



Curonian lagoon as HELCOM hotspot Lithuanian-Russian Hot Spot No. 66







Background

"The first symptom of the eutrophication of the waters in the Lagoon occurred in prewar times. But year by year, the volumes of the agricultural, industrial and municipal waste water increased, especially following the period between 1955 and 1965. This period marked the beginning of the heavy eutrophication of the Curonian Lagoon, due to the poor water quality of the River Nemunas" **HELCOM Thematic report (October 2000)**







HOTSPOTS WITHIN THE AREA







Klaipėda WWTP hot spot (deleted in 2001)

 The secondary and tertiary treatment of waste water introduced in 1998-1999









Nutrient loads (from the above report)









Hydrological coefficient K







LOON



South Baltic

PROGRA





Bottom sediments 124000 tons







- Recalculated and corrected N budget for 2000-2006 is significantly lower.
- Not so clear for the P (need additional calculations)







FISHERY

 Reconstruction of stock dynamics based on the population structure (Ložys & Razinkovas, unpublished)









Demersal commercial fish stock







Fishery

• Regulation measures improved ?







Conclusions

- Some improvement in mostly N runoff to the lagoon
- Somehow improved stocks of predatory commercial fish







LAGOON INDICATORS

ARTWE







- 1. natural processes and nature conditions (clear, not polluted etc)
- 2. Socio-economics part of development / layer existing in context of lagoon
- 3. Local or regional government policy or cooperation
- 4. Endangering for habitats (biodiversity, conditions) and human economy influence/ factors - natural and anthropogenic ones







WFD parameters

- Classification
- Macrophytes
- Phytoplankton
- Benthos
- Chemistry
- Residence time (modelled)







Potameid (*Potamonogeton pectinatus* & *P. perfoliatus*) distribution

Water quality class	Maximum potameid penetration depth, m	Comments
Very good	≥ 3 m	Maximum depth observed in 50ties (Minkevičius, Pipinis, 1959)
Good	1-3 m	Contrmporary potameid distribution threshold in the most suitable locations.
Average	0,6- 1 m	Average potameid distribution
Bad	0,6 – 0,5 m	Potameid zone in hydraulically active habitats
Very bas	< 0,5 m	Only P. pectinatus ocuurs







Fishery & food webs(MFD)

- Pelagic/benthic fish ratio
- Maximum length of fish
- Nutritional status of ke species
- ECOPATH derived parameters

