

Accident Prevention & Control Activities in the Danube River Basin

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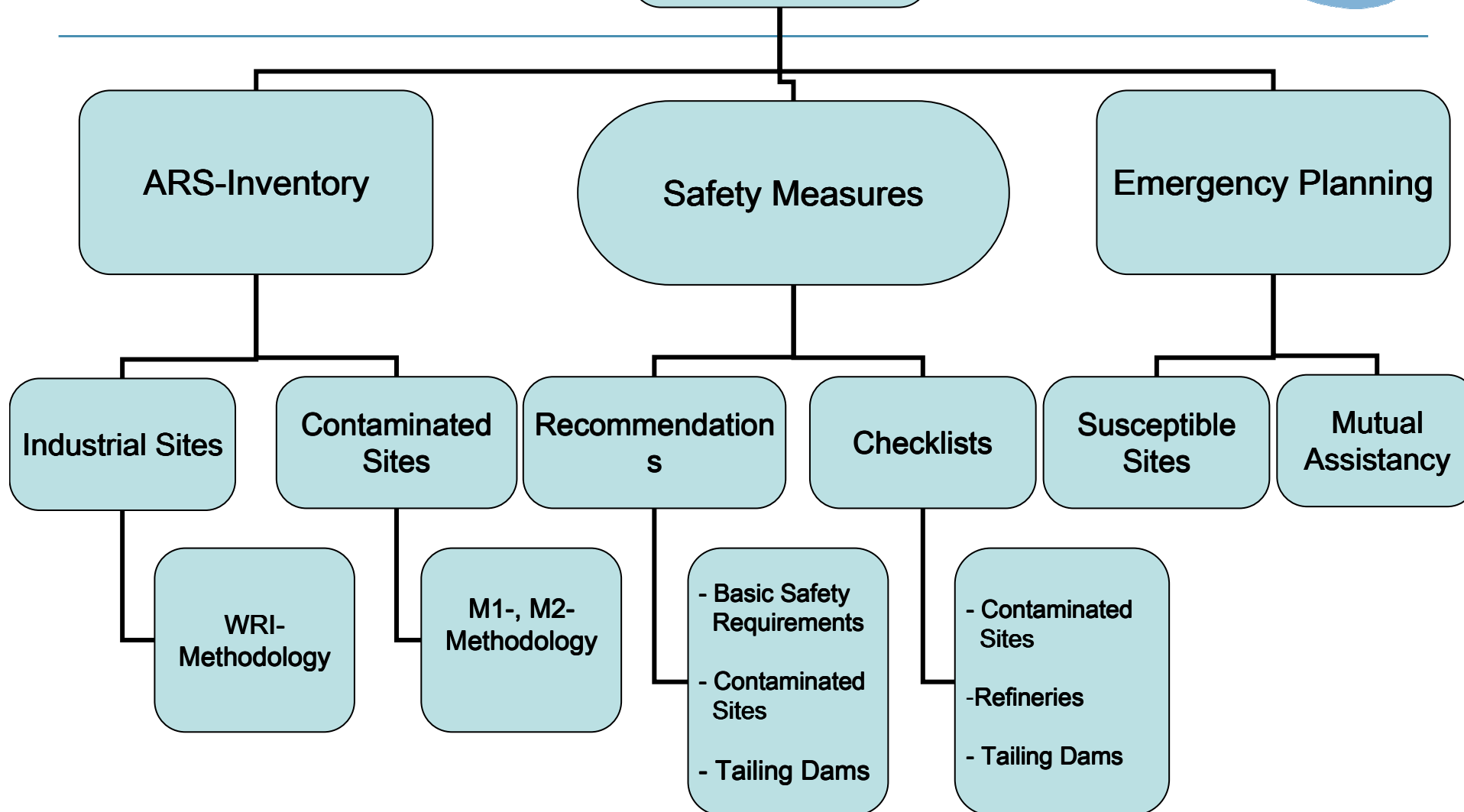


Mihaela Popovici, Igor Liska

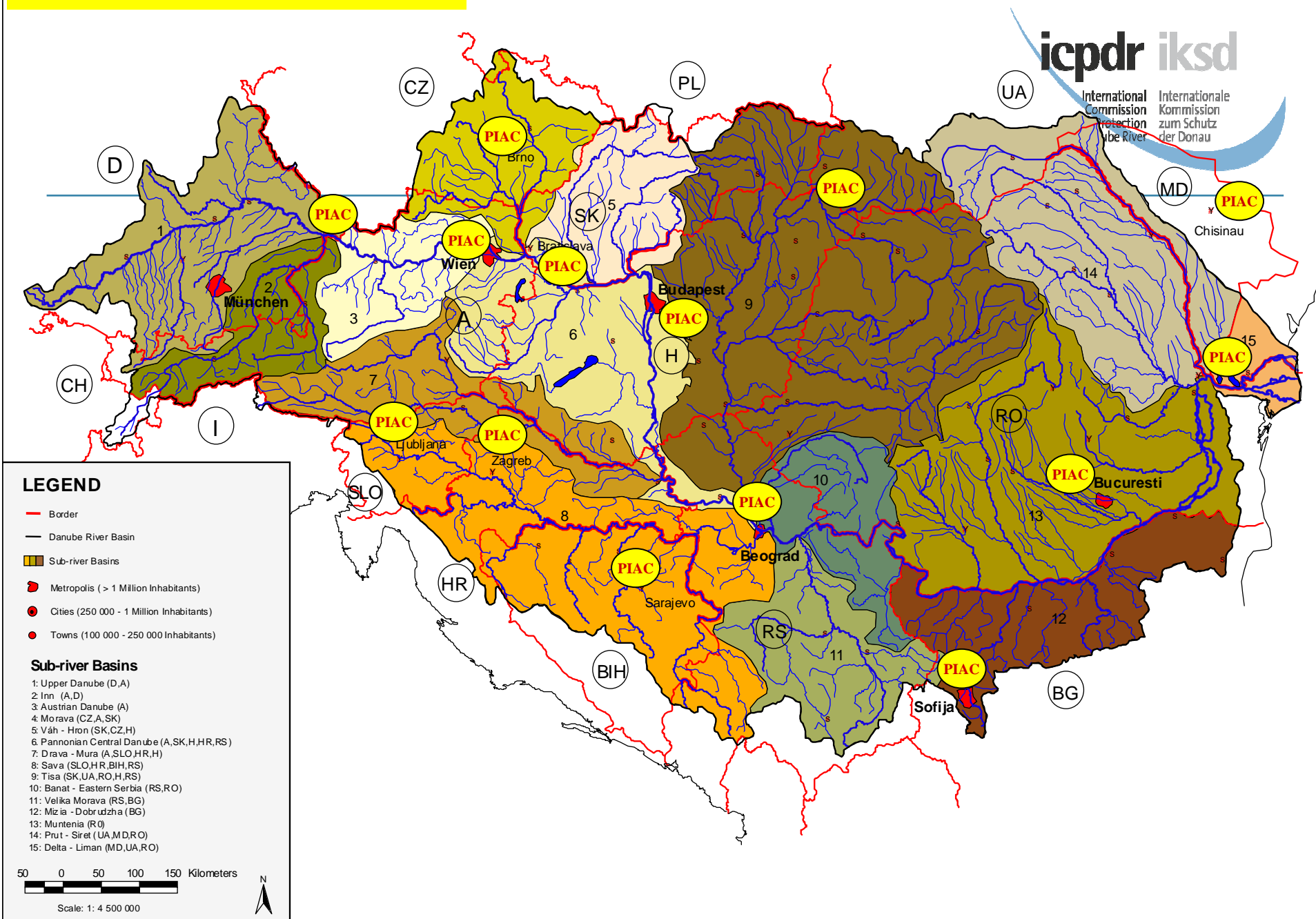
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ICPDR Accident Prevention

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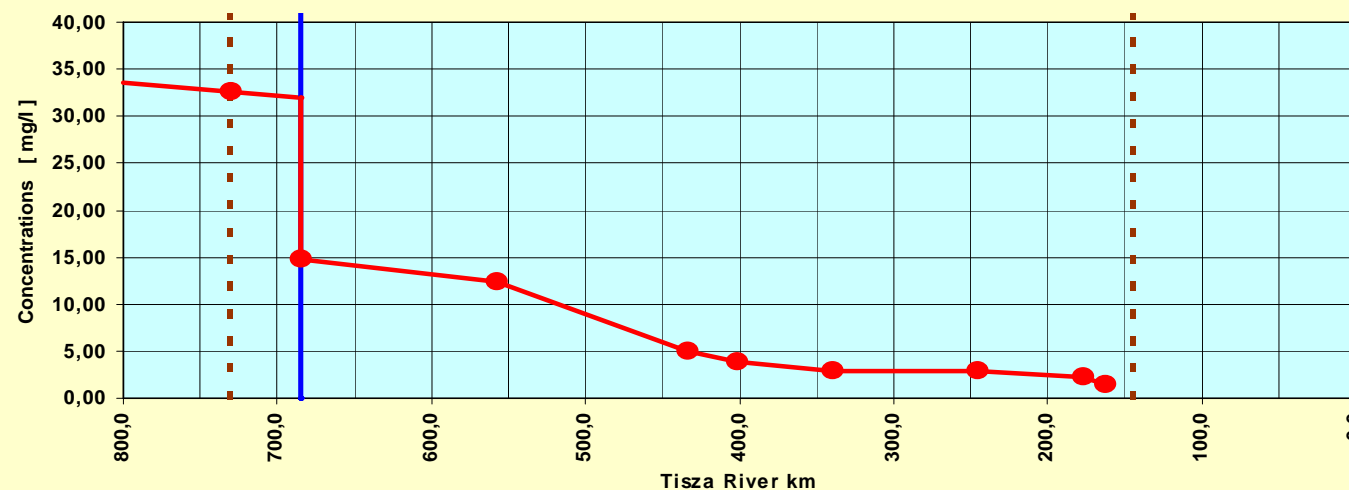
Principal International Alert Centres in the Danube River Basin



Cyanide spill 2000



Peak Values of Cyanid Wave in Tisza (HU)
(1-Feb-2000 to 11-Feb-2000)



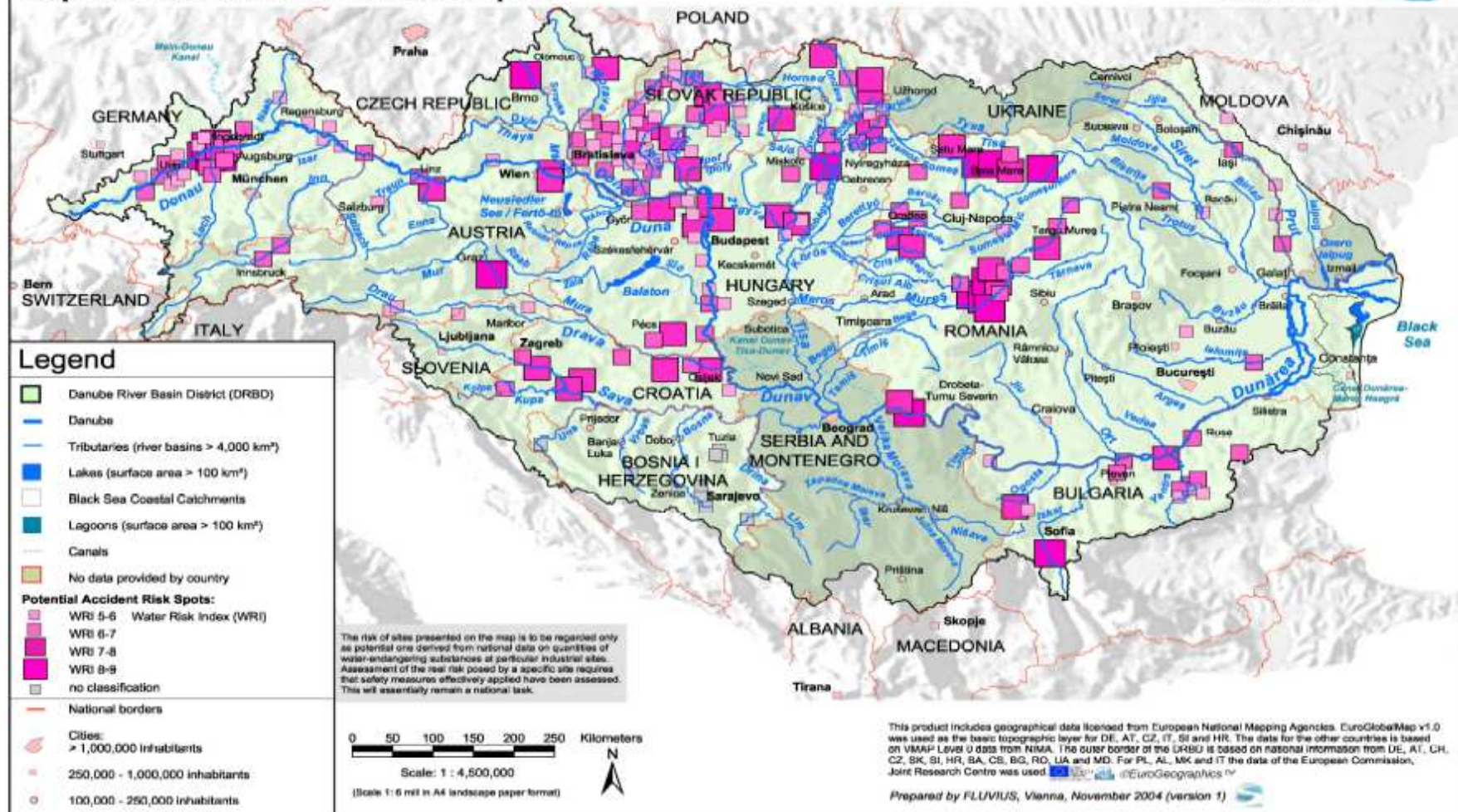
Inventory of industrial sites

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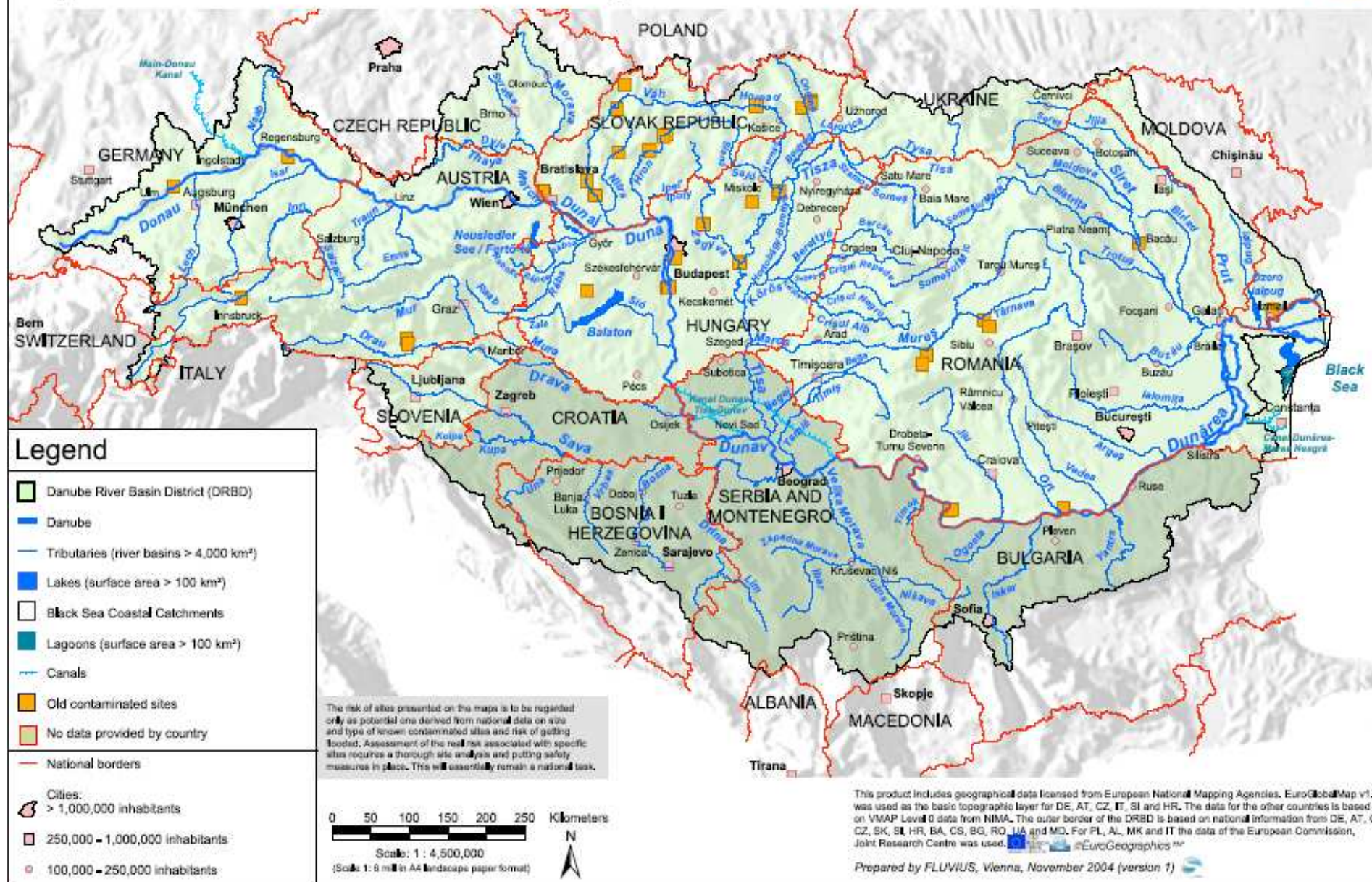
Danube River Basin District
Map 8: Potential Accident Risk Spots



Inventory of industrial sites

<u>Substance</u>	<i>Amount</i> <i>[Kg]</i>	<i>WRC</i>	<i>WRC 3 – equivalent</i> <i>[Kg]</i>	<i>WRI</i>
<u>Paraffine</u>	10000	“0”	10	1
<u>NaOH</u>	10000	1	100	2
<u>Ammonia</u>	10000	2	1000	3
<u>Acrylonitril</u>	10000	3	10000	4
<u>Sum</u>			11110	4,046

Danube River Basin District Map 9: Old Contaminated Sites in Potentially Flooded Areas



Safety measures



Major instruments for prevention:

- ⇒ Catalogue of safety measures (draft available);
- ⇒ Recommendations for safety guidelines :
 - ⇒ Basic Requirements for installations handling the water endangering substances
 - ⇒ ICPE recommendations on requirements for industrial plants containing water-polluting substances in areas with a risk of flooding
 - ⇒ Safety Recommendations for Refineries
 - ⇒ Recommendations for the Safety of Tailing Dams
- ⇒ Application & development of checklists

Safety measures

Hazard risk mitigation and emergency preparedness for mining accidental spills:

- ✓ Assess the Mining Wastes Directive implementation;
- ✓ Develop a specific mining sites inventory (template available);
- ✓ Prepare the mining sites map;
- ✓ Update and implement the Guidelines and good practices for Tailing Management Facilities.

Contingency planning



- ✓ Status survey carried out on the availability of agreements and related procedures on mutual assistance in the DRB
- ✓ Preparation of general guidelines for emergency management procedures during accidental pollution that can be shared by the Danube countries (ongoing activity – cooperation with UNECE).

Information exchange: Joint exercises



Joint management of transboundary emergency from spills of hazardous substances:

APC EG Members participated in two testing exercises within the frame of UNECE projects organised:

- ✓ at Prahovo, in Serbia with Romania, Bulgaria, Serbia (2010)
- ✓ at Giurgiulesti (MD) and Galati (RO) – with MD, UA and RO (2011)

Accident prevention/control

Future Tasks



- ✓ Update of the existing inventory of Accident Risk Sites and of contaminated sites susceptible to flooding;
- ✓ Reporting obligations to ensure an efficient system for exchange of information during accidents;
- ✓ Quantification of real risk of sites included in inventories, based on existing methodology and considering safety of measures at the respective plant;
- ✓ Assess the Mining Wastes Directive implementation and prepare a specific mining sites inventory.

Accident prevention/control Future Tasks

- ✓ Update catalogue of safety measures;
- ✓ Define mutual assistance approach for accidental pollution event;
- ✓ Basin-wide standardized overview report & map will be prepared annually to review accidental pollution events & measures taken to prevent/reduce effects.



AEWS Operation



- ✓ AEWS started its operation in 1997;
- ✓ The ICPDR Secretariat maintains the Internet-based central communication system, which is integrated with the ICPDR information system (Danubis);
- ✓ An ICPDR Task-Group supervises the system operation;
- ✓ Regular tests are being organized by Secretariat to maintain 24/7 preparedness of the system;
- ✓ Regular annual training on AEWS operation takes place;
- ✓ Alert thresholds agreed.

Alert thresholds

Alert thresholds for the Danube River Catchment		
Substance classifications	Thresholds	
Water Risk Class (WRC)	Flow rates Q_m < 1000 m ³ /s	flow rates Q_m ≥ 1000 m ³ /s
	WARNING [kg] or [l]	WARNING [kg] or [l]
“0”	≥ 100 000	≥ 1 000 000
1	≥ 10 000	≥ 100 000
2	≥ 1 000	≥ 10 000
3	≥ 100	≥ 1 000
Water Risk Index (WRI)	≥ 2	≥ 3

AEWS homepage

AEWS Home - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Reload Home Search Favorites

Address http://danubis.icpdr.org/pls/danubis/DANUBIS_DB.DYN_AEWSHOME.show Go Link

AEWS Home

Position: ICPDR/PS
User: IGOR_LISKA
Language: English

Home
Help

Setup
Personal Settings
Alarm Centers
Notifications
Routing
Locations
Rivers

AEWS Messages
New message
Inbox
Outbox
Others

Informal Messages
New informal message
Informal Messages

Reporting
Incident Overview

Related Information
Alert thresholds
Links
Discussion Forum

[Log out](#)

[Alert thresholds]

New message: [\[Standard Message\]](#) [\[Request-for-Information\]](#) [\[End-of-Alert\]](#) [\[Informal Message\]](#)

Incoming Messages

Date	From	Label	Status
10-AUG-09 18:07	PIAC00	TEST2009-08-10.PIAC00.E.3	confirmed
10-AUG-09 18:02	PIAC00	TEST2009-08-10.PIAC00.R.2	confirmed
10-AUG-09 15:48	PIAC00	TEST2009-08-10.PIAC00.S.1	confirmed
02-JUL-09 07:52	PIAC04	1111.PIAC04.E.2	confirmed
24-JUN-09 10:34	PIAC04	1111.PIAC04.S.1	confirmed

[Next](#)

Outgoing Messages

Date	To	Label	Status
03-JUN-09 21:04	PIAC00	TEST-ALEX-2009-06.ICPDR/PS.S.1	confirmed
12-MAR-09 18:12	PIAC02	TEST MIT HÖBART AM 12.3.2009.ICPDR/PS.S.2	confirmed
11-MAR-09 18:15	PIAC01	TEST_10_03_2009.ICPDR/PS.E.3	confirmed
11-MAR-09 18:15	PIAC02	TEST_10_03_2009.ICPDR/PS.E.3	confirmed
11-MAR-09 18:15	PIAC04	TEST_10_03_2009.ICPDR/PS.E.3	confirmed


[Next](#)

Informal Messages

Date	From	To	Label
04-JUN-09 13:18	PIAC00	ICPDR/PS	Test question
23-APR-09 16:18	ICPDR/PS	PIAC08	Tisza pollution

Email and SMS Notification

New Memo Reply Reply To All Forward Delete Follow Up Folder Copy Into New Chat Show Tools Dial Ext Dial Other Who?

 **"PIAC04 Daniel Geisbacher"**
<icpdr@unvienna.org>
Thursday, 2 July 2009 07:52

To: igor.liska@unvienna.org
cc:
bcc:
Subject: AEWS-TEST-MESSAGE: 1111.PIAC04.E.2

AEWS-TEST-MESSAGE:02.07.09 07:52

Type: End-of-Alert

Sender: PIAC04

Location:

Waterbody:

River-km:

Substance Name:

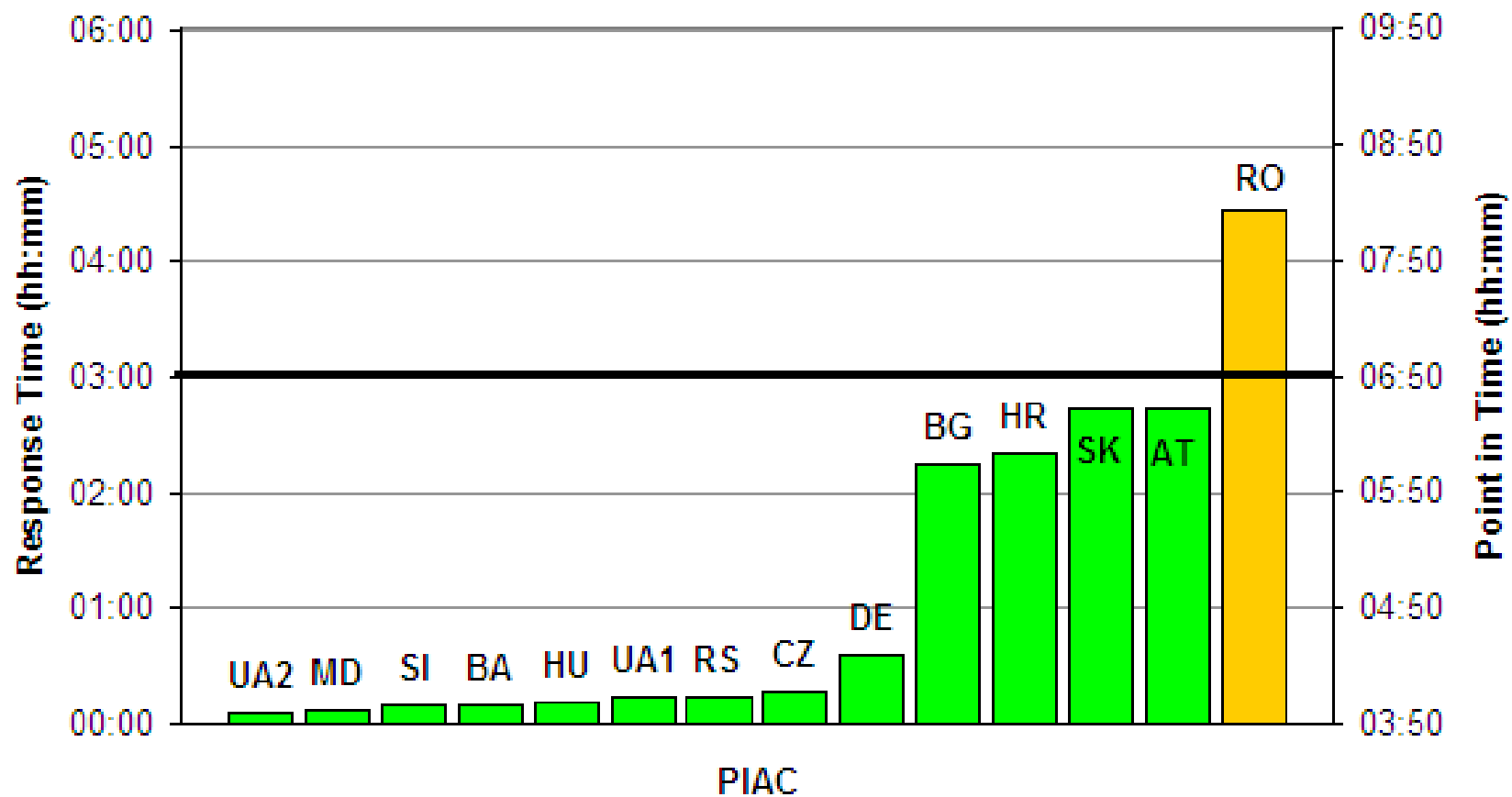
Waterbodies further affected:

DO NOT REPLY TO THIS EMAIL. THIS IS A NOTIFICATION ONLY.
USE THE AEWS WEBSITE TO READ AND REPLY TO THIS MESSAGE.

Go to <http://www.icpdr.org/aews>



AEWS Test 2011



Red Sludge spill 2010

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Red Sludge spill 2010

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www.katasztrofavedelem.hu



Inventories: Lessons learned from the major accidents in 2010



- ✓ The Ajka reservoir was included in the inventories, both as an industrial site and an IPPC installation in the Emission inventories of the ICPDR;
- ✓ Despite of a large amount of the waste in the reservoir the site has a low Water Risk Index (WRI) as the red sludge is not declared as a dangerous waste (not only in Hungary but it is even not on the EU waste list);
- ✓ Checklist application to be reinforced and accelerated!
- ✓ Contingency planning: mutual assistance approach definition, guidelines for emergency management procedures to be developed

AEWS during Ajka spill

- ✓ AEWS frequently used after red sludge spill (70+ messages);
- ✓ Information on pollutant concentrations disseminated by AEWS (HU, SK, RS, HR, RO);
- ✓ All PIACs were involved in AEWS operation during Ajka spill (even those upstream).



AEWS: Lessons learned from the major accidents in 2010



- ✓ There is a contradiction between the need of careful checking of information by decision makers and the need of a quick communication of accident data to downstream countries.
- ✓ Rapid AEWS reaction during accidents helps to create confidence and avoids any suspicion of hiding facts.
- ✓ APC EG recommendation that an alert should be triggered whenever there exists a chance that the pollution caused by an accident could have adverse transboundary impacts even though the calculated threshold values would not be exceeded.

Risk coming from shipping

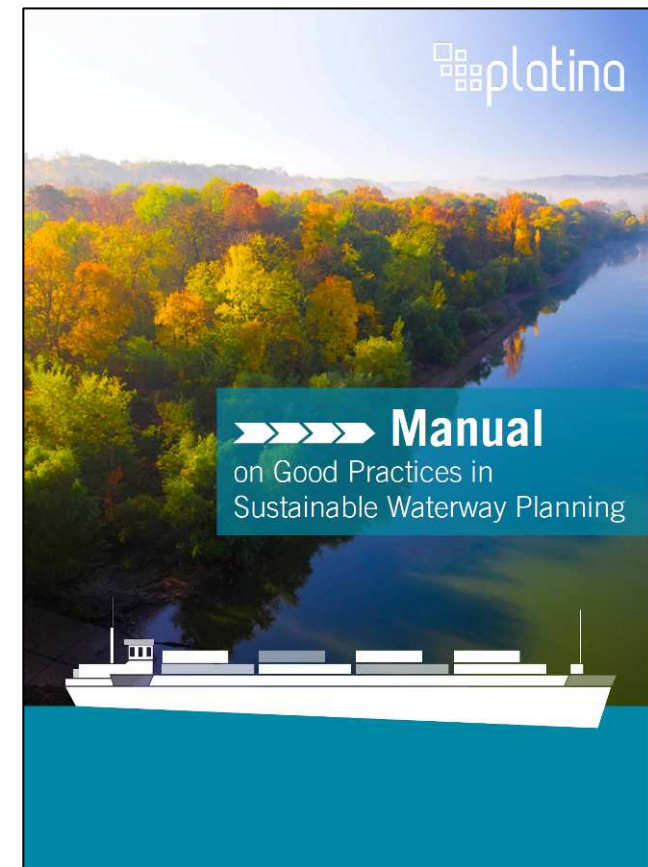
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Manual on Sustainable Waterway Planning

- Illustrate Joint Statement with its **principles & criteria**
- Present new **legal framework** conditions for river management
- Present **new approaches** in integrated planning
- Provide a general **practical guidance** for integrated planning
- **Examples** for ecology-oriented waterway and river bed engineering



WANDA Project: Inland navigation waste management



Ship waste management concepts which comprise equal level of detail for all types of ship waste

Implementation concepts and results of pilot actions as basis for subsequent implementation

Financing model for oily and greasy ship waste on Upper / Lower Danube as basis for implementation

Coordinated **Joint Action Plan** including follow up activities and possible funding sources



Danube Strategy



PA 5 To manage environmental risk

Action: “To continuously update the existing database of accident risk spots (ARS Inventory), contaminated sites and sites used for the storage of dangerous substances”

Example of project: **Accident risk spot inventory (including mining sites) in the DRB**

Thank you!



Further information: www.icpdr.org