



# Monitoring of transboundary waters in Europe: Lessons from the UNECE Pilots

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# United Nations Economic Commission for Europe





# The work of the UNECE

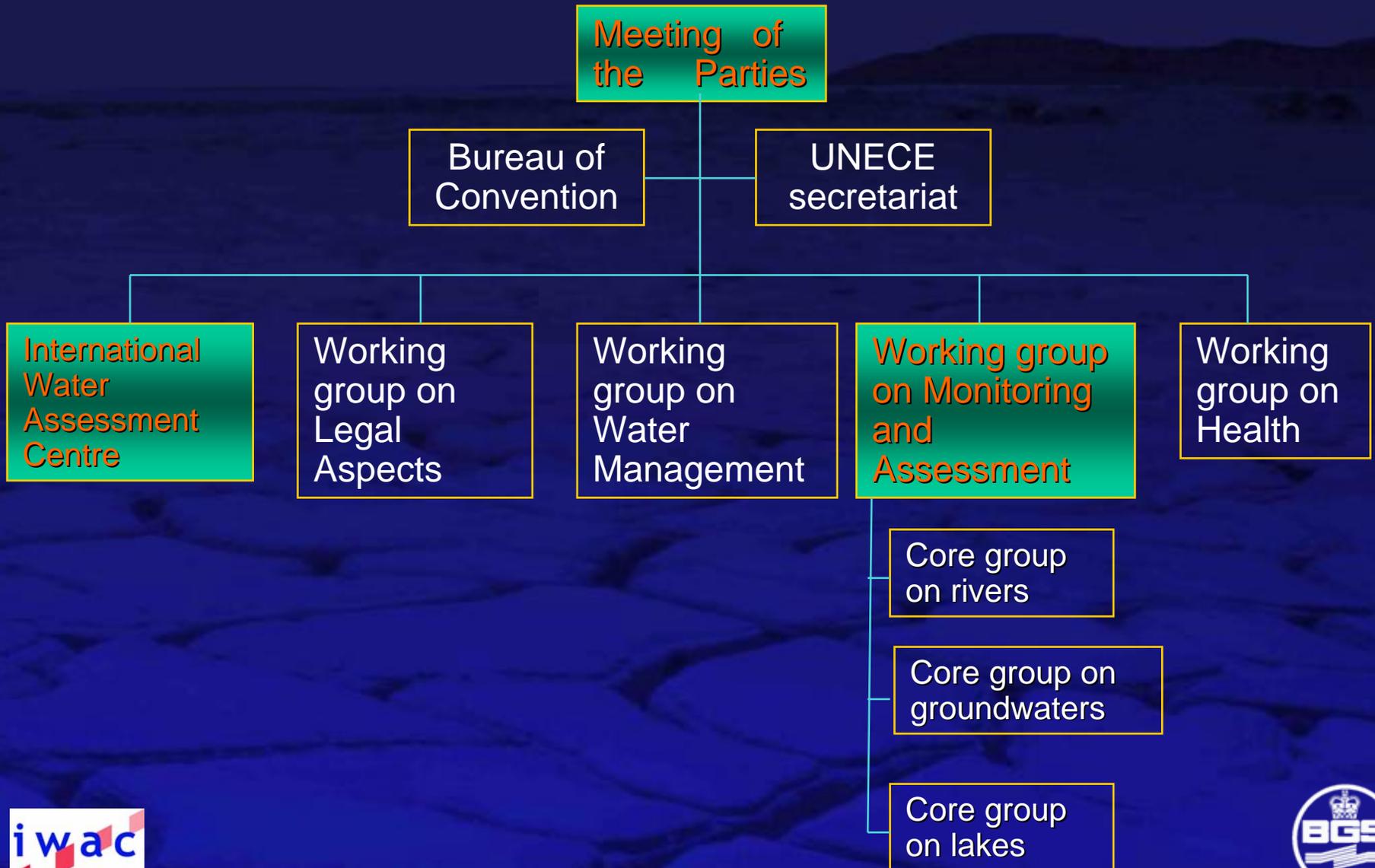
- Convention on the protection and use of transboundary watercourses and international lakes –

*Established in 1992 and came into force in 1996*

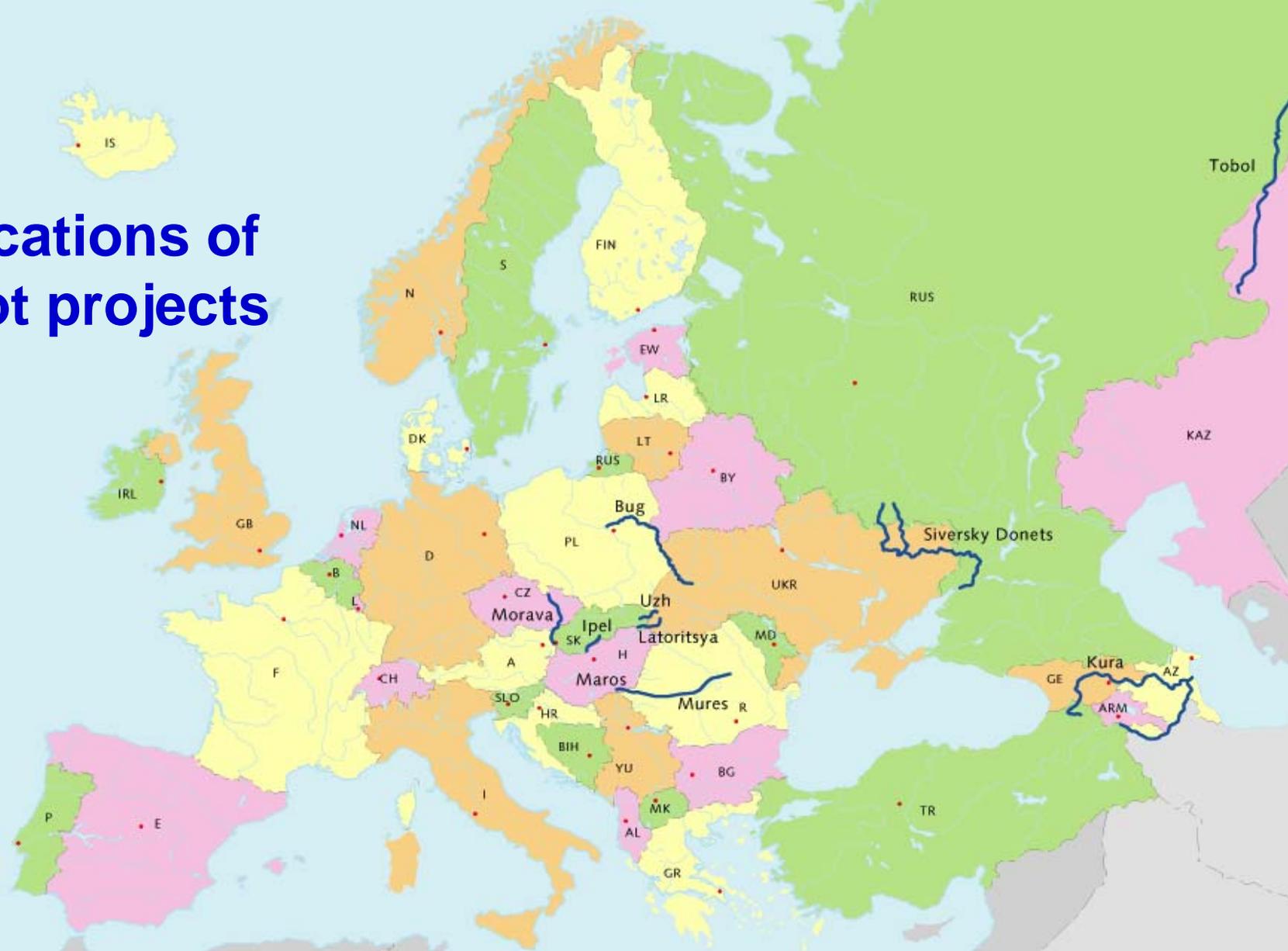
Supporting activities related to the Convention were already established from 1994

- Drafting of guidelines for monitoring and assessment for rivers, lakes and groundwater
- Testing of the guidelines in pilot projects

# Organisational structure



# Locations of pilot projects





# Objectives of the pilot projects

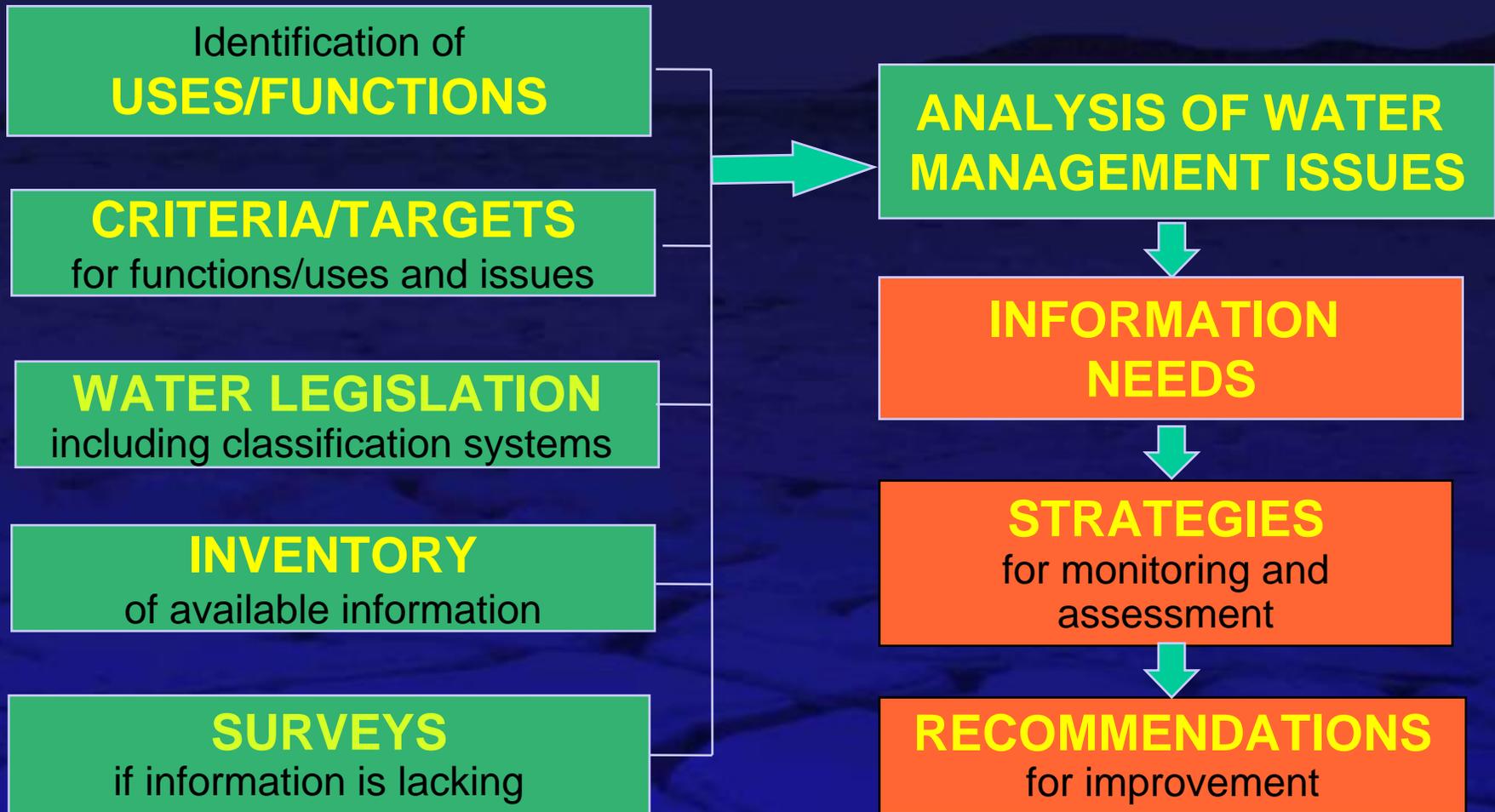
- To *demonstrate* application of the UN ECE guidelines on monitoring and assessment of transboundary waters
- To *support* countries in their application
- To *learn* from the experience gained in the pilots and identify gaps or weaknesses for their review

# Phases and activities of pilot projects



Phase	Activity	Report
1. Inception	<ul style="list-style-type: none"> <li>• MoU, look for funding, ToR</li> <li>• Project teams and workplan</li> </ul>	<i>No 1</i> Inception Report
2. Analysis of monitoring and assessment needs	<ul style="list-style-type: none"> <li>• Inventory, review legislation</li> <li>• Review existing quality data</li> <li>• Preliminary surveys of water quality</li> <li>• Inventories of polluting activities</li> <li>• Water quality and management issues</li> <li>• Specify information needs</li> </ul>	<i>No 2</i> Identification and Review of Water Management Issues
		<i>No 3</i> Recommendations for Improved Monitoring and Assessment
2. Develop recommendations	<ul style="list-style-type: none"> <li>• Evaluate existing monitoring</li> <li>• Strategies for monitoring and assessment</li> <li>• Recommend and cost improvements</li> </ul>	
3. Implementation	<ul style="list-style-type: none"> <li>• Redesign monitoring programmes</li> <li>• Implement recommended sampling, analysis, data handling and exchange</li> <li>• Procure additional equipment</li> <li>• Develop QA/QC and train staff</li> <li>• Report on water quality to stakeholders</li> </ul>	Beyond scope of pilot projects

# Steps in the river pilot projects



# Lessons learnt from project preparation



- A Memorandum of Understanding between partners is essential

*This can be facilitated by:*

- Establishing links between projects and commissions
- Involving all stakeholders from the beginning

*Further:*

- Need achievable objectives and realistic ToR, but flexible to take account of basin characteristics

# Lessons learnt from project organisation



- Necessary but time consuming to build project teams
- Need to involve people with responsibility and authority
- Need meetings and workshops within and between project teams to build trust, cooperation and common understanding
- Regular meetings of pilot project teams and advisers helped maintain progress
- Clear, agreed project structure, with defined phases and tasks
- English essential working language within and between project teams, but need some key outputs in national languages
- Joint field visits, surveys and common sampling are essential



# Common sampling in the Bug basin



# Lessons for transboundary monitoring and assessment: perceptions



- Existing perceptions of the requirements of monitoring were rather narrow, and the broader process of water quality assessment was not well understood
- The information needs approach, consideration of functions and issues and the concept of the monitoring cycle were all new

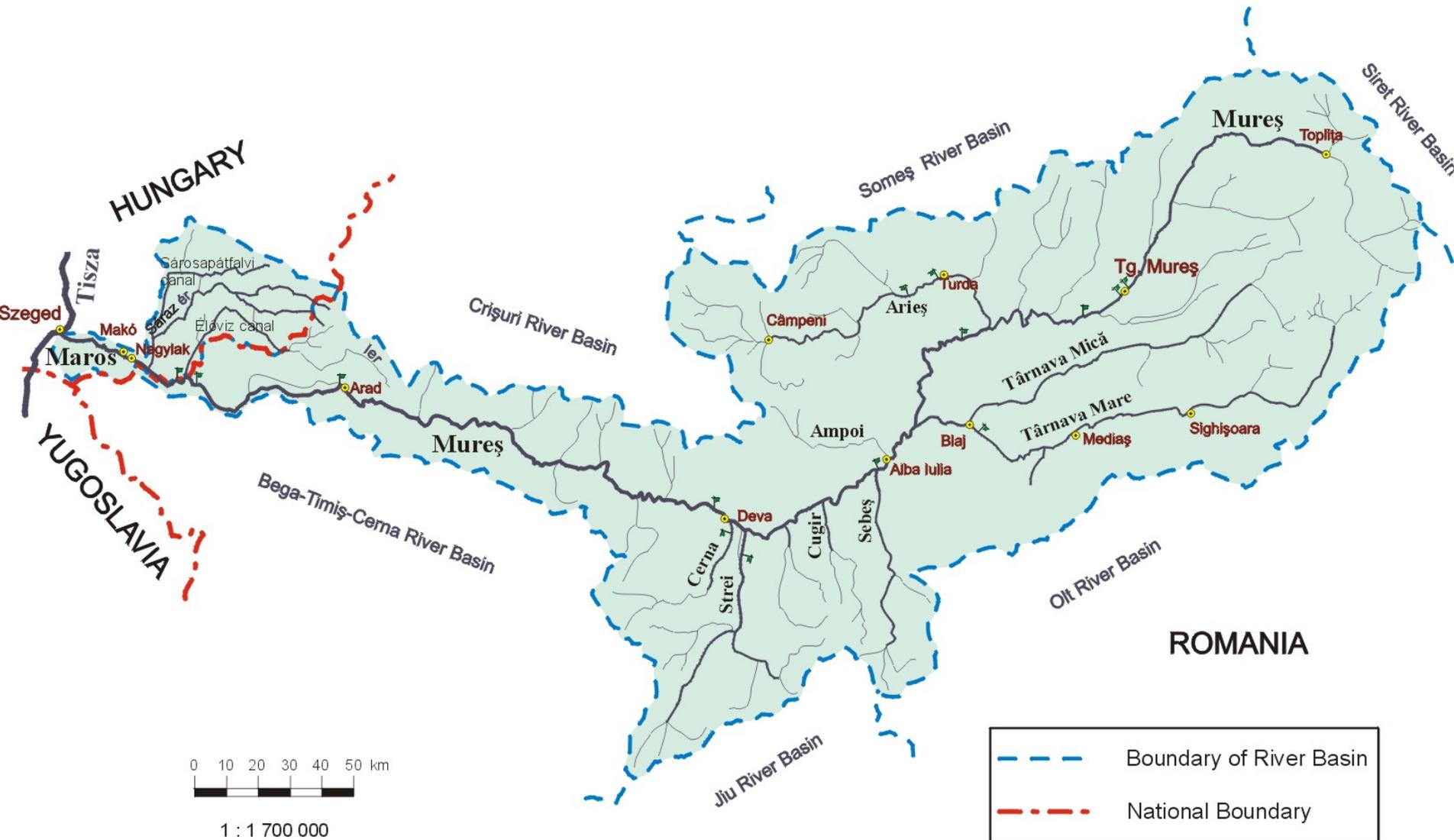
# Lessons for transboundary monitoring and assessment: the river basin



*Analysis of functions, issues and uses required project teams to:*

- take a river basin approach where previous focus had been on water quality at the border
- think about the spatial distribution of functions and issues in relation to water management
- take account of possible groundwater – surface water interactions for both quantity and quality

# Think about what is happening, *and where*, in the basin





# Water uses and issues in the Mures/Maros river basin

Issue/problems \ Functions/uses	Drinking water	Ecosystem functioning	Fishing	Recreation	Irrigation	Industrial use
Organic pollution	X	X	X	X		
Bacterial pollution	X			X		
Eutrophication		X	X	X		
Pollution by hazardous substances	X	X	X	X	X	
Accidental pollution	X	X	X	X	X	X

 high stress  medium stress  moderate stress

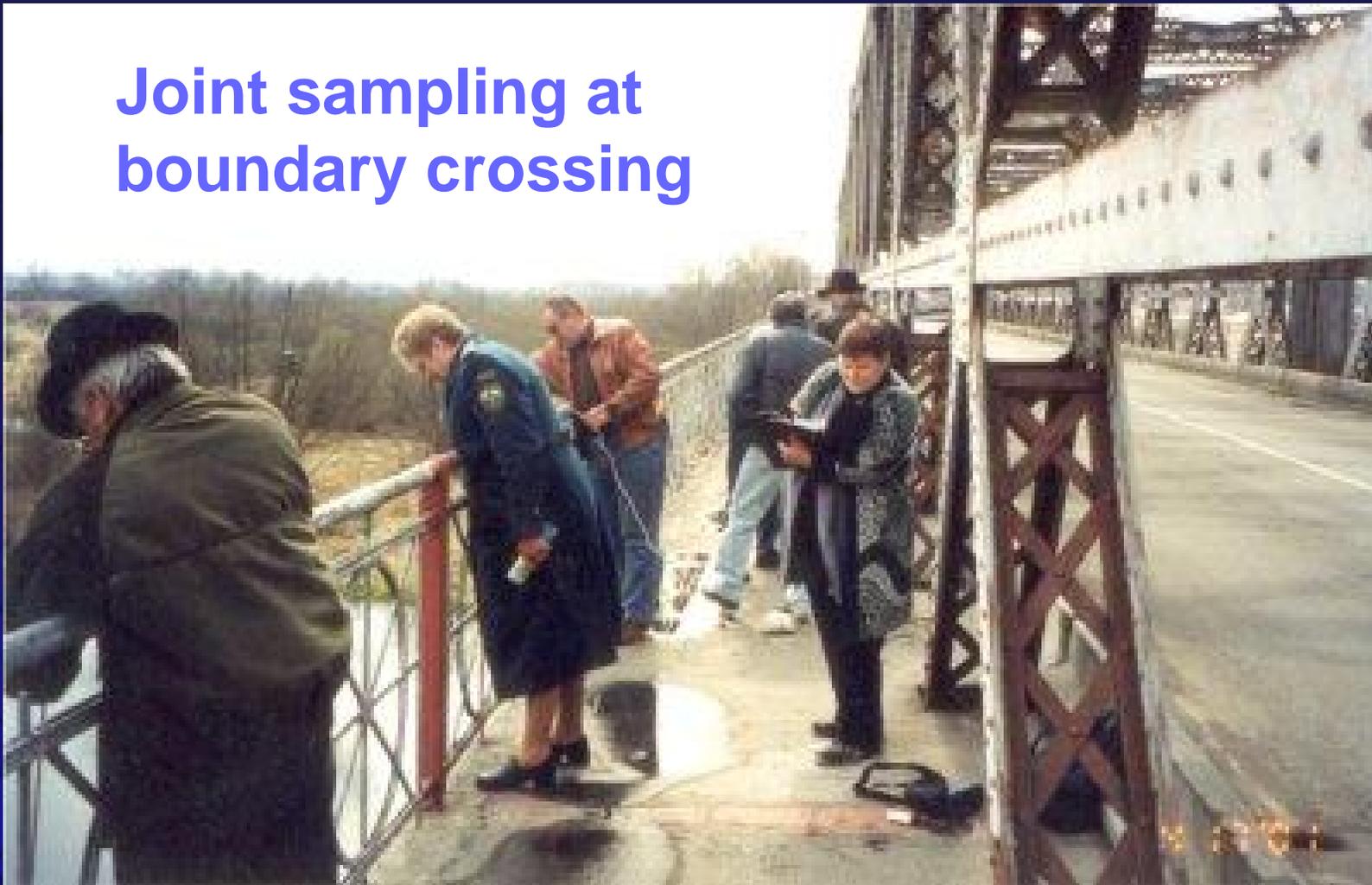


# Lessons learnt – social aspects

- A good social climate helps to ensure success
- Teams became more open to changing their ways of thinking, to raise questions and to discuss
- Working in a team builds trust
- Get to know colleagues and the way they think
- Informal and friendly atmosphere creates opportunities for initiatives
- Learn together by doing – joint field visits



## Joint sampling at boundary crossing



# Lessons for revision of the UN ECE guidelines



- River basin management needs to be better explained
- The focus on information needs still requires further explanation and illustration
- Deriving indicators from information needs within the DPSIR framework needs more discussion
- Need more attention to water quantity aspects
- Should be more emphasis on “Tailor-made” and “step-by-step” approaches to implementation
- Policy material was too much focused on legislation

*- the key is more examples!!*

# Overall results of UN ECE rivers pilots



- Good joint understanding of what the main issues are and where located within the basin
- Some, but incomplete, knowledge of the actual water quality problems from existing data
- Clear evaluation of the suitability of existing monitoring and its weaknesses
- Sampling sites and frequencies mostly adequate, but additional parameters needed
- Additional investment needed as a consequence
- Hydrological monitoring needs strengthening

***The most important lesson –  
let the river basin tell the story***

***Thank you***