



**Interreg
Estonia-Latvia**
European Regional Development Fund



EUROPEAN UNION

**INTRODUCTION OF THE
EXISTING RBMP MEASURES AND
PRACTICES IN LATVIA**

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PROJECT WBWB






LATVIJAS VIDES, ĢEOLOĢIJAS
UN METEOROLOĢIJAS CENTRS

PROGRAMME OF MEASURES IN RBMPs

Taking into account pressures, water quality and risks:

Programme of Measures
for all 4 river basin districts
in Latvia:

- Basic measures
- Supplementary measures (national level)
- Supplementary measures (waterbody level)







TOTAL AMOUNT OF MEASURES 258

Basic measures: 97
National level supplementary measures: 46
Waterbody level supplementary measures:




Daugava RBD: 36	TOTAL BUDGET NEEDED 212 200 000 EUR
Gauja RBD: 25	
Lielupe RBD: 24	
Venta RBD: 30	

Daugava RBD: 79,1 million EUR
Gauja RBD: 50,5 million EUR
Lielupe RBD: 41,8 million EUR
Venta RBD: 40,8 million EUR

MEASURES CHOSEN:



1. with guaranteed effect of improving the quality of a waterbody;
2. that are not disproportionately expensive;
3. that are feasible;
4. by expert judgement;
5. taking into account municipalities needs (a survey in 2014)

BASIC MEASURES



- Wastewater Treatment Directive (91/271/EEC)
- Nitrate Directive (91/676/EEC)
- Wastewater Sludge Directive (86/278/EEC)
- SEVESO Directive (2008/1/EC)
- Bathing Water Directive (2006/7/EC)
- Drinking Water Directive (98/83/EEC)
- Plant Protection Products Regulation (1107/2009/EC)

Latvian legislation – laws, regulations of the Cabinet of Ministers



SUPPLEMENTARY MEASURES (NATIONAL LEVEL)

- Informative measures (communication)
- Providing different surveys
 - Additional methodologies (E-flow)
 - Surveys for meandering possibilities, beavers, nature resource tax changes etc.)
- Improvements of data quality
- Capacity building
- Measures for legislation improvements
- ...



TYPES OF SUPPLEMENTARY MEASURES (WB LEVEL)

- To reduce point source pollution
- To reduce diffuse source pollution
 - From urban places,
 - from agriculture,
 - from forestry
- Measures to reduce impact of hydromorphological pressures
- Measures for lakes
- Measures for contaminated sites



MEASURES FOR POINT SOURCES

- Improvement of treatment efficiency of wastewater treatment plants (WWPTs)
 - Agglomerations with PE>2000 (4 aggl. in LV, from them 2 in Gauja RBD)
 - Water bodies under risk (under Regulation of Ministers No.418 «Regulations Regarding Water Bodies at Risk» (31.05.2011., updated 04.04.2017.))
 - Reduction of N, P with tertiary treatment
- Improved connectivity rate to centralized sewage network (till 95%)
 - In all agglomerations with PE>2000 (75 aggl.in LV, from them 15 in Gauja RBD)
 - Real connections
 - Extension of networks



MEASURES FOR DIFFUSE SOURCES - URBAN

- Management of decentralized wastewater systems
- Stormwater management improvement
- Liquidation of old boreholes (potential danger for groundwater pollution)
- Surveys of potentially contaminated sites and remediation of contaminated sites (urban / rural territories)

MEASURES FOR DIFFUSE SOURCES - AGRICULTURE




- Buffer zones 2m wide near to river / ditch banks
 - Reduces Phosphorus for 20 % and Nitrogen for 30 %
- Winter green areas or stubble fields (vegetation consisting of perennial grasses in winter, perennial vegetables, catch crops, winter crops, or crop stubble)

MEASURES FOR DIFFUSE SOURCES - AGRICULTURE

Environmentally friendly melioration during reconstruction / renovation works

- Sedimentation basins
- 2-level melioration banks
- Meandering
- Artificial wetlands
- Controlled drainage
- Stacks of rocks

MEASURES FOR DIFFUSE SOURCES - FORESTRY

Environmentally friendly melioration during reconstruction / renovation works

- Sedimentation basins
- 2-step melioration banks
- Meandering
- Artificial wetlands
- Controlled drainage
- Stacks of rocks






MEASURES FOR MORPHOLOGICAL AND HYDROLOGICAL MODIFICATIONS

- An assessment of the possibilities to apply different operational regime in small hydroelectric power stations;
- Inspect small hydroelectric power stations, evaluate the situation and the impact on the water quality;
- Cleaning of watercourses (controlling overgrowth with aquatic plants, water purification from waste) and banks in accordance with good practice and aim to improve the ecological quality of water;
- Macrophyte mowing in meandering form in regulated river stretches.

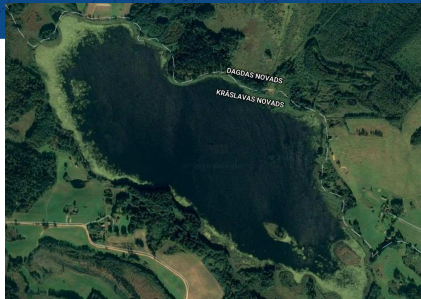



MEASURES FOR LAKE QUALITY IMPROVEMENTS


- Management plan for lakes, improvement of environmental status (waste, recreation zones..)
- Improvement of lake functionality:
 1. Cutting of aquatic plants in the direction of dominating wind, increasing the effect of waves;
 2. Create wind corridors by cutting bushes and, if necessary, trees, development of natural grass and sand zones to improve the functionality of the lake and increase the effect of waves;
 3. Reduction of aquatic plants if the lake overgrowth is more than 30%.



Assessment of pressures using satellite images



MEASURE: Improvement of lake functionality - cutting of aquatic plants in the direction of dominating wind, increasing the effect of waves




THANK YOU!

