Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit

” Institutional strengthening of the River Basin Authorities in Bulgaria for Implementation of the EU Water Framework Directive in the Danube River Basin (pilot River Basin and Sub-Basins)”

Project and Authorities

EU-Comission "Enlargement"

Bulgarian Ministry of Environment and Water (MoEW)

PL: Slavitza Dobreva

⟺

Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU)

PL: Heinz-Jochen Poremski

Twinning Project "WFD-Danube-Bulgaria" BG03/IB-EN-02
Institutional Strengthening of the River Basin Authorities in Bulgaria for Implementation of the EU Water Framework Directive in the Danube River Basin
(Pilot River Basin and Sub-River Basin)

Danube River Basin Directorate in Pleven

BG RTA: Tzvetanka Dimitrova

⟺

Twinning Project "WFD-Danube-Bulgaria"

MS RTA: Arnold Quadflieg

Steckbrief des Twinningprojektes zur WRRL

Partnerland: Bulgarien

Programm: EU Phare Twinning

Zeitraum: 23.12.2004 – 30.10.2006

Budget: 1.000.000 Euro

Projektleitung: BMU

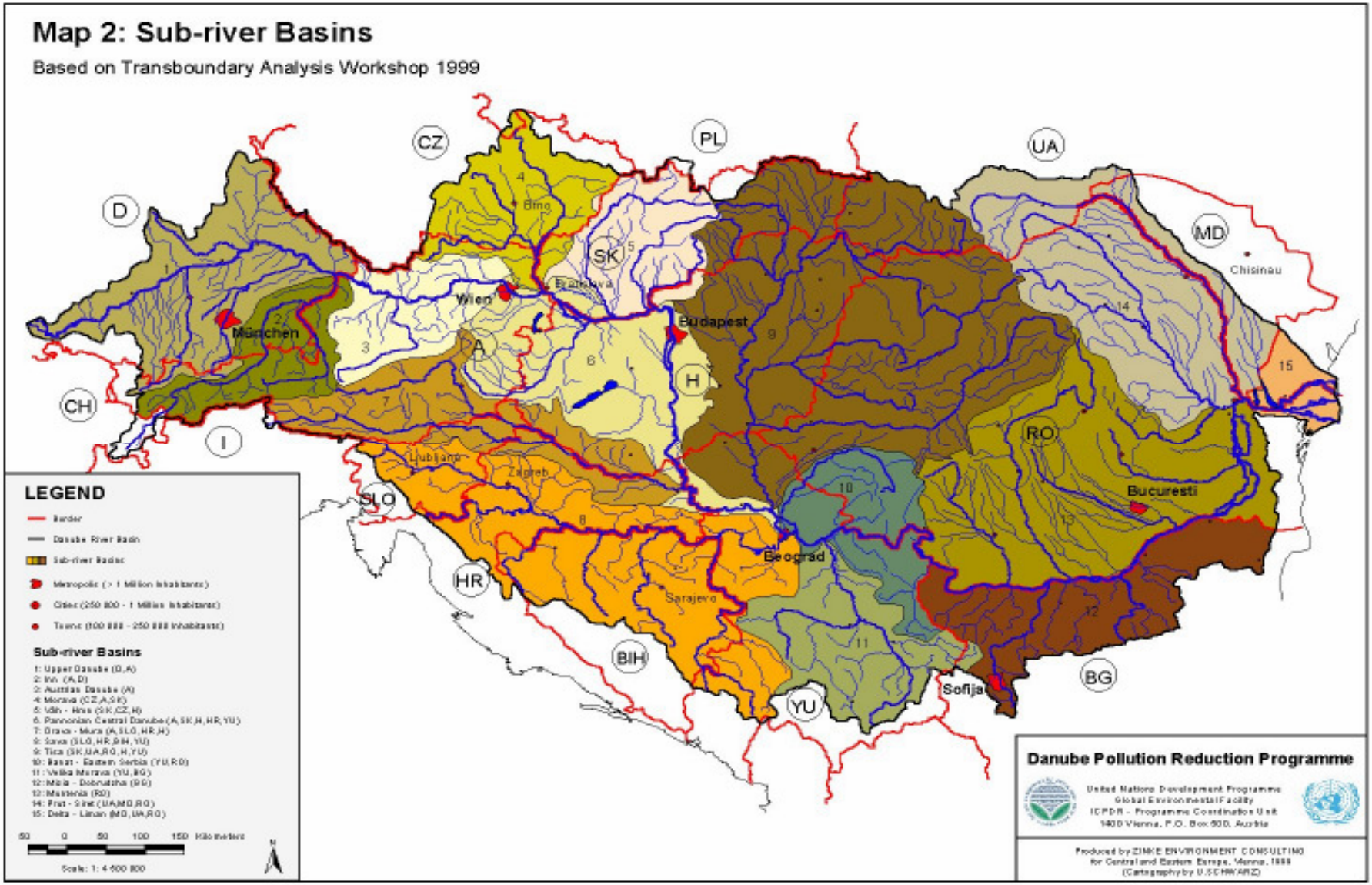
Projektmanagement: UBA

RTA: Arnold Quadflieg, Hessen

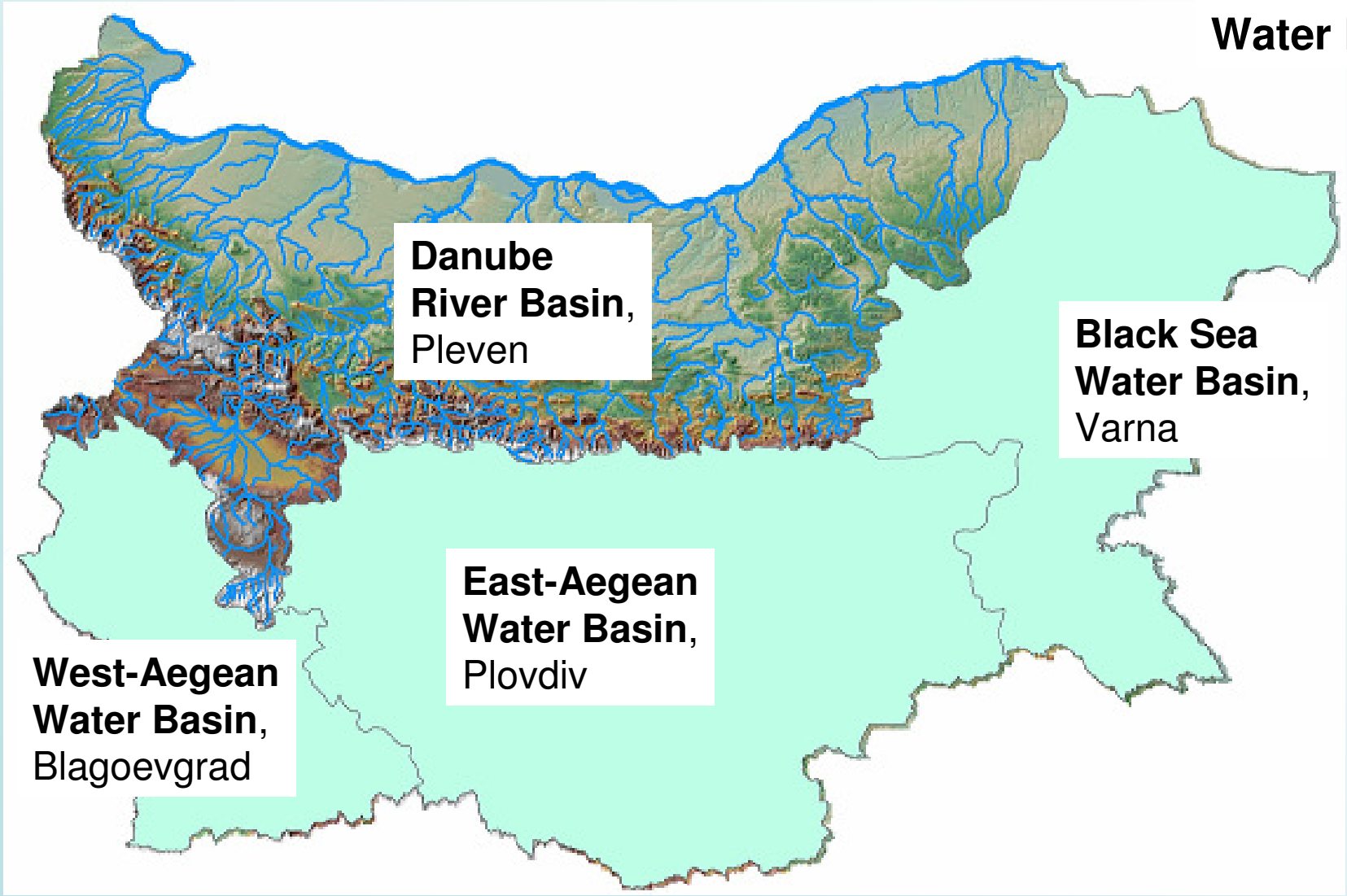
Kurzzeitexperten: 34

Kurzzeitexpertentage: 381 Tage

Danube Water Basin


Map 2: Sub-river Basins
Based on Transboundary Analysis Workshop 1999
CZ
PL
UA
D
MD
SK
Brno
Bratislava
Wien
Chisinau
München
Budapest
A
H
CH
I
RO
Ljubljana
Zagreb
Bucuresti
SLO
Beograd
HR
Sarajevo
BIH
YU
Sofija
BG
LEGEND
Border
Danube River Basin
Sub-river Basins
Metropolis (> 1 Million Inhabitants)
Cities (250 000 - 1 Million Inhabitants)
Towns (100 000 - 250 000 Inhabitants)
Sub-river Basins
1: Upper Danube (D,A)
2: Inn (A,D)
3: Austrian Danube (A)
4: Morava (CZ,A,SK)
5: Vah - Hron (SK,CZ,H)
6. Pannonian Central Danube (A,SK,H,HR,YU)
7: Drava - Mura (A,SLO,HR,H)
8: Sava (SLO,HR,BIH,YU)
9: Tisa (SK,UA,RO,H,YU)
10: Banat - Eastern Serbia (YU,RO)
11: Velika Morava (YU,BG)
12: Mala - Dobrudzha (BG)
13: Muntenia (RO)
14: Prut - Siret (UA,MD,RO)
15: Delta - Liman (MD,UA,RO)
50 0 50 100 150 Kilometers
Scale: 1: 4 500 000
N
Danube Pollution Reduction Programme
United Nations Development Programme
Global Environmental Facility
ICPDR - Programme Coordination Unit
1400 Vienna, P.O. Box 500, Austria
Produced by ZIMKE ENVIRONMENT CONSULTING
for Central and Eastern Europe, Vienna, 1999
(Cartography by U.SCHWARZ)

Bulgaria Water Basins



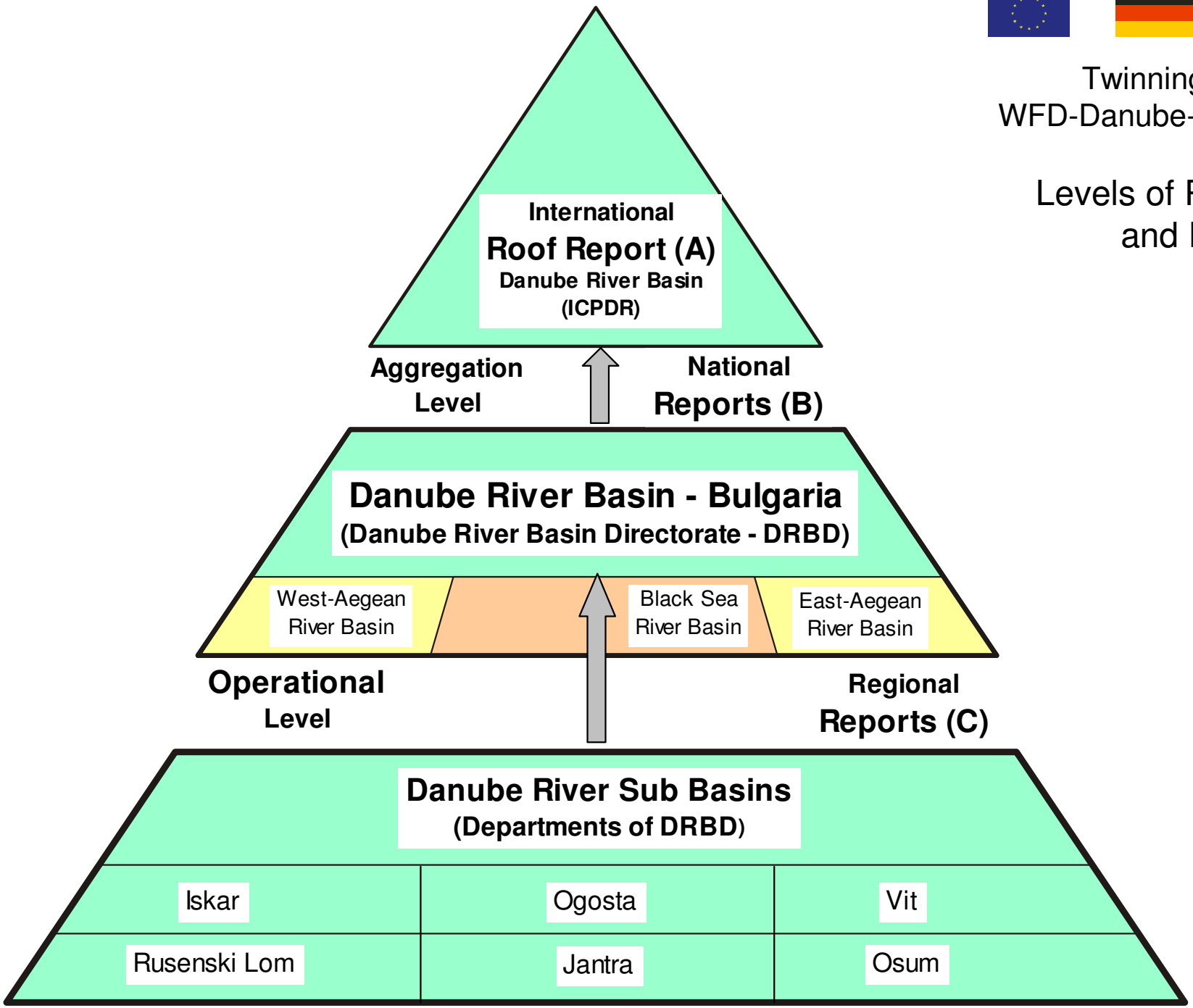
Levels of coordination

Danube river basin level → **ICPDR**

Sub-River Basin:
Sub-River-Basin for the Danube part of Bulgaria 46.600 km² → bilateral (with Romania) and national level) Leading Directorate: WBDDR

Sub-Sub-River-Basin
Operational areas: < 10.000 km²
Iskar, Vit, Jantra, B. Lom → Water Basin Directorate for the Danube Region (WBDDR)

Levels of Process and Reports



Outputs of the Twinning project

Preparing

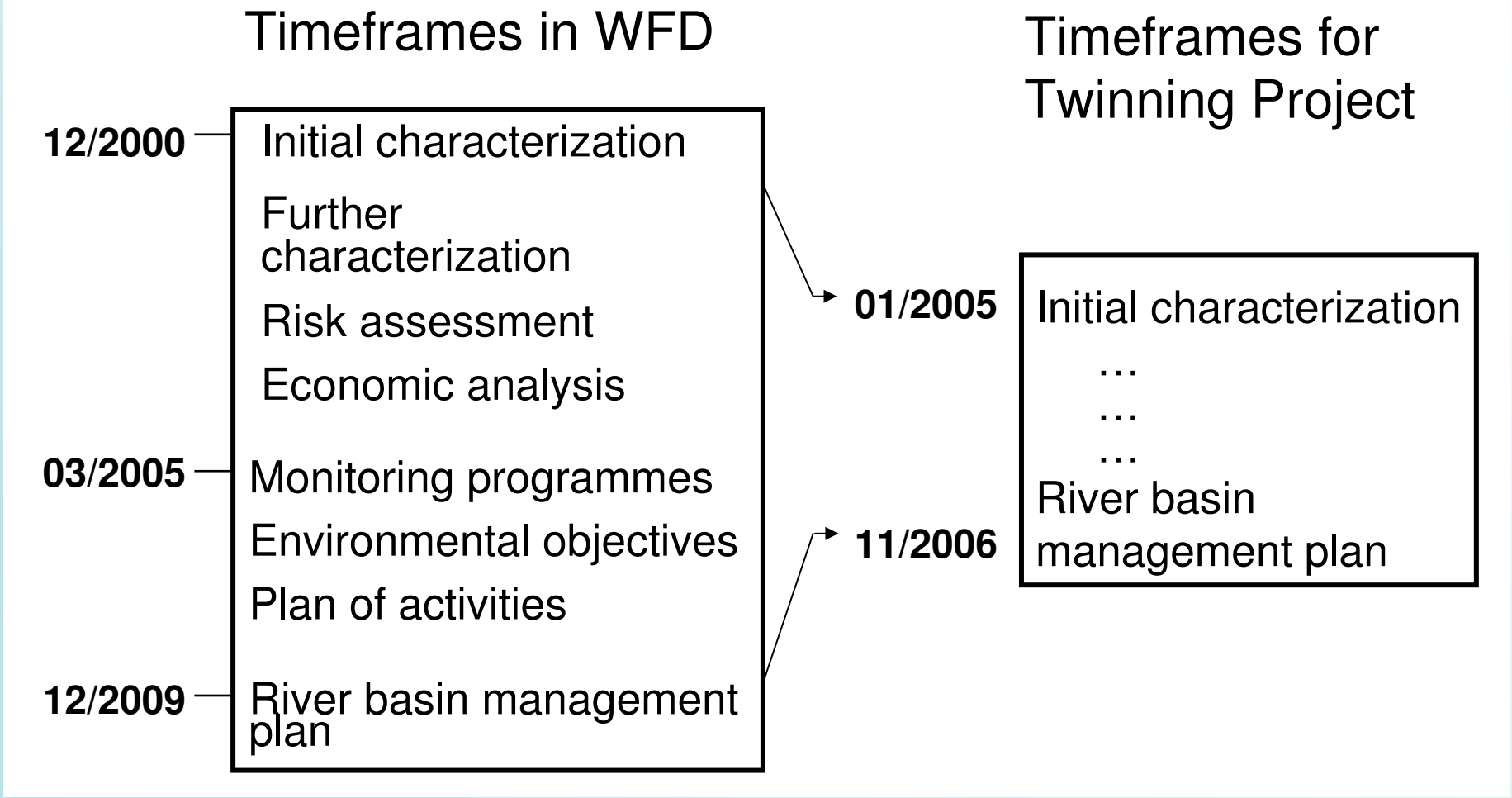
River Basin Management Plan

for the Danube River Basin Directorate (RBMP), Pleven

Bulgarian Operational Guidance

to implement the WFD

Time frames


Timeframes in WFD
12/2000
Initial characterization
Further characterization
Risk assessment
Economic analysis
03/2005
Monitoring programmes
Environmental objectives
Plan of activities
12/2009
River basin management plan
01/2005
11/2006
Timeframes for Twinning Project
Initial characterization
…
…
…
River basin management plan

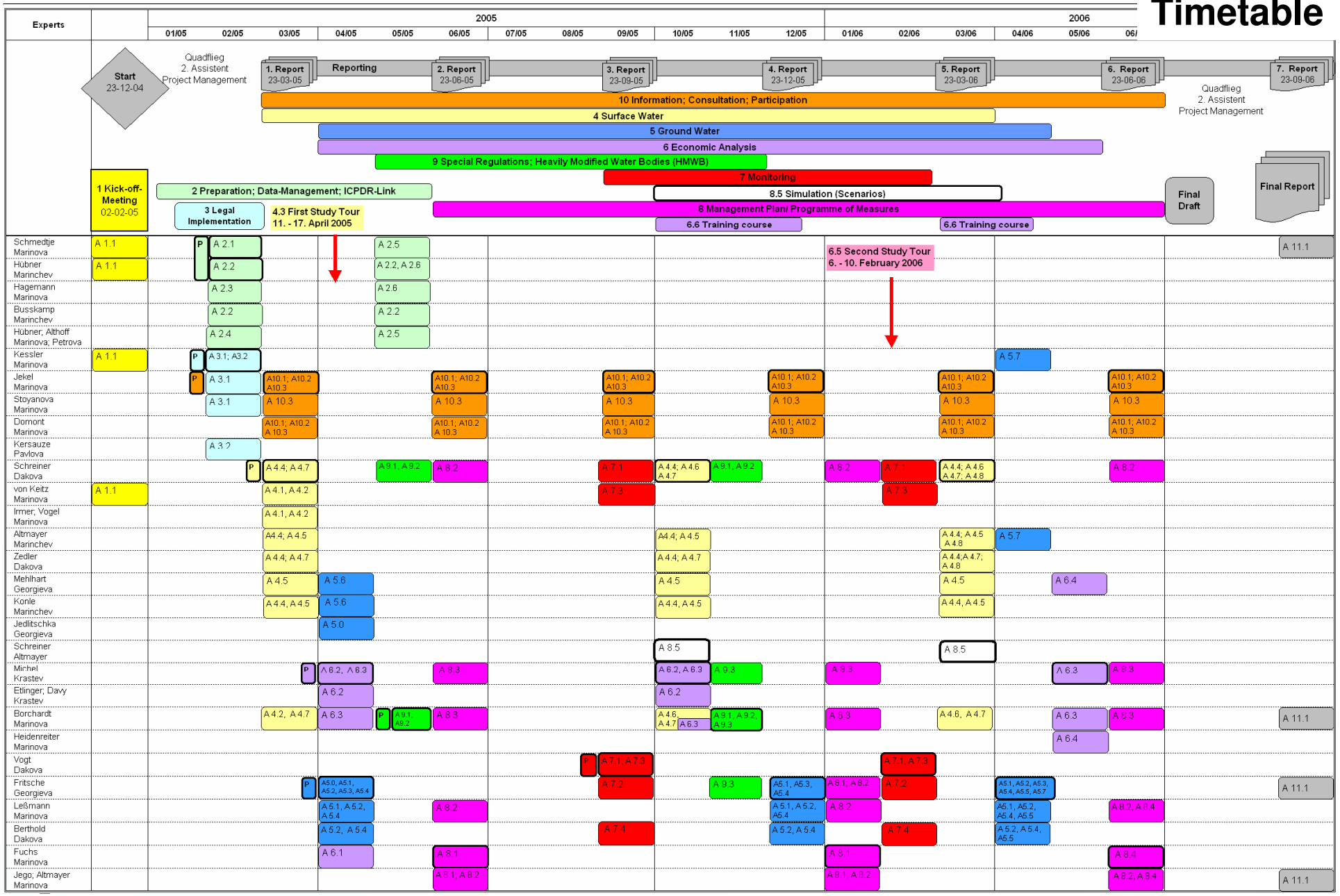
Components

	1. **Kick-off-Meeting** (02-02-05)
	2. **ICPDR-Link; GIS- and Data-Managment**
	3. **Legal Implementation**
Phase 1	4. **Risk assessment: Surface Water**
	5. **Risk assessment: Groundwater**
	6. **First Economic Analysis**
Phase 2	7. **Monitoring**
Phase 3	8. **Management Plan / Programme of Measures**
	9. **Special Regulations; Heavily Modified Water Bodies**
	10. **Information; Consultation; Participation**
	11. **Wrap up Meeting**

Twinning Project “WFD-Danube-Bulgaria”

Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit

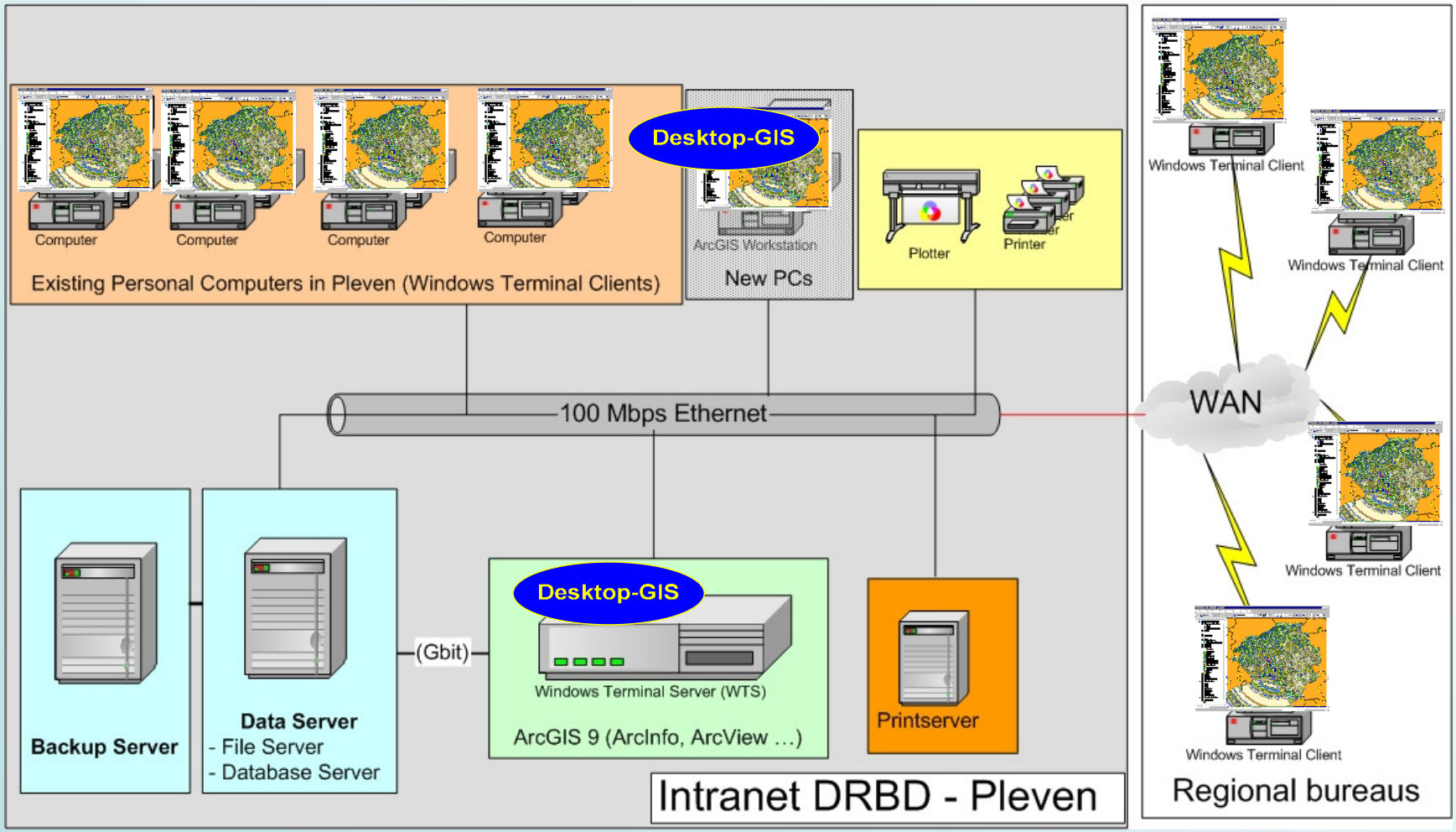
Timetable



Component 2: Activity 2.2: GIS- and Data Management

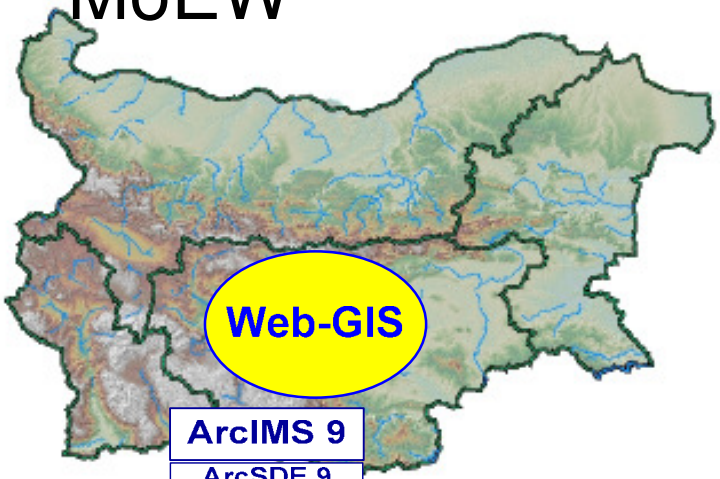
R e s u l t s / O u t p u t

Technical GIS infrastructure – phase I (GIS basics)



Technical GIS infrastructure (WFD) – MoEW

DRBD
Pleven

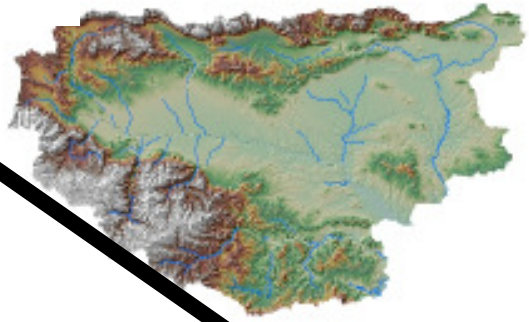


BSBD
Varna

WABD
Blagoegrad

EEA?

public



EABD
Plovdiv

Component 2: Activity 2.3:
Preparation of a Web/Internet based Communication and Information Platform

R e s u l t s / O u t p u t

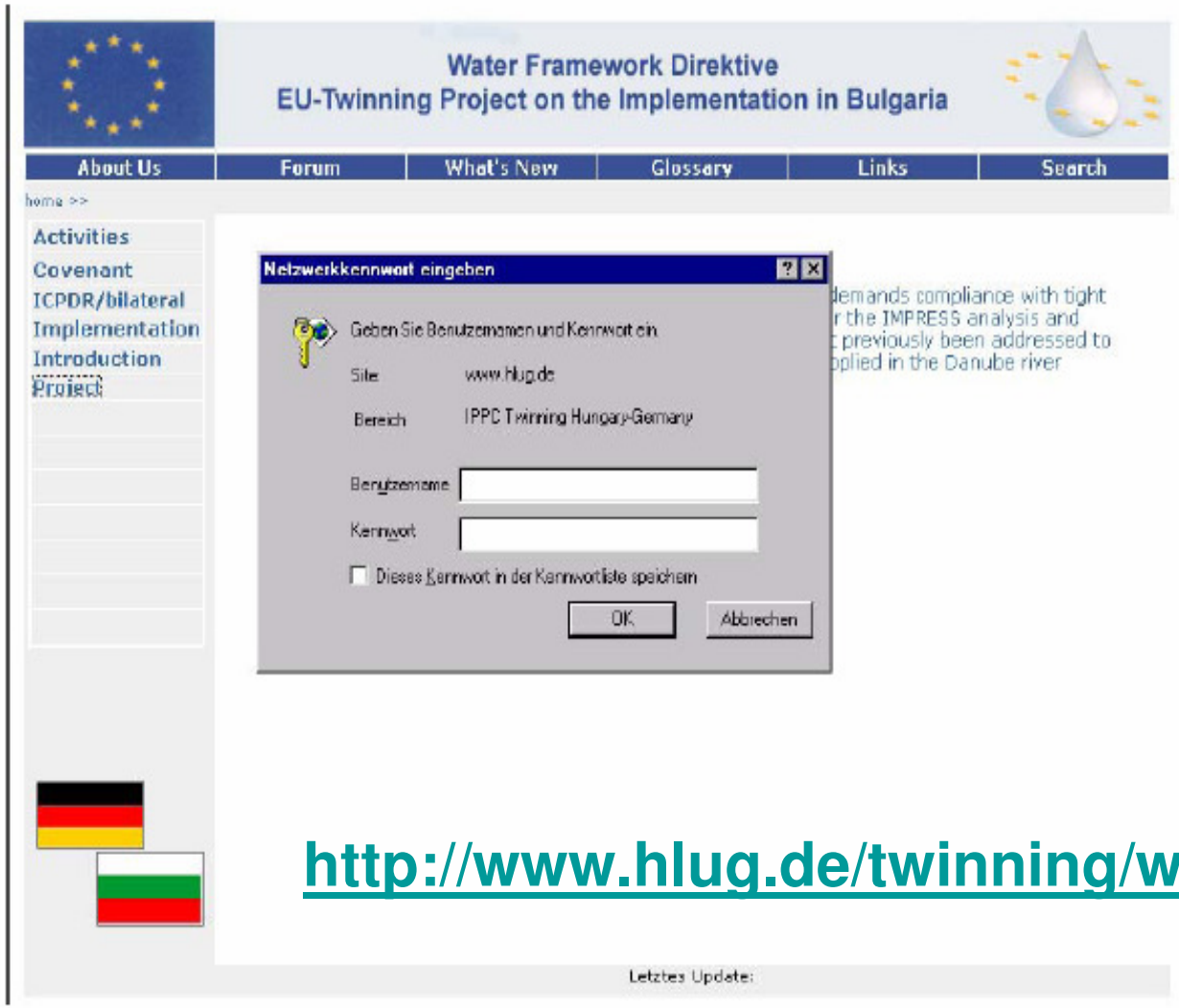
January 2005:

http://www.hlug.de/twinning/water/index.htm

- Internet presence was activated
- Language: English
- Documents: in German and Bulgarian, too
- all areas (domains) free and available for everybody
- Exception: Internet area: „project“: password protection

Objective of Web side based Homepage (1)

- Support of the Twinning project
- Quick flow of information and data
- Web based discussion forum



http://www.hlug.de/twinning/water/index.htm

Donau - Flußeinzugsgebiet

Nachhaltige Nutzung und Schutz der Gewässer –

für uns und für die künftigen Generationen….

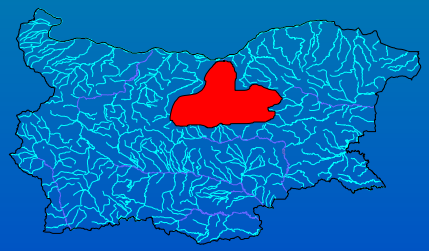
Im Donau-Flußeinzugsgebiet sind die Wasser-gebiete folgender Flüsse einbezogen:

- Erma
- Iskar
- Nischava
- Ogosta und die Flüsse, westlich von Ogosta
- Vit
- Ossum
- Yantra
- Russenski Lom
- Dobrudsha Flüsse, westlich von der Grundwasserscheide des Malm-Valalandshe-wasserführenden Horizonts

Ministerium für Umwelt und Wasser

Donau-Flußeinzugsgebiet mit Zentrum Pleven
Flussgebietsbehörde

Einzugsgebiet des Flusses Yantra



- ✓**Gesamtlaenge: 285 km**
- ✓**Flaeche des Einzugsgebiets: - 7 862 km²**
- ✓**Dichte des Flußnetzes – 0,70 km/km²**

  fuer die Nebenfluesse 0,3 km/km2; Nebenfluss Eliska und 1,5 km/km2 (Nebenfluss Ostretzka)
- ✓**Waldanteil entlang des Flusses – ca. 32 %**

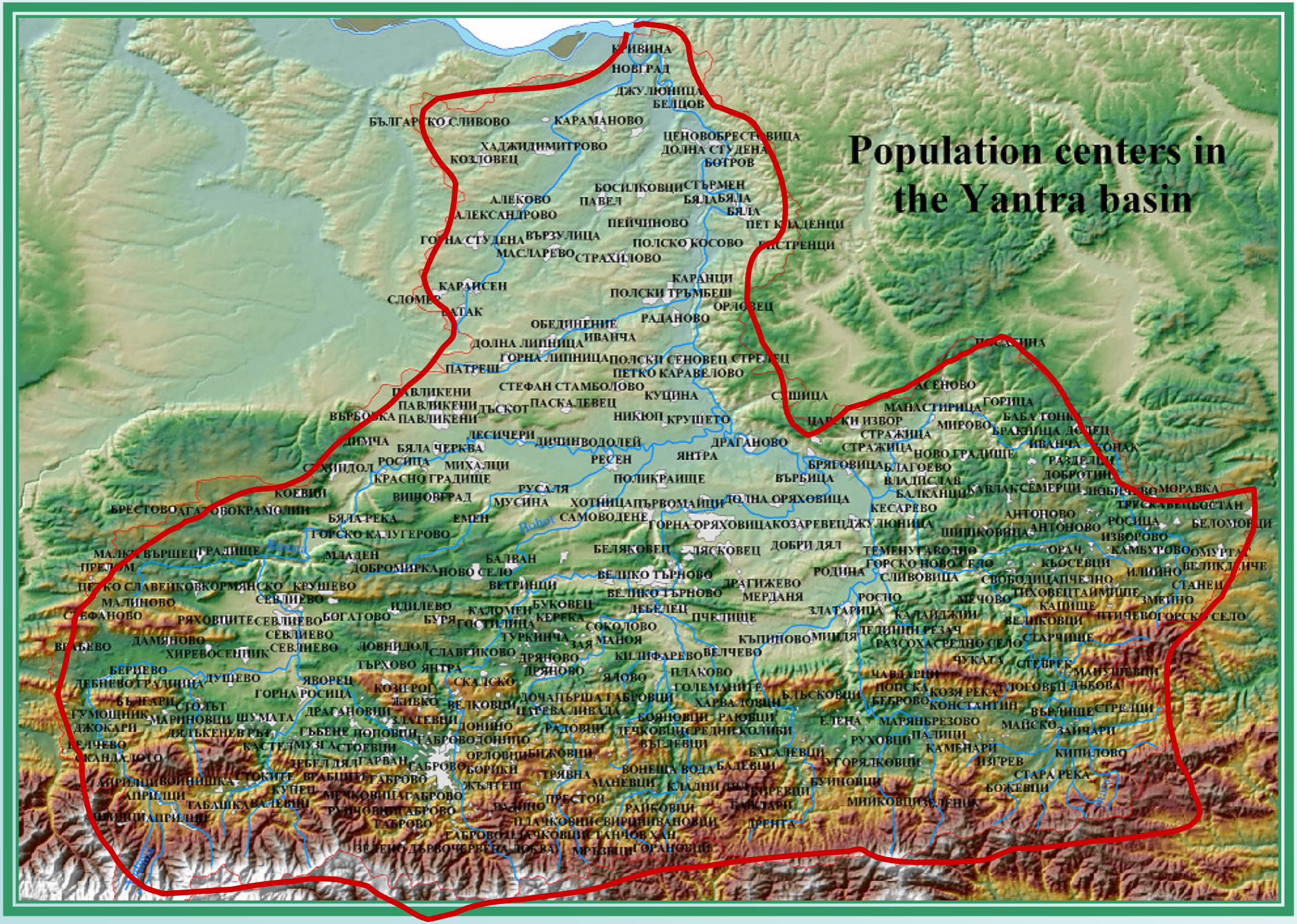
Der Fluss Yantra hat 30 Nebenfluesse laenger als 10 km.

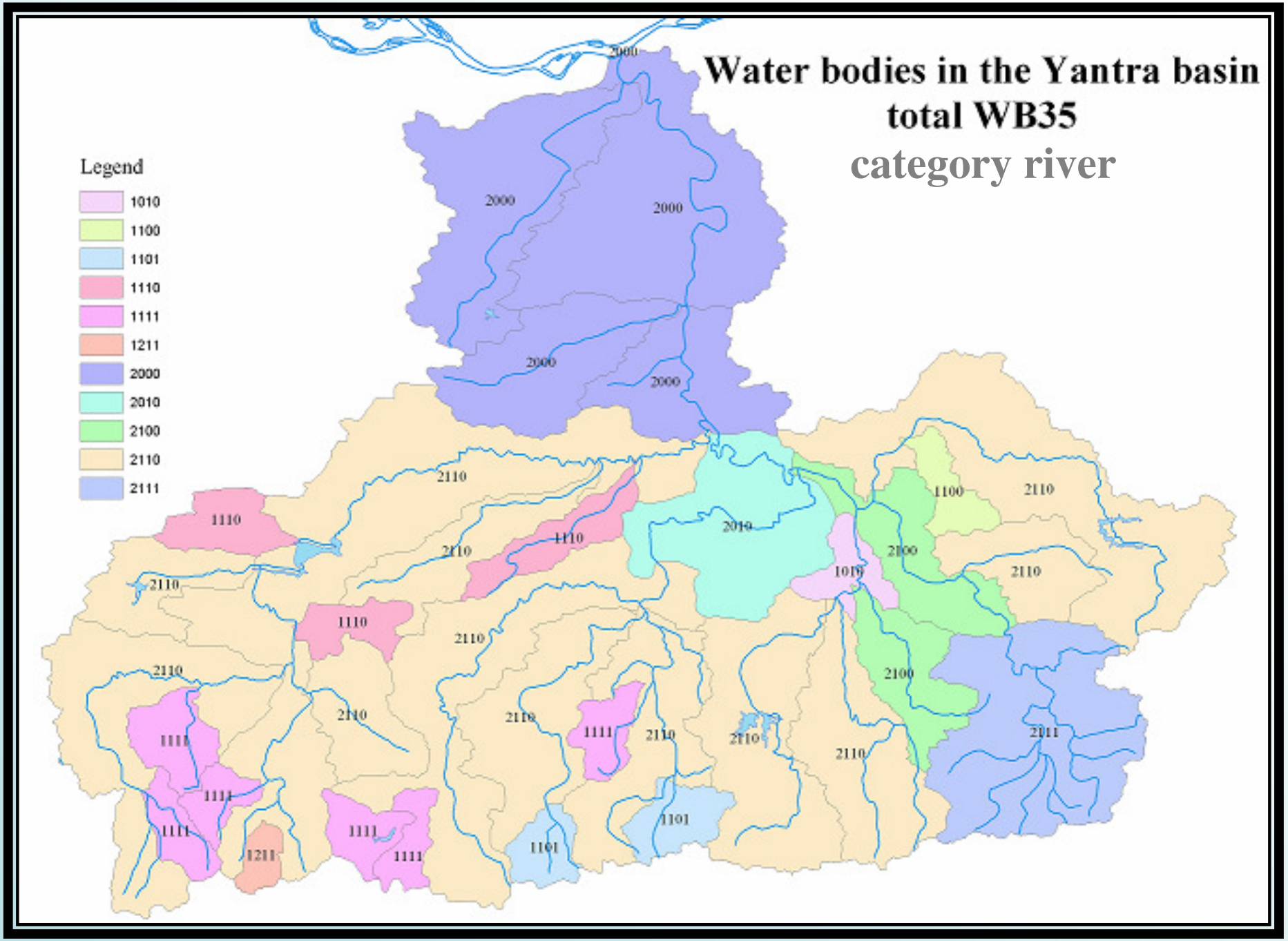
Die wichtigsten davon sind:

Rossitza - 164 km, Einzugsgebietsflaeche 2 265 km²;

Stara Reka (Fl. Lefezha) – 92 km, E.flaeche 2 424 km²;

Dzyulynitzap - 85 km, E.flaeche 892 km².

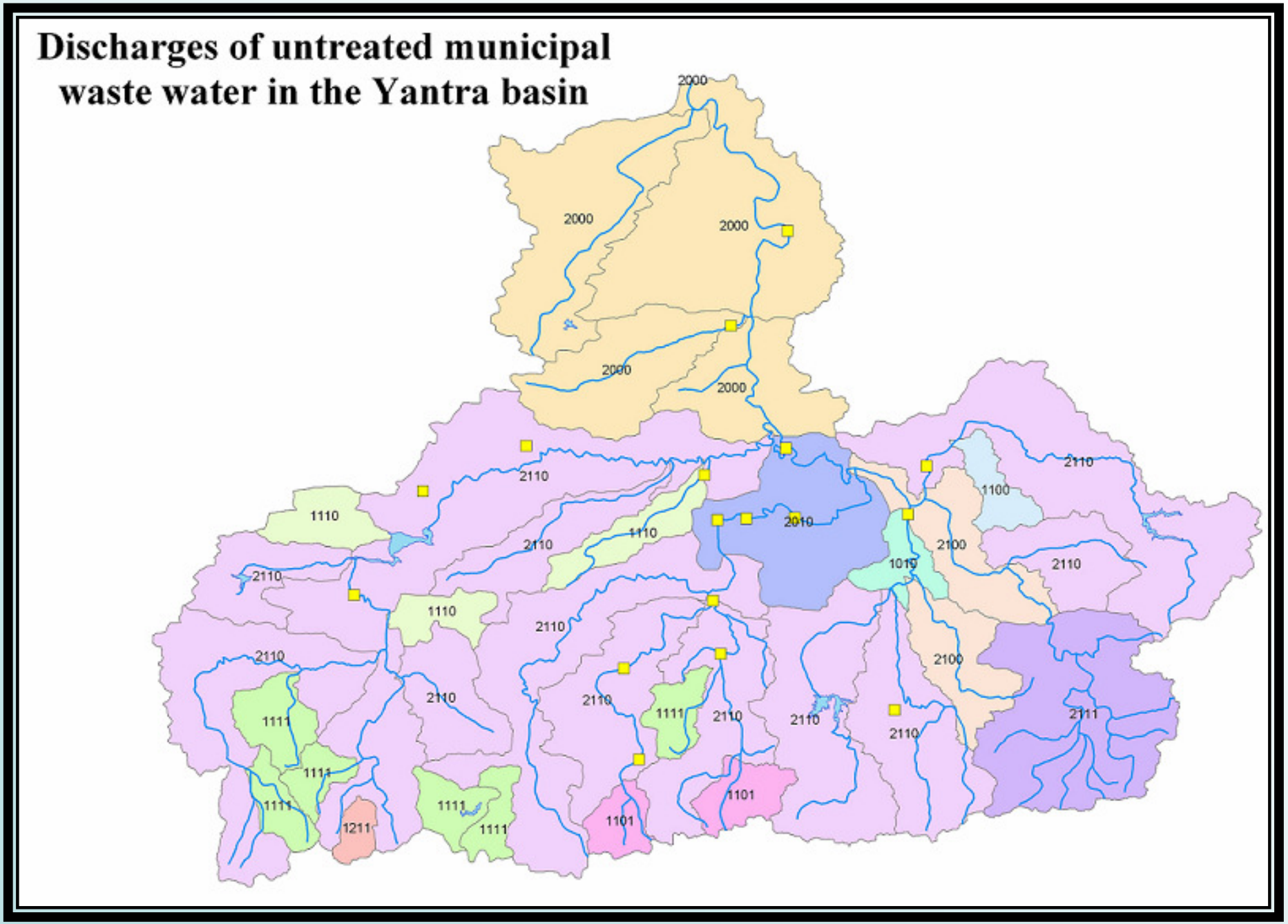

Population centers in the Yantra basin


Water bodies in the Yantra basin
total WB35
category river
Legend
1010
1100
1101
1110
1111
1211
2000
2010
2100
2110
2111

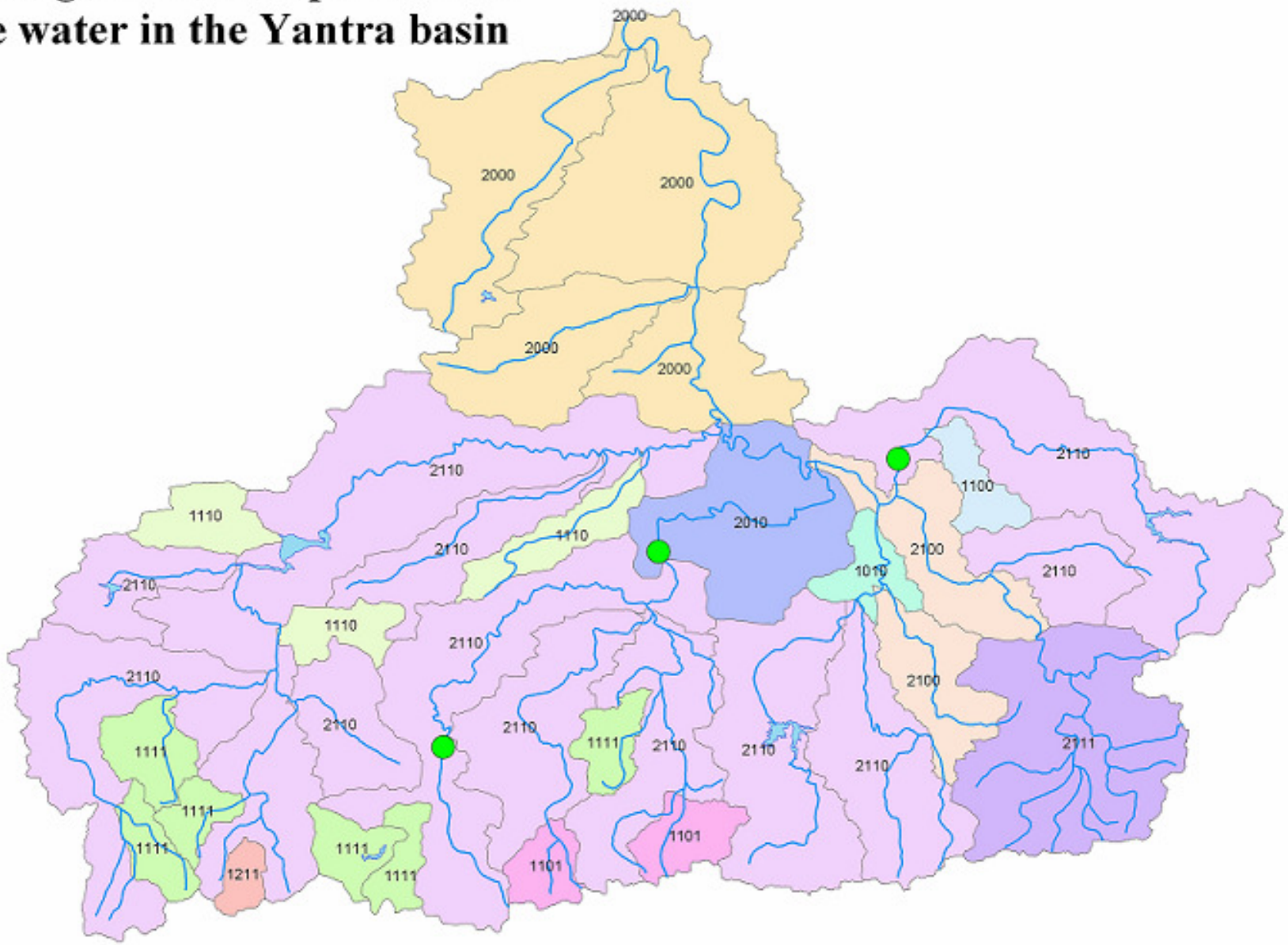
№	Discharges of untreated municipal waste waters	rivers	P.E.	Quantity waste water (m^3/a)
1	KA. Sevlievo	р.Росица, поречие р.Янтра	53 333	8253745
2	KA. Trjavna	р.Дряновска, поречие р.Янтра	16 916	394 200
3	KA Pavlikeni	дере - р.Росица, поречие Янтра	19 521	752 532
4	KA	р.Янтра	15 176	346896
5	KA Drjanova	р.Дряновска, поречие р.Янтра	11 366	220 752
6	KA Omurtag	р.Голяма река, поречие р.Янтра	11 418	986230
7	KA Debeletz	р.Дряновска, приток на р.Белица, поречие р.Янтра	5 318	няма данни
8	KA Parvomaitzi	р.Янтра	3 935	няма данни
9	KA Elena	р.Еленска, поречие р.Янтра	7 788	202 194
10	KA Kilifarevo	р.Белица, поречие р.Янтра	3 084	няма данни
11	KA Samovodene	р.Янтра	2 429	няма данни
12	KA Polikraiste	р.Янтра	2 891	няма данни
13	KA Djulünitza	р.Лефеджа, поречие р.Янтра	2 848	няма данни
14	KA Draganova	р.Янтра	3 569	няма данни
15	KA Polski Trambej	р.Елейска, поречие р.Янтра	6 222	няма данни
16	KA Suchindol	дере - р.Росица, поречие р.Янтра	2 891	38 300
17		р.Янтра	102 535	7343800
18	ГК - гр.Стражица	р.Стражишка, поречие р.Янтра	10 000	362 908

Discharges of untreated municipal waste waters

Discharges of untreated municipal waste water in the Yantra basin



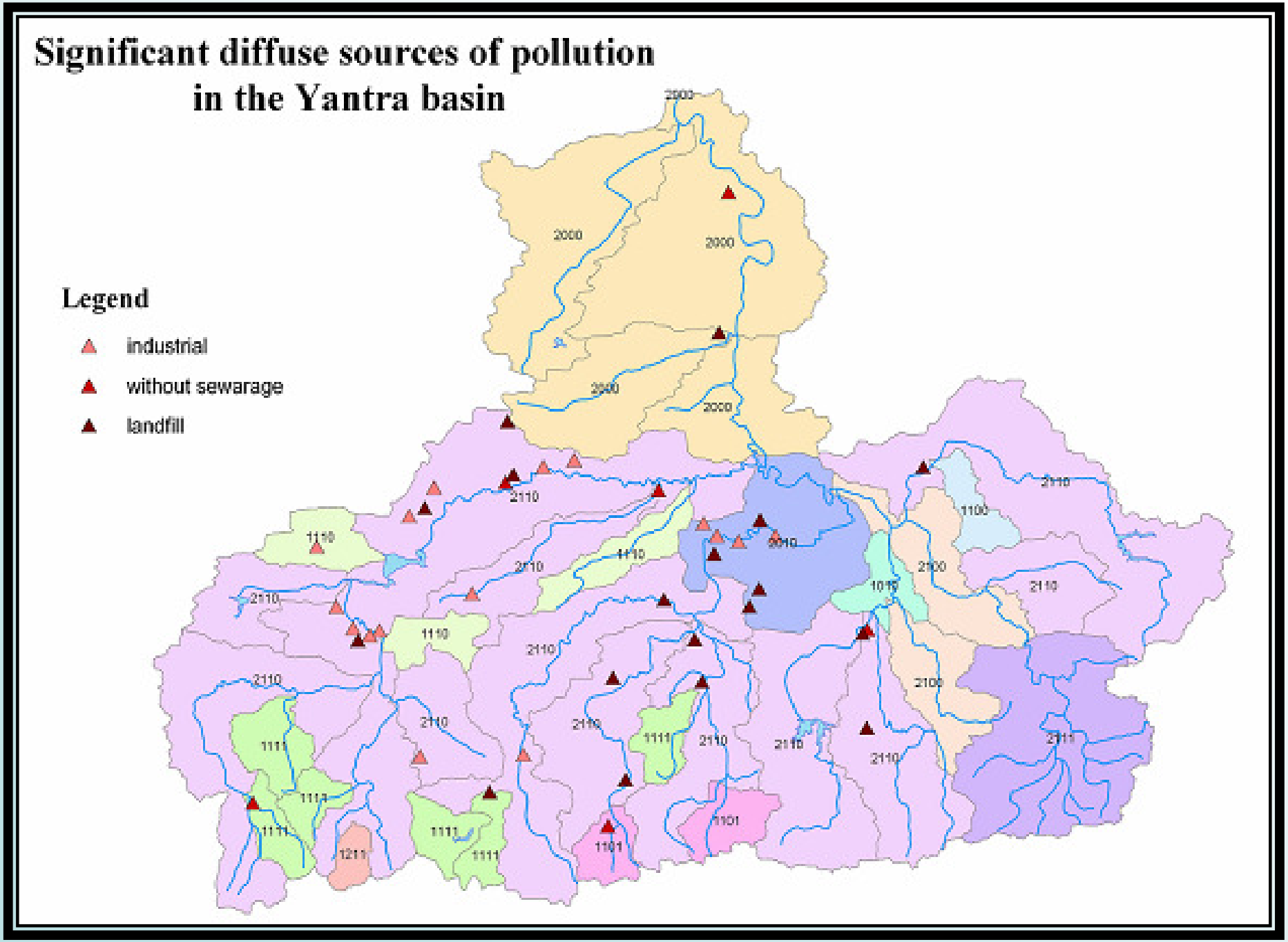
Discharges of municipal treated waste water in the Yantra basin



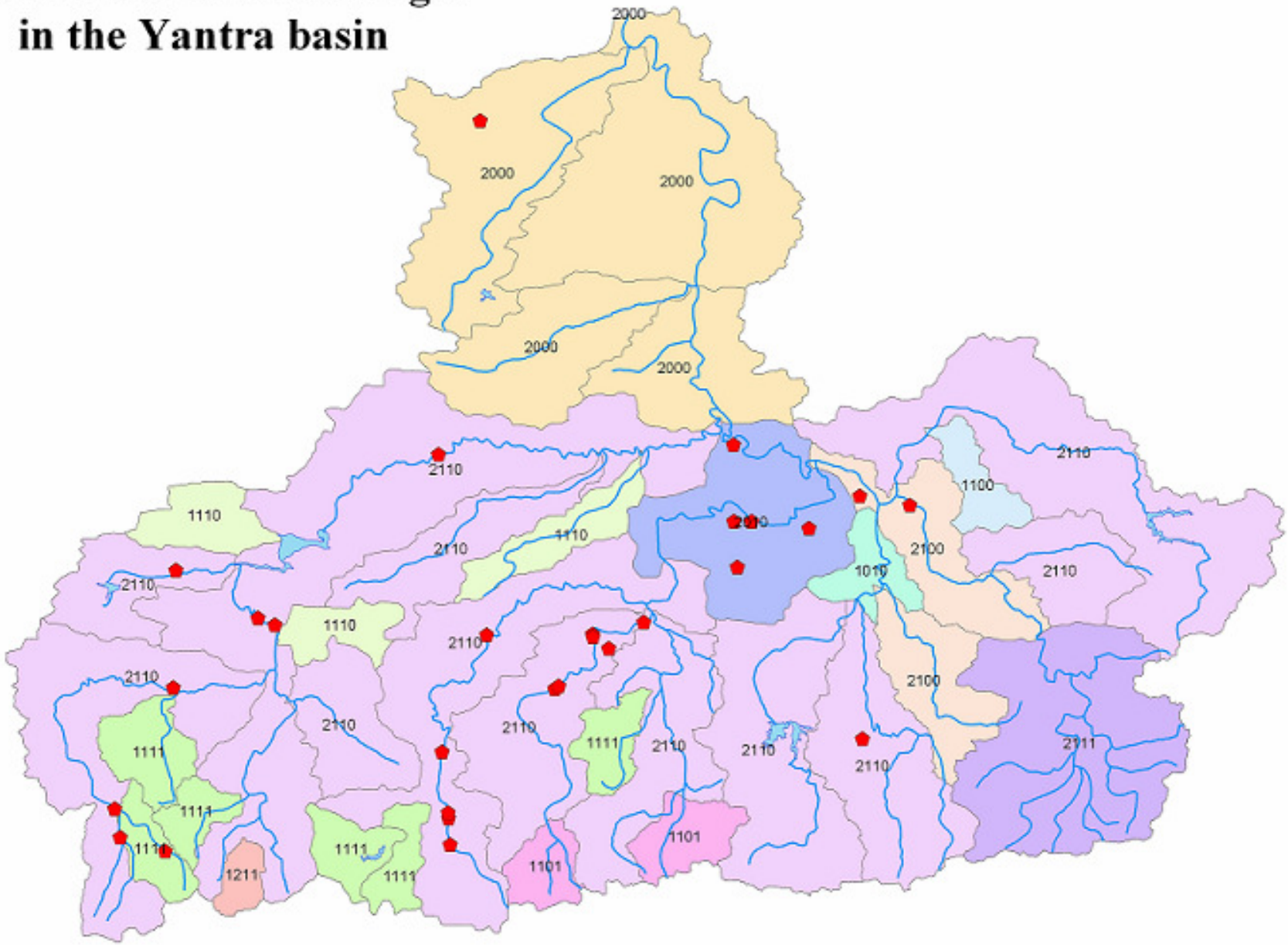
DIFFUSE SOURCES

DIFFUSE SOURCES			SUBBASIN
I.	*Urban areas without sewerage*	*PE> 2000*	
1.	Apriltzi	4 439	Vidima, TEZ Jantra
2.	Bjala Tscherkva	3 455	Rossitza, TEZ Jantra
3.	Resen	3004	Rossitza, TEZ Jantra
4.	Zenovo	2 458	Jantra
6.	Zlstsritza	3 252	Zlatarischka, Zufluß von Djulünitza, TEZ Jantra
7.	Platschkovtzi	2 749	Drjanovska, Zufluß von Belitza, TEZ Jantra

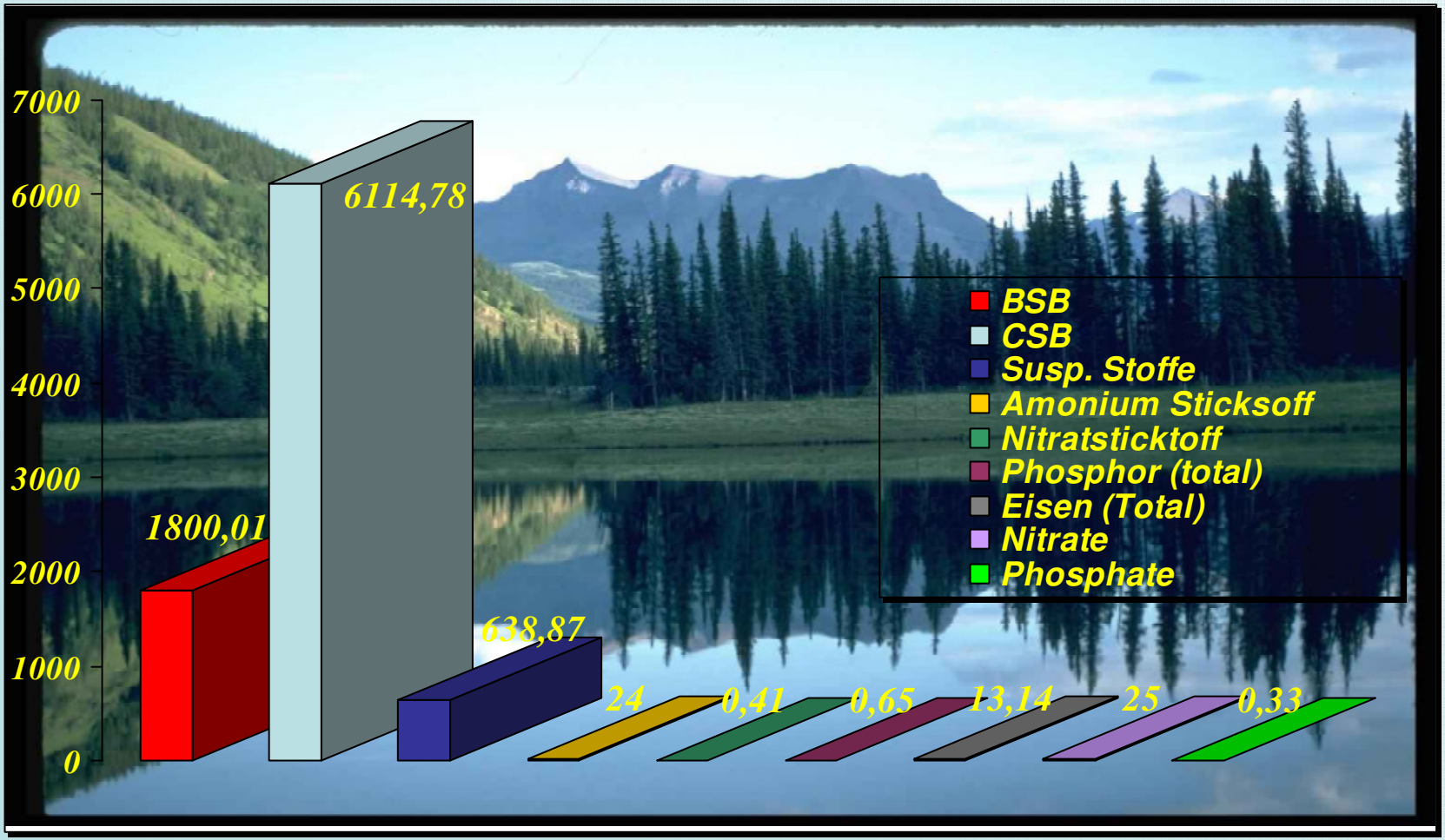
Significant diffuse sources of pollution in the Yantra basin

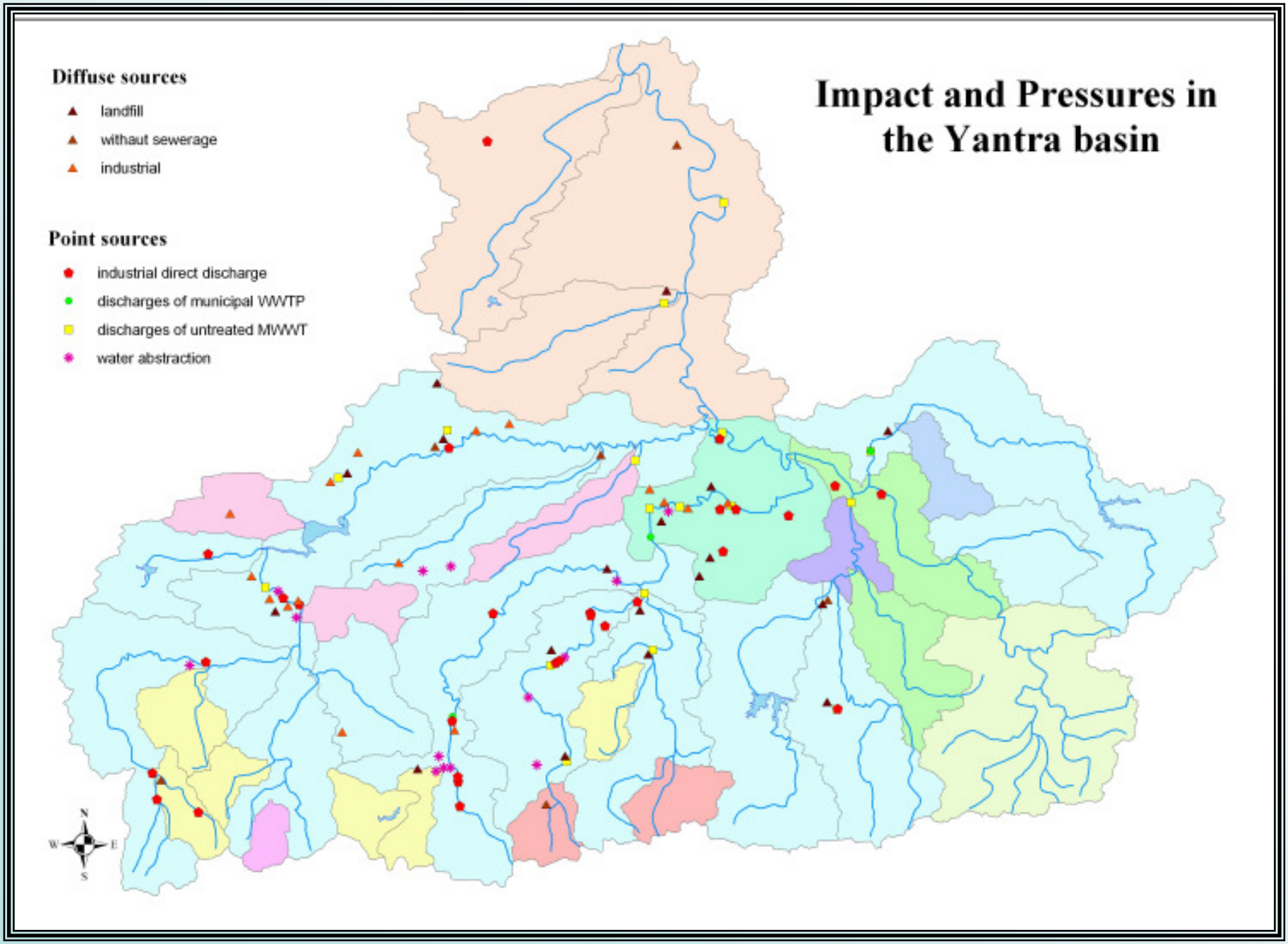


Industrial direct discharges in the Yantra basin



ALLGEMEINE VERSCHMUTZUNG NACH PARAMETERN (T/J)

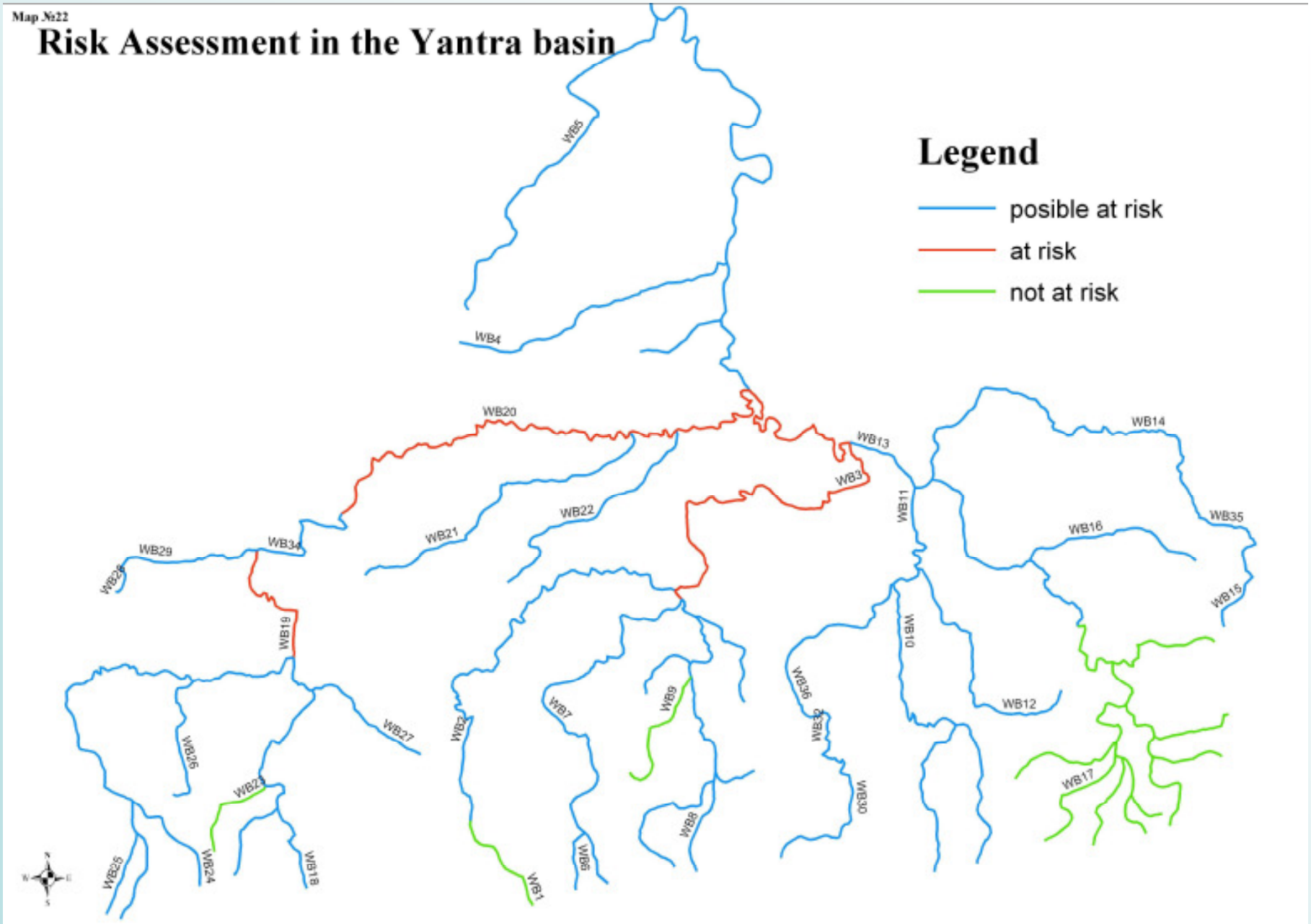


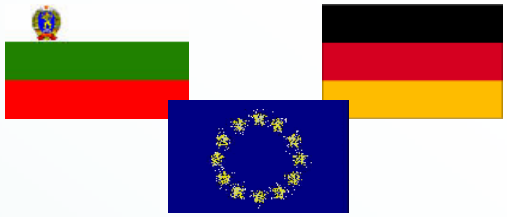

Impact and Pressures in the Yantra basin
Diffuse sources
landfill
withaut sewerage
industrial
Point sources
industrial direct discharge
discharges of municipal WWTP
discharges of untreated MWWT
water abstraction
N
W
E
S

Pressures	Type of pressures		Significance/Risk Ass.	maps
Point sources	· Municipal Discharges • Industrial Direct Discharges EPER, pollutants 76/464 Priority substances Food processing plants Salt intruder	Municipal Wastewater •Direkt-/Indirekteinleiter Chlorid Einzelstoffe Heat discharge	≥ 2000 inhabitants < 2000 inhabitants (Auswahl) Gefährliche Stoffe Gefährliche Stoffe Prioritäre Stoffe > 4000 EW > 1 kg/s Auswahl > 10 MW	map A
Diffuse sources	Fertilizer Pesticides	N-fertilizer P-fertilizer Arable land Groundwater pressures	> 6 mg/l (Jahresmittel) calculated > 0,2 mg/l (Jahresmittel) MONERIS > 30 % Sum >0,5 µg/l/ Einzel >0,1µg/l	map B map C
Water abstractions	Hydropower generation Brauchwasserentnahmen	Mindestabfluss Entnahmemenge	< 1/3 MNQ > 1/3 MNQ	map D
Morpholo-gical alterations	Morphological obstructing installations	Gewässerstruktur nach LAWA-Übersichtsverfahren	Gesamtbewertung 5*, 6, 7 * 5, wenn definierte Einzelparameter mit 6 oder 7 bewertet sind	map E
	Flow regulation ⇨ river continuityt ⇨ back waters	Passierbarkeit: Regelungsbauwerke (RBW), Sohlenbauwerke (SBW), HRB und TSP, Wasserkraftanlagen (WKA) Rückstaulänge	fehlt, d.h. kein Fischaufstieg/ Makrozoen kein Fischaufstieg/ Makrozoen Dauerstau kein Fischaufstieg/ Makrozoen > 1 km oder Summe > 1 km	map F
	Hydraulic stress	befestigte Siedlungsflächen	$Q_{ein} > HQ_1$	map G
Other anthropo-genic pressures	mining navigation Contaminated sites		Heavy metals Need to clean up	- - map H

Map №22

Risk Assessment in the Yantra basin





WRRL-Donau-Bulgarien
РДВ-Дунав-България

Wirtschaftliche Analyse
Икономически анализ

Bestandsaufnahme
Опис на дейностите

1	**Allgemeine Beschreibung des Gewässereinzugsgebietes** **Описание на Речния басейн**
2	**Wirtschaftliche Bedeutung der Wassernutzungen** **Икономическа значимост на водоползването**
3	**Referenz-Szenario 2015** **Изходен сценарий 2015г.**
4	**Kostendeckung der Wasserdienstleistungen** **Възстановяване разходите за услуги във В. сектор**

Pleven, 28-04-05

Project evaluation for programme of measures
- Organisational aspects -

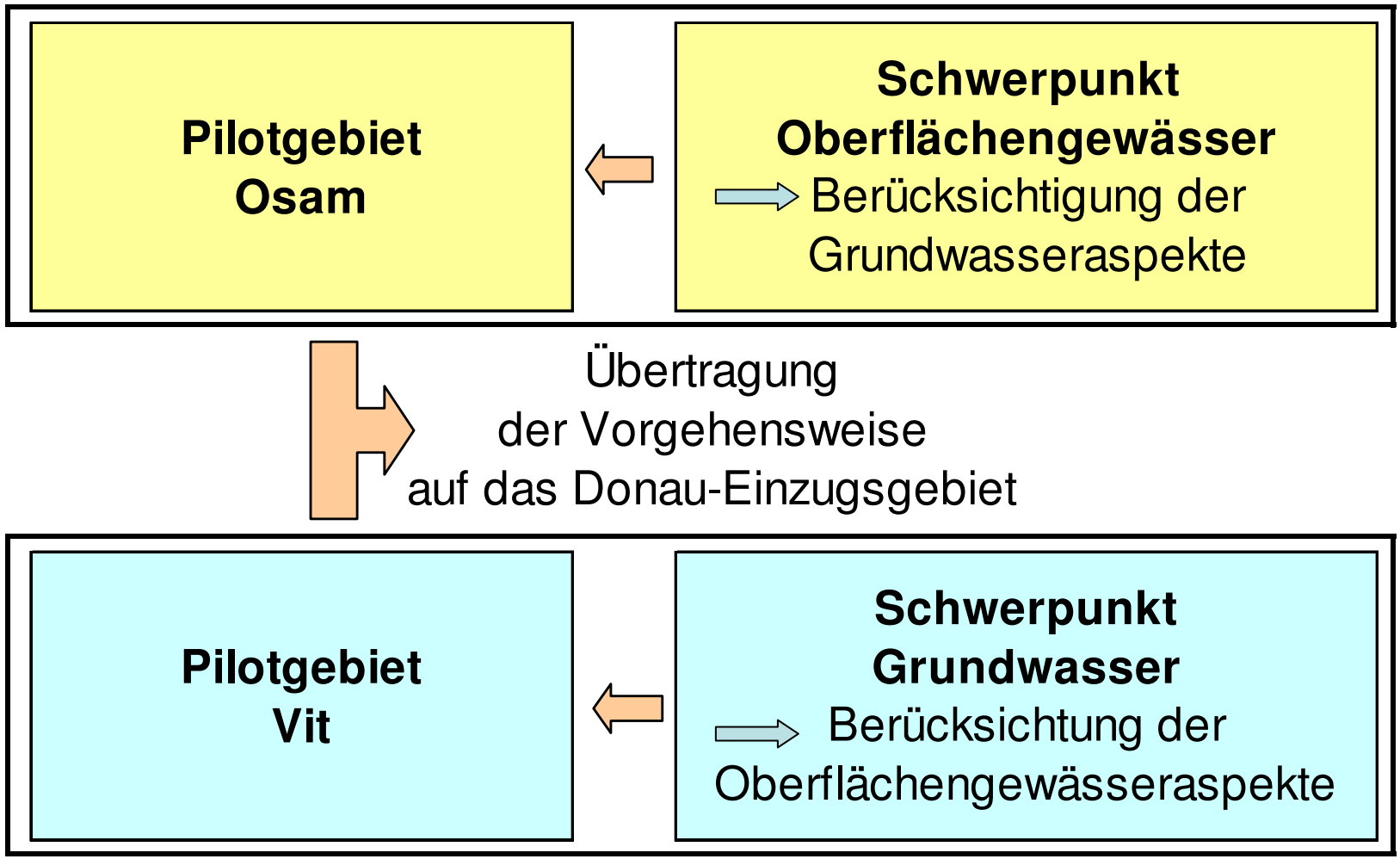
Working group: Surface water
3 MS Experten
3 BG Experten (DRBD, EEA, MoEW
Academy of Science)

Working group: Groundwater
3 MS Experten
3 BG Experten (DRBD, EEA, MoEW
Academy of Science)

Plenum

MoEW
4 Directorates
EEA
REI
Academy of Science

Water supply management (municipal, industrial, agricultural), waste water treatment, Renaturierungsmaßnahmen, cost efficient aspects, environmental objectives, monitoring, HMWB, exemptions ....


Pilotgebiet
Osam
Schwerpunkt
Oberflächengewässer
Berücksichtigung der
Grundwasseraspekte
Übertragung
der Vorgehensweise
auf das Donau-Einzugsgebiet
Pilotgebiet
Vit
Schwerpunkt
Grundwasser
Berücksichtung der
Oberflächengewässeraspekte

Massnahmenprogramm (1)

Abwasserentsorgungs-infrastruktur

- **kommunal**
- **gewerblich-industriell**

Wasserversorgungs-infrastruktur

- **kommunal**
- **gewerblich-industriell**
- **landwirtschaftlich**

Gewaesser-renaturierung

- **Planung und Bau von**
- **linearer Durchgängigkeit**
- **von Fliessgewässern und Fischtreppen**

Massnahmenprogramm (2)

Altlasten-
- **erfassung**
- **bearbeitung**
- **sanierung**

Monitoring
(Gewaesserschutz)
- **Grundwasser**
- **Oberflächengewässer**

Reduzierung der Nitratbelastung
- **Kooperationen Landwirtschaft/ Wasserversorger**
- **Gewässernachbarschaften**
- **Wasserwerksnachbarschaften**
- **....**

Wasserversorgung und Abwasserentsorgung

Training der bulgarischen Wasserdienstleister

Trinkwasserversorgung

Abwasserentsorgung

⇨ **auf der Basis der anerkannten Regeln der Technik**

Dachorganisationen,
deutsches Regelwerk DVGW, DWA (früher: ATV)

For more detailed information:

http://www.hlug.de/twinning/water/index.htm


Looking forward to
a better water status and
a better future for Europe´s rivers!