LATVIJAS VIDES, ĢEOLOĢIJAS UN METEOROLOĢIJAS CENTRS

Interreg Estonia-Latvia

MAIN MONITORING PRINCIPLES AND MONITORING IN GAUJA RBD-LV

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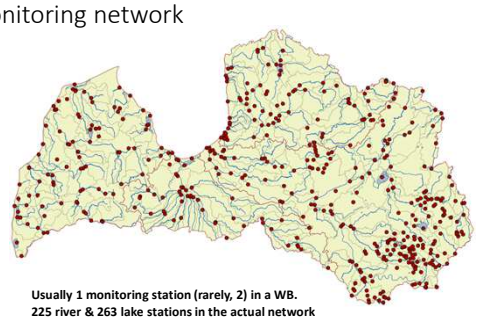
Monitoring principles

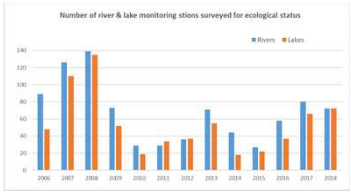
- Mainly WFD requirements to evaluate ecological and chemical status of WBs
  - Ecological status at least once per monitoring period
  - Chemical status – Gauja and Salaca river mouth and below biggest cities, if there is additional financing
- Salaca and Gauja river mouth monitored every year also for HELCOM PLC needs
- Tūlija lejpus Zosēniem – ICP waters station – background levels

Monitoring network



Usually 1 monitoring station (rarely, 2) in a WB.
225 river & 263 lake stations in the actual network

Monitoring sites surveyed



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rivers	89	126	139	73	29	29	36	71	44	27	58	80	72
Lakes	48	110	135	52	19	34	37	55	18	22	37	66	72

Delineation of waterbodies in Gauja RBD

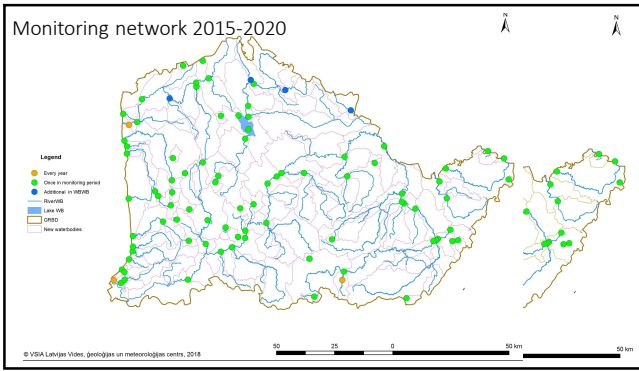
2009-2014

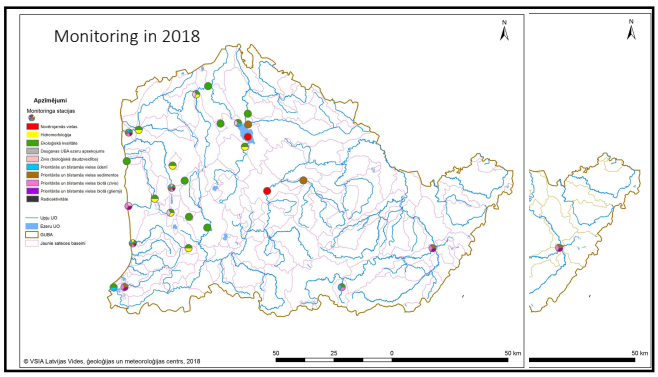
- 35 lake WBs
- 44 river WBs
- 2 river HMWBs
- 1 coastal WB and 1 transitional WB
- 5 transboundary river WBs and 1 lake WB

2017-2018 - revision

- 38 lake WBs + 9 %
- 106 river WBs + 141%
- 2 river HMWBs
- 1 coastal WB and 1 transitional WB – *to be discussed*
- 7 transboundary river WBs and 1 lake WB

Monitoring network 2015-2020





Principles used when deciding about monitoring or not

- Frequency – to ensure data series
  - Mostly 4 times – every season at least once per monitoring cycle – ecological quality assessment
  - Intensive stations 12 times (some parameters less) – ecological quality and chemical quality assessment
- Quality assessment
  - If status is less than good, than should be measured every year→ In reality does not work
- Financial aspects
  - Cutting frequency of priority substances
  - Cutting ecological monitoring stations – causing problems to fulfill requirements of 6-year monitoring program

Quality elements measured

- Ecological quality –
  - temperature, color, O_2 saturation, conductivity, pH, Ca, Mg, Na, K, HCO_3, SO_4, Cl, total hardness, suspended solids, BOD5, TOC, DOC, alkalinity, P_{tot}, P-PO_4, N_{tot}, N-NH_4, N-NO_2, N-NO_3, Si, Chlorophyll-a, phytoplankton, macrophytes, phytobentos, zoobenthos, fish diversity, RBSP (Cu and Zn)
- Chemical quality –
  - all 45 priority substances, including biota monitoring and sediments

THANKS FOR YOUR ATTENTION!