Participatory scenarios for water management planning:

an Eastern Baltic case study

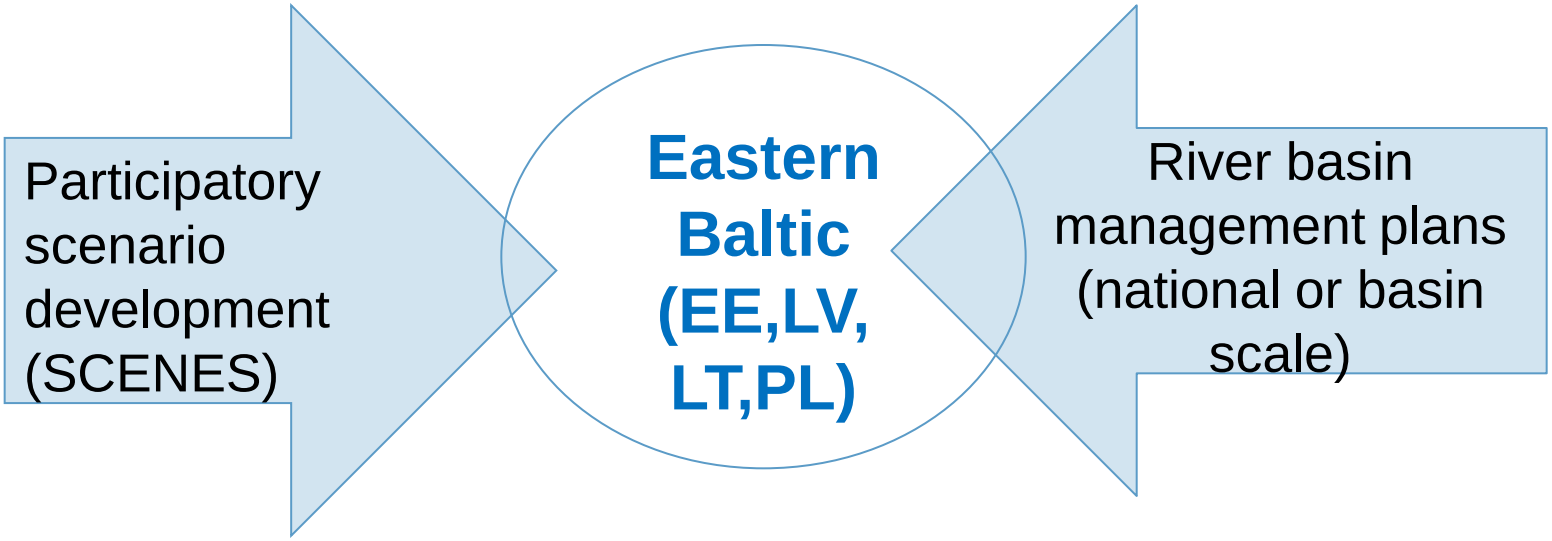
SCENES water scenarios – final results,

Budapest, 23 March, 2011

Kristina Veidemane, Arvo Iital, Marek Gielczewski, Edgars Bojars

Aim of the study

- To support the regional policy development:
  - ➢ exploring synergies between scenario development and the river basin management planning processes by application of participatory methods



River basin management planning

- The WFD transposed into national legislation
  - ➢ the key policy instrument for water management today and drives future policy trends in the E Baltic;
- Assigned river basin districts in the E Baltic,
  - ➢ mainly transboundary districts (8 out 9), shared also with non-EU countries;
- The same river basin management schedule in the region:
  - ➢ 6 year cycle, plans to be adopted in Dec 2009

❑ *9 draft river basin plans used for the study*

Participatory process

- Stakeholder analyses:
  - who is concerned about and affected by decision-making in the water policy

Stakeholder group	Estonia (Peipsi)	Latvia	Lithuania	Poland (Narew)
Agriculture/land reclamation	-	1	-	1
Forestry	-	1	-	1
National water authorities	1		1	1
River basin management authority	1	1	1	2
NGOs/local resident	2	1	1	1
Consultancy	-	2	2	-
Waste water treatment	1	1	1	1
Water researchers	1	2	-	1

Participatory process

- Stakeholder involvement:
  - 4 regional workshops: on story line development using fuzzy cognitive mapping (FCM) and backcasting
  - 29 stakeholders at regional level;
    - C.a. 80% from the participants have been also involved in the water management participation processes in their countries.

Linking FCM and river basin management planning

- Water management system of the present days constructed by the Eastern Baltic stakeholders included 16 key factors;
  - **Water quality aspects** - major concern for water resources in the region (FCM/stakeholders and RBMP)
  - **Agriculture pollution** – most significant pressure on water quality in the region
  - **Climate change** is not considered as an important factor affecting the present water system

Significant pressures on water resources

Factor	Eastern Baltic Panel, FCM	Vistula	East Estonia	Daugava	Nemunas
Point sources (industry and domestic sectors)	Important	Important	Important	Very important	Very important
Diffuse sources (agriculture pollution)	Very important	Very important	Very important	Important	Very important
Water abstraction	Less important	Less important	Less important	Less important	Less important
Morphological changes caused by energy production	Less important	Less important	Important	Very important	Less important
Tourism	Less important	Less important	Less important	Less important	Less important

Setting the policy objectives

- RBMP: an assessment of the likelihood that surface waters will fail to meet the set environmental quality objectives according to the W FD:
  - Developments of called “baseline scenario ” projection of the development of a chosen set of factors in the absence of water policy interventions until 2015;
- 4 future scenarios for water resources developed within the Scenes (2015, 230, 2050) based on the change of the key drivers;
- Elaboration of a set of policy actions for achieving the defined endpoint in a backward way (backcasting)

Development of key driving forces and pressures by 2015

	LT, Article 5 Report of WFD	Economy First scenario	Fortress Europe	Policy Rules scenario	Sustainability Eventually
Agriculture pollution	**decrease**	**increase**	**increase**	**increase by 2015**	**decrease**
Industry pollution	**decrease**	**increase**	**increase**	**decrease**	**decrease**
Energy (morphological changes)	**no change**	**increase**	**increase**	**decrease**	**no change**
Population/ domestic pollution	**decrease**	**slight increase**	**decrease**	Not defined	**decrease**

Measures/actions to achieve good water status by 2050

- **Legislation and policy development for water management:**
  - While enforcing WFD, clearer guidelines, specific target and **relevant indicators** shall be set up.
  - The possibility to use the **exemptions** and derogations from achieving the good status shall be **deleted**.
  - The governance models need to be improved by allocating **sufficient capacities** and by coordinating scattered responsibilities between the authorities.

Measures/actions to achieve good water status by 2050

- **Policy development of sectors:**
  - Due to mostly deteriorating impact on water ecosystems in the region, promotion of **hydroenergy** production needs to be reconsidered.
  - Having a potential and increasing demand for nature **tourism** in the region, the sector needs to be embedded in spatial planning, which take into account also the water management issues.

Measures/actions to achieve good water status by 2050

- **Economic instruments**
  - New **common environmental taxes or charges** should be considered to motivate reduction of pollution.
  - **Agricultural subsidy** system shall be revised to promote more environmental friendly practices.
  - Stimulation of **corporate financing** is needed for achieving water quality improvement.

Measures/actions to achieve good water status by 2050

- **Awareness raising:**
  - The key focus shall be on reaching the radical change in **valuation** of water by promoting good water status as high priority.
  - Government should **actively and regularly** provide information to every citizen on water status.
  - To promote public participation it is advisable to establish and finance stakeholder and citizen **panels**.
  - Government shall offer free of charge dedicated **educational environment programmes** for different sectors (i.e., farmers, industry representatives, etc.)

Measures/actions to achieve good water status by 2050

- **Research**
  - Implementation of **new technologies**, e.g. treatment of wastewaters including the scattered dwellings are needed to improve water quality.
  - There are lot of **data gaps** for assessment of the future of cross-border water bodies. Therefore, implementing of proper monitoring and other investigative programmes should be encouraged.

Measures/actions to achieve good water status by 2050

- **Transboundary cooperation:**
  - Transboundary agreements with all non-EU countries on cross-border water protection should be signed to prepare legal bases for practical actions and co-operation.
  - The cooperation should be granted with adequate financial support to ensure the implementation of the cross-border measures.
  - Governance capacity of national and regional administrations sharing the cross-border water bodies should be improved in the East part of Europe.

Conclusions

- Participatory scenario development process provides several opportunities to support water policy :
  - Strong link between constructed water system and assessment of the significant drivers and pressures on water resources;
  - The future trends and behaviours of the key drivers and pressures for identifying the likelihood of failure to meet objectives;
  - Elaboration of the measures and actions for achieving the objectives
- However, we should also remember that the approach is cognitive and the results can vary depending on the specific composition of the stakeholders' panel.