

Annexes

Annex I List of contributing authors and organisations

Authors

Name	Institutional Affiliation	Country	Field of work
Ain Lääne	Consultant Company OY ECOTEST	Estonia	Pollution load to the environment
Galina Titova	Laboratory of Economy of Use of Nature, St. Petersburg Research Centre for Ecological Security of RAS	Russia	Environmental economy
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Regional Task team

Name	Institutional Affiliation	Country	Field of work
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Ain Lääne	Consultant Company OY ECOTEST	Estonia	Pollution load to the environment
Elmira Boikova	Institute of Biology of Latvian Academy for Sciences	Latvia	Marine and freshwater biology
Kaisa Kononen	Maj and Tor Nessling Foundation	Finland	Eutrophication
Sverker Evans	Swedish Environmental Protection Agency	Sweden	International conventions
Guenther Nausch	Baltic Sea Research Institute	Germany	Marine biology
Sergei Olenin	Klaipeda University Centre of System Analysis	Lithuania	Environmental assessment
Tatjana Roshkoshnaya	Laboratory of Economy of Use of Nature, St. Petersburg Research Centre for Ecological Security of RAS	Russia	Environmental economy
Galina Titova	Laboratory of Economy of Use of Nature, St. Petersburg Research Centre for Ecological Security of RAS	Russia	Environmental economy
Susanna Stymne	University of Kalmar	Sweden	Environmental economy
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Astrid Saava	University of Tartu	Estonia	Public health

Annex II

Detailed scoring tables

I: Freshwater shortage

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
1. Modification of stream flow	1	N/A	Freshwater shortage	2
2. Pollution of existing supplies	2	N/A		
3. Changes in the water table	1	N/A		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small Very large	1	N/A
Degree of impact (cost, output changes etc.)	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Economic impacts		1	
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small Very large	1	N/A
Degree of severity	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Health impacts		1	
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small Very large	1	N/A
Degree of severity	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Other social and community impacts		1	

Note: N/A = Not applied

II: Pollution

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
4. Microbiological	1	N/A	Pollution	3
5. Eutrophication	3	N/A		
6. Chemical	2	N/A		
7. Suspended solids	1	N/A		
8. Solid wastes	1	N/A		
9. Thermal	0	N/A		
10. Radionuclides	1	N/A		
11. Spills	2	N/A		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small Very large	2	N/A
Degree of impact (cost, output changes etc.)	Minimum Severe	2	N/A
Frequency/Duration	Occasion/Short Continuous	2	N/A
Weight average score for Economic impacts		2	
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small Very large	2	N/A
Degree of severity	Minimum Severe	2	N/A
Frequency/Duration	Occasion/Short Continuous	2	N/A
Weight average score for Health impacts		2	
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small Very large	1	N/A
Degree of severity	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Other social and community impacts		1	

Note: N/A = Not applied

III: Habitat and community modification

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
12. Loss of ecosystems	1	N/A	Habitat and community modification	2
13. Modification of ecosystems or ecotones, including community structure and/or species composition	2	N/A		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small Very large	1	N/A
Degree of impact (cost, output changes etc.)	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Economic impacts			1
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small Very large	1	N/A
Degree of severity	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Health impacts			1
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small Very large	1	N/A
Degree of severity	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Other social and community impacts			1

Note: N/A = Not applied

IV: Unsustainable exploitation of fish and other living resources

Environmental issues	Score	Weight %	Environmental concern	Weight averaged score
14. Overexploitation	3	N/A	Unsustainable exploitation of fish	2
15. Excessive by-catch and discards	1	N/A		
16. Destructive fishing practices	1	N/A		
17. Decreased viability of stock through pollution and disease	2	N/A		
18. Impact on biological and genetic diversity	2	N/A		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small Very large	2	N/A
Degree of impact (cost, output changes etc.)	Minimum Severe	2	N/A
Frequency/Duration	Occasion/Short Continuous	2	N/A
Weight average score for Economic impacts			2
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small Very large	0	N/A
Degree of severity	Minimum Severe	0	N/A
Frequency/Duration	Occasion/Short Continuous	0	N/A
Weight average score for Health impacts			0
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small Very large	2	N/A
Degree of severity	Minimum Severe	2	N/A
Frequency/Duration	Occasion/Short Continuous	2	N/A
Weight average score for Other social and community impacts			2

Note: N/A = Not applied

V: Global change

Environmental issues	Score	Weight	Environmental concern	Weight averaged score
19. Changes in the hydrological cycle	1	N/A	Global change	0
20. Sea level change	0	N/A		
21. Increased UV-B radiation as a result of ozone depletion	0	N/A		
22. Changes in ocean CO ₂ source/sink function	0	N/A		

Criteria for Economics impacts	Raw score	Score	Weight %
Size of economic or public sectors affected	Very small Very large	1	N/A
Degree of impact (cost, output changes etc.)	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Economic impacts		1	
Criteria for Health impacts	Raw score	Score	Weight %
Number of people affected	Very small Very large	1	N/A
Degree of severity	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Health impacts		1	
Criteria for Other social and community impacts	Raw score	Score	Weight %
Number and/or size of community affected	Very small Very large	1	N/A
Degree of severity	Minimum Severe	1	N/A
Frequency/Duration	Occasion/Short Continuous	1	N/A
Weight average score for Other social and community impacts		1	

Note: N/A = Not applied

Comparative environmental and socio-economic impacts of each GIWA concern

Concern	Types of impacts								Overall score	Rank
	Environmental score		Economic score		Human health score		Social and community score			
	Present (a)	Future (b)	Present (a)	Future (b)	Present (a)	Future (b)	Present (a)	Future (b)		
Freshwater shortage	2	2	1	1	1	1	1	1	1.3	4
Pollution	3	2	2	3	2	2	1	2	2.1	1
Habitat and community modification	2	2	1	2	1	1	1	1	1.4	3
Unsustainable exploitation of fish and other living resources	2	2	2	2	0	0	2	2	1.5	2
Global change	0	1	1	2	1	2	1	2	1.3	5

Annex III

List of conventions and specific laws that affect water use in the region

- The Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, signed in Gdansk in September 1973 (Gdansk Convention);
- The Convention of the Protection of the Marine Environment of the Baltic Sea, signed in Helsinki in March 1974 (Helsinki Convention);
- The Nordic Environmental Protection Convention, signed in Stockholm in February 1974 (Stockholm Convention);
- The Convention on the Conservation of European Wildlife and Natural Habitats, signed in Bern in September 1979 (Bern Convention);
- The Convention on Long-Range Transboundary Air Pollution, signed in Geneva in November 1979;
- The Convention on the Protection and Use of Transboundary Watercourses and International Lakes, signed in Helsinki March 1992 and entered into force in 1996;
- United Nations Convention of the Law of the Sea (UNCLOS);
- UNESCO World Heritage Convention;
- United Nations Convention on Biological Diversity;
- The Ramsar Convention on Wetlands, signed in Ramsar, Iran, 1972;
- International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78);
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention);
- The European Parliament and the Council of the European Union Directive 2000/60/EC (Water Framework Directive).

