Interreg Estonia-Latvia
European Regional Development Fund

EUROPEAN UNION

WP T1 ASSESSMENTS FOR GAUJA/KOIVA & SALACA/SALATSI RIVER BASINS

WATER BODIES WITHOUT BORDERS (WBWB) PROJECT SEMINAR,
BURTNIEKI, 10.05.2018.

LINDA FĪBIGA

LATVIJAS VIDES, ĢEOLOĢIJAS UN METEOROLOĢIJAS CENTRS

RIVER BASIN MANAGEMENT PLANS

- **River basin management plan** is the **main instrument** for the improvement of status of waters
- According to the requirements of the WFD, assessment of ecological and chemical status of waters is integrated into RBMPs, **together with**:
  - **Analysis of pressures**: point source; diffuse; hydromorphological
  - **Economic analysis** and baseline scenario: prognosis of how will situation develop under present conditions
  - **Programme of Measures**: actions that are needed to improve current status of waters

WP T1 Assessments for Gauja/Koiva and Salaca/Salatsi river basins

Partners involved:

- ✓ Estonian Environmental Research Centre
- ✓ Estonian Ministry of Environment
- ✓ Environmental Agency of Estonia
- ✓ Latvian Environment, Geology and Meteorology Centre
- ✓ Burtnieku County Municipality

ACTIVITIES

A.T1.1. Compilation of existing data and identification of gaps

A.T1.2. Environmental screening and ecological quality assessment

A.T1.3. Pollution source and pressure analysis

A.T1.4. HabSim modelling (ecological flow evaluation, assessment of Hydro Power Plant impact)

A.T1.5. ESTMODEL modelling (pollution source and loads)

A.T1.1. Compilation of existing data and identification of gaps

a) common Descriptions of the characteristics of water bodies and their features according to commonly agreed principles (incl. harmonization of spatial dimensions),
b) assemble the data for analysis of river basin characteristics,
c) and identify data gaps.

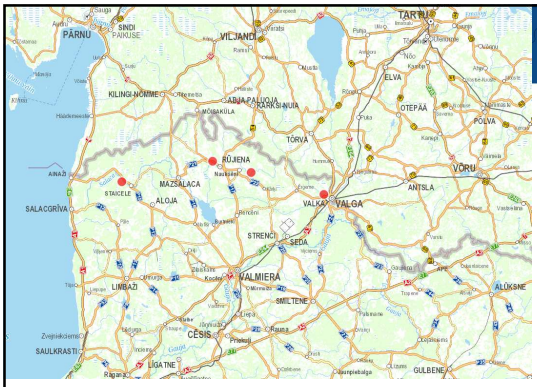
d) workshops (in Latvia / in Estonia)
   – to draw up common principles for formation of surface water bodies and for status assessment, and compilation of a report on it.

Estonia – Koiva RBD (on 2015)					Latvia – Gauja RBD (on 2015)				
WB code	WB name	Status RBMP	2nd QE below good status	Reason	WB code	WB name	Status RBMP	2nd QE below good status	Reason
River water bodies									
1154200_1	Koiva	good			G225	Gauja	good		
					G231	Gauja	good		
1158400_1	Kolga	good			(no WB)				
1158100_1	Peeli	good			(no WB)				
1158700_1	Peetri	high			G233	Melnupe/ Pēterupe	moderate	Benthic invertebrates, fish	Unclear
1155700_1	Pärlijõgi Saarlase paisuni	moderate	Fish	barriers	G237	Pērļupīte	high		
1154300_1	Ujuste	good			(no WB)				
1158000_1	Vaidava Vastse-Roosa paisuni	moderate	Fish	barriers	G235	Vaidava	moderate	Fish	Unclear
Lake water bodies									
2155900_1	Murati järv	moderate	Physico chemical QEs, benthic	natural condition	E205	Muratu ezers	good		

A.T1.2. Environmental screening and ecological quality assessment

a) environmental screening will be performed (incl. new water bodies without any environmental quality data) – during 1 year (4x per year) – *on map*

b) assessment of the status of water bodies according to harmonized principles for Gauja/Koiva and Salaca/Salatsi water bodies
   - incl. assessment of most suitable areas for small-scale filtration equipment in Burtnieki lake catchment area



Pedele river;
Pestava (Sapraša) river;
Acupīte river;
Jogla river

A.T1.3. Pollution source and pressure analysis

a) Identification of driving forces and significant pressures (point sources, diffuse sources, water abstractions, hydromorphological alterations) in Gauja/Koiva and Salaca/Salatsi water bodies.
   - Incl. results from Gauja/Koiva project
   - Municipalities

- relatively lightly impacted by anthropogenic pressures
  - Large areas of forests, especially in Estonian side
  - 97% of ca. 250 000 inhabitants – in Latvian territory
  - Agriculture, wastewaters & barriers on rivers – main pressures

b) Development of joint methodology for the assessment of potentially significant pressures (criteria for significance in Latvia and Estonia)

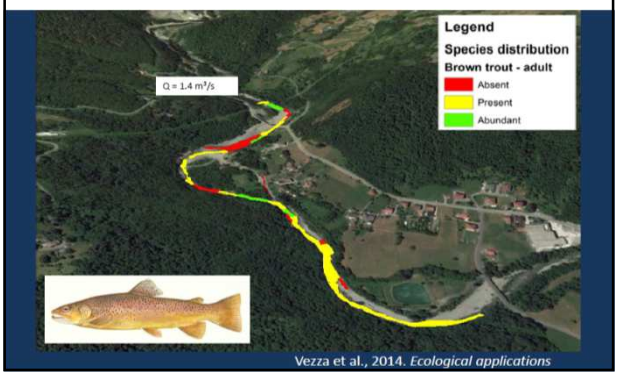
c) 2 workshops for sharing experiences in field of pressures assessment (in LV/ in EE)

A.T1.4. HabSim modelling (ecological flow evaluation, assessment of Hydro Power Plant impact)

a) Assessment of influence of small hydropower plants on habitats (specific fish species)
   - During **field works** Estonian partners will be involved for exchange of experience of practical measurements
     - Hydrological, hydromorphologica & biological data
   - **Modelling** with MesoHABSIM model will be performed,
     - Results - for other WP T2 (preparation of programme of measures for Joint Action plan).

b) 2 workshops will be organised (in Latvia / in Estonia).

SPATIAL HABITAT AVAILABILITY



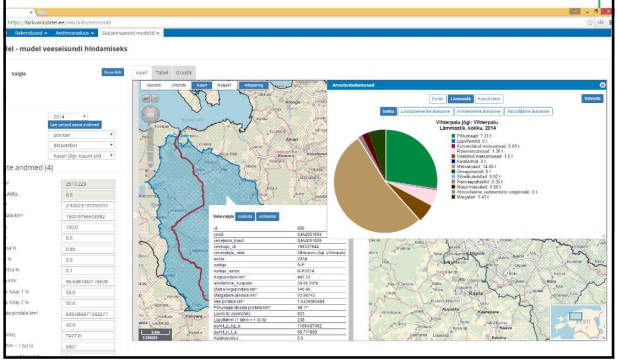
A.T1.5. ESTMODEL modelling (pollution source and loads)

ESTMODEL will be used to estimate pollution loads (N, P) from catchment area into Koiva/Gauja and Salatsi /Salaca river basin water bodies in both countries

- ESTMODEL is a static statistically based model
  - allows calculation of nutrient fluxes to surface waters and separation of natural and anthropogenic loads.
  - allows to simulate the effect of certain measures which help to reduce anthropogenic load, e.g. upgrade of wastewater treatment plants, reducing fertilizers in agricultural lands.
- The whole modelling process consists of steps:
  - collection and systematization of data, modelling, analyzing and validating results.

Estmodel

https://tarkvara.datel.ee/vesi/



THANK YOU FOR YOUR ATTENTION!

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