0
 Lithuania	COMPLETE	4	4	15948.25		0
 Luxembourg	COMPLETE	2	2	1293.00		0
 Malta	COMPLETE	1	0	583.00		0
 Netherlands	COMPLETE	4	4	Unknown		0
 Norway	INCOMPLETE	14	1	30647.14		0
 Poland	COMPLETE	2	2	175607.50		0
 Portugal	INCOMPLETE	10	4	10893583502.40		0
 Slovak Republic	COMPLETE	6	6	8172.33		0
 Slovenia	COMPLETE	0	0	Unknown		0
 Spain	COMPLETE	14	0	Unknown		0

Activities in Scheme 3 (1/3)

- Prepare an overview of the present and future flow of data
 - previous Article 5&6 project
 - evaluate Envis
 - Cyprus NFP programme EMWIS (NWIS) 
- Prepare a summary of the required outputs of the database based on WFD reporting requirements
- Prepare an overview of information needs of the beneficiaries organisations (+others)
 - visits & talks (questionnaire)

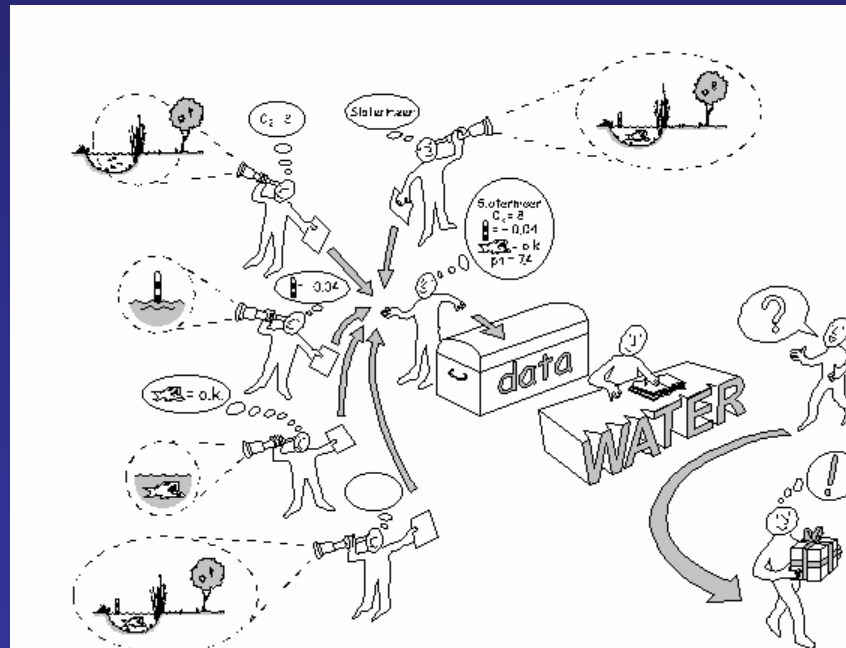
Activities in Scheme 3 (2/3)

- Identify the infrastructural requirements: hardware, software, personnel & training
- Prepare a functional design for the database using existing proven technology
 - replace Envis?
 - client-server application?
 - bio-monitoring data?
- Development and installation:
 - install
 - acceptance testing
 - documentation training documents
 - warranty



Activities in Scheme 3 (3/3)

- Develop GIS applications
 - interaction with the database
- National Explanatory Workshop



Enjoy the project

Suggestions and questions are welcome:
pascal.boderie@wldelft.nl

Thank you.

Cyprus NFP Workprogamme

SEMIDE
EMWIS

CYPRUS Focal Point

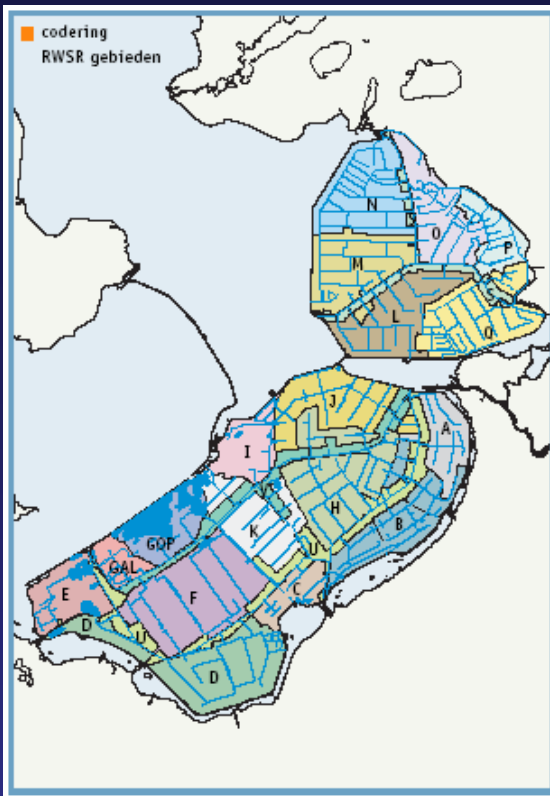
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[Training](#)
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Water Context
Geography
Geology
Natural Vegetation
Birds and animals
Climate
Environment
Brief Historical Survey
Republic of Cyprus -
Turkish Invasion and Occupation
Constitution
Executive
Legislature
Administration
Economy
Tourism
Overall Social Policy
Health
Languages

802x477
803x433
806x465
808x465
809x460
828x522
828x522
830x526
833x526

PAPHOS (ΠΑΦΟΣ)
LEFKOSIA (ΛΕFKOSIA)
ANMOCHOSTOS (FAMAGUSTA)
LARNAKA
LEMESOS (LIMASSOL)

[About Us](#)
 The **EMWIS** is the Euro-Mediterranean Information System on the
Water Law in the Water sector.
[Decision](#) [File](#) [Split](#) [Code](#) [Preview](#)



Toelichting beoordeling

- 1** Wijkt zeer sterk af van de functie-eisen
- 2** Wijkt sterk af van de functie-eisen
- 3** Wijkt af van de functie-eisen
- 4** Voldoet bijna aan de functie-eisen
- 5** Voldoet geheel aan de functie-eisen
- 5** Niet relevant
- ?** Geen informatie
- +** Geen klassennormen

Indicator	Omschrijving	Flevoland															Noordoostpolder				
		Hoge afdeling					Lage afdeling														
		A	B	C	D	E	U	F	G	H	I	J	K	V	L	M	N	O	P	Q	S
Ecologie																					
BAS-1	Ecologisch basisoniveau van stromende wateren																				
BAS-2	Ecologisch basisoniveau van sloten																				
BAS-3	Ecologisch basisoniveau van kanalen																				
BAS-4	Ecologisch basisoniveau van zand-, klei- en grindgaten																				
BAS-5	Ecologisch basisoniveau van meen en plassen																				
Oppervlaktewater																					
BAS-6	Zuurstof																				
BAS-7	Eutrofiëring van stagne wateren																				
BAS-8	Eutrofiëring van niet stagne wateren																				
BAS-9	Chloride																				
BAS-10	Zware metalen																				
BAS-11	Organische microverontreinigingen excl. bestrijdingsmiddelen																				
BAS-12	Bestrijdingsmiddelen																				
Waterbodemkwaliteit																					
BAS-14	Zware metalen in waterbodem																				
BAS-15	PKK en minerale olie																				
BAS-16	PEFS																				
BAS-17	Bestrijdingsmiddelen in waterbodem																				
Waterkwaliteit																					
BAS-18	Waterdiepte van sloten in Laag Nederland																				
BAS-20	Status peilbesluit in Laag Nederland																				
BAS-22	Waterverval door beperkte afvoercapaciteit en berging																				
BAS-23	Waterkwaliteit door beperkte aanvoercapaciteit en berging																				
Inrichting en onderhoud																					
BAS-24	Faarpassages																				
BAS-25	Migratiemogelijkheden voor vis																				
BAS-26	Paai- en opgroeimogelijkheden voor vis in meen en plassen																				
BAS-27	Alteuwendrijfbaarheid materialen profieverbodiging																				
BAS-28	Lyce oever algemeen																				
BAS-29	Onderhoud nat profiel waterloop, excl. meen, plassen, gaten																				
BAS-30	Onderhoud oevers en onderhoudspaden																				
Baggen																					
BAS-32	Vernieuwen baggerspecie																				
BAS-33	Vernieuwen baggerspecie																				

Indicator	Omschrijving	Flevoland															Noordoostpolder				
		Hoge afdeling					Lage afdeling														
		A	B	C	D	E	U	F	G	H	I	J	K	V	L	M	N	O	P	Q	S
Veiligheid																					
BAS-34	Dijkhoogte conform norm t.o.v. totale dijkhoogte																				
Risico																					
NAI-36	Stadium verdringingsbestrijding																				
Grondwaterkwaliteit																					
BAS-35	Verzuring van grondwater in verzuringsgevoelige gebieden																				
BAS-36	Vermesting van grondwater																				
BAS-37	Bestrijdingsmiddelen in grondwater in wegrijningsgebieden																				
BAS-38	Zware metalen in grondwater																				
Grondwatergevoelig																					
GRS1-5	Bedeijning kwaliteit grondwater voor drinkwater																				
GRS1-6	Hoofveelheid onttrokken grondwater																				
Noodberging																					
NO08B-1	Bestemde oppervlakte noodberging t.o.v. noodzakelijke oppervlakte																				
Vaarwater																					
VAAR-1	Dimensies vaarwater in relatie tot vaarklasse																				
VAAR-2	Dimensies kunstwerken vaarwater in relatie tot vaarklasse																				
VAAR-3	Bodemmering scheepvaart door achterstallig baggeronderhoud																				
Zwenwater																					
ZW3R-1	Waterkwaliteit zwenwater																				
ZW3R-2	Veiligheid zwenwater onder de waterlijn																				
ZW3R-3	Schaling zwenwatergevoeligheid																				
Emissies																					
EMIS-1	Emissies uit rioolwaterzuiveringsinstallaties																				
EMIS-2	Emissies uit industrie/WVO-plichtige lozings																				
EMIS-3	Emissies uit huishoudelijke lozings, ongeordend																				
EMIS-4	Emissies uit niet-WVO-plichtige lozings																				
EMIS-5	Emissies uit de landbouw																				
EMIS-6	Emissies uit riooloverstort																				
EMIS-7	Emissies uit verkeer																				
EMIS-8	Emissies uit oeverbeschermingsmaterialen																				

