



Finnish-Russian transboundary water co-operation: experiences from 50 years

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Finland and Soviet Union in early 1960s: needs for joint management of transboundary waters

- Large water quality problems, hydropower regimes, flood management problems
- Common understanding of risks, benefits and costs
- One agreement: all transboundary rivers and lakes (>400, about 19 significant)



Signing ceremony in 1964

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 navigation
 - 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, secretaries

Institutional framework

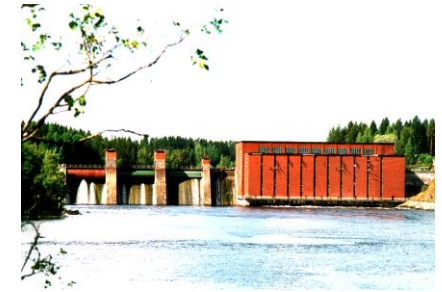
- **Joint Commission**
 - Meetings once a year
- **Working groups:**
 - ***Water Protection***
 - Water quality monitoring
 - Monitoring of pressures, particularly waste waters
 - Intercalibration of laboratory analytics
 - Information exchange on planned measures
 - ***Intergrated water recources management***
 - Discharge management
 - Flood control and flood management
 - Hydropower
 - Fish migration
 - Information exchange on planned measures
- **No secretariat - Requires high commitment by national authorities**

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

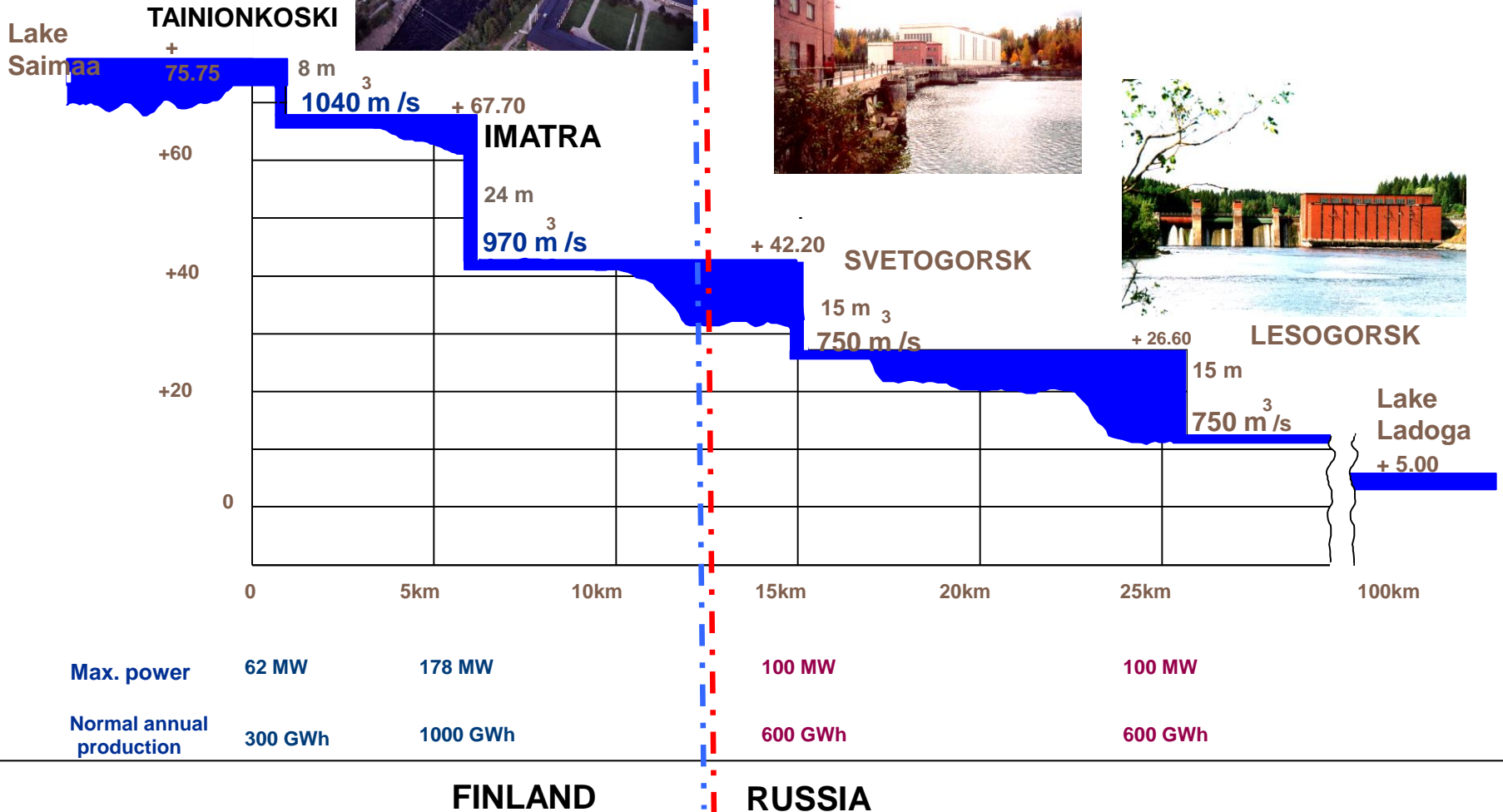


VUOKSI

Total head (utilized) = 63 m

Installed power = 440 MW

Normal annual production = 2500 GWh



Lake Saimaa and River Vuoksi Discharge Rule

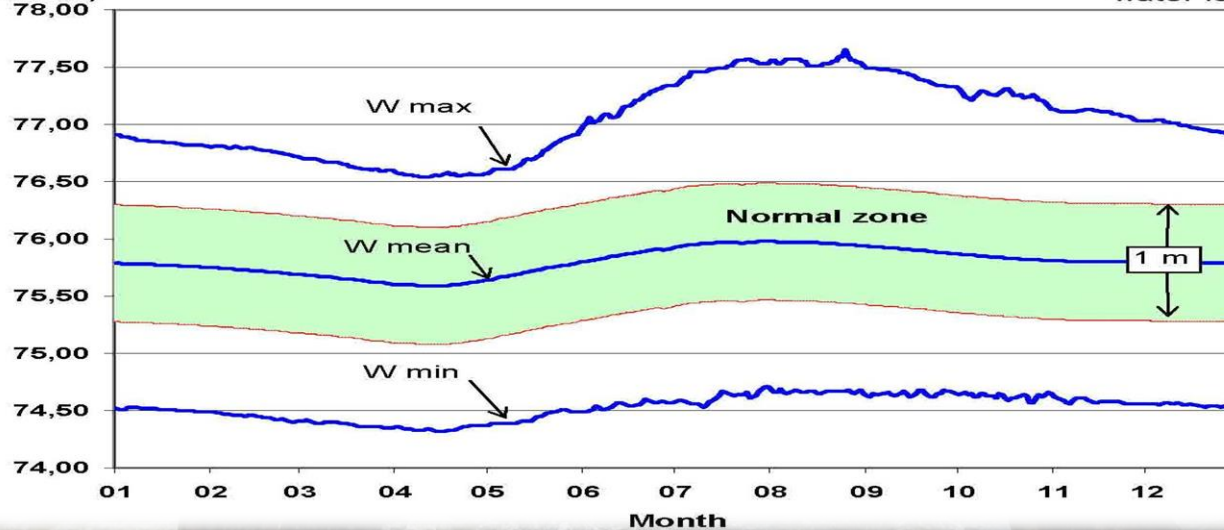
- Hydropower and flood risks main challenges at the starting point in 1970s
- Initiative of the Russian Party at the Joint Transboundary Commission 1973
- Development targets at the outset
 - Increase winter discharge and minimum flows in River Vuoksi
 - Prevent exceptionally high and low water levels 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)



Natural discharge
corresponding the
water level

QL (m³/s)

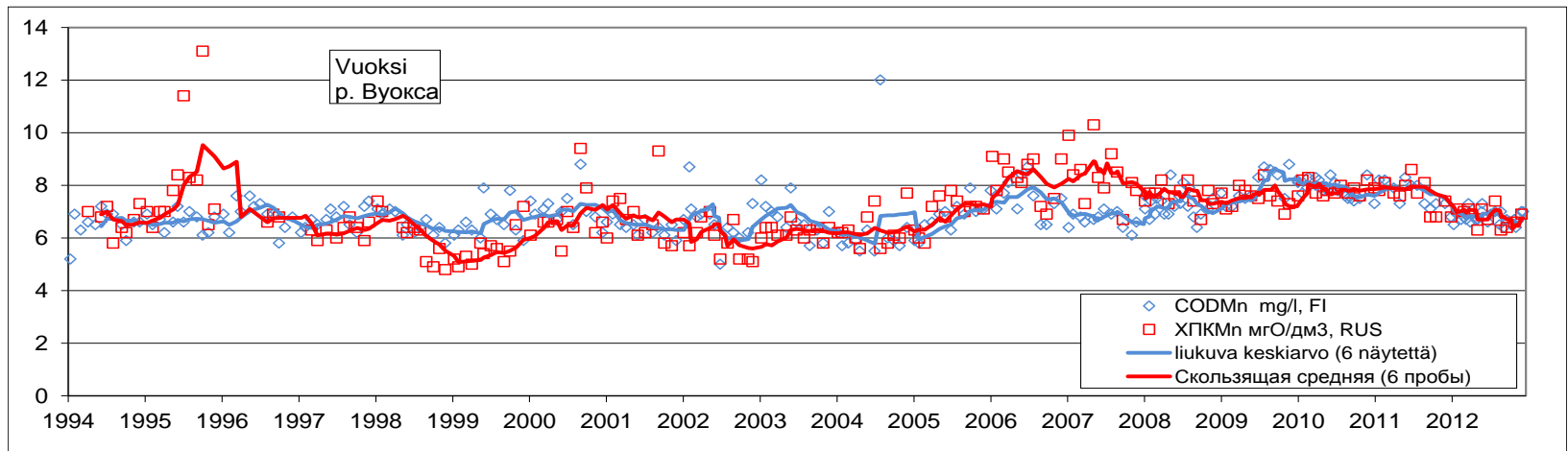
1139
966
802
650
506
374
258

Vuoksi: A case of transboundary IWRM

- Main aim: to minimise adverse consequences in the river system as a whole
- Participatory approach during planning and implementation: involve stakeholders to identify their needs, problems and priorities
- Management of flood and drought risks in both countries
- Hydro power with calculations of Russian losses in high flow periods
- Potential compensation based on intergovernmental negotiations
- Also other uses and interests such as navigation and habitats of fish and endangered Saimaa seal being addressed

Water quality monitoring

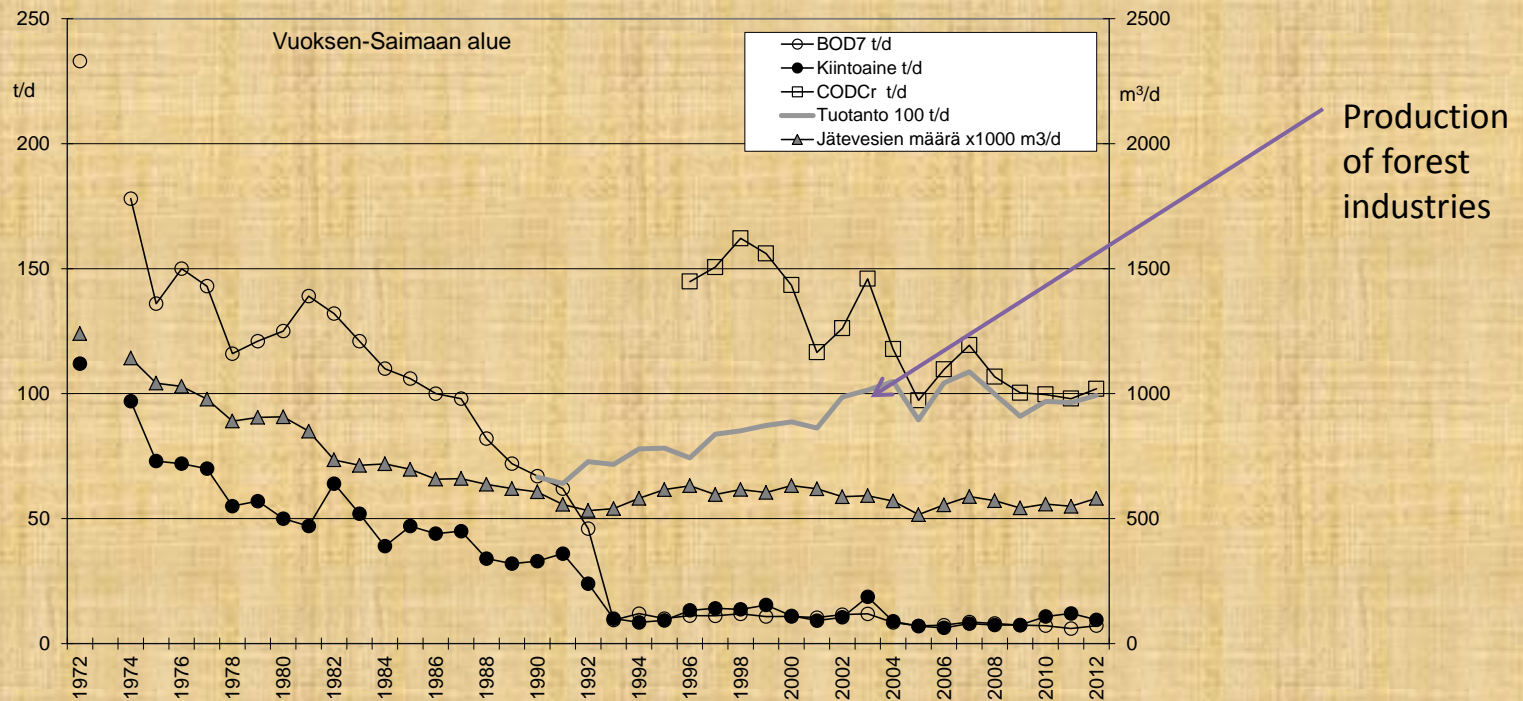
- Annual joint reports
- Water quality monitoring on both sides of the border



- Blue line and dots – Finnish results
- Red line and red dots – Russian results

Pollution loads

- Joint report every year
- Pollution loads from the Finnish side to the Saimaa – Vuoksi system



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
- New development: Risk management Programme
 - Aim: Optimisation of flow regulation taking into account all benefits and costs in both sides
- Improving river continuity for migratory fish

Potential role of Implementation Committee

- Cooperation between Finland and Russia (Soviet Union) has continued now more than 50 years – no amendments to original agreement
- During these years most of the common issues have been solved and joint management implemented
- There has been cases on which the Commission has not had a mandate - These issues have been solved via intergovernmental negotiations or new complementing agreements
- If such issues still arise, the governments of Finland and Russia will negotiate
- IC perhaps more helpful in early stages of cooperation

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 exercise by both Parties

Tack så
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