
OUTLINE OF SCIENTIFIC CART EVALUATION REPORT PRESSURE 7-2017



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CONTENT OF SCIENTIFIC CART ASSESSMENT

The evaluation of progress towards CART consist of two main products:

- The policy assessment – targeted for policy makers with the main messages
- A scientific CART assessment report, including scientific evaluation of the assessment methods, all the detailed CART assessment results (country pr. basin)

The scientific report will also include:

- A summary of the applied statistical methods, and the results of the evaluation of CART assessment methods
- How the assessment data set was established including description of data validation and data gap filling, handling of transboundary inputs
- It will also include diagrams with all the time series (country per basin etc.), overall presentation of inputs to the Baltic Sea, link to assessment data set etc.



DRAFT OUTLINE

1. Summary

2. Background

3. Methods

- ▶ 3.1 MAI, CART and Nutrient ceilings
- ▶ 3.2 Nutrient input data set
 - › 3.2.1 Filling in gaps
 - › 3.2.2 Normalization of riverine and atmospheric nitrogen deposition
 - › 3.2.3 Transboundary input time-series
 - › 3.2.4 Creating net input time-series
- ▶ 3.3 Trend analysis



▶ **3.4 Assessment methodologies including uncertainty estimation methods**

▶ **3.5 Reallocation of extra reductions**

4. Results

▶ **4.1 Nutrient input time series and trend analysis**

▶ **4.2 Changes in inputs since reference period**

▶ **4.3 Progress towards MAI**

▶ **4.4 Progress towards input ceilings (CART)**

5. Discussion

▶ **5.1 Assessment results including evaluation of changed reference inputs**

▶ **5.2 Evaluation of the assessment methodologies (trend, vs. 3, 5 year average)**

▶ **5.3 Evaluation of uncertainties**



► **5.4 Evaluation of the changed reference inputs**

6. Lessons learned and scientific advise

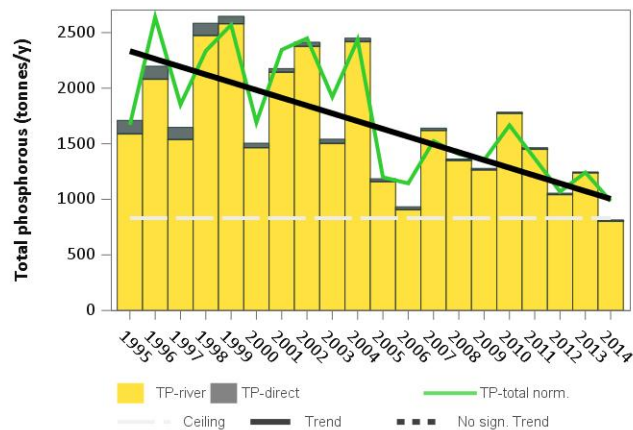
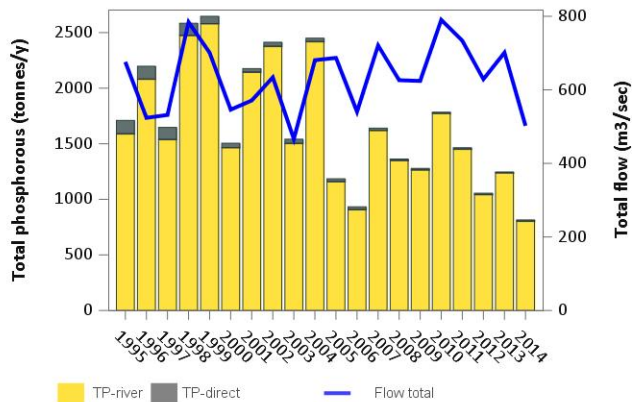
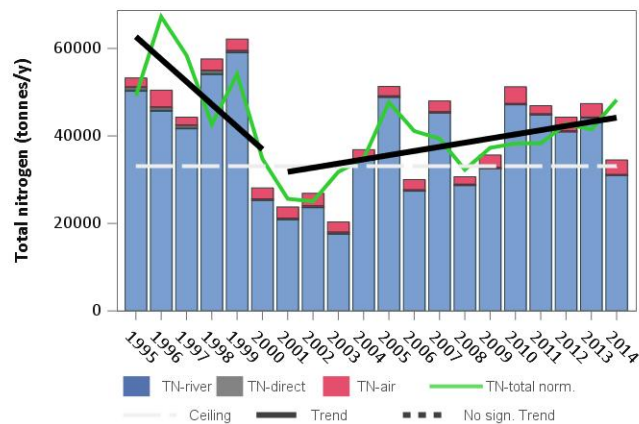
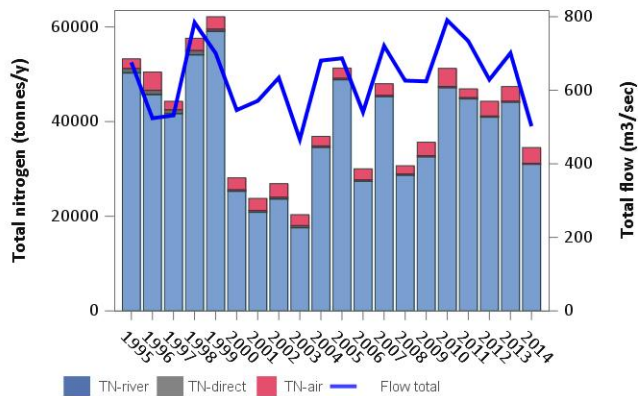
7. References

8. Annexes (including links to detailed assessment results on inputs ceilings, figures and tables country pr. basin, pr. country and pr. basin, overview used methodology by countries etc.)

- some examples on tables and diagrams:



LT - BAP



Sweden TP	BOB	BOS	BAP	GUF	GUR	DS	KAT
A : Input ceiling	826	1125	308			105	740
B: Estimated input 2014	902	812	706			83	679
C: Inputs 2014 including uncertainty (test value)	999	874	724			86	717
Extra reduction (A-C)		252				19	23
Remaining reduction to fulfill MAI	173		416				



Trend - TN

Country/basin	BOB	BOS	BAP	GUF	GUR	DS	KAT
Denmark	↓	↓	↓	↓	↓	↓	↓
Estonia	↓		↓	↓	↓	↓	↓
Finland			↓	↓	↓	↓	↓
Germany	↓	↓	↓	↓	↓	↓	↓
Latvia	↓	↓	↓			↓	↓
Lithuania		↓	↑			↓	↓
Poland	↓	↓	↓	↓	↓	↓	↓
Russia		↓	↑		↓	↓	↓
Sweden	↓	↓	↓	↓	↓	↓	↓
Belarus			↓		↓		
Czech Republic			↓				
Ukraine			↑				
Baltic Sea shipping	↓	↓	↓	↓	↓	↓	↓
Other countries	↓	↓	↓	↓	↓	↓	↓
MAI	↓	↓	↓	↓	↓	↓	↓

CHANGES IN TOTAL NITROGEN INPUTS IN PERCENTAGES SINCE THE REFERENCE PERIOD. RECENT INPUTS ESTIMATED USING 5-YEAR MEAN METHOD. ONLY SIGNIFICANT CHANGES ARE SHOWN. NEGATIVE VALUES INDICATES SIGNIFICANT DECREASE IN INPUTS SINCE THE REFERENCE PERIOD. - = CHANGE NOT SIGNIFICANT.

5 years - TN								
Country/basin	BOB	BOS	BAP	GUF	GUR	DS	KAT	BAS
Denmark	-37	-36	-30	-37	-36	-24	-20	-23
Estonia	-7,5	-	-16	-	-	-9,3	-8,0	-
Finland	-	-	-25	-	-25	-28	-28	-
Germany	-23	-23	-17	-23	-22	-	-18	-16
Latvia	-15	-14	-	-12	-	-16	-16	-
Lithuania	-8,7	-8,3	-	-8,3	27	-8,9	-8,7	-
Poland	-8,7	-8,7	-14	-8,7	-8,6	-8,7	-8,7	-14
Russia	-	-	10	-	-21	-	-	-
Sweden	-18	-12	-18	-26	-24	-	-21	-17
Belarus	-	-	-	-	-24	-	-	-17
Czech Republic	-	-	-	-	-	-	-	-
Ukraine	-	-	103	-	-	-	-	103
Baltic Sea shipping	-5,7	-5,7	-5,7	-5,7	-5,7	-5,7	-5,7	-5,7
Other countries	-8,7	-8,4	-7,5	-7,4	-6,3	-6,9	-6,9	-
BAS	-8,3	-13	-12	-	-	-18	-21	-12



TP	Change 1995- 2014	Change ref.-2012- 14	Change ref.-2010- 14	Change ref_T2014
BP	-27	-	-13	-
BB	-	-	-	-
BS	-21	-	-	-12
DS	-20	-	-	-8,3
GF	-38	-51	-37	-49
GR	-	-	-	-
KT	-18	-	-10	-8,5
BAS	-24	-19	-17	-13

TP	Change 1995- 2014	Change ref.-2012- 14	Change ref.-2010- 14	Change ref_T20 14
By	21	-	-	-
CZ	-45	-22	-28	-22
DE	-21	-14	-	-16
DK	-20	-	-8,6	-7,1
EE	-38	-39	-30	-51
EU	-	-	-	-
FI	-14	-	-	-12
LT	-58	-51	-45	-56
LV	-	-	-	-
OC	-	0	0	-
PL	-28	-	-	9
RU	-40	-49	-35	-46
SE	-21	-	-	-14
SS	-	-	-	-
UA	-2477	-	259	453



This is only a
section

of a huge
annex

		TN	TN	TN	TN	TP	TP	TP	TP
		Change	Change	Change	Change	Change	Change	Change	Change
		1995-	ref.-	2010-	ref.-	1995-	2012-	2010-	ref_T2014
		2014	2012-14	14	ref_T2	2014	14	14	ref_T2014
BY	BP	-	-	-	-16	-	-	-9	-
BY	BB	-	-	-	-	-	-	-	-
BY	SS	-	-	-	-	-	-	-	-
BY	DS	-	-	-	-	-	-	-	-
BY	GF	-	-	-	-	-	-	-	-
BY	GR	-36	-22	-24	-24	82	37	35	47
BY	KT	-	-	-	-	-	-	-	-
CZ	BP	-	-	-	-	-45	-22	-28	-22
CZ	BB	-	-	-	-	-	-	-	-
CZ	BS	-	-	-	-	-	-	-	-
CZ	DS	-	-	-	-	-	-	-	-
CZ	GF	-	-	-	-	-	-	-	-
CZ	GR	-	-	-	-	-	-	-	-
CZ	KT	-	-	-	-	-	-	-	-
DE	BP	-24	-19	-17	-20	-22	-	-	-8,6
DE	BB	-35	-24	-23	-23	-	-	-	-
DE	BS	-35	-23	-23	-22	-	-	-	-
DE	DS	-25	-21	-	-23	-20	-15	-	-22
DE	GF	-35	-23	-23	-22	-	-	-	-
DE	GR	-34	-23	-22	-21	-	-	-	-
DE	KT	-29	-18	-18	-16	-	-	-	-
DK	BP	-43	-31	-30	-33	-28	-15	-12	-12
DK	BB	-50	-40	-37	-43	-	-	-	-
DK	BS	-49	-39	-36	-42	-	-	-	-
DK	DS	-38	-22	-24	-20	-18	-	-	-4,8
DK	GF	-50	-40	-37	-42	-	-	-	-



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