



Document title	Draft updated HELCOM nutrient input reduction scheme
Code	4-7
Category	CMNT
Agenda Item	4 - Update of the Baltic Sea Action Plan
Submission date	19.05.2020
Submitted by	Executive Secretary
Reference	

Background

HOD 57-2019 considered an initial draft of the updated HELCOM nutrient input reduction scheme, in general, supported the proposed approach and requested PRESSURE WG to elaborate the text of the document further.

PRESSURE 12-2020 considered the updated the text of the Scheme proposed by RedCore DG. The group requested to incorporate to the text actions which had been considered in the frame of the work on “rephrasing of existing actions” to keep coherence of the Scheme and to assure consistency of work on the update of various parts of the BSAP. Simultaneously, these actions were withdrawn from the respective documents submitted to this meeting. PRESSURE 12-2020 provided recommendations to further the text of the scheme, invited countries to provide additional comments and requested RedCore DG to prepare an updated version of the Scheme incorporating all inputs.

Annex 1 to this document is a draft of the HELCOM nutrient input reduction scheme integrating all received inputs. The document in this Annex 1 is written in the style of the original text of the HELCOM nutrient input reduction scheme adopted by MD2013. Some open issues still remain in square brackets. Among them there are some values which require verification against recently received scientific data, the proposal by Russia to incorporate input a ceiling for the Neva in the national net input ceiling for the Gulf of Finland, the target year to achieve GES in terms of eutrophication and some other open issues.

In the explanatory notes to the updated version of the Scheme, RedCore DG highlighted that in the relevant paragraph of the Scheme countries are invited to demonstrate that national input targets (net input ceilings) for each sub-basin, expressed as nutrient input ceilings given in the tables, have been achieved and that ceilings set for individual rivers are integral parts of the net input ceilings but not additional requirements. Thus, Contracting Parties are free to implement measures where they are most appropriate to meet their national net input ceilings.

HOD 57-2019 also raised the question regarding the incorporation to the HELCOM nutrient input reduction scheme in the final BSAP. PRESSURE 12-2020 briefly discussed the matter and took note of the proposal by Germany to incorporate the whole text of the Scheme in the BSAP.

In line with the guidance by HOD 57-2019 on general structure of the updated BSAP, which recommended a “layered preamble”, the HELCOM nutrient input reduction scheme can be integrated in the “Introductory passage for the eutrophication segment” setting the main objectives for the segment. Annex 2 gives an example of incorporation of the Scheme in the preamble to the eutrophication segment. Provisions of the Scheme, currently considered as measures, are in general of aspirational character and can be specified but not repeated in the operational part of the segment.

Alternatively, the HELCOM nutrient input reduction scheme could be annexed to the updated BSAP in the format proposed in the Annex 1 to this document with corresponding reference in the preambular part of the eutrophication segment.

Action requested

The Meeting is invited to consider the updated draft of the HELCOM nutrient input reduction scheme and provide guidance on further development of the document especially resolving open issues and on further integration of the scheme to the updated BSAP.

Annex 1.**Requirements for nutrient input reduction to reach the goal towards a Baltic Sea unaffected by eutrophication (HELCOM nutrient input reduction scheme)**

WE ACKNOWLEDGE the progress in reduction of input nutrients to the Baltic Sea achieved by all countries in the last decades which resulted in the total reduction of nitrogen and phosphorus input to the Baltic Sea by 14 and 24 percent respectively, but **WE ALSO RECOGNIZE** that eutrophication remains one of the major environmental problems of the Baltic Sea and that the required reduction of environmental pressure on the marine ecosystem caused by nutrient load has not been reached,

WE RE-ITERATE that the maximum allowable inputs of nutrients - indicating the maximal level of inputs of water- and airborne nitrogen and phosphorus to Baltic Sea sub-basins – remain the regional targets to reach good environmental status of the Baltic Sea,

WE ALSO AGREE that nutrient input ceilings define maximum inputs via water and air to achieve good status with respect to eutrophication for Baltic Sea sub-basins. **WE AGREE** that they are calculated as shares of the maximum allowable inputs to each sub-basin according the polluter pays principle using the proportions of nutrient inputs in the reference period 1997-2003,

RECOGNIZING that national net nutrient input ceilings for each sub-basin are sums of national shares in transboundary rivers ceilings and ceilings for remaining territory with input to the respective sub-basin, **WE ALSO AGREE** that national net nutrient input ceilings should correspond to the input targets set for the Baltic Sea sub-basins, reflecting fair share of the contribution of all Baltic Sea countries and other sources of nutrients to the total nutrient load and assuring the good environmental status of the Sea in terms of eutrophication,

BEARING IN MIND that the HELCOM nutrient reduction scheme is based on the best available scientific information, **WE STRESS** that [maximum allowable inputs and nutrient input ceilings]¹ are reviewed as necessary using a harmonized approach when new scientific knowledge is available.

WE ACKNOWLEDGE that the maximum nutrient input to the Baltic Sea that can be allowed so that good environmental status with regard to eutrophication can still be reached is 792,209 tons of nitrogen and 21,716 tons of phosphorus,

NOTING that achieving the nutrient reduction targets of the BSAP requires substantial improvements in fresh water environmental quality, **WE COMMIT** to work closely with river basin management authorities to achieve all our environmental objectives,

WE STRESS² that the achievement of good environmental status in relation to eutrophication in the Baltic Sea also relies on additional reduction efforts by non-Contracting Parties as follows: [18720] tons of airborne nitrogen from non-Contracting Parties assuming full implementation of the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone of the UNECE Convention on Long-range Transboundary Air Pollution until 2020 and National Emissions Ceilings (NEC) Directive (2016/2284/EU) until 2030; [3230] tons of waterborne nitrogen and [800] tons of waterborne phosphorus from non-Contracting Parties assuming that they take the same responsibility to reduce nutrients input as the Contracting Parties,

RECALLING the decision of the IMO to establish NECA in the Baltic Sea and North Sea on reduction of airborne nitrogen pollution from shipping which will lead to the reduction of 18060³ tons of atmospheric

¹ DE would prefer to keep this more general, e.g. "the scheme", as that there is no immediate obligation of reviewing MAI.

² Values in square brackets will be further verified utilizing the most recent data.

³ The value is based on ENIREC II data but should be verified.

nitrogen, but noting with concern that some vessels may seek to achieve this reduction by replacing atmospheric emissions with direct discharges to the sea,

WE FURTHERMORE AGREE that, based on the currently available data on nutrient fluxes in the Baltic Sea marine ecosystem, the maximum allowable inputs of nutrients for the Baltic Sea sub-basins to reach good status with respect to eutrophication are as follows:

Baltic Sea Sub-basin	Maximum Allowable Inputs (MAI)	
	TN, tonnes	TP, tonnes
Kattegat	74,000	1,687
Danish Straits	65,998	1,601
Baltic Proper	325,000	7,360
Bothnian Sea	79,372	2,773
Bothnian Bay	57,622	2,675
Gulf of Riga	88,417	2,020
Gulf of Finland	101,800	3,600
Baltic Sea	792,209	21,716

AKNOWLEDGING that almost half of the waterborne input of nutrients enters the Baltic Sea via transboundary rivers **WE AGREE** to set nutrient input ceilings for 9 major transboundary rivers, addressing inputs from the whole river catchment areas, separately from the remaining territory of countries.

WE AGREE on the following nutrient input ceilings:

Nutrient input ceilings for nitrogen for HELCOM countries, transboundary rivers and other sources:

	BOB	BOS	BAP	GUF	GUR	DS	KAT	BAS
DE	946	3923	32281	1645	1747	23647	4662	68852
DK	281	1149	9026	420	463	28067	28525	67931
EE	113	404	1478	11330	13099	22	24	26471
FI	35086	28677	1827	15627	295	76	89	81677
LT	108	495	3620	305	462	65	80	5135
LV	74	330	2789	246	12223	31	34	15727
PL	668	3127	35486	1406	1595	1481	1444	45206
RU	839	1994	7321	22875	662	238	246	34175
SE	17718	32651	30691	625	525	6056	32810	121076
OC	1375	5008	26947	2985	2188	4933	4502	47938
BSS	284	1141	5180	675	345	651	701	8978
NOS	131	475	2427	196	150	729	884	4992
NEMUNAS			29338					29338
BARTA			957					957
VENTA			6033					6033
LIELUPE					15864			15864
DAUGAVA					38801			38801
ODER			49298					49298
VISTULA			74808					74808
PREGOLYA			5494					5494
[NEVA] ⁴				43462				43462
MAI	57622	79372	325000	101800	88417	65998	74000	792209

⁴ Russia requests to remove input ceiling for Neva from the tables and incorporate it in the net national ceiling for the Gulf of Finland.

Waterborne nitrogen input ceilings for HELCOM and non-HELCOM countries within transboundary river basins:

River	Basin	NIC	DE	FI	LT	LV	PL	RU	BY	CZ	UA
NEMUNAS	BAP	29338			18934				10404		
BARTA	BAP	957			377	581					
VENTA	BAP	6033			3730	2303					
LIELUPE	GUR	15864			5867	9996					
DAUGAVA	GUR	38801			897	22450		2634	12820		
ODER	BAP	49298	179				43951			3551	
VISTULA	BAP	74808					70063		3052		1693
PREGOLYA	BAP	5494					2498	2995			
[NEVA]	GUF	43462		4855				38607			

Nutrient input ceilings for phosphorus for HELCOM countries, transboundary rivers and other sources:

	BOB	BOS	BAP	GUF	GUR	DS	KAT	BAS
DE			71			401		472
DK			21			979	815	1815
EE			9	225	185			418
FI	1683	1245		297				3224
LT			50					50
LV			62		499			560
PL			543					543
RU			146	1531				1677
SE	811	1134	318			116	754	3133
OC	181	394	1046	150	93	105	118	2087
NEMUNAS			914					914
BARTA			25					25
VENTA			106					106
LIELUPE					302			302
DAUGAVA					942			942
ODER			1554					1554
VISTULA			2350					2350
PREGOLYA			147					147
[NEVA]				1398				1398
MAI	2675	2773	7360	3600	2020	1601	1687	21716

*Sources of atmospheric deposition of phosphorus cannot be allocated to countries.

Waterborne phosphorus input ceilings for HELCOM and non-HELCOM countries within transboundary river basins:

RIVER	BASIN	NIC	DE	FI	LT	LV	PL	RU	BY	CZ	UA
NEMUNAS	BAP	914			628				286		
BARTA	BAP	25			5	20					
VENTA	BAP	106			26	80					
LIELUPE	GUR	302			109	193					
DAUGAVA	GUR	942			33	403		99	407		
ODER	BAP	1554	38				1459			57	
VISTULA	BAP	2350					2240		63		47
PREGOLYA	BAP	147					51	96			
[NEVA]	GUF	1398		20				1378			

RECOGNIZING the delay between action in the catchment and their effect on reduction of nutrient inputs **WE AGREE** to have all necessary nutrient reduction measures fully implemented latest [by 2027]

in order to be able to demonstrate that national input targets expressed as nutrient input ceilings for each sub-basin have been achieved by [2030]⁵.

RECOGNIZING that the input ceilings for nitrogen and phosphorus are based on current scientific knowledge and are subject to uncertainties and following the precautionary principle **WE COMMIT** to not increase nutrient inputs to a basin until both MAI and [good status with respect to eutrophication] have been reached even in basins where nutrient inputs are already below the nutrient input ceilings.

WE AGREE to conduct regular assessments, annually for MAI and every 2 years for input ceilings to follow up implementation of regional and national targets for inputs of nutrients based on the most recent monitoring data of riverine nutrient loads, the data on air deposition of nutrients, transboundary loads and national data on inputs from direct point sources including sea-based aquaculture. **WE COMMIT** to maintain up-to-date national monitoring networks and to strive for harmonized methods to estimate nutrient inputs from unmonitored areas and to provide timely sufficient and consistent data on nutrient loads to the Baltic Sea (HELCOM Recommendations 37-38/1 and 37-38/2) in order to ensure reliability of the follow-up system.

RECOGNIZING that reductions in nutrient inputs in sub-basins may have wide-spread effects, **WE AGREE** that extra reduction – reduction of nutrient input below the national nutrient input ceiling for a sub-basin - can be accounted for, in proportion to the effect on a neighboring basin, by the countries in reaching their nutrient input ceilings.

RECOGNIZING that nutrient inputs from the catchments are of great importance **WE COMMIT** to establish continuous cooperation with River Basin Management Authorities to ensure that river basin management plans incorporate the nutrient input ceilings set by the HELCOM Baltic Sea Action Plan and, thus, ensure sufficiency of measures undertaken under different policies to achieving the environmental targets of the BSAP. **WE ALSO ENCOURAGE** contracting parties to the Helsinki Convention to enhance cooperation with river basin management authorities of non-HELCOM countries to institutionalize cooperation on river basin management through signing official agreements with relevant authorities, to address transboundary waterborne nutrient inputs from non-Contracting Parties according to the HELCOM nutrient input reduction scheme.

⁵ Germany suggests not to provide a target year for reaching input ceilings since 2030 is not realistic and a later date is not possible since BSAP only runs until 2030

Annex 2.

“ACKNOWLEDGING the progress in reduction of input nutrients to the Baltic Sea achieved by all countries in the last decades which resulted in the total reduction of nitrogen and phosphorus input to the Baltic Sea by 14 and 24 percent respectively, but ALSO RECOGNIZING that eutrophication remains one of the major environmental problems of the Baltic Sea and that the required reduction of environmental pressure on the marine ecosystem caused by nutrient load has not been reached, Contracting Parties to the Helsinki Convention AGREE on the Requirements for nutrient input reduction to reach the goal towards a Baltic Sea unaffected by eutrophication described in the following “HELCOM nutrient input reduction scheme.”

“HELCOM nutrient input reduction scheme”

The regional targets to reach good environmental status of the Baltic Sea are (remain) the maximum allowable inputs of nutrients - indicating the maximal level of inputs of water- and airborne nitrogen and phosphorus to Baltic Sea sub-basins.

Nutrient input ceilings define maximum inputs via water and air to achieve good status with respect to eutrophication for Baltic Sea sub-basins for each country and transboundary river. They are calculated as shares of the maximum allowable inputs to each sub-basin according to the polluter pays principle using the proportions of nutrient inputs in the reference period 1997-2003.

National net nutrient input ceilings for each sub-basin are sums of national shares in transboundary rivers ceilings and ceilings for remaining territory with input to the respective sub-basin. They correspond to the input targets set for the Baltic Sea sub-basins, reflecting fair share of the contribution of all Baltic Sea countries and other sources of nutrients to the total nutrient load and assuring the good environmental status of the Sea in terms of eutrophication.

As the values in the HELCOM nutrient reduction scheme are based on the best available scientific information, [maximum allowable inputs and nutrient input ceilings] are reviewed as necessary using a harmonized approach when new scientific knowledge is available.

The maximum nutrient input to the Baltic Sea that can be allowed so that good environmental status with regard to eutrophication can still be reached is 792,209 tons of nitrogen and 21,716 tons of phosphorus.

Achieving the nutrient reduction targets of the BSAP requires substantial improvements in fresh water environmental quality, close cooperation with river basin management authorities is necessary to achieve all our environmental objectives.

The achievement of good environmental status in relation to eutrophication in the Baltic Sea also relies on additional reduction efforts by non-Contracting Parties as follows: [18720] tons of airborne nitrogen from non-Contracting Parties assuming full implementation of the Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone of the UNECE Convention on Long-range Transboundary Air Pollution until 2020 and National Emissions Ceilings (NEC) Directive (2016/2284/EU) until 2030; [3230] tons of waterborne nitrogen and [800] tons of waterborne phosphorus from non-Contracting Parties assuming that they take the same responsibility to reduce nutrients input as the Contracting Parties,

The decision of the IMO to establish NECA in the Baltic Sea and North Sea on reduction of airborne nitrogen pollution from shipping which will lead to the reduction of 18060 tons of atmospheric nitrogen, but noting with concern that some vessels may seek to achieve this reduction by replacing atmospheric emissions with direct discharges to the sea,

The maximum allowable inputs of nutrients for the Baltic Sea sub-basins to reach good status with respect to eutrophication, based on the currently available data on nutrient fluxes in the Baltic Sea marine ecosystem, are as follows:

Table illustrating maximum allowable inputs

Almost half of the waterborne input of nutrients enters the Baltic Sea via transboundary rivers which requires setting nutrient input ceilings for 9 major transboundary rivers, addressing inputs from the whole river catchment areas, separately from the remaining territory of countries. The nutrient input ceilings are:

Tables illustrating Nutrient input ceilings

Action in the catchment has a delayed effect on reduction of nutrient inputs. That is why all necessary nutrient reduction measures will be fully implemented latest [by 2027] in order to be able to demonstrate that national input targets expressed as nutrient input ceilings for each sub-basin have been achieved by [2030].

The input ceilings for nitrogen and phosphorus are based on current scientific knowledge and are subject to uncertainties thus following the precautionary principle, increase of nutrient inputs to a basin is not allowed until both MAI and [good status with respect to eutrophication] have been reached even in basins where nutrient inputs are already below the nutrient input ceilings.

Regular assessments of implementation of the Scheme will be performed - annually for MAI and every 2 years for input ceilings to follow up implementation of regional and national targets for inputs of nutrients based on the most recent monitoring data of riverine nutrient loads, the data on air deposition of nutrients, transboundary loads and national data on inputs from direct point sources including sea-based aquaculture. National monitoring networks will be maintained in up-to-date state and striving for harmonized methods to estimate nutrient inputs from unmonitored areas and to provide timely sufficient and consistent data on nutrient loads to the Baltic Sea (HELCOM Recommendations 37-38/1 and 37-38/2) in order to ensure reliability of the follow-up system.

As reductions in nutrient inputs in sub-basins may have wide-spread effects, extra reduction – reduction of nutrient input below the national nutrient input ceiling for a sub-basin - can be accounted for, in proportion to the effect on a neighboring basin, by the countries in reaching their nutrient input ceilings.

As nutrient inputs from the catchments are of great importance, continuous cooperation with River Basin Management Authorities will be established to ensure that river basin management plans incorporate the nutrient input ceilings set by the HELCOM Baltic Sea Action Plan and, thus, ensure sufficiency of measures undertaken under different policies to achieving the environmental targets of the BSAP. Contracting parties to the Helsinki Convention are encouraged to enhance cooperation with river basin management authorities of non-HELCOM countries to institutionalize cooperation on river basin management through signing official agreements with relevant authorities, to address transboundary waterborne nutrient inputs from non-Contracting Parties according to the HELCOM nutrient input reduction scheme.