

Report on the
**Knowledge Assessment Methodologies
Fall School**

held in
Novi Sad, October 1-5, 2007

Prepared for UNESCO-BRESCE

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Abbreviations

UNESCO BRESCE – United Nations Educational, Scientific and Cultural Organization
EC JRC – European Commission Joint Research Centre
UNS – University of Novi Sad, Serbia
TBR - Trans-boundary Biosphere Reserve
SNR – Special Nature Reserve
DDM – Danube – Drava - Mura

More info about the school is on the web site: <http://www.kfs.ns.ac.yu/organisation.html>

Rationale

In the light of 3rd Knowledge Assessment Methodologies (KAM) Fall School held in Novi Sad, Serbia, October 1-5 2007, in the organization of European Commission Joint Research Centre and the University of Novi Sad, UNESCO-BRESCE organized two morning sessions on the second day of the school, October 2nd, 2007 (for detailed programme of the school see *ANNEX 1*).

Key note lecture on the “Traditional Knowledge and Water” was held by Ms. Corinne Wacker, professor at the University of Applied Sciences Basel, Institute of Environmental Technology, with the intention to provide (a) the understanding of how water has been used in the past (e.g. the water civilization see figure 1), (b) the current inventory activities of this knowledge, and (c) the safeguarding and potential re-usage of this knowledge as a technological incubator. Described are sustainable technologies and practices supported by cultural and local knowledge. This approach is offered as an alternative to the ‘classical’ water governance that is still primarily focused on the engineering aspects. The ‘traditional’ water governance was created by people leaving and sharing the common water resource.

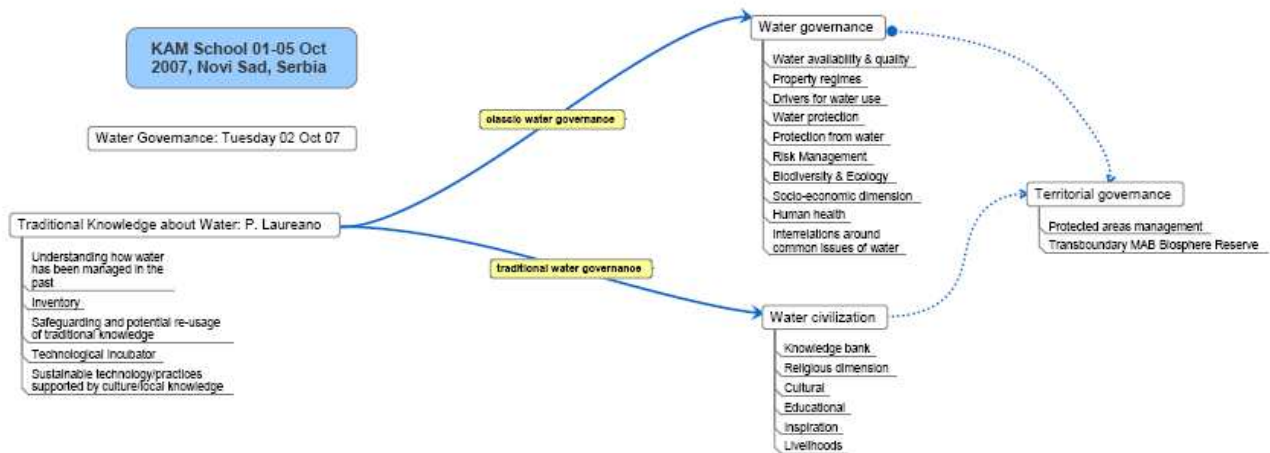


Figure 1: Water governance idea for the school

Short presentation on the Case Study “Danube-Drava-Mura river corridor” proposed for Trans-boundary Biosphere Reserve (TBR), was given by Ms. Vera Cvejic, with the aim to present one perspective for the mentioned territory and to be used as working material with the background information for the application of methodologies offered by the school to participants.

The moderated panel discussion - aimed at presenting opinions and viewpoints on the water issues in relation to the territory of SNR “Gornje Podunavlje” as a part of the proposed TBR “Danube-Drava-Mura river corridor”, in the attempt to reflect the complexity of the actors involved. The following institutions were invited:

- **University of Novi Sad:**

Faculty of Natural Sciences and Mathematics: prof.dr. Ivana Teodorovic (not present due to the IAD conference held in Novi Sad in the same period), prof.dr. Vladimir Stojanovic,
Faculty of Agriculture: prof.dr. Andjelka Belic

- **Institute for Nature Protection:** dr. Biljana Panjkovic (not present), Ms. Duska Dimovic (not present)
- **IUCN:** Mr. Boris Erg
- **Provincial Secretariat of Environment protection and Sustainable Development:** Ms. Tamara Stojanovic
- **NGO Society for protection and research of birds in Vojvodina:** Mr. Marko Tucakov
- **“Vojvodina sume” – forestry service:** Mr. Miljan Velojic (not present but there was his representative)
- **SNR “Gornje Podunavlje”:** Ms. Elizabeta Stanic Vojnic Hajduk
- **Municipality of Apatin:** Mr. Zivorad Smiljanic (not present)

The panel discussion was moderated by Ms. Angela Guimaraes Pereira (EU JRC). All panellists presented their viewpoints on water issues within the SNP “Gornje Podunavlje”. Mr. Vladimir Stojanovic presented development of ecotourism in protected areas with the special emphasis on importance of territory as part of the UNESCO protected area, Ms. Andjelka Belic raise the issue on wetlands importance and effectiveness in waste water treatment within the wetland ecosystem, Ms. Elizabeta Stanic Vojnic Hajduk addressed the on going activities in “Gornje Podunavlje”, Ms. Tamara Stojanovic gave more details on supportive provincial secretariat role regarding protected areas, Mr. Boris Erg presented Gornje Podunavlje in the light of the development of IUCN activities and protected area management and, Mr. Marko Tucakov presented importance of preservation of wetland ecosystem from the aspect of bird nesting and breeding.

In two-hour discussion, panellists were confronted with participants’ questions related to this specific territory, plans and development. The session was concluded with necessity of raising this issue in public and more often organisation of similar meetings.

Vivacity of the discussion demonstrated that the stakeholders are interested in internationally recognised designation to be put in place in order to frame the existing activities.

Unfolding the Scenario on the issue of Danube-Drava-Mura river corridor

(Proposal for TBR)

Input data are given by panelists, case study presentation (Annex 3 and 4) and internet research.

Group 1

Conservation of biodiversity in the Danube-Drava-Mura river corridor

Presentation to representatives of policy makers from the five countries

Group members: Rade Popovic, Aysel Karafistan, Marina Sciban, Nazli Sencan and Mehemet Umit Taner

Current situation is estimated through domestic experts, internet, NGO opinion and local governance representatives. Methodologies are developed through work in groups, literature research and expertise.

According to group opinion, major obstacles for the territorial development are: 22 dams on Drava, large sand and gravel banks nearby rivers, many large cities, river trade routes and decreasing population number of some species. About 2000 various plants and more than 5000 animal species are addressed as good point.

Assessment of critical dimensions is done on the basis of environment, socio-economy, technology and government. In technology is considered to be in improvements in agro technology, cleaner production and waste water treatment. In environment: increase in biological research, population decrease of some species, negative effect of embankments and dams on habitats.



Photo example: catastrophic flood in Kotoriba (ex Yugoslavia), 1965.

In Socio-economics: increasing water demand (Agriculture irrigation with underground water), increase of water pollution (pesticide), increase land demand (illegal weekend houses, rural tourism), new jobs in protected areas (guides, environmentalists, shops, restaurants and motels), less jobs in agriculture, fisheries, hunting and river transport. In Government: new laws according EU legislative, new environmental taxes and subsidies, better inspection of protected areas, better inspection of polluters.

Strategic invariants are considered to be demographic and governance
Critical uncertainties - economy and environment.

Driving forces: agro-technology, clean production, waste water treatment, bio-research, decrease of populations species, agriculture, population, employment, laws, inspection, taxes

Time scale: ten years

Scenario 1

Realistic scenario: improvement of economy and biodiversity conservation

Scenario 2

Pessimistic scenario: crisis of biodiversity conservation

Group 2

Eco tourism development in Upper - Danube SNR

Time scale: 2007-2020

For policy makers

Group members: Barbara Bordokos, Lolita Zakic, Milan Milosevic, Atac Bascetin and Nil Ayhan.

Aims and time frame of the participatory process initiated

Aims:

- Initiate discussions related to local, regional development planning
- Identify local problems, needs related to development of eco-tourism
- Knowledge integration (expert and local)
- **Develop sustainable tourism: to strengthen local tourism in line with nature protection**
- Manage uncertainties related to local development

Time frame:

- Planning process: 2 years
- Implementation, monitoring, evaluation: continuously till 2020

Social actors of the participatory process

- National governments
- Ministry of Environment
- Water Management Authorities
- Forest management authorities
- Nature conservation NGO-s
- Local governments
- Industry
- Eco-tourism operators (pensions, restaurants or those interested to develop them etc.)
- Entrepreneurs
- Local artizans
- Farmers
- Young people (as potential operators of eco-tourism)
- Old people (know local traditions the best)

Participatory methods:

- **Policy exercise**
- **Scenario workshops with local people**
- Trainings

- eco-tourism: for those interested in developing services, programmes, products for eco-tourism and agro-tourism

- environmental education: events with local schools (excursions, summer camps, special training materials developed)

- Eco-tourism events

Policy exercise:

- With scientists and decision-makers:
- to introduce eco-tourism to policy-makers,
- increase awareness on the importance of nature conservation
- Outcome: report on the event, press release to local and regional newspapers

Scenario workshops:

- To create scenarios for eco-tourism based on community consensus
- Personal public invitation letter to representatives of social actors

Input report:

- results of impact assessment of community discussions on potential industrial investment (port, embankments)
- appraisal of state of affairs, problems, future visions
- expert scenarios as a starting point for further discussions

Participants (25-30 people expected):

- representatives of various social actors

Outcome:

- detailed report on scenarios developed
- policy suggestion for policy-makers on scenario to be implemented
- press release to local and regional newspapers and to website of the participatory process

Current situation:

Governance

- International NGO-s pushing the agenda of biosphere reserve
- 2 countries waiting for EU-accession: Serbia, Croatia, 3 countries already in EU: Hungary, Slovenia, Austria

Economy

- Moderate level of local eco-tourism, eco-tourism development plan at the national level
- Plans of building the port, embankments
- No coordination of tourism activities, no management authority for the development activities
- Intensive forestry, hunting tourism, moderately intensive agriculture

Society

- Local culture (handicrafts, embroideries, traditional food, agricultural products, festivals)
- Population density: low
- Education of population: agricultural-oriented

Environment

- Special nature reserve established in Serbia in 2001, rare bird species
- No visitors centre, bird-watching tower
- Some bilateral agreements between countries on nature conservation
- Cooperation of environmentalists: IUCN, local NGO-s, governmental organisations

Technology

- Plans for dams, port, embankments, hydroelectric plant

Driving forces:

Governance

- Legal aspects: EU-laws, conservation laws, relationship of national agricultural, forestry and conservation policy
- EU accession of Serbia, Croatia

Environment

- Level of environmental awareness
- Influence of international NGO-s such as WWF, IUCN, UNESCO

Economy

- Level of purchasing power increasing

Demography

- Human population growth: 4000-5000 people/village
- Aging population

Technology

- Industrial lobby (dams, enbankments)

Social

- Some old traditions still conserved

Critical uncertainties:

- EU- accession on the way?
- International relations (conflict between countries?)
- Building of ports, enbankments?
- Regulation and implementation of nature conservation and environmental policy in the respective countries?
- National and regional development plans of the respective countries? (hard infrastructure vs. soft development)

Scenario 1

Sustainable eco-tourism

- No port, no energy plant, no dam
- Eco-tourism develops, but only in the buffer and transition zone: local culture conserved, handicrafts, local dresses, healthy (might be even organic) local agricultural products
- Only scientists can go the core area
- Small local enterprises based on local resources and local employment: tour-guides, accommodation, food (locally processed agricultural products)
- Walking trails are developed
- Number of visitors: limited
- Involvement of locals in drawing up of local eco-tourism and development plan, decision-making
- Bird-watch towers
- Small-scale nautical tourism
- Environmental education (using also the walking trails for this purpose)

Outcome: Sustainable eco-tourism

Scenario 2

Construction

- Port, dams constructed
- Destruction of nature
- Local traditions suffer
- Eco-tourism low level

Outcome: Low level eco-tourism

Scenario 3

Business as usual

- Hunting tourism continues
- Intensive forestry continues
- Level of environmental education remains low
- Number of tourists slightly increases
- Moderate increase in eco-tourism programmes
- Some infrastructure developed for tourists (birdwatching tower, visitors centres, accommodation)
- Not much cooperation between countries
- Not much cooperation between those involved in eco-tourism

- No involvement of locals in designing local development plans
Outcome: moderate eco-tourism

Group 3

Group members: Ana Pavlovic, Marko Cacanowski, Tamara Jurca, Ayse Celep, Afsar Urut Ulgen

Do you ever imagine the future?
People in protected area

Backi Monostor case

For journalists

Connection between people and nature

Scenario 1

Business and Technology

Driving forces: government, demography, economy, industry and technology, social structure and environment

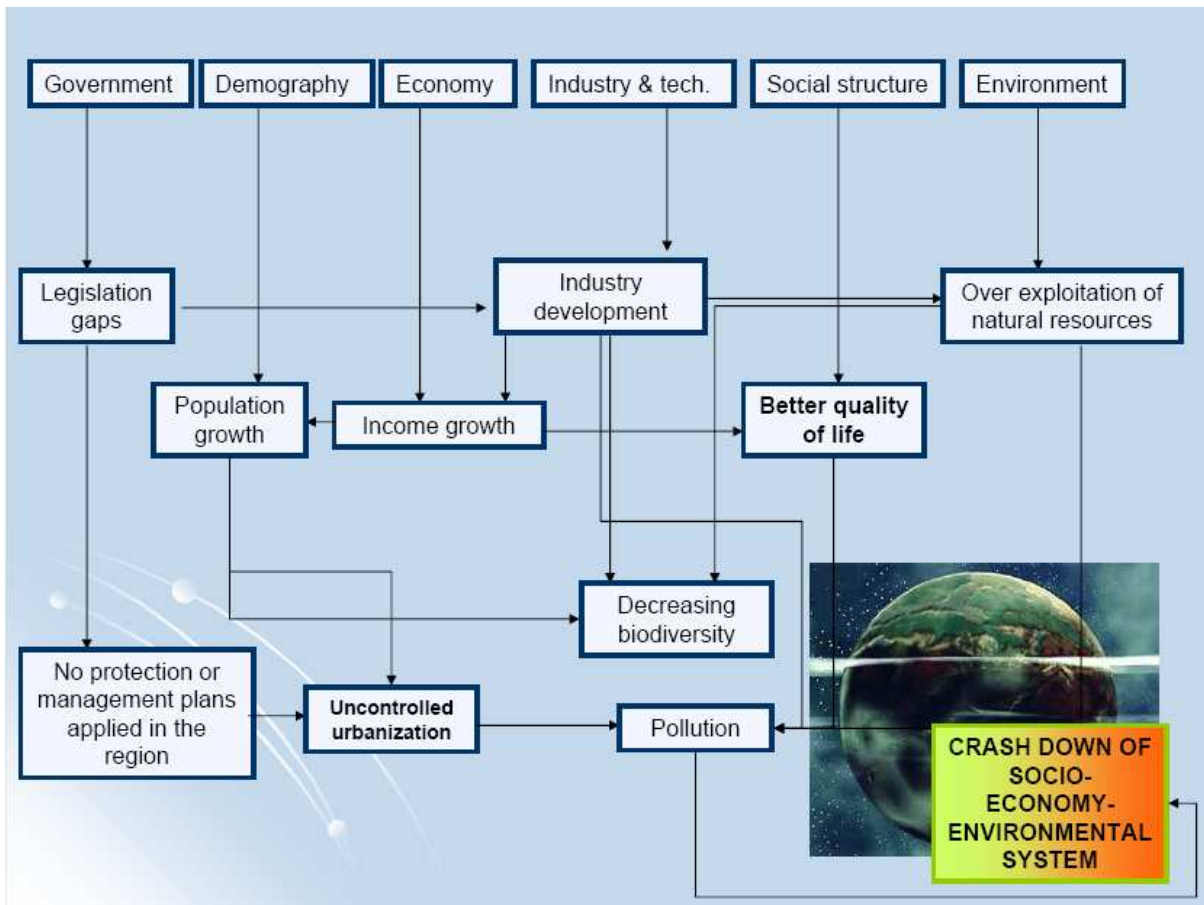


Figure 2: Unfolding of scenario “Business and Technology”

Output: Crash down of socio-economy environmental system

Scenario 2

Green revolution

Time scale: 25 years

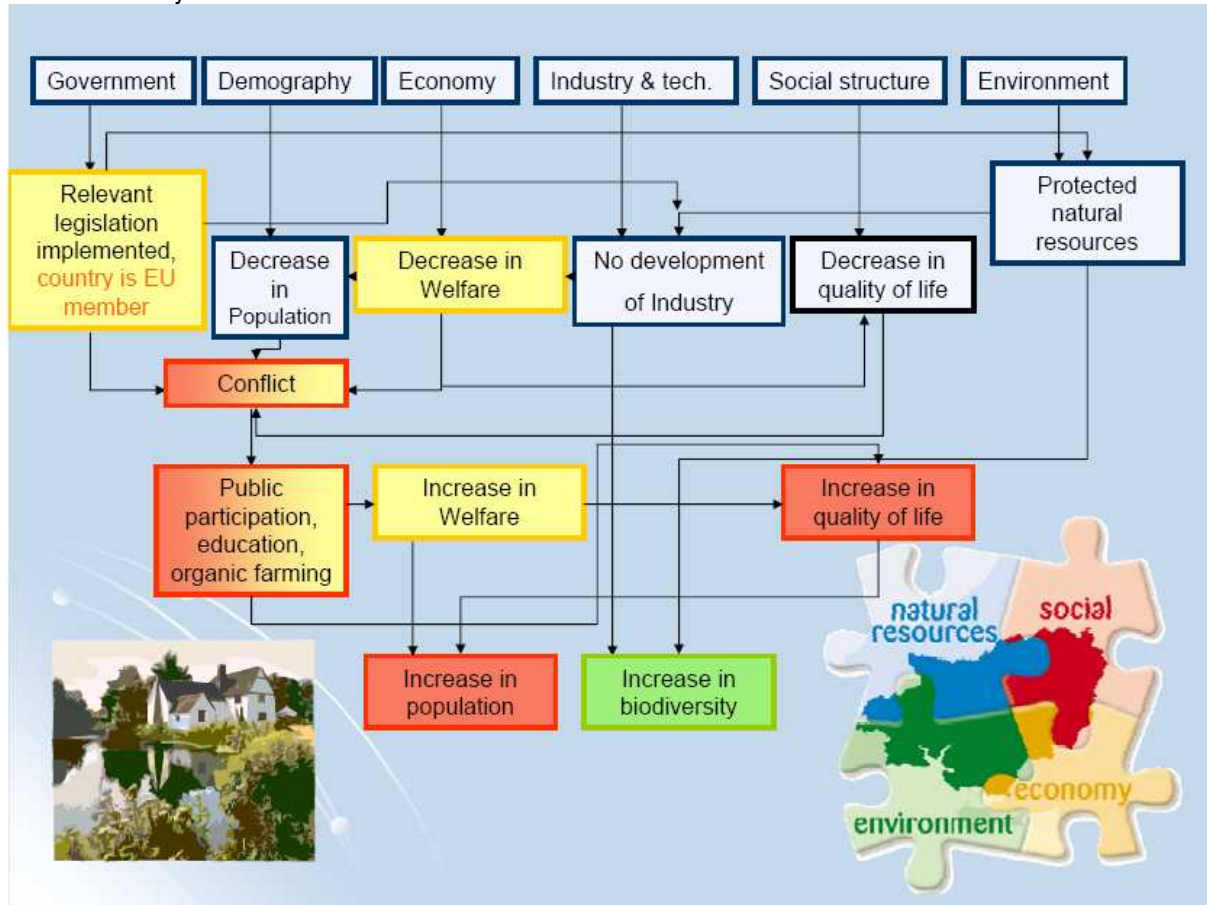


Figure 3: Unfolding of scenario “Green revolution”

Scenario 3

Impossible perfection

Output: Strong laws because of protected areas cause no people

Time scale: 50 years

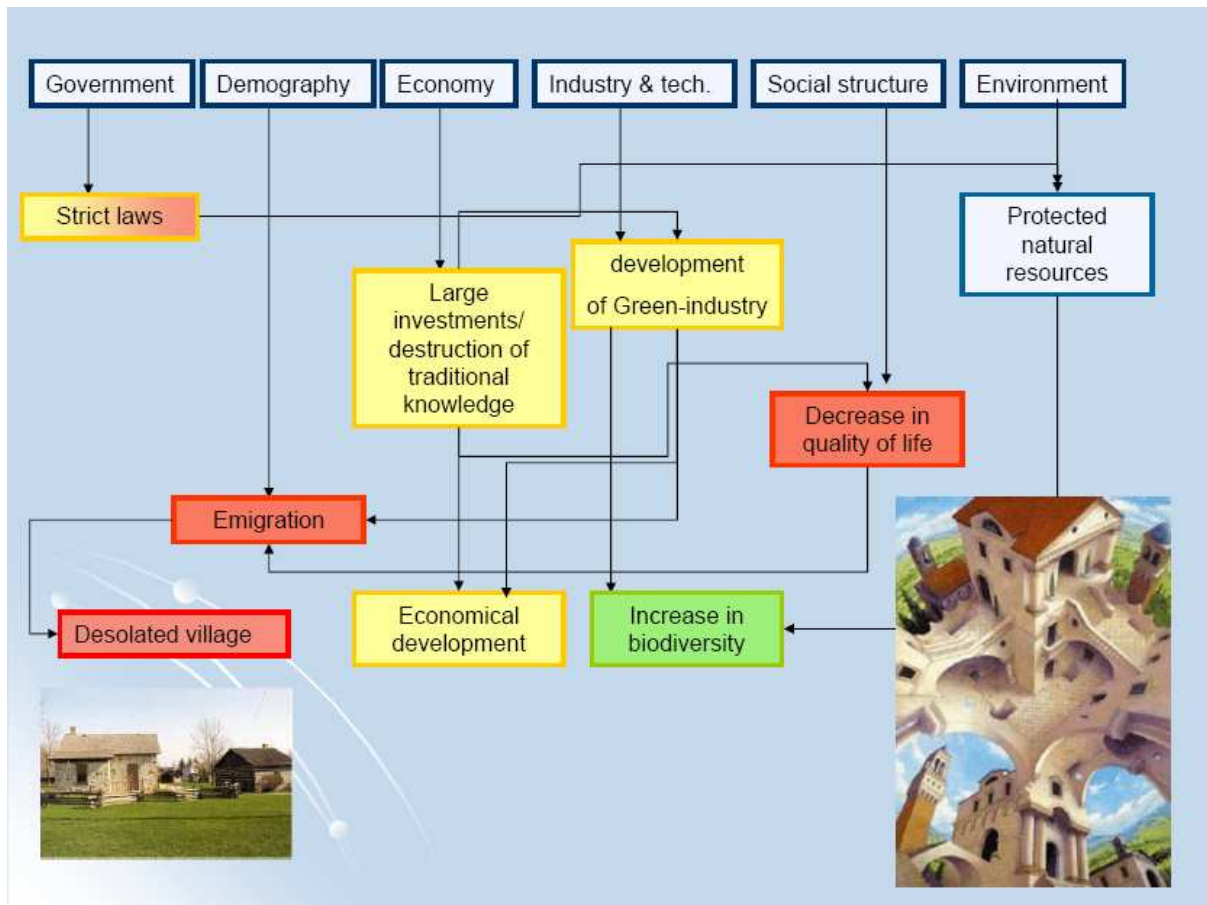


Figure 4: Unfolding of scenario "Impossible perfection"

The question what do we want in the future?

More info about the group presentations is on the web site: <http://www.kfs.ns.ac.yu/organisation.html>

Conclusion

There is an interest in water governance issue from various stakeholders, institutional (University of Novi Sad, Provincial Secretariat for Sustainable Development and Environment Protection, Special Nature Reserve management authorities, etc.) as well as international organizations as JRC.

In the light of the vivid discussions, the scenario of TBR was the most suitable scenario recognized by various stakeholders. Knowing the complexity of different actors involved, governmental as well as non governmental and regional, it is suggested to put in place an appropriate governance mechanism to lead the process of designation. According to my understanding of situation complexity, recognition of UNESCO BRESCE would be the most suitable platform for the process of designation of "Danube-Drava-Mura river corridor as TBR. To put this scenario in progress it is necessary for UNESCO BRESCE to platform the meeting with all interested stakeholders in the future period.

ANNEX 1: Programme of the KAM Fall School

	Monday	Tuesday	Wednesday	Thursday	Friday
8:30	Registration, etc...				
8:45 10:45	Welcome KFS modules Overview and Group Work	Traditional knowledge Case study	Participatory methods with hands-on	Communication of Science	Quality Assurance
Coffee Break					
11:00 13:00	Complexity, Policy and science governance	Water governance: panel discussion	Social Multi-criteria	Uncertainty management with hands-on	Explore: scenario work
Lunch					
14:30 15:45	Social Programme	Scenarios / visions	Guided Hands on Naiade	Exploration of several software, namely B-involved and gouverne	Presentation of group work
		Coffee Break			
16:00 18:00		Explore: scenario work	Explore: scenario work	Explore: scenario work	Closing remarks
19:30			Social dinner		

ANNEX 2: List of participants

#	Name	Institution	Country
1	Tamara Jurca	Faculty of Sciences, UNS	Serbia
2	Lolita Zakić	Faculty of Science, UNS	Serbia
3	Tamara Đurđić	NVO member	Serbia
4	Rade Popović	Faculty of Economics, UNS	Serbia
5	Milan Milošević	NGO "European Movement in Smederevska Palanka"	Serbia
6	Tijana Stajić	Faculty of Technical Sciences, UNS	Serbia
7	Vanja Karadžić	ECOMAN, Faculty of Science and Techn., Univ. Nova de Lisboa, Portugal	Serbia
8	Ana Pavlović	Faculty of Technical Sciences, UNS	Serbia
9	Dušanka Laketić		Serbia
10	Dragan Adamović	Faculty of Technical Sciences, UNS	Serbia
11	Dragoljub Cvetković	Faculty of Technology, UNS	Serbia
12	Verica Nešković-Zdravić	Member of the City Council of Novi Sad in charge of environmental protection	Serbia
13	Dragica Branković	Head of the Dep. for Environmental Protection, City Admin. of Novi Sad	Serbia
14	Marina Šćiban	Faculty of Technology, UNS	Serbia
15	Tijana Šironjić	Sudent Ecology and Environment protection	Serbia
16	Nuray Karapinar	Research Engineer in MTA	Turkey
17	Ahmet Türküm	Kocaeli Provincial Directorate of Environment and Forestry	Turkey
18	Mehmet Umit Taner		Turkey
19	Ayşe Beyza Celep	Bosphorus University, Ph D Student	Turkey
20	Barbara Bodorkos		Hungary
21	Marko Gacanoski	EPTISA, Belgrade	Croatia
22	Nazli Cencan	Yeditepe University Faculty of Pharmacy- Instructor and PhD. student	Turkey
23	Atac Bascetin	The Society for Mining, Metallurgy and Exploration Inc. USA	Turkey
24	Nil Ayhan		Turkey

ANNEX 3: Presentations of the panelists

Web site: <http://www.kfs.ns.ac.yu/organisation.html>

ANNEX 4: Presentation of the Case Study "Danube – Drava – Mura river corridor" proposal for the Trans-boundary Biosphere Reserve

Web site: <http://www.kfs.ns.ac.yu/organisation.html>

ANNEX 5: Map of the proposed TBR "Danube – Drava – Mura river corridor"

