



*This project
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The NATO Science for Peace
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THE POTENTIAL CONFLICT PREVENTION BY EAST OF EUROPEAN UNION TRANSNATIONAL GROUNDWATER RESOURCES MANAGEMENT

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BUDAPEST, 24-25 MARCH 2011

Futures of European Waters - how should policies adapt?

OUTLINE



Face of Conflict

Groundwater Management

Transboundary Issues

NATO Pilot Study Project

Challenges

Water Conflict Prevention by Cooperation



Natural Disasters

EARTH QUAKE Sichuan, 2004



TSUNAMI, 2004



FLOOD Bogatynia, 2010



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Men-made Disasters

Gulf of Mexico, 2010



Ajka Hungary, 2010



China, 2009



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Pieter Bruegel Elder

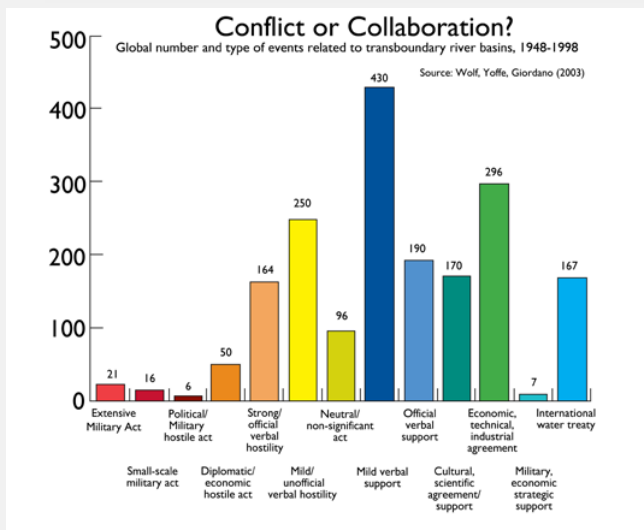
WATER WARS

"Too often, where we need water, we find guns instead."

Ban Ki-Moon 2008



Darfur
Jordan
Ganges
Tigris-Euphrates
Indus
Nile

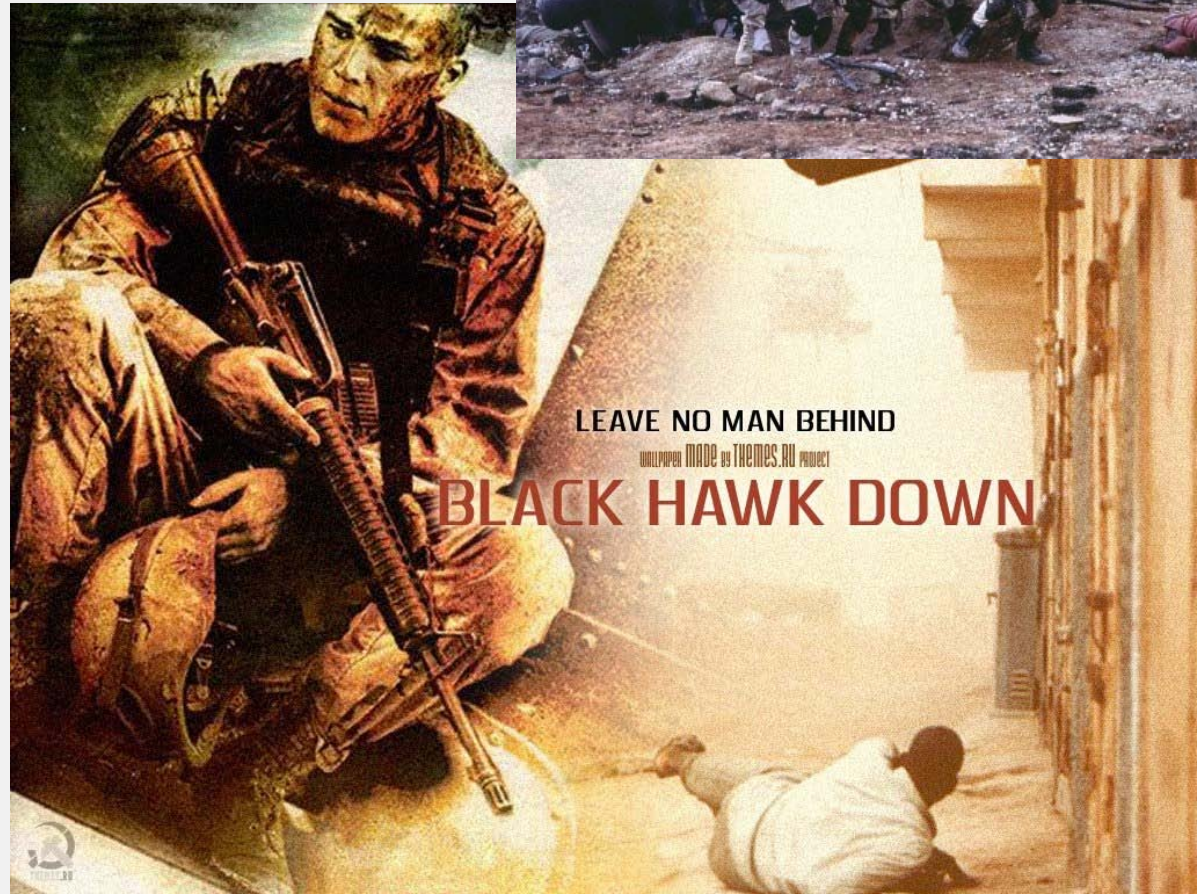


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DARFFUR CONFLICT

“The conflict that led to the crisis arose from the tensions between nomadic farmers' groups who were **competing for water** and grazing land - both increasingly scarce due to the expanding Sahara Desert.”



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SOURCES of CONFLICT

Conflicting Goals

- Developing a common vision of the future among stakeholders
- Educating stakeholders and conducting public awareness activities
- Finding **win-win solutions**
- Compensating those who will experience losses stemming from a solution
- Promoting holistic understandings of water problems

Factual Disagreements

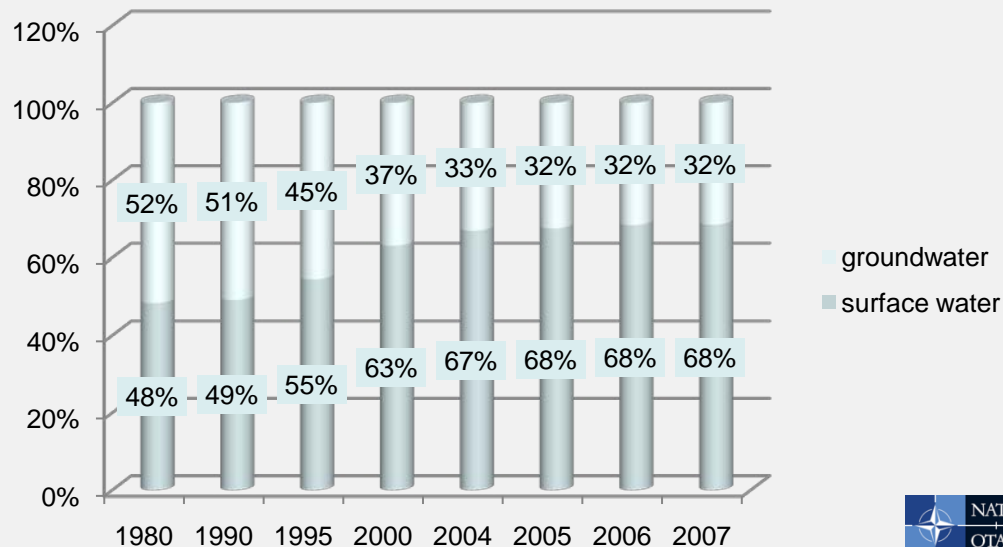
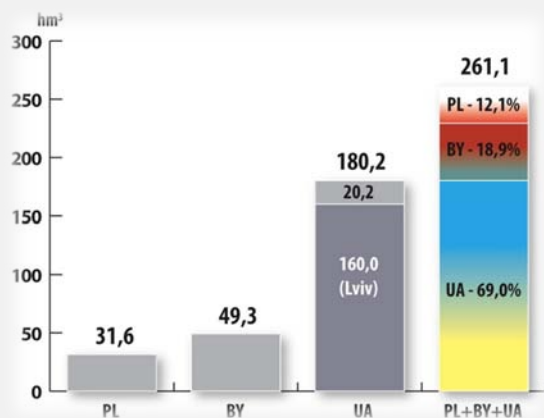
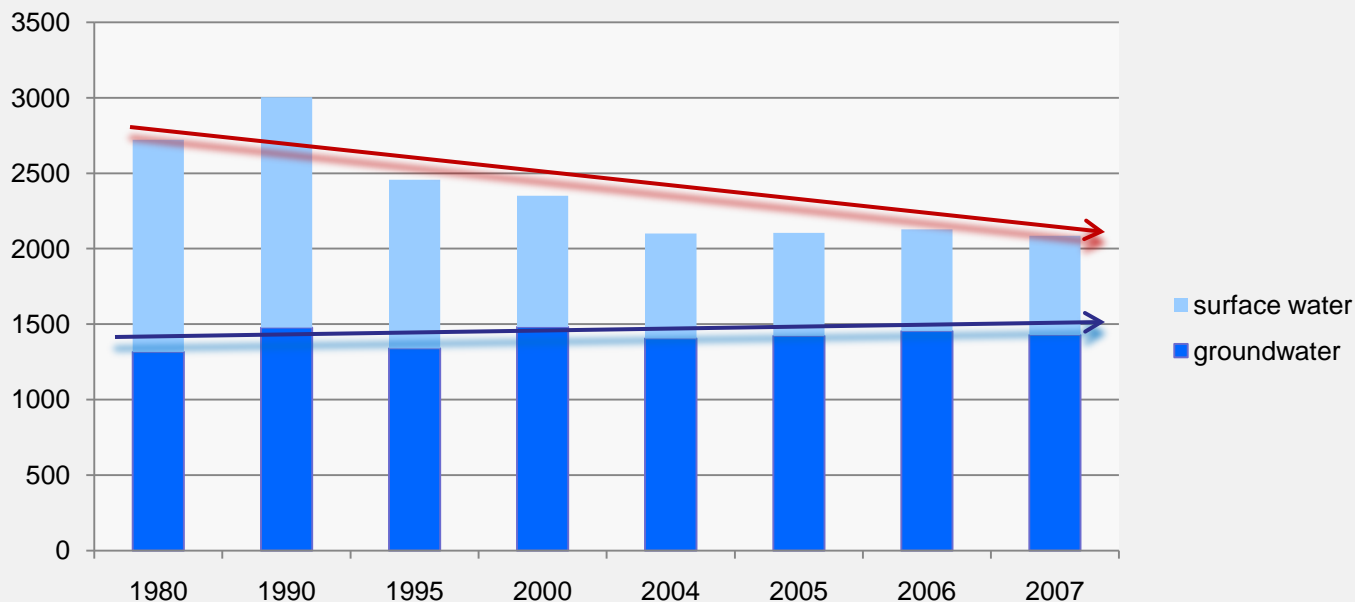
- Promoting effective communication over areas of genuine disagreement
- Undertaking additional research to generate better data
- Promoting joint research or research performed by the third party

Distrust and Power Struggles

- Developing better relationships between the parties
- Taking parties out of their familiar environments
- Getting parties to listen to each other
- Finding common ground or self-interests
- Bringing in a **mediator**



WATER USAGE

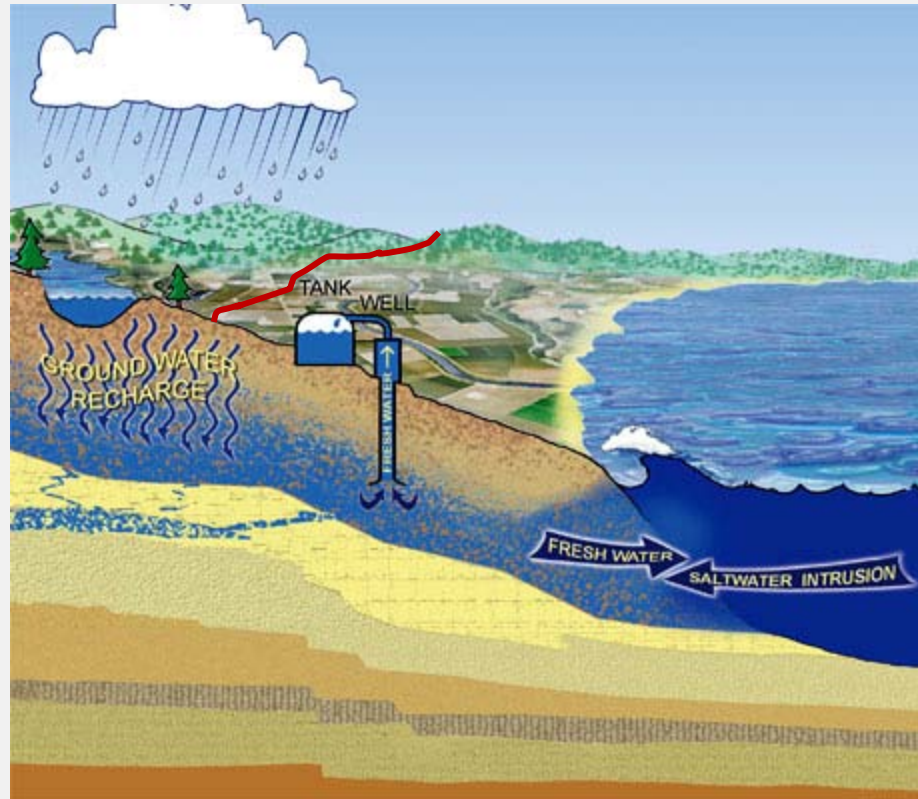


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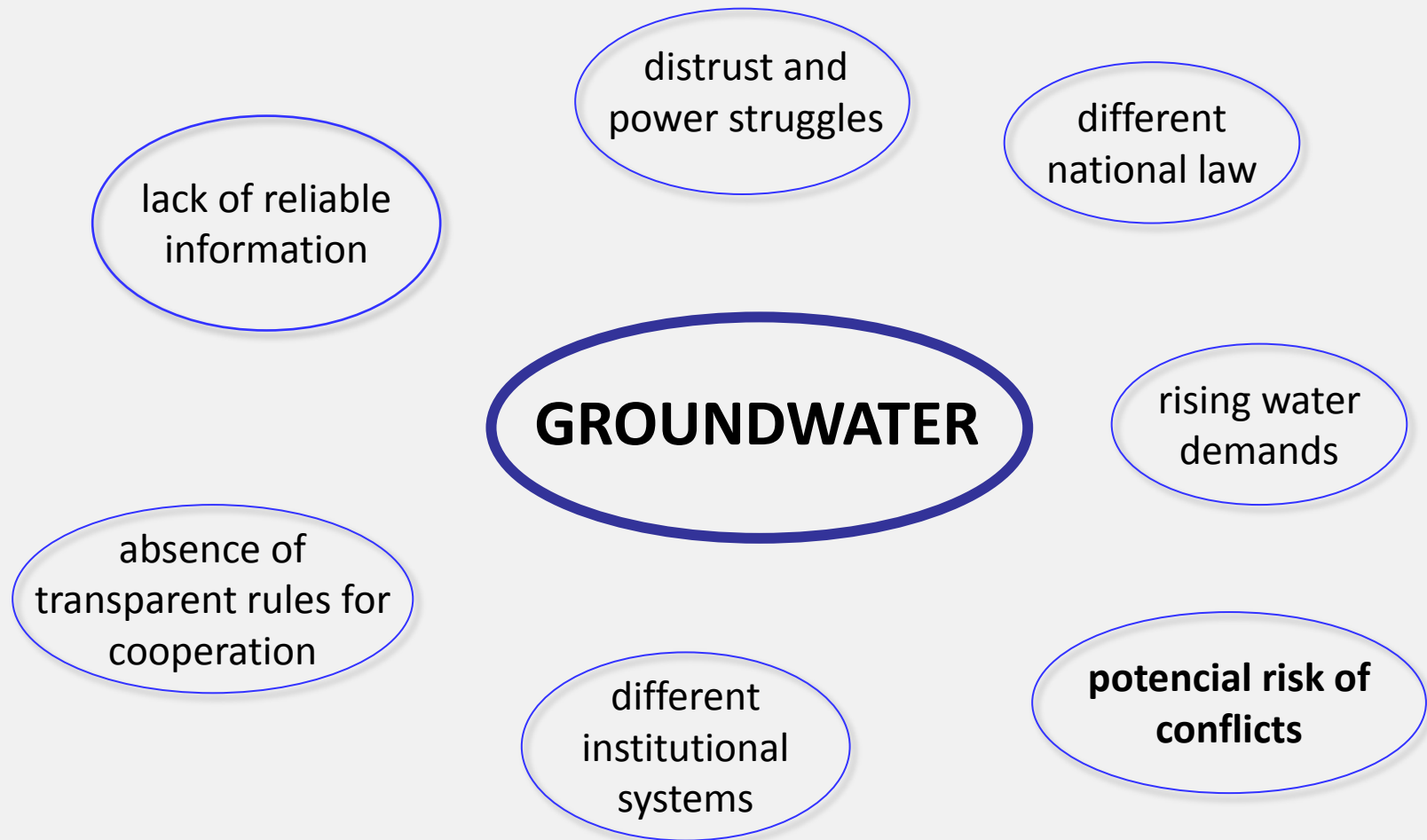
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GROUNDWATER



TRANSBOUNDARY AQUIFERS



Borders

Environmental issues do not stop at borders

Neighbours

60 million EU citizens live at less than 25 km from the borders

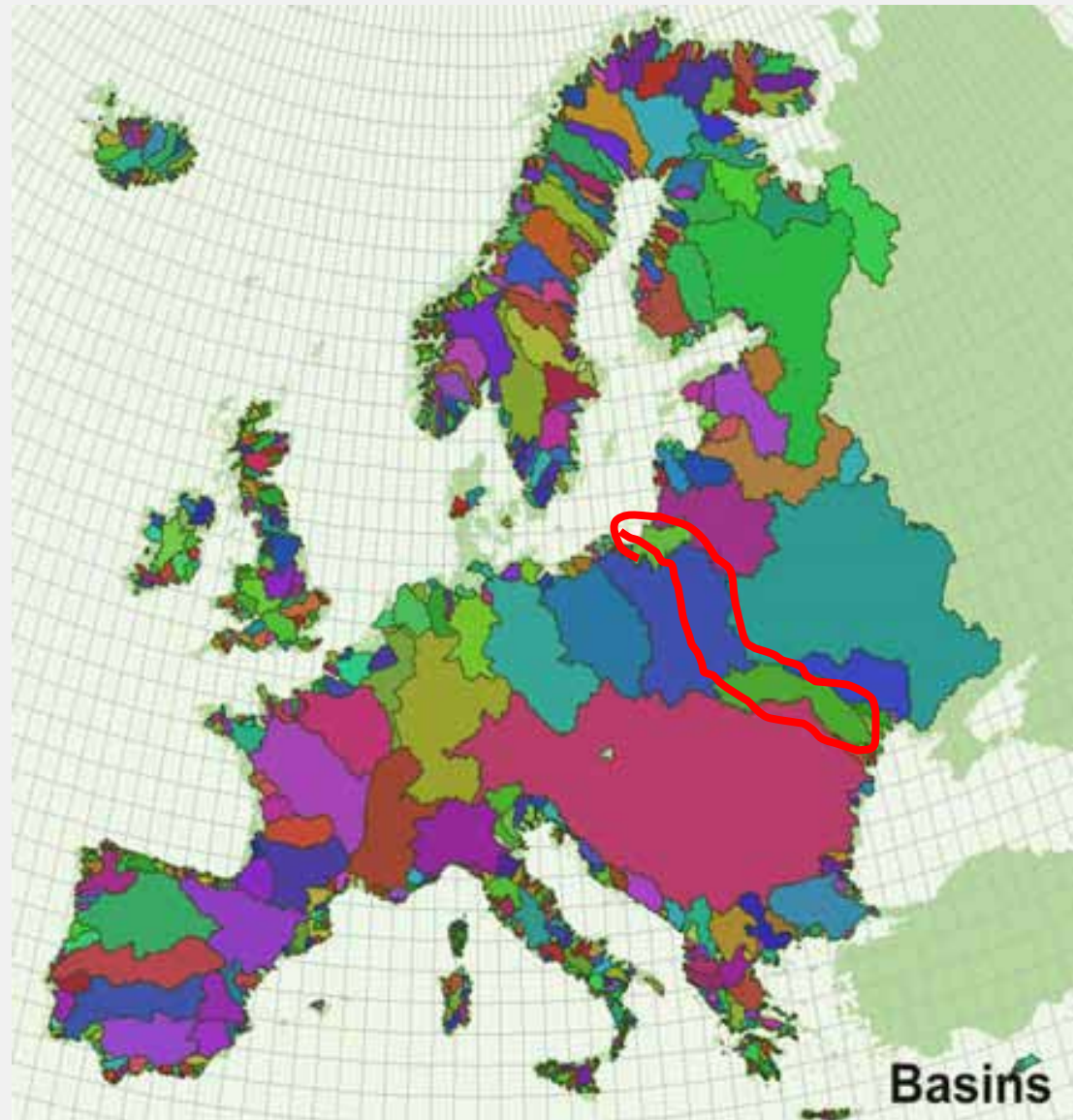
Policy

At least 12% of the EU citizens (492 million) are concerned by trans-boundary environmental policies

WATER

70% of all fresh water bodies in EUROPE are part of trans-boundary river basin

TRANSBOUNDARY ASPECTS



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TRANSBOUNDARY AREA BY – PL – UA

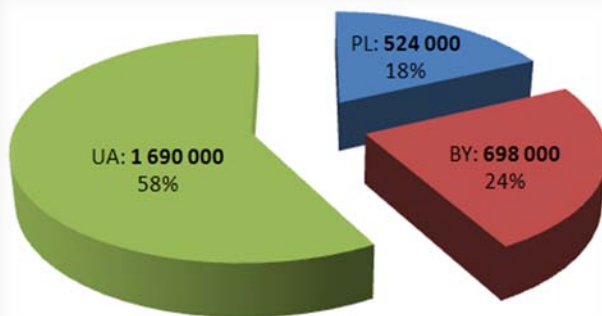
Area: 39 420,2 km²

BY: 24%

PL: 49%

UA: 27%

Population (2006):



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Start Up

Initial meeting

Lublin (PL), August 2006

I Meeting

Transboundary Water
Management in Bug Basin

Lviv (UA), May 2007

II Meeting

Groundwater Monitoring
Systems

Minsk (BY), November 2007

III Meeting

Technical assistance

Lviv (UA), December 2007

IV Meeting

Technical Aspects of
Groundwater Monitoring

Shack (UA), September 2008

V Meeting

Towards Future Cooperation

Jerusalem (IS), April 2009

VI Meeting

Regional cooperation for solving
transboundary issues East from UE

Kiev (UA), November 2010

Sustainable Use and Protection of Groundwater Resources - Transboundary Water Management



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PROJECT PRINCIPLES

*The main goal of the project is to prepare an **expert platform** for discussion about rational groundwater management and the **efficient way of protection** of transboundary resources*

Bridging scientific knowledge and policy



OBJECTIVES

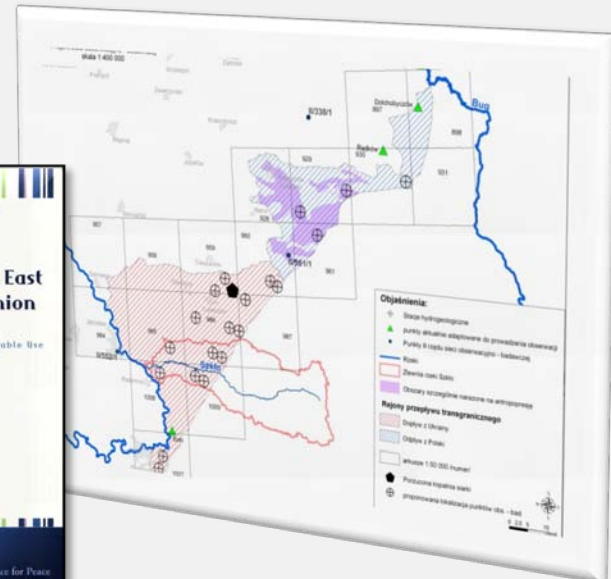
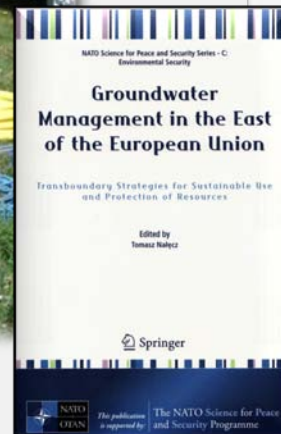


- **Exchange** of information and experience among teams of experts
- **Implementation** of quality assessment rules for transboundary waters
- **Unify** a methodology of groundwater monitoring system
- **Coordination** of rational water management in international river basin district
- **Prevent** of ecological disasters and mitigate consequences of drinking water supply contamination

... NOT ONLY TALKS



- Join field works
- Scientist understand transboundary problems
- Water sampling methods compared
- Effects of chemical analyzes show different philosophy of field measurements
- There are some questions to be answer



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WATER POLICY



1979

80/68/EEC on the protection of groundwater against pollution caused by certain dangerous substances

1991

Nitrates directive 91/676/EC on the protection of waters against pollution caused by nitrates from agricultural sources

23 October 2000

Water Framework Directive (WFD) – 2000/60/EC

16 January 2007

Groundwater Directive (GFD) – 2006/118/EC

“Common principles are needed in order to coordinate Member States' efforts to improve the protection of Community waters in terms of quantity and quality, to promote sustainable water use, **to contribute to the control of transboundary water problems**, to protect aquatic ecosystems ...”

Development of the new instruments according to the principles of the UN General Assembly Resolution on the “Law of Transboundary Aquifers”

Water convention, bil- / multi-lateral treaties and agreements

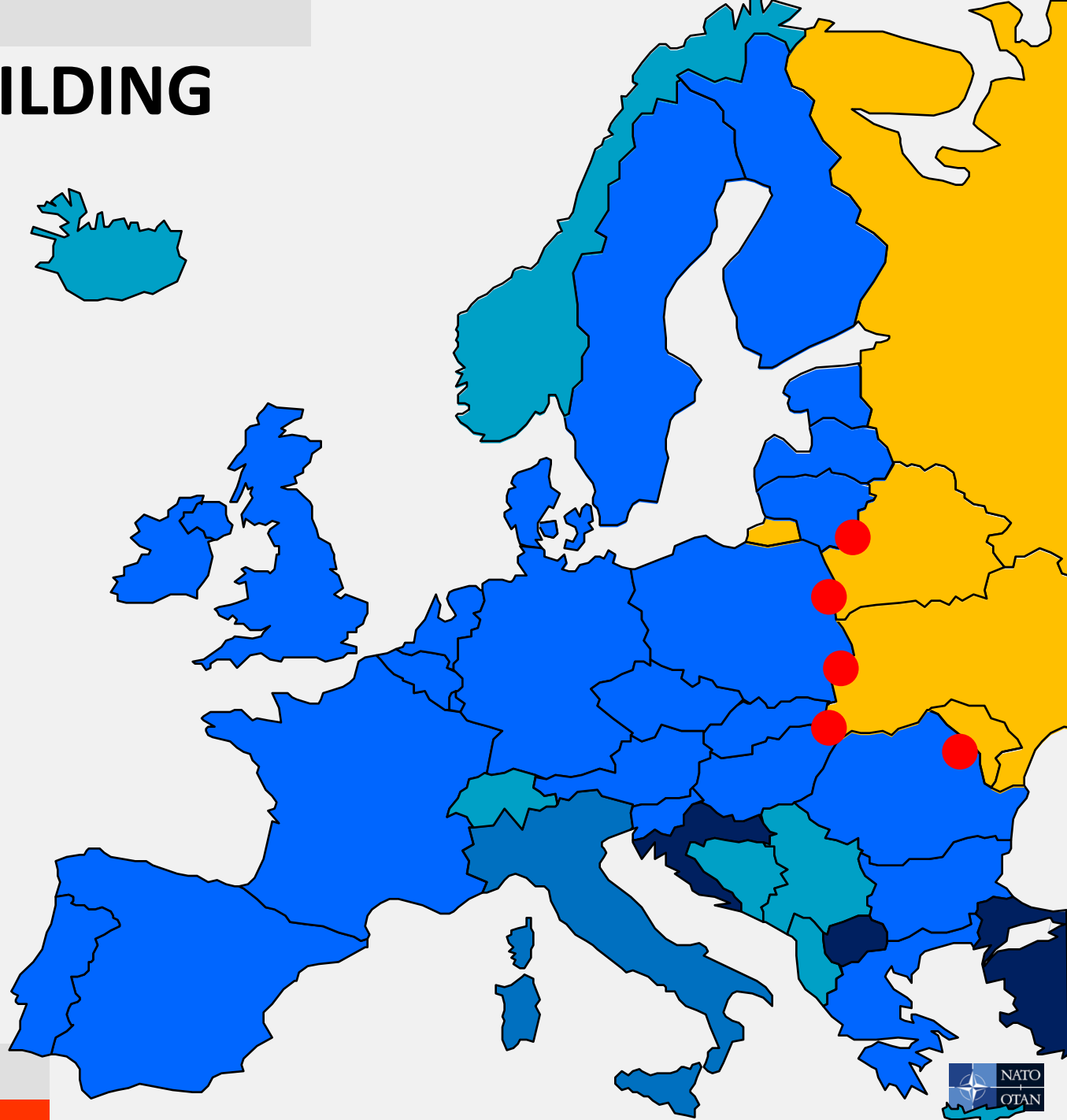


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CAPACITY BUILDING

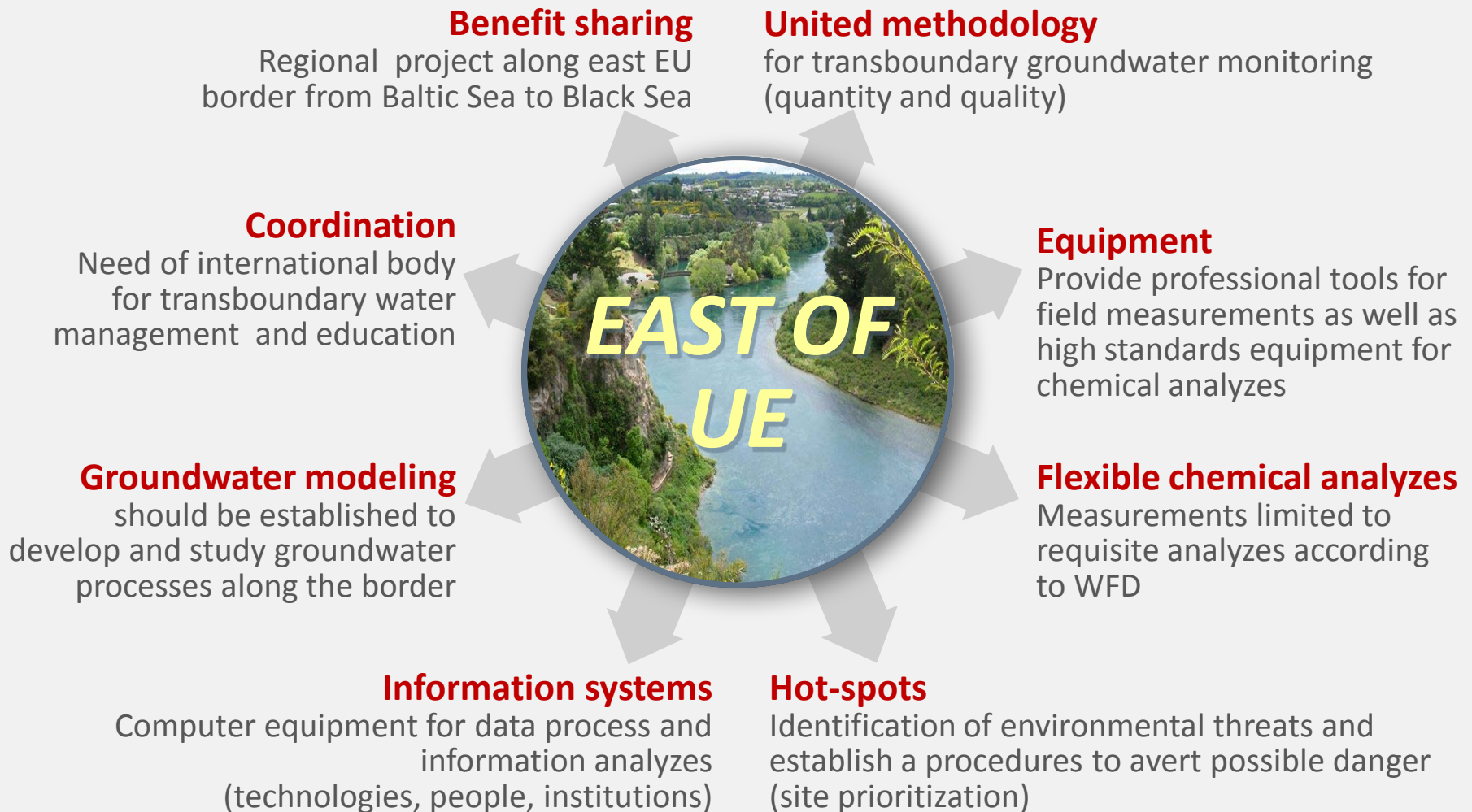


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CHALLENGES



HOW TO TAKE CHALLENGES?

- Acceptance for diversity
- Political endorsement and cooperation
- Towards an effective legal agreement to foster regional cooperation
- International financial support
- Political commitment and financial means to implement a common programme of measures
- Transparent cooperation between partners bridge the differences



CONCLUSION

- the doors for cooperation are open, but ...
- difficult today, but effective in the long term
- WFD is a good motivation for transboundary joint activities, but it is not enough
- establishing of international body to create united methodology for transboundary groundwater monitoring system
- shared waters = shared opportunities
- local research for global solutions
- financial means to support long term strategy



Sustainable use and protection of groundwater resources in transboundary water management

Pilot Study

Groundwater resources will be of increasing significance for the domestic economy in the future because surface waters - the main water source used by humans over ages - become progressively more contaminated. Now more than 60% of man-used water comes from groundwater resources. The consequences of water shortages could destabilize the geopolitical environment. The political conflicts that such changes in water resource availability could engender, could put global economic sustainability and security at risk. Therefore, the most important fields of activity in hydrogeology are the preparation of balance of groundwater resources, assessment of factors affecting their formation, and implementation of protection systems. The main idea of the project is the development of transboundary water quality monitoring and assessment between Ukraine and Poland, with strong support from the USA and Israel, and the development of international cooperation on implementation of transboundary water quality assessment. The project will initiate cooperation on monitoring, contamination migration and water management issues. Abandonment of study of contamination migration and monitoring groundwater can degrade the water dependent ecosystems as well as cause future problems with drinking water supply. The proposed project builds on previous Polish - Ukrainian activities in integrated water resource management.

Pilot countries

- Belarus
- Poland
- Ukraine

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Transboundary Groundwater Management

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Transboundary Water Management

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News

Objectives

Partners

People

Kiev 2010

Previous Meetings

Contact



This is a meeting point for idea of knowledge and experience exchange with regard to transboundary groundwater management. NATO Pilot Study Project "Sustainable Use and Protection of Groundwater Resources Transboundary Water Management" creates an **expert platform** for discussion about rational groundwater management and the **efficient way of protection** of transboundary water resources.

The awareness of threats, which stem from negative effects of climate change, as well as pressures connected with intensive human activities, implies the urge for coordinated groundwater-protection activities and joint (mutual) management of their resources in transnational (transboundary) areas. The transboundary water management issue constitutes a significant element of Water Framework Directive requirements, which regulates and supervises the rational use of environmental resources in the areas of the EU - Member Countries. The project participants expressed the view that it is important to continue previous activities in the Bug river basin district and that some further surveys and measurements to extend the project in order to cover the entire trans-border area of the European Community along with neighbouring countries (which stretch from the Baltic Sea to the Black Sea) need to be taken.

The project focuses on the transnational areas situated in the eastern border between EU and Eastern Partner Countries. On that website we would like to provide information about environmental projects carried out in the area of the Bug River Basin. Also reports from project meetings and their deliverables are presented here.

Last meeting:

Regional cooperation for solving transboundary issues East of UE

10 - 12th November 2010, Kiev (Ukraine)



find out more

NATO's New
Strategic
Concept



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WEB PAGE

Thank you!

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