



Addressing the largest point emissions in the Baltic Sea

Wastewater treatment from the financier's perspective

Mikael Sjövall

Communications Manager

Nordic Environment Finance Corporation

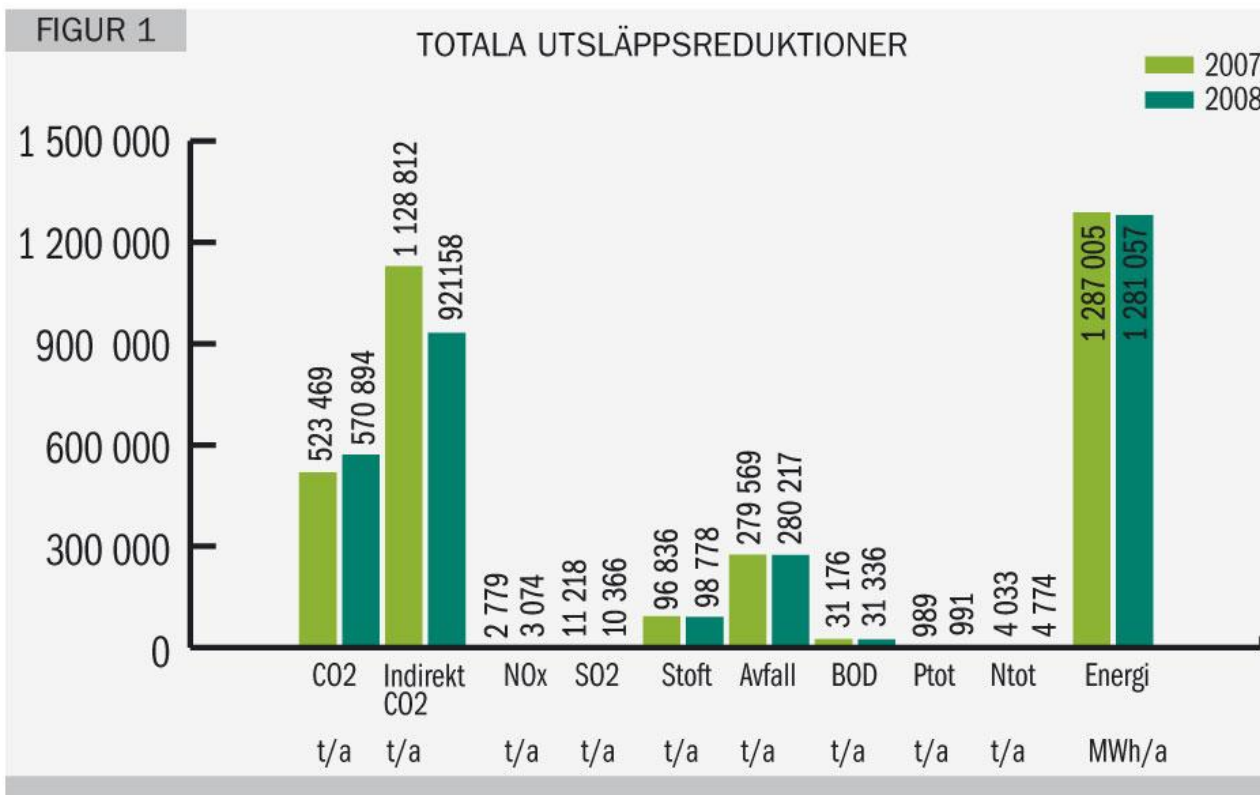
NEFCO in a nutshell

- international financial institution, established 1990 by the Nordic governments
- we administer funds to a total value of 353 million euros
- NEFCO provides loans and capital investments for environmental projects of interest to the Nordic countries
- geographic mandate: Russia, Ukraine, Belarus, Estonia, Latvia and Lithuania
- environmental priorities: climate issues, protection of the Baltic Sea and mitigation of toxic discharges
- 27 employees and 5 locally hired consultants

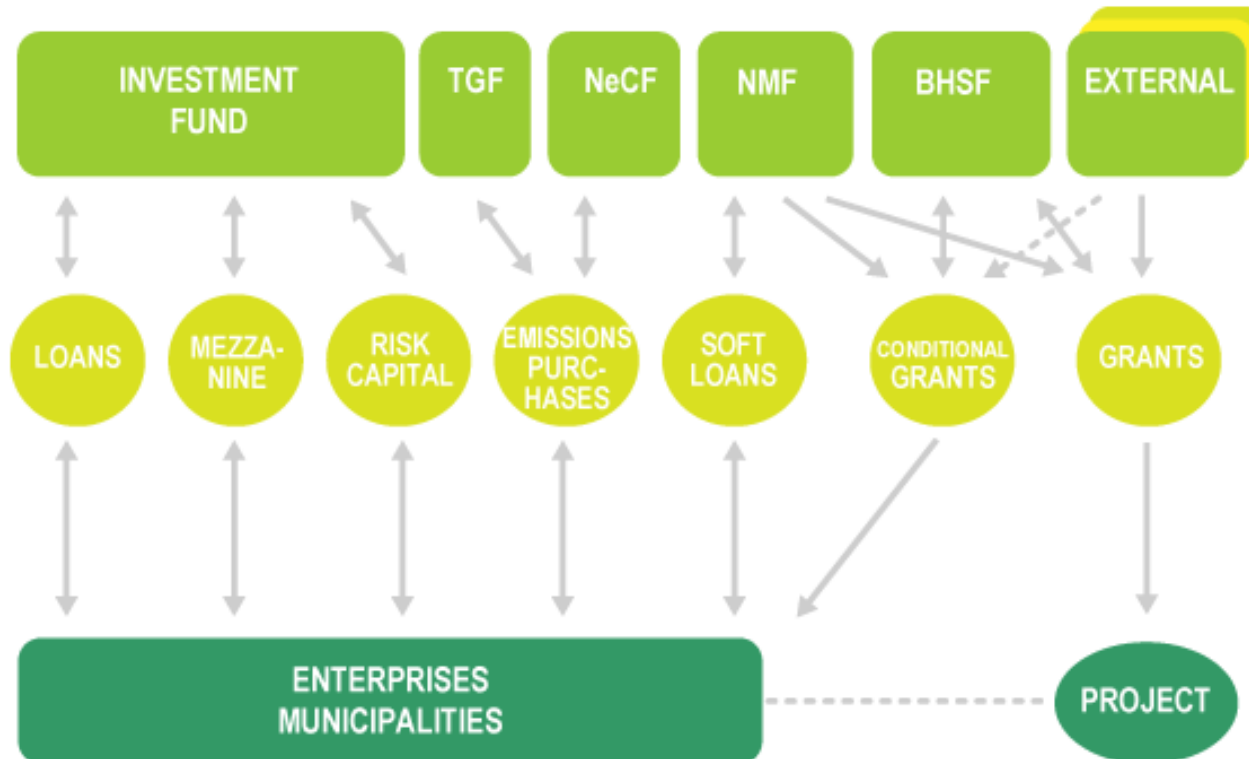
Key criteria for financing projects

- the project must be implemented within our geographic mandate
- financial viability and tested technology
- no green field projects
- measurable data on the emission reductions of the project must be provided
- ecological cost efficiency and Nordic interest

Our emission reductions



Our funds



NEFCO and wastewater treatment

- 24 projects financed so far
- NEFCO has reduced the phosphorus discharges by 1,000 tonnes per year
- focusing at BOD, phosphorus and nitrogen
- energy efficiency aspects
- recent projects: Sosnovy Bor, Petrozavodsk, Novgorod, Kaliningrad



The targets set by the BSAP

	Phosphorus (tonnes)	Nitrogen (tonnes)
Denmark	16	17210
Estonia	220	900
Finland	150	1200
Germany	240	5620
Latvia	300	2560
Lithuania	880	11750
Poland	8760	62400
Russia	2500	6970
Sweden	290	20780
Transboundary pool	1660	3780

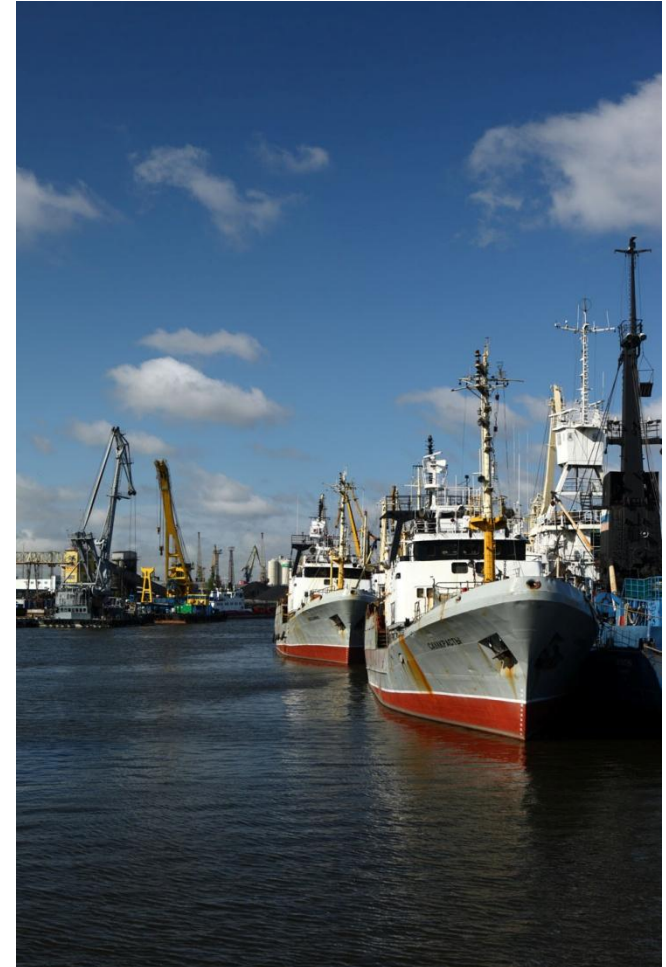
Example 1

- the South-Western wastewater treatment plant in Saint Petersburg
- total investment cost: 170 million EUR
- NEFCO's financial share 2 %
- phosphorus removal
- reduction: 533 tonnes of phosphorus per year



Example 2/Kaliningrad county

- environmental hot spot
- 20 locations in focus
- 160 tonnes of phosphorus and 700 tonnes of nitrogen discharged into the Baltic Sea
- the Russian government has reserved 20.6 MEUR
- pilot studies financed by NEFCO and the EU
- goal: reducing 58 tonnes of phosphorus in the first stage

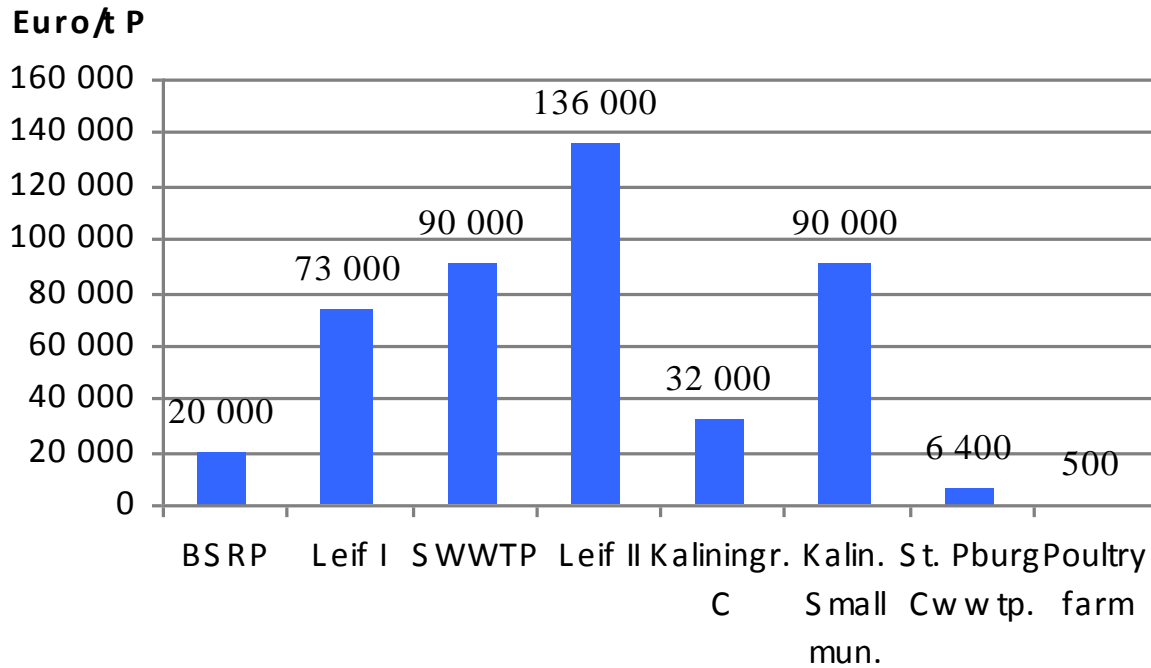


Reality check

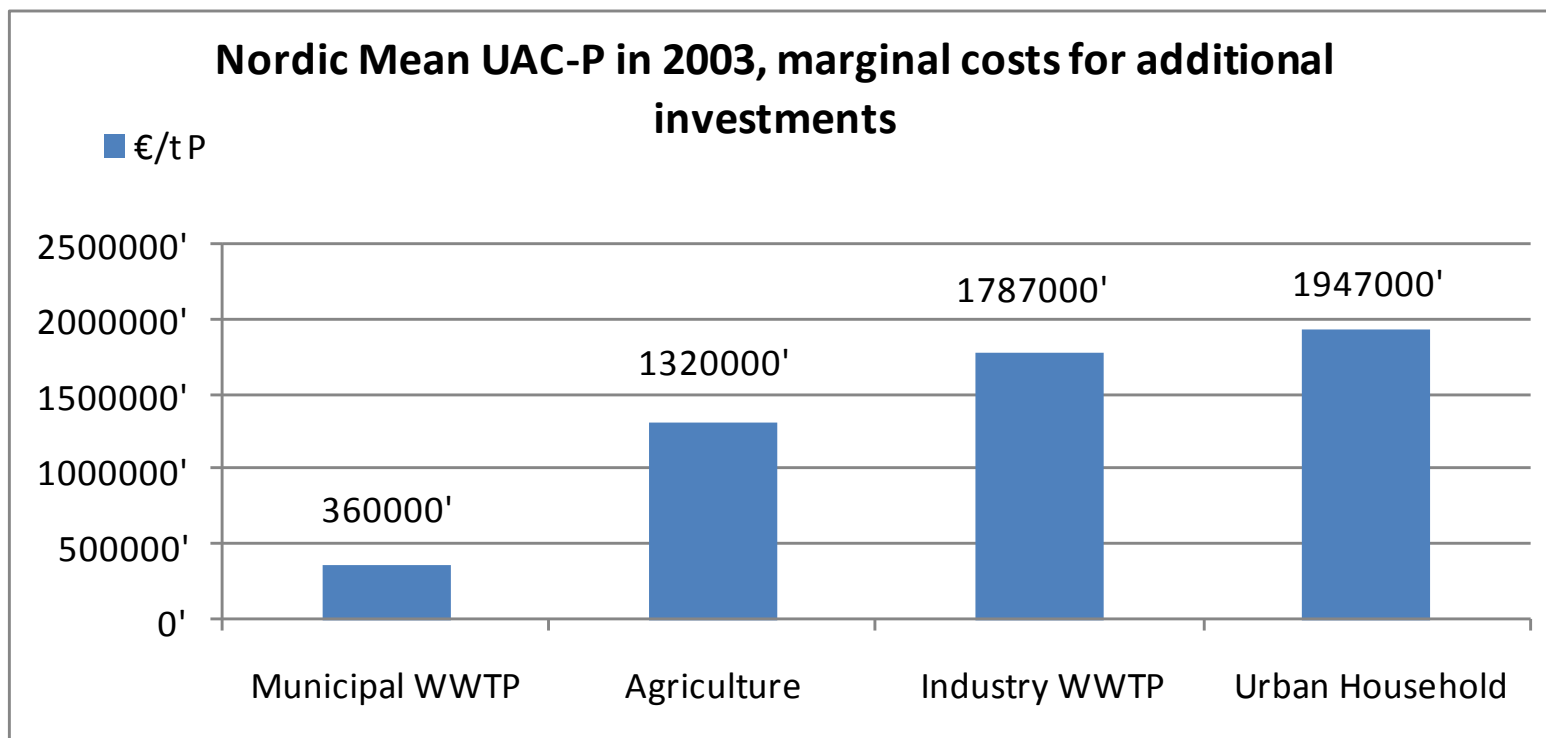
- financiers concentrate on specific projects, not programs
- the sad reality: good programs do not necessarily lead to project financing without identification of real projects
- after identification of bankable projects they are included in the project cycle of the financier
- the real challenge is to find the balance of environmental benefit and pay-back time.

Unit Abatement Costs

UAC for Earlier and Predicted P-reductions



Nordic shadow prices



Finding the biggest bang for the buck

- the P-goal within BSAP: 15,000 tonnes per year
- by the finishing of Saint Petersburg WWTP: 1,800 tonnes P-reduction per year (750 MEUR)
- Kaliningrad (+ 20 additional locations): 400 tonnes of P per year at a cost of approximately 140 MEUR
- about 2,000-3,000 additional P-tonnes from poultry farms with an estimated cost of about 500-1,000 €/tonne

Low hanging fruits


- 217 municipal wastewater treatment plants discharge directly to the Baltic Sea without any treatment
- In total 3036 plants that cover 6260 t P: prepare a list and prioritize the largest ones
- introduction of a nutrient trading system
- binding of dissolved P in Baltic deep water areas by aeration
- improved farm routines (6450 tonnes of phosphorus)

World economic crisis- and the BSAP

- Competition for scarce financial resources tougher than ever
- All countries around the Baltic Sea are severely affected
- Hard to get the environmental issues back on the top of the agenda
- A certain delay in the time schedule seems inevitable

Finally...

- The international financial institutions still have the will and the resources available for co-financing of environmentally cost efficient and well prepared investment projects in line with the Baltic Sea Action Plan!

An aerial photograph capturing a sunset over a large body of water. The sun is positioned in the upper center, casting a bright, shimmering reflection on the water's surface. Below the water, a thick, undulating layer of white and yellowish clouds stretches across the horizon, creating a textured, cloud-like landscape. The overall color palette is dominated by warm, golden-yellow and orange tones, with a darkening sky above the sun.

Thank you for your attention!

For more information, please contact:
mikael.sjovall@nefco.fi +358 50 3535 045