

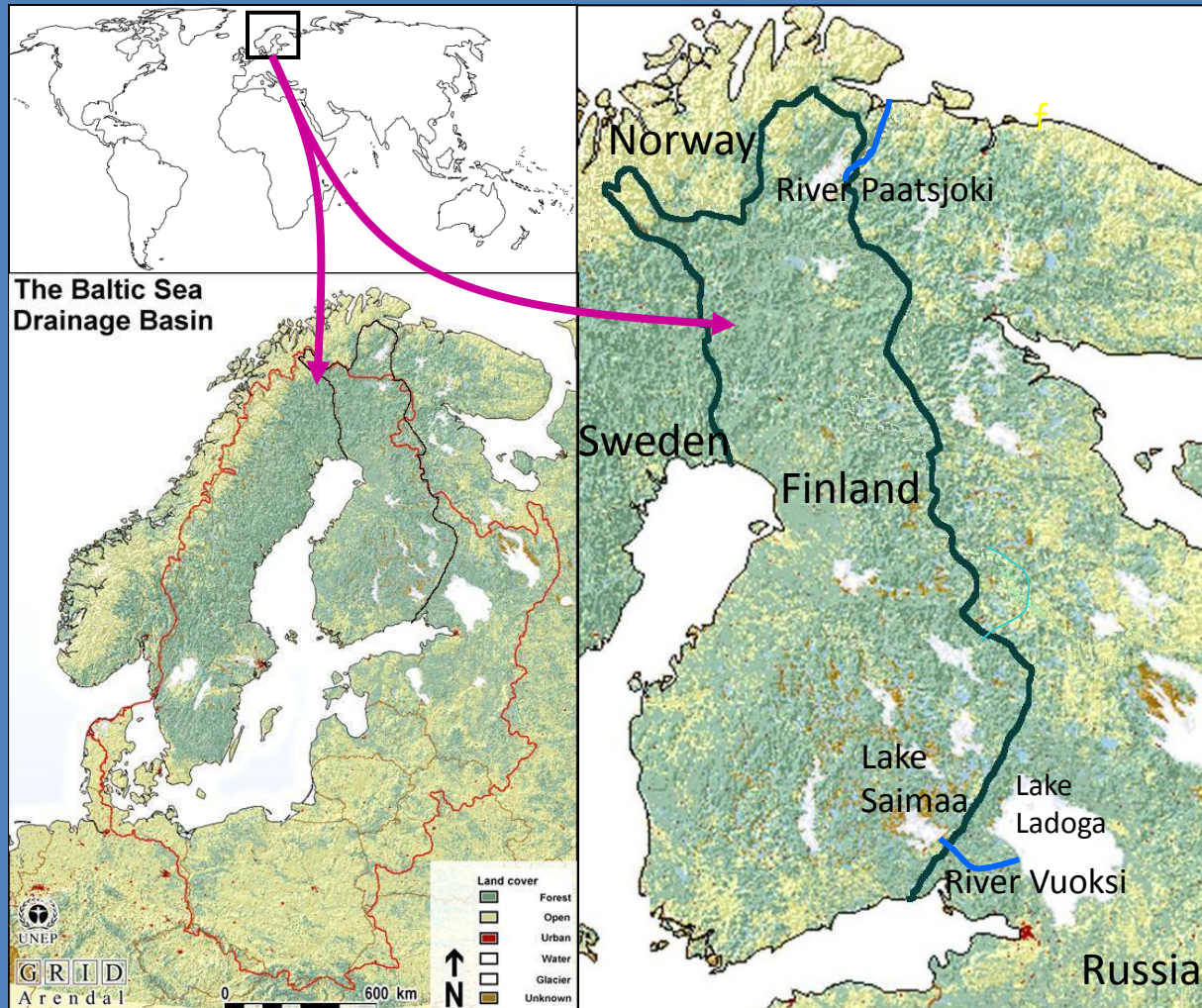


Reconciling flood protection and energy in the transboundary cooperation on water management between Finland and the Russian Federation

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Watercourses

Workshop on Transboundary Water Cooperation
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Finland – Russia Transboundary Water Cooperation



Location of Finland with Rivers Vuoksi and Paatsjoki crossing the Russian border

Finnish - Russian Agreement on the Utilisation of Transboundary Watercourses (1964)

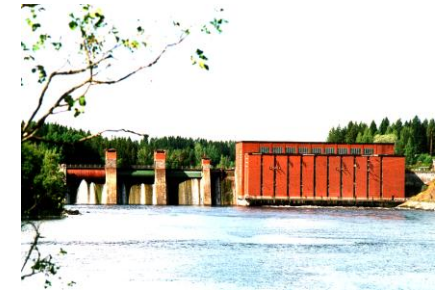
- Regulations on impacts in neighbouring country
 - Water flow and structural measures
 - Floods and water scarcity
 - Timber floating and water traffic
 - Fisheries and fish migration
 - Pollution and water quality
 - Public health and economy
- Joint Finnish – Russian Commission on the Utilisation of Transboundary Watercourses
 - Each Party: 3 members and deputies, experts, secretary
 - Meetings annually

The Lake Saimaa - River Vuoksi System



- Catchment 70 000 km²
 - Finland 77 %, Russia 23 %
- Lake Saimaa
 - surface 4 460 km²
 - precipitation ~ 600 mm/a
 - water level fluctuation 3,3 m, annual mean 0,7 m
- River Vuoksi natural discharge
 - mean 600 m³/s
 - max 1170 m³/s
 - min 220 m³/s

The profile and power plants of the River Vuoksi



VUOKSI

Total head (utilized) = 63 m

Installed power = 440 MW

Normal annual production = 2500 GWh



Lake Saimaa and River Vuoksi Discharge Rule

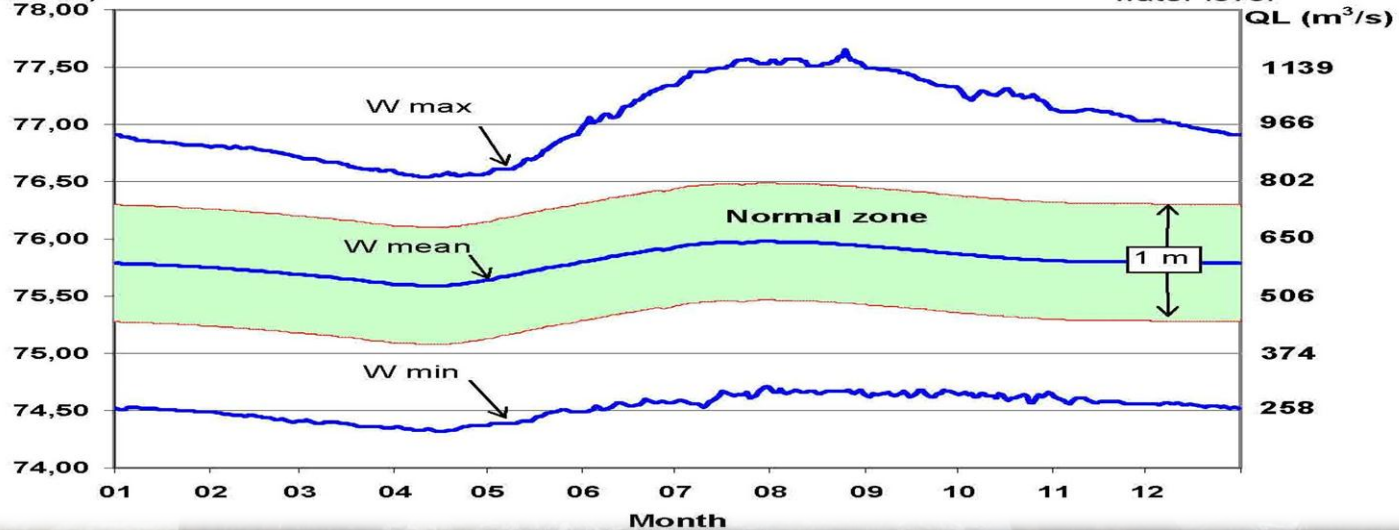
- Hydropower and flood risks main challenges at the starting point in 1970s
- Initiative of the Russian Party at the Joint Transboundary Commission 1973
- Development targets at the outset
 - Increase winter discharge and minimum flows in River Vuoksi
 - Prevent exceptionally high and low water levels in Lake Saimaa
 - Prevent exceptionally high and low flows in River Vuoksi
- First plan 1979 accepted by Joint Commission
- Jointly accepted 1989, implemented 1991

The Discharge Rule

- Natural water level and discharge in normal circumstances
- When water level forecast goes beyond normal zone discharge may be increased or reduced
- Natural discharge resumed when flood or drought threat ceases

Water level NN+m
(meters above sea level)

W (NN+m)



A case of transboundary IWRM

- Main aim: to minimise adverse consequences in the river system as a whole
- Knowledge and understanding of the neighbours' situation
- Participatory approach during planning and implementation: involve stakeholders to identify their needs, problems and priorities
- Common understanding of risks, benefits and costs in the broad sense
 - e.g. common projects on flood mapping

A case of transboundary IWRM

- Management of flood and drought risks in both countries
- Hydro power with compensation for Russian losses in some cases
- Also other uses and interests such as water traffic and habitats of fish and endangered Saimaa seal being addressed

Challenges

- Climate change
 - Increased occurrence and variability of heavy precipitation and drought periods
 - Shorter snow period, more abundant autumn and winter floods, less severe spring floods
 - Alterations in ice conditions
 - Ice and snow cover essential for Saimaa seal nesting
- Forecasting and optimal flow control become crucial
 - > real-time data and better forecasts on hydrology and meteorology
- Flood risk management tools: e.g. mapping and planning
- Transboundary early warning systems

Finland - Russia Cooperation: Some General Observations

- Joint transboundary integrated water resources management is achievable even with two very different societies
- Survived cold war and collapse of Soviet Union
- Pragmatic, clear focus on finding joint management interests
- Reasonable and equitable use of shared natural resource
- Still seen as a good example by both Parties
- Added value of UNECE cooperation: flood risk management, climate change, monitoring activities

Kiitos!

