



## Revision of maximum allowable nitrogen inputs applicable for the Danish River Basin Management Plan 2021-2027 (RBMP3): A follow-up on the international evaluation

Timmermann, Karen; Nielsen, Sophia E. B.; Christensen, Jesper; Erichsen, Anders

Link to article, DOI:  
[10.11581/DTU.00000359](https://doi.org/10.11581/DTU.00000359)

Publication date:  
2024

Document Version  
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

*Citation (APA):*  
Timmermann, K., Nielsen, S. E. B., Christensen, J., & Erichsen, A. (2024). *Revision of maximum allowable nitrogen inputs applicable for the Danish River Basin Management Plan 2021-2027 (RBMP3): A follow-up on the international evaluation*. DTU Aqua. DTU Aqua-rapport No. 467-2024 <https://doi.org/10.11581/DTU.00000359>

---

### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

# Revision of maximum allowable nitrogen inputs applicable for the Danish River Basin Management Plan 2021-2027: A follow-up on the international evaluation

Karen Timmermann, Sophia E.B. Nielsen, Jesper Christensen, and Anders Erichsen

DTU Aqua Report no. 467-2024





# Revision of maximum allowable nitrogen inputs applicable for the Danish River Basin Management Plan 2021-2027: A follow-up on the international evaluation

Karen Timmermann<sup>1</sup>, Sophia E.B. Nielsen<sup>2</sup>, Jesper Christensen<sup>3</sup>, and Anders Erichsen<sup>2</sup>

<sup>1</sup> DTU Aqua, Technical University of Denmark

<sup>2</sup> DHI A/S

<sup>3</sup> Department of Ecoscience, Aarhus University

DTU Aqua Report no. 467-2024

## Colophon

|                      |                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title:               | Revision of maximum allowable nitrogen inputs applicable for the Danish River Basin Management Plan 2021-2027: A follow-up on the international evaluation                                                                                                                                                                                                            |
| Authors:             | Karen Timmermann <sup>1</sup> , Sophia E.B. Nielsen <sup>2</sup> , Jesper Christensen <sup>3</sup> , and Anders Erichsen <sup>2</sup><br><sup>1</sup> DTU Aqua, Technical University of Denmark<br><sup>2</sup> DHI A/S<br><sup>3</sup> Department of Ecoscience, Aarhus University                                                                                   |
| DTU Aqua Report no.: | 467-2024                                                                                                                                                                                                                                                                                                                                                              |
| Year:                | September 2024                                                                                                                                                                                                                                                                                                                                                        |
| Reference:           | Timmermann, K., Nielsen, S.E.B, Christensen, J. & Erichsen, A. (2024). Revision of maximum allowable nitrogen inputs applicable for the Danish River Basin Management Plan 2021-2027: A follow-up on the international evaluation. DTU Aqua. DTU Aqua Rapport no. 467-2024. <a href="https://doi.org/10.11581/DTU.00000359">https://doi.org/10.11581/DTU.00000359</a> |
| Quality assurance:   | Anja Skjoldborg Hansen (DCE), Jens Kjerulf Petersen (DTU Aqua)                                                                                                                                                                                                                                                                                                        |
| Cover photo:         | By Peter Bondo                                                                                                                                                                                                                                                                                                                                                        |
| Published by:        | National Institute of Aquatic Resources, Technical University of Denmark, Henrik Dams Allé, 2800 Kgs. Lyngby, Denmark                                                                                                                                                                                                                                                 |
| Download:            | <a href="http://www.aqua.dtu.dk/publikationer">www.aqua.dtu.dk/publikationer</a>                                                                                                                                                                                                                                                                                      |
| ISSN:                | 1395-8216                                                                                                                                                                                                                                                                                                                                                             |
| ISBN:                | 978-87-7481-407-8                                                                                                                                                                                                                                                                                                                                                     |

**DTU Aqua Reports** contain results from research projects, reviews of specific topics, expositions for authorities etc. Unless stated in the colophon, the reports are not peer reviewed, which means that the content has not been reviewed by researchers outside the project group.

# Preface

This report constitutes a follow-up to the International Evaluation of the Scientific and Legal Basis for Nitrogen Reduction in the 3<sup>rd</sup> Danish River Basin Management Plan (RBMP3), which was finalised in October 2023. Two of the issues identified by the international evaluation panel included 1) the use of Chl-a target values in open intercalibrated water bodies and 2) the applicability of eelgrass depth limit in shallow water bodies leading to alternative methods for estimating Maximum Allowable nutrient Inputs (MAI) to Danish coastal waters. In addition, the methods for estimating riverine nutrient inputs to coastal waters have been revised, resulting in updated data for nitrogen loadings. In this report we assess the implications of updates for the MAI estimations and revise the MAI estimations used for the RBMP3 taking into account the scientific updates and alternative solutions resulting from the international evaluation.

This report is financially supported by the Danish Environmental Protection Agency (DEPA) under the project “Second opinion phase III, strengthen model foundation”. While DEPA has commented a previous draft of the report, the content and recommendations are the sole responsibility of the authors.

# Content

|                                                                             |    |
|-----------------------------------------------------------------------------|----|
| Content.....                                                                | 4  |
| 1. Introduction .....                                                       | 5  |
| 2. Assessing suggested updates on N-MAIs .....                              | 7  |
| 2.1 Updated nitrogen loadings .....                                         | 7  |
| 2.2 Revised Chl-a targets in open intercalibrated water bodies .....        | 7  |
| 2.3 Rooted vegetation in shallow water bodies .....                         | 8  |
| 3. Re-calculating N-MAIs .....                                              | 9  |
| 3.1 The current RBMP3 and assumptions regarding “other countries” .....     | 9  |
| 3.2 Updating nitrogen loadings .....                                        | 12 |
| 3.3 Changing Chl-a target values in open intercalibrated water bodies ..... | 13 |
| 3.4 Updated N-MAI scenarios .....                                           | 14 |
| 3.5 Closing remarks .....                                                   | 32 |
| Cited litterature .....                                                     | 33 |
| Appendix A: Scenario 1 results .....                                        | 34 |
| Appendix B: Scenario 2 results .....                                        | 64 |

# 1. Introduction

Between 2016 and 2020, collaborative efforts by Aarhus University (AU), Technical University of Denmark (DTU), and DHI A/S (DHI) resulted in the development of models and methodologies used for determining the maximum nitrogen inputs allowing Danish coastal waters to achieve “good ecological status” (GES), as mandated by the Water Framework Directive (WFD). These models and methods subsequently constituted the pivotal foundation for the 3rd Danish River Basin Management Plan (RBMP3) for coastal waters, scheduled for implementation between 2021 and 2027.

As part of the political agreement “The Agriculture Package,” adopted in October 2021, it was decided to conduct an international evaluation of the models and methods underpinning the RBMP3. This evaluation, involving foreign research institutions, sought to scrutinize assumptions, prerequisites, or choices that could impact the calculation of remaining nitrogen effort within the legal and scientific framework of the WFD. The outcomes of this evaluation, completed in October 2023 (Hermann et al., 2023), hold potential significance for the revisit of The Agricultural Package scheduled for 2024.

One of the key issues identified by the panel was a divergence between the Chl-a good-moderate (G/M) boundary values used in the RBMP3 and the intercalibrated Chl-a G/M boundary values in the open waters of the Western Baltic Sea. More specifically, the panel states that “...G/M boundaries for the intercalibrated water bodies in the Baltic realm have been lowered significantly compared to the Commission approved intercalibration results” and the panel recommends “...to ensure that the comparability with the intercalibrated standards is not affected...”. The panel acknowledges the improved scientific background for the updated G/M boundaries but highlights the discrepancies with the intercalibrated values, hence they suggest to apply intercalibrated values until a potential new intercalibration has been carried out.

The issue with chl-a targets in open intercalibrated water bodies have been addressed in the report “Adjustment of chlorophyll-a targets in open intercalibrated water bodies” (Timmermann et al., 2024) where alternative solutions were identified including a solution where Chl-a targets for a selection of open coastal waters were refitted to the intercalibrated Chl-a-targets from the latest EU commission decision (EU Comm 2018) on intercalibration where used for water bodies where intercalibrated Chl-a target values exist.

Also, during the international evaluation, stakeholders pinpointed the fact that the G/M boundary for eelgrass depth limit in few shallow water bodies is deeper than the maximum water depth. Altogether, 11 water bodies are shallower than the eelgrass depth limit at G/M boundary, and 17 water bodies are shallower than the reference depth limit. Although the International evaluation panel acknowledge the scientific reasoning for the use of eelgrass depth limit in shallow waters, the Panel believes that in specific situations this creates unnecessary complications and in practice changes the Maximum Allowable Input of Nitrogen (N-MAI) in only a few very shallow water bodies, why they suggest using G/M boundary depth limits for rooted angio-sperms that are truncated at the maximum water depth, both in the environmental status assessment and in the model calculations of N-MAI. The issue with the eelgrass indicator in shallow water bodies



was addressed in the report “Applicability of the WFD indicator “Angiosperm depth limit” in shallow water bodies” (Christensen et al., 2024)

The aim of this report is to:

- 1) Assess to what extent updates to the scientific basis for the RBMP3 will affect the N-MAI to Danish coastal waters. This specifically include assessment of the results from projects on 'Adjustment of environmental targets for chlorophyll-a in open intercalibrated coastal waters' and 'Follow-up on recommendations regarding the use of the indicator for rooted benthic plants in shallow coastal waters' as well as the updated results on nitrogen loadings to Danish coastal waters.
- 2) Estimate updated N-MAIs based on the assessment results from 1) to be used for a revisit of the RBMP3.

## 2. Assessing suggested updates on N-MAIs

### 2.1 Updated nitrogen loadings

The methods for calculating nutrient loadings (N and P) for Danish coastal waters have recently been updated by Aarhus University resulting in revised N load estimates as well as revised P and freshwater (Q) estimates compared to RBMP3. Although the total N-load from all Danish catchments are almost similar in the updated version compared to the estimated load used for RBMP3 (RBMP3-load), there are significant differences for some individual water body catchments. The total N-load from all DK catchments amount to 58,537 tons N/year in the updated version whereas the Danish load used in RBMP3 was 58,100 tons N/year – a difference of less than 1%. For the individual water body catchments, differences between the updated load and RBMP3-load of up to 50% were observed, however, for most water bodies (within the 20 and 80 percentile), N-load changed between -11% (20% percentile) and 8% (80%percentile).

The changes in N-load estimates have direct consequences for the N-MAI calculations mainly as N-MAI is calculated as a percentage reduction requirement relative to the current N load. We have noted that the Panel has raised concerns about the appropriateness of making continuous updates to nutrient input data during the later stages of the project phase.

*“The Panel advises to incorporate all new scientific insights and close scrutiny of data into updates of the plans in later phases, but to do that in an ordered way. Building consensus on the quality and consistency of the data bases underlying such new calculations is an important prerequisite that should receive sufficient attention before any revision of calculations and conclusions are prepared in such a next phase. Once the database is established, it should remain fixed for the duration of the RBMP-phase any new insights being accumulated into a next revision”* (Hermann et al 2023).

We want to emphasize that we have taken this feedback seriously and are committed to adhering to the panel’s recommendations in the future as this approach will increase robustness and help avoid continuous adjustments that could muddy the communication of the results and the main conclusions of the RBMP advisory work.

### 2.2 Revised Chl-a targets in open intercalibrated water bodies

The Chlorophyll-a targets established as part of RBMP3 is based on revised calculations of water body specific reference values (Timmermann et al. 2024) in combination with intercalibrated EQR G-M boundaries stated in the EU Commission decision (EU comm 2018). The models and methods used to establish chlorophyll-a reference conditions for RBMP3 have been improved significantly and the resulting reference conditions now consider the characteristics of each water body.

Due to the redefining of reference conditions from RBMP2 to RBMP3 inconsistencies between RBMP3 Chl-a boundaries and intercalibrated Chl-a boundaries in NEA8b and BC6 (intercalibration with Sweden) have emerged. For BC8, no inconsistencies between RBMP3 and the latest intercalibration decision have been detected as only EQR boundaries and not Chl-a boundaries are included in the EU Commission decision (EU Comm 2018).

Although the international panel acknowledges the improved scientific foundation of Chl-a boundaries (Hermann et al., p18) the panel recommends aligning G/M boundary values for Chl-a in open water bodies to the intercalibrated values as much as possible (Hermann et al., 2023 p. 18).

As described in Timmermann et al., 2024, we recommend the following approach:

- 1) Use the Chl-a reference and G-M boundaries from RBMP3 as these are estimated based on improved models and methods using intercalibrated EQR values
- 2) Initiate a re-intercalibration process with Sweden (NEA8b, BC6) and Germany (BC8) to establish an improved and updated common basis for determining reference conditions, EQR boundaries and Chl-a boundaries for the common water body types
- 3) As a temporary solution to accommodate the recommendation from the international panel, it is suggested to use EQR boundaries and Chl-a boundaries from the EU intercalibration decision (EU Comm 2018) for open coastal water bodies that were part of the intercalibration with Sweden (NEA8b, BC6, see fig. 3.1) and maintain the EQR intercalibrated with Germany for BC8. This implies revision of Chl-a G-M boundaries in 12 open water bodies. As the intercalibrated G-M boundary values are higher than the updated values used in RBMP3, this revision results in similar or higher MAIs compared to RBMP3.

In the present report MAIs will be calculated for two scenarios using either 1) RBMP3 Chl-a G-M boundaries values or 2) Revised (increased) Chl-a G-M boundary values for 12 water bodies whereas G-M values for the remaining water bodies is as in RBMP3. Both scenarios will be using updated nutrient loadings.

### **2.3 Rooted vegetation in shallow water bodies**

The international evaluation panel has highlighted an issue with the existing indicator for the biological quality element “eelgrass and other angiosperms” in shallow water bodies. The problem is that eelgrass and other angiosperms are currently assessed on the light-limited depth distribution which is not fully applicable in the shallowest water bodies. The indicator cannot be classified when the light-limited depth distribution exceeds the maximum water depth. This may prevent status classification in the highest classes for the biological quality element in a few water bodies (not currently relevant for any of the shallow water bodies). In Christensen et al (2024) it is recommended maintaining the existing depth limits in the status assessment, including shallow areas, because the reference condition used to set boundary thresholds is an indirect expression of the water clarity in a reference state.

It is recommended that a new angiosperm indicator for shallow areas is developed for future river basin management plans (Christensen et al., 2024). For the revised RBMP3 it is recommended to use the supporting element “water clarity” to classify environmental status and calculate N-MAIs. This practice will not affect N-MAIs compared to RBMP3.

## 3. Re-calculating N-MAIs

### 3.1 The current RBMP3 and assumptions regarding “other countries”

As part of the scientific model developments behind RBMP3 a number of management scenarios were carried out to assess the sensitivity to a wide range of assumptions targeting N- and P-reductions in neighboring countries.

The various scenarios are described in Erichsen et al. (2020a) and relates to assumptions regarding land-based nutrient inputs from other countries and nutrient inputs from the atmosphere and covers preconditions for the Danish land-based N-MAI calculations. The preconditions are grouped into three management scenarios and one scenario related to the interpretation of the Water Framework Directive (WFD-scenario). The current RBMP3 is based on a combination of scenario 2d (updated nutrient reduction targets from Baltic Sea Action Plan) and 2e-30% (additional 30% reduction in P to the Wadden Sea), which is among the scenarios resulting in the highest N-MAI for Danish catchments (Erichsen et al, 2021a). The suite of scenarios behind RBMP3 are briefly described below.

#### 3.1.1 Management Scenario 1 – Regional Treaties and RBMP 2015-2021

Management scenario 1 assumes that all national and international adopted treaties related to nutrient management, including RBMP 2015-2021, have been implemented. This corresponds to:

- Full implementation of the Baltic Sea Action Plan (BSAP) (HELCOM) and similar reduction targets in the North Sea (OSPAR)
- Implementation of RBMP 2015-2021 in all relevant EU countries
- Full implementation of the NEC-directive with respect to atmospheric N-deposition.

#### 3.1.2 Management Scenario 2 - Land-based Nutrient Scenarios

The second group of scenarios encompasses alternative assumptions regarding land-based loadings from neighboring countries that are not based on adopted treaties. The assumptions include:

For the five sub-scenarios (a-e) described below, the atmospheric deposition is kept as described in management scenario 1, i.e. full implementation of the NEC-directive concerning atmospheric N-deposition.

- a. Neighboring countries are assumed to have had the same percentage of nutrient reduction as Denmark when Danish land-based N-MAIs are reached. The reduction percentage is relative to the basis period 1997-2001
- b. Neighboring countries are assumed to have the same area-specific anthropogenic loadings (kg/ha) as Denmark when Danish N-MAIs are reached
- c. Loadings from neighboring countries are unchanged compared to the present-day loadings (2014-2018)
- d. Danish land-based N-MAIs assuming updated BSAP targets. A new set of targets is being developed in HELCOM and will be adopted by the end of 2021.

- e. Additional Wadden Sea P-reductions (20% or 30% additional TP-reductions to the Wadden Sea)

### 3.1.3 Management Scenario 3 - Atmospheric N Scenarios

The third group of scenarios encompasses assumptions for the atmospheric N-depositions originating from emissions in Denmark and surrounding countries. These assumptions are:

- a. Danish land-based N-MAIs correspond to 2027 NEC-prognosis. Both Danish and international N-depositions are based on the prognosis of the NEC-implementation instead of the full implementation.
- b. Danish land-based N-MAIs assuming synergy impacts from climate actions. As Denmark and other countries work to minimise climate changes, some synergies are expected to impact N-depositions as well.

For the above two sub-scenarios, the land-based nutrient loadings will be kept as described in management scenario 1, i.e. adopted treaties (BSAP and RBMP 2015-2021) have been implemented (see Erichsen *et al.* (2020a) for details).

### 3.1.4 WFD-Scenarios

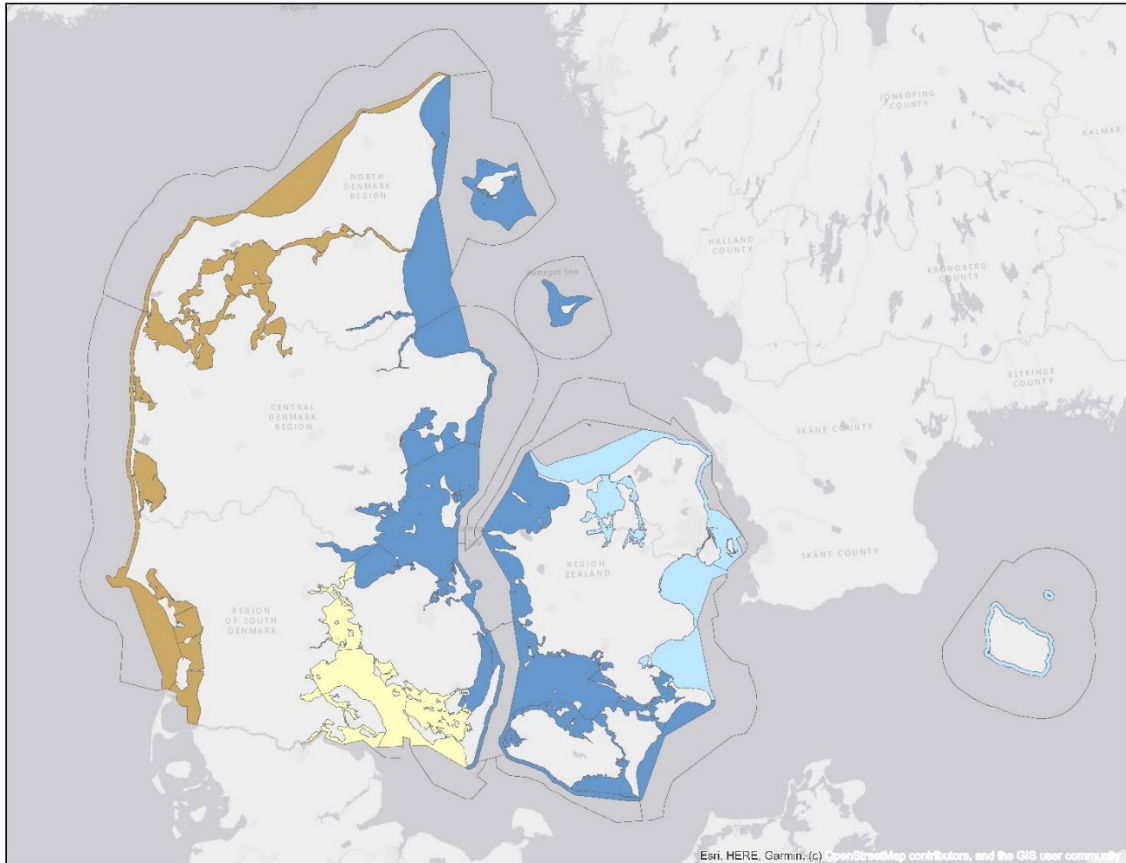
In addition to the overall management scenarios three WFD-scenarios were carried out to test the implications of increasing the likelihood of achieving GES. These WFD-scenarios encompass:

- a. Increasing the likelihood of achieving GES by changing the indicator target values from the good-moderate boundary to a target value between good and high status.
- b. One-out-all-out principles. This approach will use average model results per indicator but include the lowest MAI between the two indicators.
- c. MAI calculations are performed without taking the system contribution into account.

### 3.1.5 RBMP3 scenario

Based on the above-described management scenarios, the Danish Environmental Protection Agency (DEPA) combined scenarios to develop the N-MAIs to be implemented as the final RBMP3. Hence, the N-MAIs were developed as a combination between scenario 2d and 2e (30% additional TP-reductions to the Wadden Sea), described above.

The distributions of reductions applied for neighboring countries are shown in Figure 3.1, whereas the reductions applied are included in Table 3.1



**Figure 3.1. Distribution of reductions applied in the different management scenarios.**

Nutrient reductions resulting from the German implementation of the RBMP (2015-2021) to the North Sea and Baltic Sea are applied in water bodies marked with brown and yellow, respectively. Nutrient reductions resulting from the implementation of the BSAP to the Baltic Proper (BAP) and Danish Straits (DS) are applied to water bodies marked in light blue. In dark blue areas, BSAP reductions to BAP and DS are applied after taking into account the effect of transport processes accounted for by the HELCOM (2020) allocation scheme.

**Table 3.1. Overview of input data used to construct management scenario 2e (30% P-reductions) for reductions of non-Danish nutrient loadings. These input data represent assumed reductions of non-Danish nutrient loadings corresponding to Management scenario 2e. Acronyms used are: Baltic Sea Action Plan (BSAP), Danish Straits (DS), Baltic Proper (BAP), River Basin Management Plan (RBMP) and National Emission reduction Commitments (NEC).**

| Danish water areas affected                                    | N load reduction in management scenario 2e. Reductions are in % of current (2014-2018) load | P load reduction applied in management scenario 2e. Reductions are in % of current (2014-2018) load | Adopted treaties                                               |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Western Baltic Sea (light blue area, Fig. 3.1)                 | 12%                                                                                         | 27%                                                                                                 | Effect of BSAP to DS and BAP.                                  |
| Great Belt and Kattegat (dark blue area, Fig. 3.1)             | 35%                                                                                         | 27%                                                                                                 | Effect of BSAP and German RBMP, using HELCOM allocation scheme |
| Southern Little Belt (yellow area, , Fig. 3.1)                 | 44%                                                                                         | 27%                                                                                                 | Effect of German RBMP (2015-2021)                              |
| North Sea water bodies and Limfjorden (brown area, , Fig. 3.1) | 31%                                                                                         | 30%                                                                                                 | Effect of German RBMP (2015-2021)                              |
| Atmospheric deposition, all Danish water bodies                | 16%                                                                                         | 0%                                                                                                  | NEC directive                                                  |

### 3.2 Updating nitrogen loadings

Since the developments of methods and models behind RBMP3 – and hence, the methods and models being internationally evaluated – AU has released a new method/model for estimating the annual land-based N- and P-loads from Danish catchments.

Hence, this influences the background data behind the model developments and has implications on the status N- and P-loads as well as the N-MAIs estimated based on the developed models (mechanistic and statistical models). However, updates of the loadings are assumed not to impact the model sensitivity to changes in N-loads, why the model estimated slopes used to calculate MAIs remain unchanged. As the water body status assessment is based on measured data, we maintain model sensitivity (dose-response) to both N- and P-reductions and estimate the updated N-MAIs by applying the already estimated needs for reductions as described in e.g., Erichsen et al. (2020b).

The status loads and N-MAIs will therefore differ from the absolute values reported in e.g., Erichsen et al. (2020b), but the need for reduction (in % reductions) remains unchanged.

### 3.3 Changing Chl-a target values in open intercalibrated water bodies

As described in Timmermann et al., 2024 the update in Chl-a targets to match the intercalibrated values between Denmark and Germany, as suggested by the international panel of experts, relates to 8 NEA8b water bodies, 4 BC6 water bodies and 7 NEA1/26c water bodies, see Figure 3.2.

In addition, a number of BC8 areas are shown in Figure 3.2, but here the intercalibration alone relates to the EQR values, which were used in e.g., Erichsen et al. (2020a-c), why no changes in G/M nominal boundary values nor EQR values are implemented in this report. The intercalibrated Chl-a target values in the various GIG regions are included in Table 3.2.

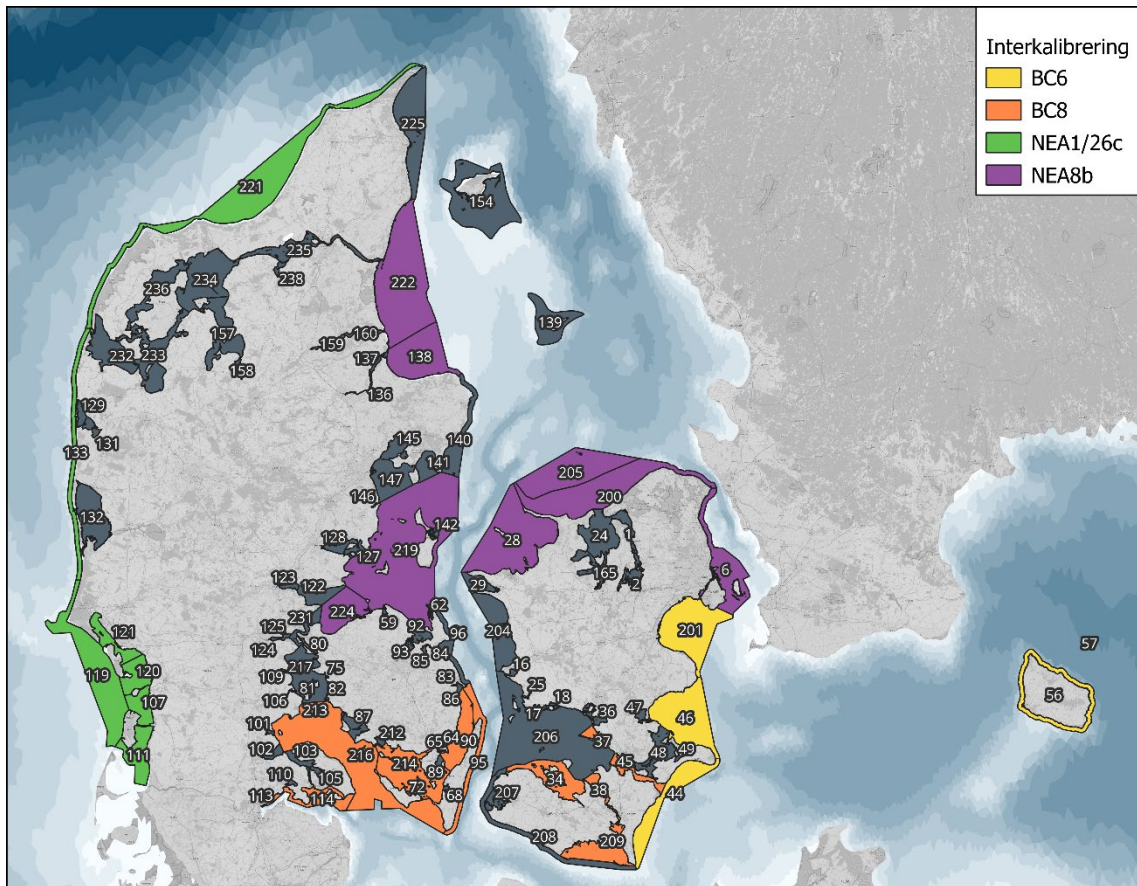


Figure 3.2. Intercalibrated waters between Denmark and Sweden (BC6 and NEA8b) and between Denmark and Germany (BC8 and NEA1/26c).

Table 3.2. Intercalibrated Chl-a G/M boundary values (EU Comm 2018).

| GIG               | G/M boundary value                  |
|-------------------|-------------------------------------|
| BC6               | 1.72 µg/l                           |
| BC8               | No intercalibrated Chl-a boundaries |
| NEA1/26C          | 7.5 µg/l                            |
| NEA8b             | 1.58 µg/l                           |
| NEA8b – The Sound | 1.63 µg/l                           |



## **3.4 Updated N-MAI scenarios**

### **3.4.1 Scenario 1: Updated TN loads to Danish catchments**

Based on the combined RBMP3 scenario 2d and 2e described in section 3.1.5 (implementation of the updated Baltic Sea Action Plan, German nutrient reductions according to RBMP 2015-2021, reductions in atmospheric N deposition according to the NEC directive and 30% additional P reduction for the Wadden Sea) the different reduction requirements and corresponding MAIs are calculated using the updated nitrogen loadings (version 2023) as status N load (2014-2018) for each water body catchment.

The different reduction requirements (%-wise and in actual tons) based on the different indicators and different models are included in Appendix A, whereas the aggregated MAIs are reported in Table 3.3.

**Table 3.3. Scenario 1 results showing the Maximum Allowable Nitrogen Inputs (N-MAIs) for Danish water bodies given the implementation of the updated Baltic Sea Action Plan, German nutrient reductions according to WFD and reductions in atmospheric N deposition according to the NEC directive. The N-MAIs are calculated using updated (version 2023) nitrogen loadings as status N load (2014-2018) for each catchment and the same environmental indicator target values as in RBMP3. The table shows N-MAIs in tons N per year, where 'main' denote main-catchment and 'sub' denote sub-catchments being part of a main-catchment. The table show status loads as well as N-MAIs calculated for 5 different phosphorus reduction scenarios designated P0, P10, P20, P30 and P50, where phosphorus loadings from Danish catchments are reduced by 0%, 10%, 20%, 30% and 50%, respectively. The column 'aggregated' denotes sub-catchments included in specific MAIs.**

| WB no | WB name               | Aggregation | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P20 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|-----------------------|-------------|------------------------------------|------|-------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|
|       |                       |             | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  |
| 1     | Roskilde-Fjordydre    | 1,2         |                                    | 853  |                         | 613  |                          | 615  |                          | 617  |                          | 619  |                          | 623  |
| 2     | Roskilde-Fjordindre   | 2           |                                    | 434  |                         | 425  |                          | 426  |                          | 427  |                          | 428  |                          | 430  |
| 6     | NordligeOeresund      | 6           | 1149                               |      | 1149                    |      | 1149                     |      | 1149                     |      | 1149                     |      | 1149                     |      |
| 16    | KorsoerNor            | 16          |                                    | 32   |                         | 24   |                          | 24   |                          | 25   |                          | 25   |                          | 26   |
| 17    | BasnaesNor            | 17          |                                    | 70   |                         | 52   |                          | 52   |                          | 52   |                          | 52   |                          | 52   |
| 18    | HolsteinborgNor       | 18          |                                    | 26   |                         | 26   |                          | 26   |                          | 26   |                          | 26   |                          | 26   |
| 24    | Isefjordydre          | 24,165      |                                    | 1079 |                         | 688  |                          | 688  |                          | 688  |                          | 688  |                          | 688  |
| 25    | Skaelskoer-FjordogNor | 25          |                                    | 40   |                         | 33   |                          | 34   |                          | 34   |                          | 35   |                          | 37   |
| 28    | SejeroeBugt           | 28          | 198                                |      | 198                     |      | 198                      |      | 198                      |      | 198                      |      | 198                      |      |
| 29    | Kalundborg-Fjord      | 29          | 84                                 |      | 48                      |      | 50                       |      | 53                       |      | 57                       |      | 64                       |      |
| 34    | Smaalandsfarvandetsyd | 34          | 543                                |      | 543                     |      | 543                      |      | 543                      |      | 543                      |      | 543                      |      |
| 35    | KarrebaekFjord        | 35          |                                    | 1268 |                         | 1003 |                          | 1033 |                          | 1061 |                          | 1088 |                          | 1140 |
| 36    | DybsoeFjord           | 36          |                                    | 59   |                         | 59   |                          | 59   |                          | 59   |                          | 59   |                          | 59   |
| 37    | AvnoeFjord            | 37          |                                    | 234  |                         | 182  |                          | 185  |                          | 187  |                          | 189  |                          | 194  |

| WB no | WB name                  | Aggregation | TN status Load v2023 [tons N/year] |     | N-MAI, P0 [tons N/year] |     | N-MAI, P10 [tons N/year] |     | N-MAI, P020 [tons N/year] |     | N-MAI, P30 [tons N/year] |     | N-MAI, P50 [tons N/year] |     |
|-------|--------------------------|-------------|------------------------------------|-----|-------------------------|-----|--------------------------|-----|---------------------------|-----|--------------------------|-----|--------------------------|-----|
|       |                          |             | Main                               | Sub | Main                    | Sub | Main                     | Sub | Main                      | Sub | Main                     | Sub | Main                     | Sub |
| 38    | Guldborgsund             | 38          | 374                                |     | 374                     |     | 374                      |     | 374                       |     | 374                      |     | 374                      |     |
| 44    | HjelmBugt                | 44          | 87                                 |     | 87                      |     | 87                       |     | 87                        |     | 87                       |     | 87                       |     |
| 45    | Groensund                | 45          | 298                                |     | 224                     |     | 224                      |     | 224                       |     | 224                      |     | 224                      |     |
| 46    | FakseBugt                | 46,47       | 589                                |     | 509                     |     | 512                      |     | 516                       |     | 520                      |     | 528                      |     |
| 47    | PraestoeFjord            | 47          |                                    | 232 |                         | 151 |                          | 155 |                           | 159 |                          | 163 |                          | 171 |
| 48    | StegeBugt                | 48,49       | 298                                |     | 287                     |     | 288                      |     | 288                       |     | 288                      |     | 288                      |     |
| 49    | StegeNor                 | 49          |                                    | 29  |                         | 18  |                          | 19  |                           | 19  |                          | 19  |                          | 19  |
| 56    | Oestersoeen-Bornholm     | 56          | 939                                |     | 561                     |     | 561                      |     | 561                       |     | 561                      |     | 561                      |     |
| 57    | Oester-soeenChristiansoe | 57          | 4                                  |     | 2                       |     | 2                        |     | 2                         |     | 2                        |     | 2                        |     |
| 59    | NaeraaStrand             | 59          |                                    | 93  |                         | 22  |                          | 24  |                           | 33  |                          | 41  |                          | 60  |
| 62    | Lillestrand              | 62          |                                    | 9   |                         | 5   |                          | 5   |                           | 5   |                          | 5   |                          | 6   |
| 68    | LindelseNor              | 68          |                                    | 41  |                         | 41  |                          | 41  |                           | 41  |                          | 41  |                          | 41  |
| 72    | Kloeven                  | 72          |                                    | 28  |                         | 28  |                          | 28  |                           | 28  |                          | 28  |                          | 28  |
| 74    | Bredningen               | 74          |                                    | 130 |                         | 45  |                          | 50  |                           | 56  |                          | 61  |                          | 73  |
| 80    | GamborgFjord             | 80          |                                    | 83  |                         | 76  |                          | 76  |                           | 76  |                          | 76  |                          | 76  |
| 82    | AborgMindeNor            | 82          |                                    | 140 |                         | 34  |                          | 34  |                           | 34  |                          | 36  |                          | 62  |
| 83    | HolckenhavnFjord         | 83          |                                    | 284 |                         | 100 |                          | 108 |                           | 119 |                          | 130 |                          | 153 |
| 84    | KertemindeFjord          | 84,85       |                                    | 43  |                         | 35  |                          | 35  |                           | 35  |                          | 35  |                          | 35  |
| 85    | KertingeNor              | 85          |                                    | 21  |                         | 18  |                          | 19  |                           | 19  |                          | 19  |                          | 19  |
| 86    | NyborgFjord              | 83,86       |                                    | 305 |                         | 121 |                          | 129 |                           | 140 |                          | 151 |                          | 174 |
| 87    | HelnaesBugt              | 87          |                                    | 186 |                         | 127 |                          | 127 |                           | 127 |                          | 127 |                          | 127 |

| WB no | WB name                 | Aggregation | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P20 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|-------------------------|-------------|------------------------------------|------|-------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|
|       |                         |             | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  |
| 89    | Lunkebugten             | 89          |                                    | 18   |                         | 12   |                          | 12   |                          | 12   |                          | 12   |                          | 12   |
| 90    | Langelands-sund         | 83,86,89,90 | 737                                |      | 546                     |      | 554                      |      | 565                      |      | 577                      |      | 600                      |      |
| 92    | Odense-Fjordydre        | 92,93       |                                    | 1282 |                         | 798  |                          | 813  |                          | 830  |                          | 847  |                          | 881  |
| 93    | OdenseFjord-SedenStrand | 93          |                                    | 1220 |                         | 736  |                          | 752  |                          | 768  |                          | 785  |                          | 819  |
| 95    | StorebaeltSV            | 95          | 141                                |      | 91                      |      | 91                       |      | 91                       |      | 91                       |      | 91                       |      |
| 96    | StorebaeltNV            | 96, 84, 85  | 199                                |      | 118                     |      | 118                      |      | 118                      |      | 118                      |      | 118                      |      |
| 101   | GennerBugt              | 101         |                                    | 42   |                         | 21   |                          | 21   |                          | 21   |                          | 21   |                          | 21   |
| 102   | AabenraaFjord           | 102         |                                    | 126  |                         | 69   |                          | 69   |                          | 69   |                          | 69   |                          | 69   |
| 103   | AlsFjord                | 103,104,105 |                                    | 290  |                         | 181  |                          | 181  |                          | 181  |                          | 181  |                          | 181  |
| 104   | AlsSund                 | 104         |                                    | 65   |                         | 65   |                          | 65   |                          | 65   |                          | 65   |                          | 65   |
| 105   | Augustenborg-Fjord      | 105         |                                    | 85   |                         | 85   |                          | 85   |                          | 85   |                          | 85   |                          | 85   |
| 106   | Haderslev-Fjord         | 106         |                                    | 200  |                         | 119  |                          | 120  |                          | 120  |                          | 121  |                          | 122  |
| 107   | JuvreDyb                | 107         |                                    | 366  |                         | 171  |                          | 188  |                          | 206  |                          | 225  |                          | 265  |
| 108   | AvnoeVig                | 108         |                                    | 58   |                         | 27   |                          | 30   |                          | 32   |                          | 34   |                          | 40   |
| 109   | HejlsmindeNor           | 109         |                                    | 165  |                         | 113  |                          | 125  |                          | 131  |                          | 137  |                          | 147  |
| 110   | NyboelNor               | 110         |                                    | 74   |                         | 55   |                          | 57   |                          | 58   |                          | 60   |                          | 63   |
| 111   | ListerDyb               | 111         |                                    | 2059 |                         | 1500 |                          | 1575 |                          | 1653 |                          | 1733 |                          | 1900 |
| 113   | Flensborg-Fjordindre    | 113         |                                    | 43   |                         | 25   |                          | 25   |                          | 25   |                          | 25   |                          | 25   |

| WB no | WB name               | Aggregation             | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P020 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|-----------------------|-------------------------|------------------------------------|------|-------------------------|------|--------------------------|------|---------------------------|------|--------------------------|------|--------------------------|------|
|       |                       |                         | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                      | Sub  | Main                     | Sub  | Main                     | Sub  |
| 114   | Flensborg-Fjordydre   | 110,113,114             |                                    | 242  |                         | 204  |                          | 206  |                           | 207  |                          | 209  |                          | 212  |
| 119   | Vesterhavetsyd        | 119, 107, 111, 121, 120 | 8746                               |      | 4014                    |      | 4014                     |      | 4014                      |      | 4014                     |      | 4541                     |      |
| 120   | Knudedyb              | 120                     |                                    | 3074 |                         | 841  |                          | 841  |                           | 967  |                          | 1370 |                          | 1957 |
| 121   | Graadyb               | 121                     |                                    | 3042 |                         | 1539 |                          | 1840 |                           | 2170 |                          | 2533 |                          | 3042 |
| 122   | VejleFjordydre        | 122,123                 |                                    | 994  |                         | 724  |                          | 728  |                           | 731  |                          | 735  |                          | 743  |
| 123   | VejleFjordindre       | 123                     |                                    | 579  |                         | 517  |                          | 525  |                           | 532  |                          | 536  |                          | 543  |
| 124   | Kolding-Fjordindre    | 124                     |                                    | 503  |                         | 229  |                          | 241  |                           | 257  |                          | 274  |                          | 315  |
| 125   | Kolding-Fjordydre     | 124,125                 |                                    | 547  |                         | 273  |                          | 285  |                           | 300  |                          | 317  |                          | 359  |
| 127   | Horsens-Fjordydre     | 127,128                 |                                    | 836  |                         | 477  |                          | 480  |                           | 483  |                          | 485  |                          | 491  |
| 128   | Horsens-Fjordindre    | 128                     |                                    | 785  |                         | 429  |                          | 432  |                           | 435  |                          | 438  |                          | 443  |
| 129   | Nis-sumFjordYdre      | 129,131,130             |                                    | 2301 |                         | 1001 |                          | 1045 |                           | 1116 |                          | 1248 |                          | 1551 |
| 130   | NissumFjordmelle      | 130,131                 |                                    | 1937 |                         | 637  |                          | 681  |                           | 752  |                          | 884  |                          | 1187 |
| 131   | NissumFjordFelstedKog | 131                     |                                    | 1783 |                         | 1222 |                          | 1222 |                           | 1266 |                          | 1357 |                          | 1590 |
| 132   | Ringkoebing-Fjord     | 132                     |                                    | 5045 |                         | 2580 |                          | 2708 |                           | 2835 |                          | 3313 |                          | 4692 |

| WB no | WB name                                                       | Aggregation          | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P020 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|---------------------------------------------------------------|----------------------|------------------------------------|------|-------------------------|------|--------------------------|------|---------------------------|------|--------------------------|------|--------------------------|------|
|       |                                                               |                      | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                      | Sub  | Main                     | Sub  | Main                     | Sub  |
| 133   | Vesterhavet-nord                                              | 133,129,130,131, 132 | 7423                               |      | 3658                    |      | 3830                     |      | 4028                      |      | 4638                     |      | 6320                     |      |
| 136   | Randers Fjord, indre                                          | 136                  |                                    | 2980 |                         | 2229 |                          | 2229 |                           | 2299 |                          | 2391 |                          | 2573 |
| 137   | Randers Fjord, ydre                                           | 136,137              |                                    | 3122 |                         | 2168 |                          | 2267 |                           | 2366 |                          | 2463 |                          | 2657 |
| 138   | HevringBugt                                                   | 138, 137, 136        | 3251                               |      | 2296                    |      | 2396                     |      | 2494                      |      | 2592                     |      | 2785                     |      |
| 139   | Anholt                                                        | 139                  | 7                                  |      | 7                       |      | 7                        |      | 7                         |      | 7                        |      | 7                        |      |
| 140   | DjurslandOest                                                 | 140                  | 649                                |      | 514                     |      | 514                      |      | 514                       |      | 514                      |      | 514                      |      |
| 141   | EbeltoftVig                                                   | 141                  | 14                                 |      | 14                      |      | 14                       |      | 14                        |      | 14                       |      | 14                       |      |
| 142   | StavnsFjord                                                   | 142                  |                                    | 4    |                         | 3    |                          | 3    |                           | 3    |                          | 3    |                          | 3    |
| 144   | KnebelVig                                                     | 144                  |                                    | 16   |                         | 13   |                          | 13   |                           | 13   |                          | 13   |                          | 13   |
| 145   | KaloeVig                                                      | 144,145              |                                    | 222  |                         | 219  |                          | 219  |                           | 219  |                          | 219  |                          | 219  |
| 146   | Norsminde-Fjord                                               | 146                  |                                    | 143  |                         | 95   |                          | 101  |                           | 109  |                          | 116  |                          | 132  |
| 147   | AarhusBugtog-BegtrupVig                                       | 144,145,147          | 703                                |      | 697                     |      | 700                      |      | 700                       |      | 700                      |      | 700                      |      |
| 154   | KattegatLaeso                                                 | 154                  | 55                                 |      | 55                      |      | 55                       |      | 55                        |      | 55                       |      | 55                       |      |
| 157   | Bjoernholms-BugtRiisgaardeBredningS-kiveFjordog-LovnsBredning | 157,158              |                                    | 3651 |                         | 1321 |                          | 1435 |                           | 1545 |                          | 1650 |                          | 1946 |
| 158   | HjarbaekFjord                                                 | 158                  |                                    | 1852 |                         | 555  |                          | 631  |                           | 708  |                          | 786  |                          | 947  |
| 159   | Mariager-Fjordindre                                           | 159                  |                                    | 491  |                         | 136  |                          | 155  |                           | 174  |                          | 193  |                          | 230  |

| WB no | WB name                      | Aggregation                            | TN status Load v2023 [tons N/year] |     | N-MAI, P0 [tons N/year] |     | N-MAI, P10 [tons N/year] |     | N-MAI, P020 [tons N/year] |     | N-MAI, P30 [tons N/year] |     | N-MAI, P50 [tons N/year] |     |
|-------|------------------------------|----------------------------------------|------------------------------------|-----|-------------------------|-----|--------------------------|-----|---------------------------|-----|--------------------------|-----|--------------------------|-----|
|       |                              |                                        | Main                               | Sub | Main                    | Sub | Main                     | Sub | Main                      | Sub | Main                     | Sub | Main                     | Sub |
| 160   | Mariager-Fjordydre           | 159,160                                |                                    | 962 |                         | 607 |                          | 626 |                           | 645 |                          | 664 |                          | 701 |
| 165   | Isefjordindre                | 165                                    |                                    | 975 |                         | 584 |                          | 584 |                           | 584 |                          | 584 |                          | 584 |
| 200   | Kattegat-Nordsjaelland       | 1,2,24,165,200                         | 2155                               |     | 1396                    |     | 1396                     |     | 1396                      |     | 1396                     |     | 1396                     |     |
| 201   | KoegeBugt                    | 201                                    | 1179                               |     | 1034                    |     | 1047                     |     | 1056                      |     | 1066                     |     | 1084                     |     |
| 204   | Jammerland-BugtogMusholmBugt | 204                                    | 1381                               |     | 965                     |     | 966                      |     | 968                       |     | 969                      |     | 972                      |     |
| 206   | Smaalandsfarvandetaabnedel   | 16,17,18,25,35,36,37,206               | 2017                               |     | 1668                    |     | 1701                     |     | 1733                      |     | 1764                     |     | 1823                     |     |
| 207   | NakskovFjord                 | 207                                    |                                    | 359 |                         | 314 |                          | 316 |                           | 318 |                          | 320 |                          | 324 |
| 208   | Femerbaelt                   | 207,208,209                            | 1337                               |     | 1105                    |     | 1107                     |     | 1110                      |     | 1112                     |     | 1116                     |     |
| 209   | Roedsandog-Bredningen        | 209                                    |                                    | 410 |                         | 250 |                          | 250 |                           | 250 |                          | 250 |                          | 250 |
| 212   | FaaborgFjord                 | 212                                    |                                    | 22  |                         | 16  |                          | 16  |                           | 16  |                          | 16  |                          | 16  |
| 214   | Detsydfynske-Oehav           | 68,72,212,214                          | 532                                |     | 288                     |     | 289                      |     | 290                       |     | 290                      |     | 292                      |     |
| 216   | Lillebaeltsyd                | 87,101,102,103,104,105,110,113,114,216 | 1332                               |     | 898                     |     | 898                      |     | 898                       |     | 898                      |     | 898                      |     |

| WB no | WB name                                | Aggregation                     | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P20 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|----------------------------------------|---------------------------------|------------------------------------|------|-------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|
|       |                                        |                                 | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  |
| 217   | LillebaeltBredningen                   | 74,82,106,108,109,217           | 914                                |      | 467                     |      | 467                      |      | 467                      |      | 467                      |      | 467                      |      |
| 219   | Aarhus-BugtsydSamsoeogNordligeBaelthav | 59,62,92,93,127,128,142,146,219 | 2694                               |      | 1632                    |      | 1656                     |      | 1681                     |      | 1681                     |      | 1681                     |      |
| 221   | Skagerrak                              | 221                             | 1409                               |      | 1409                    |      | 1409                     |      | 1409                     |      | 1409                     |      | 1409                     |      |
| 222   | KattegatAalborgBugt                    | 222,159,160                     | 2034                               |      | 1679                    |      | 1699                     |      | 1718                     |      | 1736                     |      | 1774                     |      |
| 224   | NordligeLillebaelt                     | 122,123,224                     | 1398                               |      | 962                     |      | 962                      |      | 962                      |      | 962                      |      | 962                      |      |
| 225   | NordligeKattegatAalbaek-Bugt           | 225                             | 715                                |      | 715                     |      | 715                      |      | 715                      |      | 715                      |      | 715                      |      |
| 231   | LillebaeltSnaevringen                  | 231,124,125,80                  | 800                                |      | 266                     |      | 285                      |      | 304                      |      | 323                      |      | 360                      |      |
| 232   | NissumBredning                         | 232                             | 911                                |      | 545                     |      | 562                      |      | 578                      |      | 595                      |      | 630                      |      |
| 233   | KaasBredningogVenoe-Bugt               | 232,233                         |                                    | 2075 |                         | 1361 |                          | 1479 |                          | 1598 |                          | 1718 |                          | 1794 |
| 234   | Loegstoer-Bredning                     | 157,158,234,233,236             |                                    | 6752 |                         | 2893 |                          | 3009 |                          | 3125 |                          | 3241 |                          | 3472 |



| WB no | WB name                 | Aggregation                       | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |     | N-MAI, P10 [tons N/year] |     | N-MAI, P020 [tons N/year] |     | N-MAI, P30 [tons N/year] |     | N-MAI, P50 [tons N/year] |     |
|-------|-------------------------|-----------------------------------|------------------------------------|------|-------------------------|-----|--------------------------|-----|---------------------------|-----|--------------------------|-----|--------------------------|-----|
|       |                         |                                   | Main                               | Sub  | Main                    | Sub | Main                     | Sub | Main                      | Sub | Main                     | Sub | Main                     | Sub |
| 235   | NibeBredningogLange-rak | 157, 158, 233, 234, 235, 236, 238 | 11242                              |      | 6857                    |     | 6980                     |     | 7142                      |     | 7304                     |     | 7734                     |     |
| 236   | ThistedBredning         | 236                               |                                    | 1150 |                         | 396 |                          | 407 |                           | 417 |                          | 431 |                          | 458 |
| 238   | HalkaerBredning         | 238                               |                                    | 639  |                         | 114 |                          | 120 |                           | 167 |                          | 213 |                          | 412 |
| Sum   |                         |                                   | 58537                              |      | 37878                   |     | 38419                    |     | 39021                     |     | 40009                    |     | 43075                    |     |

### 3.4.2 Scenario 2: Updated loads and Chl-a targets in 12 water bodies

Scenario 2 is also based on the combined RBMP3 scenario 2d and 2e described in section 3.1.5 and on updated nitrogen loadings (version 2023), which are used to calculate status N load (2014-2018) for each water body catchment. In order to align with the recommendation from the international evaluation panel, the chlorophyll-a target values are not based on RBMP3 targets but have been revised in 12 open water bodies in order to align with the intercalibration results for Chlorophyll-a (EU comm 2018). Table 3.3 shows the resulting N-MAls from scenario 2.

**Table 3.4. Scenario 2 results showing the Maximum Allowable Nitrogen Inputs (N-MAIs) for Danish water bodies given the implementation of the updated Baltic Sea Action Plan, German nutrient reductions according to WFD and reductions in atmospheric N deposition according to the NEC directive. The N-MAIs are calculated using updated (version 2023) nitrogen loadings as status N load for each catchment. Environmental indicator target values are as in RBMP3 except for Chlorophyll-a target values for 12 water bodies in BC6 and NEA8b which have been increased from their water body specific boundary value to the intercalibrated type specific value. Water. The table shows N-MAIs in tons N per year, where 'main' denote main-catchment and 'sub' denote sub-catchments being part of a main-catchment. The table show status loads as well as N-MAIs calculated for 5 different phosphorus reduction scenarios designated P0, P10, P20, P30 and P50, where phosphorus loadings from Danish catchments are reduced by 0%, 10%, 20%, 30% and 50%, respectively. The column 'aggregated' denotes sub-catchments included in specific MAIs.**

| WB no | WB name               | Aggregation | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P20 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|-----------------------|-------------|------------------------------------|------|-------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|
|       |                       |             | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  |
| 1     | Roskilde-Fjordydre    | 1,2         |                                    | 853  |                         | 613  |                          | 615  |                          | 617  |                          | 619  |                          | 623  |
| 2     | Roskilde-Fjordindre   | 2           |                                    | 434  |                         | 425  |                          | 426  |                          | 427  |                          | 428  |                          | 430  |
| 6     | NordligeOeresund      | 6           | 1149                               |      | 1149                    |      | 1149                     |      | 1149                     |      | 1149                     |      | 1149                     |      |
| 16    | KorsoerNor            | 16          |                                    | 32   |                         | 24   |                          | 24   |                          | 25   |                          | 25   |                          | 26   |
| 17    | BasnaesNor            | 17          |                                    | 70   |                         | 52   |                          | 52   |                          | 52   |                          | 52   |                          | 52   |
| 18    | HolsteinborgNor       | 18          |                                    | 26   |                         | 26   |                          | 26   |                          | 26   |                          | 26   |                          | 26   |
| 24    | Isefjordydre          | 24,165      |                                    | 1079 |                         | 688  |                          | 688  |                          | 688  |                          | 688  |                          | 688  |
| 25    | Skaelskoer-FjordogNor | 25          |                                    | 40   |                         | 33   |                          | 34   |                          | 34   |                          | 35   |                          | 37   |
| 28    | SejeroeBugt           | 28          | 198                                |      | 198                     |      | 198                      |      | 198                      |      | 198                      |      | 198                      |      |
| 29    | Kalundborg-Fjord      | 29          | 84                                 |      | 48                      |      | 50                       |      | 53                       |      | 57                       |      | 64                       |      |
| 34    | Smaalandsfarvandetsyd | 34          | 543                                |      | 543                     |      | 543                      |      | 543                      |      | 543                      |      | 543                      |      |
| 35    | Kar-rebaekFjord       | 35          |                                    | 1268 |                         | 1003 |                          | 1033 |                          | 1061 |                          | 1088 |                          | 1140 |
| 36    | DybsoeFjord           | 36          |                                    | 59   |                         | 59   |                          | 59   |                          | 59   |                          | 59   |                          | 59   |
| 37    | AvnoeFjord            | 37          |                                    | 234  |                         | 182  |                          | 185  |                          | 187  |                          | 189  |                          | 194  |

| WB no | WB name                  | Aggregation | TN status Load v2023 [tons N/year] |     | N-MAI, P0 [tons N/year] |     | N-MAI, P10 [tons N/year] |     | N-MAI, P020 [tons N/year] |     | N-MAI, P30 [tons N/year] |     | N-MAI, P50 [tons N/year] |     |
|-------|--------------------------|-------------|------------------------------------|-----|-------------------------|-----|--------------------------|-----|---------------------------|-----|--------------------------|-----|--------------------------|-----|
|       |                          |             | Main                               | Sub | Main                    | Sub | Main                     | Sub | Main                      | Sub | Main                     | Sub | Main                     | Sub |
| 38    | Guldborgsund             | 38          | 374                                |     | 374                     |     | 374                      |     | 374                       |     | 374                      |     | 374                      |     |
| 44    | HjelmBugt                | 44          | 87                                 |     | 87                      |     | 87                       |     | 87                        |     | 87                       |     | 87                       |     |
| 45    | Groensund                | 45          | 298                                |     | 224                     |     | 224                      |     | 224                       |     | 224                      |     | 224                      |     |
| 46    | FakseBugt                | 46,47       | 589                                |     | 509                     |     | 512                      |     | 516                       |     | 520                      |     | 528                      |     |
| 47    | PraestoeFjord            | 47          |                                    | 232 |                         | 151 |                          | 155 |                           | 159 |                          | 163 |                          | 171 |
| 48    | StegeBugt                | 48,49       | 298                                |     | 287                     |     | 288                      |     | 288                       |     | 288                      |     | 288                      |     |
| 49    | StegeNor                 | 49          |                                    | 29  |                         | 18  |                          | 19  |                           | 19  |                          | 19  |                          | 19  |
| 56    | Oestersoeen-Bornholm     | 56          | 939                                |     | 939                     |     | 939                      |     | 939                       |     | 939                      |     | 939                      |     |
| 57    | Oester-soeenChristiansoe | 57          | 4                                  |     | 4                       |     | 4                        |     | 4                         |     | 4                        |     | 4                        |     |
| 59    | NaeraaStrand             | 59          |                                    | 93  |                         | 22  |                          | 24  |                           | 33  |                          | 41  |                          | 60  |
| 62    | Lillestrand              | 62          |                                    | 9   |                         | 5   |                          | 5   |                           | 5   |                          | 5   |                          | 6   |
| 68    | LindelseNor              | 68          |                                    | 41  |                         | 41  |                          | 41  |                           | 41  |                          | 41  |                          | 41  |
| 72    | Kloeven                  | 72          |                                    | 28  |                         | 28  |                          | 28  |                           | 28  |                          | 28  |                          | 28  |
| 74    | Bredningen               | 74          |                                    | 130 |                         | 45  |                          | 50  |                           | 56  |                          | 61  |                          | 73  |
| 80    | GamborgFjord             | 80          |                                    | 83  |                         | 76  |                          | 76  |                           | 76  |                          | 76  |                          | 76  |
| 82    | AborgMindeNor            | 82          |                                    | 140 |                         | 34  |                          | 34  |                           | 34  |                          | 36  |                          | 62  |
| 83    | HolckenhavnFjord         | 83          |                                    | 284 |                         | 100 |                          | 108 |                           | 119 |                          | 130 |                          | 153 |
| 84    | KertemindeFjord          | 84,85       |                                    | 43  |                         | 35  |                          | 35  |                           | 35  |                          | 35  |                          | 35  |
| 85    | KertingeNor              | 85          |                                    | 21  |                         | 18  |                          | 19  |                           | 19  |                          | 19  |                          | 19  |
| 86    | NyborgFjord              | 83,86       |                                    | 305 |                         | 121 |                          | 129 |                           | 140 |                          | 151 |                          | 174 |
| 87    | HelnaesBugt              | 87          |                                    | 186 |                         | 127 |                          | 127 |                           | 127 |                          | 127 |                          | 127 |

| WB no | WB name                 | Aggregation | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P020 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|-------------------------|-------------|------------------------------------|------|-------------------------|------|--------------------------|------|---------------------------|------|--------------------------|------|--------------------------|------|
|       |                         |             | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                      | Sub  | Main                     | Sub  | Main                     | Sub  |
| 89    | Lunkebugten             | 89          |                                    | 18   |                         | 12   |                          | 12   |                           | 12   |                          | 12   |                          | 12   |
| 90    | Langelands-sund         | 83,86,89,90 | 737                                |      | 546                     |      | 554                      |      | 565                       |      | 577                      |      | 600                      |      |
| 92    | Odense-Fjordydre        | 92,93       |                                    | 1282 |                         | 798  |                          | 813  |                           | 830  |                          | 847  |                          | 881  |
| 93    | OdenseFjord-SedenStrand | 93          |                                    | 1220 |                         | 736  |                          | 752  |                           | 768  |                          | 785  |                          | 819  |
| 95    | StorebaeltSV            | 95          | 141                                |      | 91                      |      | 91                       |      | 91                        |      | 91                       |      | 91                       |      |
| 96    | StorebaeltNV            | 96, 84, 85  | 199                                |      | 118                     |      | 118                      |      | 118                       |      | 118                      |      | 118                      |      |
| 101   | GennerBugt              | 101         |                                    | 42   |                         | 21   |                          | 21   |                           | 21   |                          | 21   |                          | 21   |
| 102   | AabenraaFjord           | 102         |                                    | 126  |                         | 69   |                          | 69   |                           | 69   |                          | 69   |                          | 69   |
| 103   | AlsFjord                | 103,104,105 |                                    | 290  |                         | 181  |                          | 181  |                           | 181  |                          | 181  |                          | 181  |
| 104   | AlsSund                 | 104         |                                    | 65   |                         | 65   |                          | 65   |                           | 65   |                          | 65   |                          | 65   |
| 105   | Augustenborg-Fjord      | 105         |                                    | 85   |                         | 85   |                          | 85   |                           | 85   |                          | 85   |                          | 85   |
| 106   | Haderslev-Fjord         | 106         |                                    | 200  |                         | 119  |                          | 120  |                           | 120  |                          | 121  |                          | 122  |
| 107   | JuvreDyb                | 107         |                                    | 366  |                         | 171  |                          | 188  |                           | 206  |                          | 225  |                          | 265  |
| 108   | AvnoeVig                | 108         |                                    | 58   |                         | 27   |                          | 30   |                           | 32   |                          | 34   |                          | 40   |
| 109   | HejlsmindeNor           | 109         |                                    | 165  |                         | 113  |                          | 125  |                           | 131  |                          | 137  |                          | 147  |
| 110   | NyboelNor               | 110         |                                    | 74   |                         | 55   |                          | 57   |                           | 58   |                          | 60   |                          | 63   |
| 111   | ListerDyb               | 111         |                                    | 2059 |                         | 1500 |                          | 1575 |                           | 1653 |                          | 1733 |                          | 1900 |
| 113   | Flensborg-Fjordindre    | 113         |                                    | 43   |                         | 25   |                          | 25   |                           | 25   |                          | 25   |                          | 25   |

| WB no | WB name               | Aggregation             | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P20 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|-----------------------|-------------------------|------------------------------------|------|-------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|
|       |                       |                         | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  |
| 114   | Flensborg-Fjordydre   | 110,113,114             |                                    | 242  |                         | 204  |                          | 206  |                          | 207  |                          | 209  |                          | 212  |
| 119   | Vesterhavetsyd        | 119, 107, 111, 121, 120 | 8746                               |      | 4014                    |      | 4014                     |      | 4014                     |      | 4014                     |      | 4541                     |      |
| 120   | Knudedyb              | 120                     |                                    | 3074 |                         | 841  |                          | 841  |                          | 967  |                          | 1370 |                          | 1957 |
| 121   | Graadyb               | 121                     |                                    | 3042 |                         | 1539 |                          | 1840 |                          | 2170 |                          | 2533 |                          | 3042 |
| 122   | VejleFjordydre        | 122,123                 |                                    | 994  |                         | 724  |                          | 728  |                          | 731  |                          | 735  |                          | 743  |
| 123   | VejleFjordindre       | 123                     |                                    | 579  |                         | 517  |                          | 525  |                          | 532  |                          | 536  |                          | 543  |
| 124   | Kolding-Fjordindre    | 124                     |                                    | 503  |                         | 229  |                          | 241  |                          | 257  |                          | 274  |                          | 315  |
| 125   | Kolding-Fjordydre     | 124,125                 |                                    | 547  |                         | 273  |                          | 285  |                          | 300  |                          | 317  |                          | 359  |
| 127   | Horsens-Fjordydre     | 127,128                 |                                    | 836  |                         | 477  |                          | 480  |                          | 483  |                          | 485  |                          | 491  |
| 128   | Horsens-Fjordindre    | 128                     |                                    | 785  |                         | 429  |                          | 432  |                          | 435  |                          | 438  |                          | 443  |
| 129   | Nis-sumFjordYdre      | 129,131,130             |                                    | 2301 |                         | 1001 |                          | 1045 |                          | 1116 |                          | 1248 |                          | 1551 |
| 130   | NissumFjordmelle      | 130,131                 |                                    | 1937 |                         | 637  |                          | 681  |                          | 752  |                          | 884  |                          | 1187 |
| 131   | NissumFjordFelstedKog | 131                     |                                    | 1783 |                         | 1222 |                          | 1222 |                          | 1266 |                          | 1357 |                          | 1590 |
| 132   | Ringkoebing-Fjord     | 132                     |                                    | 5045 |                         | 2580 |                          | 2708 |                          | 2835 |                          | 3313 |                          | 4692 |

| WB no | WB name                                                       | Aggregation          | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P20 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|---------------------------------------------------------------|----------------------|------------------------------------|------|-------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|--------------------------|------|
|       |                                                               |                      | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  | Main                     | Sub  |
| 133   | Vesterhavet-nord                                              | 133,129,130,131, 132 | 7423                               |      | 3658                    |      | 3830                     |      | 4028                     |      | 4638                     |      | 6320                     |      |
| 136   | Randers Fjord, indre                                          | 136                  |                                    | 2980 |                         | 2229 |                          | 2229 |                          | 2299 |                          | 2391 |                          | 2573 |
| 137   | Randers Fjord, ydre                                           | 136,137              |                                    | 3122 |                         | 2168 |                          | 2267 |                          | 2366 |                          | 2463 |                          | 2657 |
| 138   | HevringBugt                                                   | 138, 137, 136        | 3251                               |      | 2296                    |      | 2396                     |      | 2494                     |      | 2592                     |      | 2785                     |      |
| 139   | Anholt                                                        | 139                  | 7                                  |      | 7                       |      | 7                        |      | 7                        |      | 7                        |      | 7                        |      |
| 140   | DjurslandOest                                                 | 140                  | 649                                |      | 514                     |      | 514                      |      | 514                      |      | 514                      |      | 514                      |      |
| 141   | EbeltoftVig                                                   | 141                  | 14                                 |      | 14                      |      | 14                       |      | 14                       |      | 14                       |      | 14                       |      |
| 142   | StavnsFjord                                                   | 142                  |                                    | 4    |                         | 3    |                          | 3    |                          | 3    |                          | 3    |                          | 3    |
| 144   | KnebelVig                                                     | 144                  |                                    | 16   |                         | 13   |                          | 13   |                          | 13   |                          | 13   |                          | 13   |
| 145   | KaloeVig                                                      | 144,145              |                                    | 222  |                         | 219  |                          | 219  |                          | 219  |                          | 219  |                          | 219  |
| 146   | Norsminde-Fjord                                               | 146                  |                                    | 143  |                         | 95   |                          | 101  |                          | 109  |                          | 116  |                          | 132  |
| 147   | AarhusBugtog-BegtrupVig                                       | 144,145,147          | 703                                |      | 697                     |      | 700                      |      | 700                      |      | 700                      |      | 700                      |      |
| 154   | KattegatLaeso                                                 | 154                  | 55                                 |      | 55                      |      | 55                       |      | 55                       |      | 55                       |      | 55                       |      |
| 157   | Bjoernholms-BugtRiisgaardeBredningS-kiveFjordog-LovnsBredning | 157,158              |                                    | 3651 |                         | 1321 |                          | 1435 |                          | 1545 |                          | 1650 |                          | 1946 |
| 158   | HjarbaekFjord                                                 | 158                  |                                    | 1852 |                         | 555  |                          | 631  |                          | 708  |                          | 786  |                          | 947  |
| 159   | Mariager-Fjordindre                                           | 159                  |                                    | 491  |                         | 136  |                          | 155  |                          | 174  |                          | 193  |                          | 230  |

| WB no | WB name                      | Aggregation                            | TN status Load v2023 [tons N/year] |     | N-MAI, P0 [tons N/year] |     | N-MAI, P10 [tons N/year] |     | N-MAI, P20 [tons N/year] |     | N-MAI, P30 [tons N/year] |     | N-MAI, P50 [tons N/year] |     |
|-------|------------------------------|----------------------------------------|------------------------------------|-----|-------------------------|-----|--------------------------|-----|--------------------------|-----|--------------------------|-----|--------------------------|-----|
|       |                              |                                        | Main                               | Sub | Main                    | Sub | Main                     | Sub | Main                     | Sub | Main                     | Sub | Main                     | Sub |
| 160   | Mariager-Fjordydre           | 159,160                                |                                    | 962 |                         | 607 |                          | 626 |                          | 645 |                          | 664 |                          | 701 |
| 165   | Isefjordindre                | 165                                    |                                    | 975 |                         | 584 |                          | 584 |                          | 584 |                          | 584 |                          | 584 |
| 200   | Kattegat-Nordsjaelland       | 1,2,24,165,200                         | 2155                               |     | 1396                    |     | 1396                     |     | 1396                     |     | 1396                     |     | 1396                     |     |
| 201   | KoegeBugt                    | 201                                    | 1179                               |     | 1179                    |     | 1179                     |     | 1179                     |     | 1179                     |     | 1179                     |     |
| 204   | Jammerland-BugtogMusholmBugt | 204                                    | 1381                               |     | 965                     |     | 966                      |     | 968                      |     | 969                      |     | 972                      |     |
| 206   | Smaalandsfarvandetaabnedel   | 16,17,18,25,35,36,37,206               | 2017                               |     | 1668                    |     | 1701                     |     | 1733                     |     | 1764                     |     | 1823                     |     |
| 207   | NakskovFjord                 | 207                                    |                                    | 359 |                         | 314 |                          | 316 |                          | 318 |                          | 320 |                          | 324 |
| 208   | Femerbaelt                   | 207,208,209                            | 1337                               |     | 1105                    |     | 1107                     |     | 1110                     |     | 1112                     |     | 1116                     |     |
| 209   | Roedsandog-Bredningen        | 209                                    |                                    | 410 |                         | 250 |                          | 250 |                          | 250 |                          | 250 |                          | 250 |
| 212   | FaaborgFjord                 | 212                                    |                                    | 22  |                         | 16  |                          | 16  |                          | 16  |                          | 16  |                          | 16  |
| 214   | Detsydfynske-Oehav           | 68,72,212,214                          | 532                                |     | 288                     |     | 289                      |     | 290                      |     | 290                      |     | 292                      |     |
| 216   | Lillebaeltsyd                | 87,101,102,103,104,105,110,113,114,216 | 1332                               |     | 898                     |     | 898                      |     | 898                      |     | 898                      |     | 898                      |     |



| WB no | WB name                                | Aggregation                     | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |      | N-MAI, P10 [tons N/year] |      | N-MAI, P020 [tons N/year] |      | N-MAI, P30 [tons N/year] |      | N-MAI, P50 [tons N/year] |      |
|-------|----------------------------------------|---------------------------------|------------------------------------|------|-------------------------|------|--------------------------|------|---------------------------|------|--------------------------|------|--------------------------|------|
|       |                                        |                                 | Main                               | Sub  | Main                    | Sub  | Main                     | Sub  | Main                      | Sub  | Main                     | Sub  | Main                     | Sub  |
| 217   | LillebaeltBredningen                   | 74,82,106,108,109,217           | 914                                |      | 467                     |      | 467                      |      | 467                       |      | 467                      |      | 467                      |      |
| 219   | Aarhus-BugtsydSamsoeogNordligeBaelthav | 59,62,92,93,127,128,142,146,219 | 2694                               |      | 1632                    |      | 1656                     |      | 1681                      |      | 1681                     |      | 1681                     |      |
| 221   | Skagerrak                              | 221                             | 1409                               |      | 1409                    |      | 1409                     |      | 1409                      |      | 1409                     |      | 1409                     |      |
| 222   | KattegatAalborgBugt                    | 222,159,160                     | 2034                               |      | 1679                    |      | 1699                     |      | 1718                      |      | 1736                     |      | 1774                     |      |
| 224   | NordligeLillebaelt                     | 122,123,224                     | 1398                               |      | 1102                    |      | 1102                     |      | 1102                      |      | 1102                     |      | 1102                     |      |
| 225   | NordligeKattegatAalbaekBugt            | 225                             | 715                                |      | 715                     |      | 715                      |      | 715                       |      | 715                      |      | 715                      |      |
| 231   | LillebaeltSnævringen                   | 231,124,125,80                  | 800                                |      | 266                     |      | 285                      |      | 304                       |      | 323                      |      | 360                      |      |
| 232   | NissumBredning                         | 232                             | 911                                |      | 545                     |      | 562                      |      | 578                       |      | 595                      |      | 630                      |      |
| 233   | KaasBredningogVenoeBugt                | 232,233                         |                                    | 2075 |                         | 1361 |                          | 1479 |                           | 1598 |                          | 1718 |                          | 1794 |
| 234   | LoegstoerBredning                      | 157,158,234,233,236             |                                    | 6752 |                         | 2893 |                          | 3009 |                           | 3125 |                          | 3241 |                          | 3472 |

| WB no | WB name                 | Aggregation                       | TN status Load v2023 [tons N/year] |      | N-MAI, P0 [tons N/year] |     | N-MAI, P10 [tons N/year] |     | N-MAI, P020 [tons N/year] |     | N-MAI, P30 [tons N/year] |     | N-MAI, P50 [tons N/year] |     |
|-------|-------------------------|-----------------------------------|------------------------------------|------|-------------------------|-----|--------------------------|-----|---------------------------|-----|--------------------------|-----|--------------------------|-----|
|       |                         |                                   | Main                               | Sub  | Main                    | Sub | Main                     | Sub | Main                      | Sub | Main                     | Sub | Main                     | Sub |
| 235   | NibeBredningogLange-rak | 157, 158, 233, 234, 235, 236, 238 | 11242                              |      | 6857                    |     | 6980                     |     | 7142                      |     | 7304                     |     | 7734                     |     |
| 236   | ThistedBredning         | 236                               |                                    | 1150 |                         | 396 |                          | 407 |                           | 417 |                          | 431 |                          | 458 |
| 238   | HalkaerBredning         | 238                               |                                    | 639  |                         | 114 |                          | 120 |                           | 167 |                          | 213 |                          | 412 |
| Sum   |                         |                                   | 58537                              |      | 38544                   |     | 39071                    |     | 39664                     |     | 40642                    |     | 43690                    |     |

### 3.5 Closing remarks

The estimated Maximum Allowable Nitrogen Input (N-MAI) to Danish water bodies presented in this report is based on the preconditions that the updated BSAP, the RBMP 2015-2021, additional Wadden Sea P-reductions (30%) and the NEC directive will be fully implemented. These treaties have been adopted, but are not fully implemented yet.

N-MAI calculated in scenario 1 is based on chlorophyll-a targets calculated using the best available models and methods, and take into account the characteristics of each water body. This contrasts with M-MAIs from scenario 2 which, for 12 water bodies, are based on chlorophyll-a targets estimated using older models dating back to an intercalibration process following the RBMP2. As a consequence, N-MAIs from scenario 1 are considered to be more scientifically sound compared to scenario 2 results as the target setting in scenario 1 is more precise, coherent and scientifically consistent.

If the preconditions are fulfilled, and the N-MAI for Danish water bodies is reached by the end of 2027, all Danish water bodies will most likely not have reached Good Ecological Status (GES) as defined in the WFD. This is because:

- The N-MAI estimation is based on the depth of light as a proxy for the indicator eelgrass depth limit. Hence, even if light has reached the target value, recovery of eelgrass after light improvements may take years to decades. In addition, other factors, such as sediment suitability, lack of seedlings, etc., may delay or prevent eelgrass recovery.
- With the given preconditions, one or both of the indicators (chlorophyll-a and light) may not reach the target value despite reductions from Danish catchments. In these situations, the reduction requirement for that indicator is cut off/truncated at the reference loading. A cut-off at reference loading indicates that due to the scenario and associated preconditions, a specific N-MAI for that water body that ensures GES cannot be obtained, and administrative choices have to be made, like applying an average reduction from neighbouring water bodies, reductions to down-stream water bodies or a general N-MAI (kg/ha) for those water bodies. However, the implication is that GES for both indicators cannot be expected in these water bodies, even if N-MAI is obtained.
- The method is not based on the one-out-all-out principle as required in the WFD, but on an average of two indicators. Hence, it is expected that both indicators will be as close to the target value as possible, but one will theoretically be above and one below the target value.
- In both scenarios, we are using the boundary between good and moderate status as the target value for each of the indicators. Due to uncertainties, there is a 50% chance that the indicator value will end in good status and a 50% chance that the indicator value will end in moderate status, if N-MAI for that indicator is reached, assuming the measured indicator follows a symmetrical distribution.
- As some ecosystems respond with significant time-lags to changes in loadings, it will take years before the full environmental effects of nutrient reductions can be observed. Hence, reaching MAI will provide the conditions for obtaining GES but the achievement of GES will likely be delayed

## Cited literature

Christensen JPA, Erichsen A, Carstensen J. & Timmermann K (2024) Applicability of the WFD indicator “Angiosperm depth limit” in shallow water bodies. Aarhus University, DCE – Danish Centre for Environment and Energy, 22 pp. Scientific note no. 2024|27

Erichsen AC, Larsen TC, Nielsen SEB, Timmermann K, Christensen JPA & Markager S (2020a). Application of the Danish EPA's Marine Model Complex and Development of a Method Applicable for the River Basin Management Plans 2021-2027. Scenario Summary. Technical report. DHI.

Erichsen AC, Larsen TC, Nielsen SEB, Timmermann K, Christensen JPA & Markager S (2020b). Application of the Danish EPA's Marine Model Complex and Development of a Method Applicable for the River Basin Management Plans 2021-2027. Management Scenario 2d – Land-based nutrient scenarios (updated BSAP ceilings). Technical report. DHI.

Erichsen AC, Larsen TC, Nielsen SEB, Timmermann K, Christensen JPA & Markager S (2020c). Application of the Danish EPA's Marine Model Complex and Development of a Method Applicable for the River Basin Management Plans 2021-2027. Management Scenario 2e – Land-based nutrient scenarios (additional Wadden Sea reductions). Technical report. DHI.

EU Comm (2018). COMMISSION DECISION (EU) 2018/229 of 12 February 2018. Establishing, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, the values of the Member State monitoring system classifications as a result of the intercalibration exercise and repealing Commission Decision 2013/480/EU. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018D0229>

Hermann P, Newton A, Gustafsson B, Josefsson H, Krüger R (2023) International evaluation of the scientific and legal basis for nitrogen reductions in the 3rd Danish River Basin Management Plan. Miljø- og føde-vareudvalget 2023-2024. MOF Alm.del - Bilag 79. <http://dce2.au.dk/pub/SR461.pdf>

Timmermann K, Christensen JPA, Erichsen A (2021) Establishing Chlorophyll-a reference conditions and boundary values applicable for the River Basin Management Plans 2021-2027. Aarhus University, DCE – Danish Centre for Environment and Energy, 32 pp. Scientific Report No. 461

Timmermann K, Erichsen A, Christensen JPA, Carstensen J (2024) Adjustment of chlorophyll-a targets in open intercalibrated water bodies. Aarhus University, DCE – Danish Centre for Environment and Energy, 20 pp.

## Appendix A: Scenario 1 results

**Table A-1. Scenario 1, P0: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs (without any aggregation) and the corresponding need for reduction in %. Danish P 0%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 490         |              | 613         | 613      | 28                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 396         | 434          | 415         | 425      | 2                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 16          |              | 24          | 24       | 25                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 34          |              | 52          | 52       | 26                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 600          | 804          | 685         | 849         | 702          | 767         | 734      | 32                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 32          | 33          |              | 33          | 33       | 17                 |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 13           | 50           | 46          | 84          | 32           | 65          | 48       | 42                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 738         |              | 1,003       | 1,003    | 21                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 131         |              | 182         | 182      | 22                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 46  | Fakse Bugt                 | 46,47       | 589                   |              |              | 577         | 589         |              | 583         | 583      | 1                  |
| 47  | Præstø Fjord               | 47          | 232                   |              |              | 161         | 141         |              | 151         | 151      | 35                 |
| 48  | Stege Bugt                 | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |
| 49  | Stege Nor                  | 49          | 29                    |              |              | 22          | 15          |              | 18          | 18       | 36                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 184         | 939         |              | 561         | 561      | 40                 |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 0.1         | 4           |              | 2           | 2        | 49                 |
| 59  | Nærrå Strand               | 59          | 93                    |              |              | 22          | 22          |              | 22          | 22       | 76                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 4           |              | 5           | 5        | 41                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 48          | 42          |              | 45          | 45       | 65                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 34          | 34          |              | 34          | 34       | 76                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 81          | 118         |              | 100         | 100      | 65                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 20           |              | 21          | 12          | 20           | 16          | 18       | 13                 |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 152         | 274         |              | 213         | 213      | 30                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 930         | 1,062       | 987          | 996         | 992      | 23                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 390         | 667          | 805         | 736      | 40                 |

| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 95  | Storebælt SV           | 95                            | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV           | 96, 84, 85                    | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt            | 101                           | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 134         |              | 119         | 119      | 40                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 171         |             |              | 171         | 171      | 53                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 31          | 23          |              | 27          | 27       | 52                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 152         | 74          |              | 113         | 113      | 32                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 49          | 61          |              | 55          | 55       | 26                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,500       |             |              | 1,500       | 1,500    | 27                 |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,014       |             |              | 4,014       | 4,014    | 54                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 841          |              | 841         |             | 841          | 841         | 841      | 73                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 1,539       |             |              | 1,539       | 1,539    | 49                 |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 493         | 994         |              | 743         | 743      | 25                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 552          | 468          | 550         | 499         | 510          | 524         | 517      | 11                 |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 188          |              | 251         | 289         | 188          | 270         | 229      | 54                 |

| No. | Name                      | Aggregation               | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|---------------------------|---------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 125 | Kolding Fjord, ydre       | 124,125                   | 547                   |              |              | 255         | 415         |              | 335         | 335      | 39                 |
| 127 | Horsens Fjord, ydre       | 127,128                   | 836                   |              |              | 510         | 450         |              | 480         | 480      | 43                 |
| 128 | Horsens Fjord, indre      | 128                       | 785                   |              |              | 408         | 451         |              | 429         | 429      | 45                 |
| 129 | Nissum Fjord, Ydre        | 129,131,130               | 2,301                 |              |              | 1,297       | 974         |              | 1,136       | 1,136    | 51                 |
| 130 | Nissum Fjord, mellem      | 130,131                   | 1,937                 |              |              | 837         | 436         |              | 637         | 637      | 67                 |
| 131 | Nissum Fjord, Felsted Kog | 131                       | 1,783                 | 1,783        |              | 662         | 662         | 1,783        | 662         | 1,222    | 31                 |
| 132 | Ringkøbing Fjord          | 132                       | 5,045                 |              | 1,679        | 5,045       | 1,917       | 1,679        | 3,481       | 2,580    | 49                 |
| 133 | Vesterhavet, nord         | 133,129,130,<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre      | 136                       | 2,980                 | 2,980        | 1,477        | 2,980       | 1,477       | 2,229        | 2,229       | 2,229    | 25                 |
| 137 | Randers Fjord, ydre       | 136,137                   | 3,122                 | 3,122        | 1,213        | 3,122       | 1,213       | 2,168        | 2,168       | 2,168    | 31                 |
| 138 | Hevring Bugt              | 138, 137,<br>136          | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                    | 139                       | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst             | 140                       | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig              | 141                       | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord              | 142                       | 4                     |              |              | 4           | 3           |              | 3           | 3        | 20                 |
| 144 | Knebel Vig                | 144                       | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                  | 144,145                   | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord           | 146                       | 143                   |              |              | 143         | 47          |              | 95          | 95       | 34                 |
| 147 | Århus Bugt og Begtrup Vig | 144,145,147               | 703                   | 689          | 703          | 692         | 703         | 696          | 698         | 697      | 1                  |
| 154 | Kattegat Læsø             | 154                       | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |



| No. | Name                                                               | Aggregation                        | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------|------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 157 | Bjørnholms Bugt, Riisgårde Bredning, Skive Fjord og Lovns Bredning | 157,158                            | 3,651                 |              |              | 1,018       | 1,623       |              | 1,321       | 1,321    | 64                 |
| 158 | Hjarbæk Fjord                                                      | 158                                | 1,852                 |              |              | 440         | 670         |              | 555         | 555      | 70                 |
| 159 | Mariager Fjord, indre                                              | 159                                | 491                   |              |              | 80          | 192         |              | 136         | 136      | 72                 |
| 160 | Mariager Fjord, ydre                                               | 159,160                            | 962                   |              |              | 783         | 516         |              | 649         | 649      | 32                 |
| 165 | Isefjord, indre                                                    | 165                                | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                                              | 1,2,24,165,200                     | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                                          | 201                                | 1,179                 | 897          |              | 1,162       | 1,179       | 897          | 1,170       | 1,034    | 12                 |
| 204 | Jammerland Bugt og Musholm Bugt                                    | 204                                | 1,381                 |              |              | 1,381       | 549         |              | 965         | 965      | 30                 |
| 206 | Smålandsfarvandet, åbne del                                        | 16,17,18,25,35,36,37,206           | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                                                      | 207                                | 359                   |              |              | 349         | 279         |              | 314         | 314      | 12                 |
| 208 | Femerbælt                                                          | 207,208,209                        | 1,337                 |              |              | 874         | 1,337       |              | 1,105       | 1,105    | 17                 |
| 209 | Rødsand og Bredningen                                              | 209                                | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                                                       | 212                                | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                                                 | 68,72,212,214                      | 532                   | 171          | 384          | 171         | 427         | 278          | 299         | 288      | 46                 |
| 216 | Lillebælt, syd                                                     | 87,101,102,103,104,105,110,113,116 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |

| No. | Name                                       | Aggregation                             | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|-----------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 217 | Lillebælt Bredningen                       | 74,82,106,1<br>08,109,217               | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,<br>127,128,142<br>,146,219 | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |
| 221 | Skagerrak                                  | 221                                     | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt                       | 222,159,160                             | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt                         | 122,123,224                             | 1,398                 |              |              | 525         | 1,398       |              | 962         | 962      | 31                 |
| 225 | Nordlige Kattegat ÅlbækBugt                | 225                                     | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen                       | 231,124,125<br>,80                      | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning                            | 232                                     | 911                   | 313          | 660          | 297         | 911         | 486          | 604         | 545      | 40                 |
| 233 | Kaas Bredning og Venø Bugt                 | 232,233                                 | 2,075                 |              |              | 1,661       | 1,060       |              | 1,361       | 1,361    | 34                 |
| 234 | Løgstør Bredning                           | 157,158,234<br>,233,236                 | 6,752                 |              |              | 1,838       | 3,948       |              | 2,893       | 2,893    | 57                 |
| 235 | Nibe Bredning og Langerak                  | 157,158,<br>233,234,<br>235,236,<br>238 | 11,242                |              | 10,084       | 3,190       | 10,200      | 10,084       | 6,695       | 8,390    | 25                 |
| 236 | Thisted Bredning                           | 236                                     | 1,150                 |              |              | 269         | 524         |              | 396         | 396      | 66                 |
| 238 | Halkær Bredning                            | 238                                     | 639                   |              |              | 114         | 114         |              | 114         | 114      | 82                 |

**Table A-2. Scenario 1, P10: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs and the corresponding need for reduction in %. Danish P 10%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 494         |              | 615         | 615      | 28                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 400         | 434          | 417         | 426      | 2                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 17          |              | 24          | 24       | 24                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 34          |              | 52          | 52       | 26                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 625          | 823          | 685         | 850         | 724          | 767         | 746      | 31                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 33          | 34          |              | 34          | 34       | 15                 |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 13           | 57           | 46          | 84          | 35           | 65          | 50       | 40                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 797         |              | 1,033       | 1,033    | 19                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 136         |              | 185         | 185      | 21                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |
| 46  | Fakse Bugt             | 46,47       | 589                   |              |              | 579         | 589         |              | 584         | 584      | 1                  |
| 47  | Præstø Fjord           | 47          | 232                   |              |              | 164         | 146         |              | 155         | 155      | 33                 |
| 48  | Stege Bugt             | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 49  | Stege Nor                  | 49          | 29                    |              |              | 22          | 15          |              | 19          | 19       | 35                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 184         | 939         |              | 561         | 561      | 40                 |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 0           | 4           |              | 2           | 2        | 49                 |
| 59  | Nærå Strand                | 59          | 93                    |              |              | 26          | 23          |              | 24          | 24       | 74                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 4           |              | 5           | 5        | 40                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 51          | 49          |              | 50          | 50       | 61                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 34          | 34          |              | 34          | 34       | 76                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 86          | 130         |              | 108         | 108      | 62                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 21           |              | 21          | 13          | 21           | 17          | 19       | 11                 |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 156         | 278         |              | 217         | 217      | 29                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 939         | 1,095       | 987          | 1,017       | 1,002    | 22                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 453         | 667          | 836         | 752      | 38                 |
| 95  | Storebælt SV               | 95          | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV               | 96, 84, 85  | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt                | 101         | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |

| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 135         |              | 120         | 120      | 40                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 188         |             |              | 188         | 188      | 49                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 33          | 26          |              | 30          | 30       | 49                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 165         | 85          |              | 125         | 125      | 24                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 51          | 63          |              | 57          | 57       | 24                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,575       |             |              | 1,575       | 1,575    | 23                 |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,014       |             |              | 4,014       | 4,014    | 54                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 841          |              | 841         |             | 841          | 841         | 841      | 73                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 1,840       |             |              | 1,840       | 1,840    | 40                 |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 500         | 994         |              | 747         | 747      | 25                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 567          | 482          | 551         | 500         | 524          | 525         | 525      | 9                  |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 204          |              | 256         | 300         | 204          | 278         | 241      | 52                 |
| 125 | Kolding Fjord, ydre    | 124,125                       | 547                   |              |              | 261         | 422         |              | 341         | 341      | 38                 |
| 127 | Horsens Fjord, ydre    | 127,128                       | 836                   |              |              | 518         | 455         |              | 487         | 487      | 42                 |
| 128 | Horsens Fjord, indre   | 128                           | 785                   |              |              | 410         | 455         |              | 432         | 432      | 45                 |

| No. | Name                                                                     | Aggregation              | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------------|--------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 129 | Nissum Fjord, Ydre                                                       | 129,131,130              | 2,301                 |              |              | 1,380       | 1,056       |              | 1,218       | 1,218    | 47                 |
| 130 | Nissum Fjord, mellem                                                     | 130,131                  | 1,937                 |              |              | 925         | 436         |              | 681         | 681      | 65                 |
| 131 | Nissum Fjord, Felsted Kog                                                | 131                      | 1,783                 | 1,783        |              | 662         | 662         | 1,783        | 662         | 1,222    | 31                 |
| 132 | Ringkøbing Fjord                                                         | 132                      | 5,045                 |              | 1,679        | 5,045       | 2,429       | 1,679        | 3,737       | 2,708    | 46                 |
| 133 | Vesterhavet, nord                                                        | 133,129,130<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre                                                     | 136                      | 2,980                 | 2,980        | 1,477        | 2,980       | 1,477       | 2,229        | 2,229       | 2,229    | 25                 |
| 137 | Randers Fjord, ydre                                                      | 136,137                  | 3,122                 | 3,122        | 1,412        | 3,122       | 1,412       | 2,267        | 2,267       | 2,267    | 27                 |
| 138 | Hevring Bugt                                                             | 138, 137,<br>136         | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                                                                   | 139                      | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst                                                            | 140                      | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig                                                             | 141                      | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord                                                             | 142                      | 4                     |              |              | 4           | 3           |              | 3           | 3        | 20                 |
| 144 | Knebel Vig                                                               | 144                      | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                                                                 | 144,145                  | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord                                                          | 146                      | 143                   |              |              | 143         | 59          |              | 101         | 101      | 29                 |
| 147 | Århus Bugt og Begtrup Vig                                                | 144,145,147              | 703                   | 703          | 703          | 692         | 703         | 703          | 698         | 700      | 0                  |
| 154 | Kattegat Læsø                                                            | 154                      | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |
| 157 | Bjørnholms Bugt, Riisgårde<br>Bredning, Skive Fjord og<br>Lovns Bredning | 157,158                  | 3,651                 |              |              | 1,018       | 1,852       |              | 1,435       | 1,435    | 61                 |
| 158 | Hjarbæk Fjord                                                            | 158                      | 1,852                 |              |              | 480         | 781         |              | 631         | 631      | 66                 |

| No. | Name                                       | Aggregation                            | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|----------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 159 | Mariager Fjord, indre                      | 159                                    | 491                   |              |              | 84          | 225         |              | 155         | 155      | 68                 |
| 160 | Mariager Fjord, ydre                       | 159,160                                | 962                   |              |              | 822         | 597         |              | 710         | 710      | 26                 |
| 165 | Isefjord, indre                            | 165                                    | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                      | 1,2,24,165,200                         | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                  | 201                                    | 1,179                 | 915          |              | 1,179       | 1,179       | 915          | 1,179       | 1,047    | 11                 |
| 204 | Jammerland Bugt og Musholm Bugt            | 204                                    | 1,381                 |              |              | 1,381       | 552         |              | 966         | 966      | 30                 |
| 206 | Smålandsfarvandet, åbne del                | 16,17,18,25,35,36,37,206               | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                              | 207                                    | 359                   |              |              | 351         | 281         |              | 316         | 316      | 12                 |
| 208 | Femerbælt                                  | 207,208,209                            | 1,337                 |              |              | 878         | 1,337       |              | 1,107       | 1,107    | 17                 |
| 209 | Rødsand og Bredningen                      | 209                                    | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                               | 212                                    | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                         | 68,72,212,214                          | 532                   | 171          | 387          | 171         | 427         | 279          | 299         | 289      | 46                 |
| 216 | Lillebælt, syd                             | 87,101,102,103,104,105,110,113,116,216 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |
| 217 | Lillebælt Bredningen                       | 74,82,106,108,109,217                  | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,127,128,142,219            | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |

| No. | Name                        | Aggregation                 | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|-----------------------------|-----------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 221 | Skagerrak                   | 221                         | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt        | 222,159,160                 | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt          | 122,123,224                 | 1,398                 |              |              | 525         | 1,398       |              | 962         | 962      | 31                 |
| 225 | Nordlige Kattegat ÅlbækBugt | 225                         | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen        | 231,124,125,80              | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning             | 232                         | 911                   | 343          | 695          | 297         | 911         | 519          | 604         | 562      | 38                 |
| 233 | Kaas Bredning og Venø Bugt  | 232,233                     | 2,075                 |              |              | 1,729       | 1,228       |              | 1,479       | 1,479    | 29                 |
| 234 | Løgstør Bredning            | 157,158,234,233,236         | 6,752                 |              |              | 1,838       | 4,181       |              | 3,009       | 3,009    | 55                 |
| 235 | Nibe Bredning og Langerak   | 157,158,233,234,235,236,238 | 11,242                |              | 10,301       | 3,795       | 10,877      | 10,301       | 7,336       | 8,819    | 22                 |
| 236 | Thisted Bredning            | 236                         | 1,150                 |              |              | 269         | 545         |              | 407         | 407      | 65                 |
| 238 | Halkær Bredning             | 238                         | 639                   |              |              | 114         | 127         |              | 120         | 120      | 81                 |



**Table A-3. Scenario 1. P20: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs and the corresponding need for reduction in %. Danish P 20%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 499         |              | 617         | 617      | 28                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 404         | 434          | 419         | 427      | 2                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 18          |              | 25          | 25       | 22                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 34          |              | 52          | 52       | 25                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 651          | 841          | 685         | 850         | 746          | 768         | 757      | 30                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 33          | 35          |              | 34          | 34       | 13                 |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 19           | 64           | 46          | 84          | 41           | 65          | 53       | 36                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 854         |              | 1,061       | 1,061    | 16                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 140         |              | 187         | 187      | 20                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |
| 46  | Fakse Bugt             | 46,47       | 589                   |              |              | 581         | 589         |              | 585         | 585      | 1                  |
| 47  | Præstø Fjord           | 47          | 232                   |              |              | 167         | 151         |              | 159         | 159      | 32                 |
| 48  | Stege Bugt             | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 49  | Stege Nor                  | 49          | 29                    |              |              | 22          | 15          |              | 19          | 19       | 35                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 184         | 939         |              | 561         | 561      | 40                 |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 0.1         | 4           |              | 2           | 2        | 49                 |
| 59  | Nærå Strand                | 59          | 93                    |              |              | 31          | 34          |              | 33          | 33       | 65                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 4           |              | 5           | 5        | 40                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 55          | 56          |              | 56          | 56       | 57                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 34          | 34          |              | 34          | 34       | 76                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 96          | 141         |              | 119         | 119      | 58                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 21           |              | 21          | 13          | 21           | 17          | 19       | 10                 |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 161         | 282         |              | 222         | 222      | 27                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 949         | 1,128       | 987          | 1,038       | 1,013    | 21                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 520         | 667          | 870         | 768      | 37                 |
| 95  | Storebælt SV               | 95          | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV               | 96, 84, 85  | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt                | 101         | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |

| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 136         |              | 120         | 120      | 40                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 206         |             |              | 206         | 206      | 44                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 35          | 29          |              | 32          | 32       | 45                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 165         | 97          |              | 131         | 131      | 21                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 52          | 64          |              | 58          | 58       | 22                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              |             | 1,653       |              | 1,653       | 1,653    | 20                 |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,014       |             |              | 4,014       | 4,014    | 54                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 1,093        |              | 841         |             | 1,093        | 841         | 967      | 69                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 2,170       |             |              | 2,170       | 2,170    | 29                 |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 508         | 994         |              | 751         | 751      | 24                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 579          | 496          | 552         | 500         | 537          | 526         | 532      | 8                  |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 227          |              | 261         | 311         | 227          | 286         | 257      | 49                 |
| 125 | Kolding Fjord, ydre    | 124,125                       | 547                   |              |              | 267         | 429         |              | 348         | 348      | 36                 |
| 127 | Horsens Fjord, ydre    | 127,128                       | 836                   |              |              | 527         | 458         |              | 493         | 493      | 41                 |
| 128 | Horsens Fjord, indre   | 128                           | 785                   |              |              | 411         | 459         |              | 435         | 435      | 45                 |

| No. | Name                                                                     | Aggregation              | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------------|--------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 129 | Nissum Fjord, Ydre                                                       | 129,131,130              | 2,301                 |              |              | 1,494       | 1,137       |              | 1,315       | 1,315    | 43                 |
| 130 | Nissum Fjord, mellem                                                     | 130,131                  | 1,937                 |              |              | 1,067       | 436         |              | 752         | 752      | 61                 |
| 131 | Nissum Fjord, Felsted Kog                                                | 131                      | 1,783                 | 1,783        |              | 662         | 836         | 1,783        | 749         | 1,266    | 29                 |
| 132 | Ringkøbing Fjord                                                         | 132                      | 5,045                 |              | 1,679        | 5,045       | 2,937       | 1,679        | 3,991       | 2,835    | 44                 |
| 133 | Vesterhavet, nord                                                        | 133,129,130<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre                                                     | 136                      | 2,980                 | 2,980        | 1,618        | 2,980       | 1,618       | 2,299        | 2,299       | 2,299    | 23                 |
| 137 | Randers Fjord, ydre                                                      | 136,137                  | 3,122                 | 3,122        | 1,610        | 3,122       | 1,610       | 2,366        | 2,366       | 2,366    | 24                 |
| 138 | Hevring Bugt                                                             | 138, 137,<br>136         | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                                                                   | 139                      | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst                                                            | 140                      | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig                                                             | 141                      | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord                                                             | 142                      | 4                     |              |              | 4           | 3           |              | 3           | 3        | 19                 |
| 144 | Knebel Vig                                                               | 144                      | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                                                                 | 144,145                  | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord                                                          | 146                      | 143                   |              |              | 143         | 75          |              | 109         | 109      | 24                 |
| 147 | Århus Bugt og Begtrup Vig                                                | 144,145,147              | 703                   | 703          | 703          | 692         | 703         | 703          | 698         | 700      | 0                  |
| 154 | Kattegat Læsø                                                            | 154                      | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |
| 157 | Bjørnholms Bugt, Riisgårde<br>Bredning, Skive Fjord og<br>Lovns Bredning | 157,158                  | 3,651                 |              |              | 1,018       | 2,071       |              | 1,545       | 1,545    | 58                 |
| 158 | Hjarbæk Fjord                                                            | 158                      | 1,852                 |              |              | 525         | 890         |              | 708         | 708      | 62                 |

| No. | Name                                       | Aggregation                            | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|----------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 159 | Mariager Fjord, indre                      | 159                                    | 491                   |              |              | 89          | 258         |              | 174         | 174      | 65                 |
| 160 | Mariager Fjord, ydre                       | 159,160                                | 962                   |              |              | 869         | 671         |              | 770         | 770      | 20                 |
| 165 | Isefjord, indre                            | 165                                    | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                      | 1,2,24,165,200                         | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                  | 201                                    | 1,179                 | 934          |              | 1,179       | 1,179       | 934          | 1,179       | 1,056    | 10                 |
| 204 | Jammerland Bugt og Musholm Bugt            | 204                                    | 1,381                 |              |              | 1,381       | 555         |              | 968         | 968      | 30                 |
| 206 | Smålandsfarvandet, åbne del                | 16,17,18,25,35,36,37,206               | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                              | 207                                    | 359                   |              |              | 352         | 284         |              | 318         | 318      | 11                 |
| 208 | Femerbælt                                  | 207,208,209                            | 1,337                 |              |              | 883         | 1,337       |              | 1,110       | 1,110    | 17                 |
| 209 | Rødsand og Bredningen                      | 209                                    | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                               | 212                                    | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                         | 68,72,212,214                          | 532                   | 171          | 390          | 171         | 427         | 281          | 299         | 290      | 46                 |
| 216 | Lillebælt, syd                             | 87,101,102,103,104,105,110,113,116,216 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |
| 217 | Lillebælt Bredningen                       | 74,82,106,108,109,217                  | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,127,128,142,219            | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |

| No. | Name                        | Aggregation                 | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|-----------------------------|-----------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 221 | Skagerrak                   | 221                         | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt        | 222,159,160                 | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt          | 122,123,224                 | 1,398                 |              |              | 525         | 1,398       |              | 962         | 962      | 31                 |
| 225 | Nordlige Kattegat ÅlbækBugt | 225                         | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen        | 231,124,125,80              | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning             | 232                         | 911                   | 374          | 731          | 297         | 911         | 552          | 604         | 578      | 37                 |
| 233 | Kaas Bredning og Venø Bugt  | 232,233                     | 2,075                 |              |              | 1,800       | 1,396       |              | 1,598       | 1,598    | 23                 |
| 234 | Løgstør Bredning            | 157,158,234,233,236         | 6,752                 |              |              | 1,838       | 4,413       |              | 3,125       | 3,125    | 54                 |
| 235 | Nibe Bredning og Langerak   | 157,158,233,234,235,236,238 | 11,242                |              | 10,516       | 4,436       | 11,242      | 10,516       | 7,839       | 9,178    | 18                 |
| 236 | Thisted Bredning            | 236                         | 1,150                 |              |              | 269         | 565         |              | 417         | 417      | 64                 |
| 238 | Halkær Bredning             | 238                         | 639                   |              |              | 114         | 219         |              | 167         | 167      | 74                 |

**Table A-4. Scenario 1, P30: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs and the corresponding need for reduction in %. Danish P 30%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 503         |              | 619         | 619      | 27                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 409         | 434          | 421         | 428      | 1                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 19          |              | 25          | 25       | 21                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 35          |              | 52          | 52       | 25                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 678          | 860          | 685         | 851         | 769          | 768         | 769      | 29                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 33          | 37          |              | 35          | 35       | 11                 |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 28           | 70           | 46          | 84          | 49           | 65          | 57       | 32                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 908         |              | 1,088       | 1,088    | 14                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 145         |              | 189         | 189      | 19                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |
| 46  | Fakse Bugt             | 46,47       | 589                   |              |              | 582         | 589         |              | 586         | 586      | 1                  |
| 47  | Præstø Fjord           | 47          | 232                   |              |              | 170         | 156         |              | 163         | 163      | 30                 |
| 48  | Stege Bugt             | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 49  | Stege Nor                  | 49          | 29                    |              |              | 22          | 16          |              | 19          | 19       | 34                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 184         | 939         |              | 561         | 561      | 40                 |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 0.1         | 4           |              | 2           | 2        | 49                 |
| 59  | Nærå Strand                | 59          | 93                    |              |              | 37          | 45          |              | 41          | 41       | 55                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 4           |              | 5           | 5        | 39                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 60          | 63          |              | 61          | 61       | 53                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 39          | 34          |              | 36          | 36       | 74                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 108         | 152         |              | 130         | 130      | 54                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 21           |              | 21          | 14          | 21           | 17          | 19       | 9                  |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 166         | 286         |              | 226         | 226      | 26                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 958         | 1,161       | 987          | 1,060       | 1,023    | 20                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 587         | 667          | 904         | 785      | 36                 |
| 95  | Storebælt SV               | 95          | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV               | 96, 84, 85  | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt                | 101         | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |



| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 137         |              | 121         | 121      | 40                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 225         |             |              | 225         | 225      | 39                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 38          | 31          |              | 34          | 34       | 40                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 165         | 108         |              | 137         | 137      | 17                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 53          | 66          |              | 60          | 60       | 20                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,733       |             |              | 1,733       | 1,733    | 16                 |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,014       |             |              | 4,014       | 4,014    | 54                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 1,899        |              | 841         |             | 1,899        | 841         | 1,370    | 55                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 2,533       |             |              | 2,533       | 2,533    | 17                 |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 517         | 994         |              | 755         | 755      | 24                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 579          | 510          | 553         | 501         | 544          | 527         | 536      | 7                  |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 253          |              | 266         | 322         | 253          | 294         | 274      | 46                 |
| 125 | Kolding Fjord, ydre    | 124,125                       | 547                   |              |              | 273         | 436         |              | 355         | 355      | 35                 |
| 127 | Horsens Fjord, ydre    | 127,128                       | 836                   |              |              | 537         | 463         |              | 500         | 500      | 40                 |
| 128 | Horsens Fjord, indre   | 128                           | 785                   |              |              | 413         | 462         |              | 438         | 438      | 44                 |

| No. | Name                                                                     | Aggregation              | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------------|--------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 129 | Nissum Fjord, Ydre                                                       | 129,131,130              | 2,301                 |              |              | 1,660       | 1,217       |              | 1,439       | 1,439    | 37                 |
| 130 | Nissum Fjord, mellem                                                     | 130,131                  | 1,937                 |              |              | 1,332       | 436         |              | 884         | 884      | 54                 |
| 131 | Nissum Fjord, Felsted Kog                                                | 131                      | 1,783                 | 1,783        |              | 835         | 1,026       | 1,783        | 930         | 1,357    | 24                 |
| 132 | Ringkøbing Fjord                                                         | 132                      | 5,045                 |              | 2,381        | 5,045       | 3,443       | 2,381        | 4,244       | 3,313    | 34                 |
| 133 | Vesterhavet, nord                                                        | 133,129,130<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre                                                     | 136                      | 2,980                 | 2,980        | 1,802        | 2,980       | 1,802       | 2,391        | 2,391       | 2,391    | 20                 |
| 137 | Randers Fjord, ydre                                                      | 136,137                  | 3,122                 | 3,122        | 1,804        | 3,122       | 1,804       | 2,463        | 2,463       | 2,463    | 21                 |
| 138 | Hevring Bugt                                                             | 138, 137,<br>136         | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                                                                   | 139                      | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst                                                            | 140                      | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig                                                             | 141                      | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord                                                             | 142                      | 4                     |              |              | 4           | 3           |              | 3           | 3        | 19                 |
| 144 | Knebel Vig                                                               | 144                      | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                                                                 | 144,145                  | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord                                                          | 146                      | 143                   |              |              | 143         | 90          |              | 116         | 116      | 18                 |
| 147 | Århus Bugt og Begtrup Vig                                                | 144,145,147              | 703                   | 703          | 703          | 692         | 703         | 703          | 698         | 700      | 0                  |
| 154 | Kattegat Læsø                                                            | 154                      | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |
| 157 | Bjørnholms Bugt, Riisgårde<br>Bredning, Skive Fjord og<br>Lovns Bredning | 157,158                  | 3,651                 |              |              | 1,018       | 2,282       |              | 1,650       | 1,650    | 55                 |
| 158 | Hjarbæk Fjord                                                            | 158                      | 1,852                 |              |              | 573         | 998         |              | 786         | 786      | 58                 |

| No. | Name                                       | Aggregation                            | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|----------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 159 | Mariager Fjord, indre                      | 159                                    | 491                   |              |              | 95          | 290         |              | 193         | 193      | 61                 |
| 160 | Mariager Fjord, ydre                       | 159,160                                | 962                   |              |              | 926         | 740         |              | 833         | 833      | 13                 |
| 165 | Isefjord, indre                            | 165                                    | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                      | 1,2,24,165,200                         | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                  | 201                                    | 1,179                 | 952          |              | 1,179       | 1,179       | 952          | 1,179       | 1,066    | 10                 |
| 204 | Jammerland Bugt og Musholm Bugt            | 204                                    | 1,381                 |              |              | 1,381       | 558         |              | 969         | 969      | 30                 |
| 206 | Smålandsfarvandet, åbne del                | 16,17,18,25,35,36,37,206               | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                              | 207                                    | 359                   |              |              | 354         | 286         |              | 320         | 320      | 11                 |
| 208 | Femerbælt                                  | 207,208,209                            | 1,337                 |              |              | 887         | 1,337       |              | 1,112       | 1,112    | 17                 |
| 209 | Rødsand og Bredningen                      | 209                                    | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                               | 212                                    | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                         | 68,72,212,214                          | 532                   | 171          | 393          | 171         | 427         | 282          | 299         | 290      | 45                 |
| 216 | Lillebælt, syd                             | 87,101,102,103,104,105,110,113,116,216 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |
| 217 | Lillebælt Bredningen                       | 74,82,106,108,109,217                  | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,127,128,142,219            | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |

| No. | Name                        | Aggregation                 | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|-----------------------------|-----------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 221 | Skagerrak                   | 221                         | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt        | 222,159,160                 | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt          | 122,123,224                 | 1,398                 |              |              | 525         | 1,398       |              | 962         | 962      | 31                 |
| 225 | Nordlige Kattegat ÅlbækBugt | 225                         | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen        | 231,124,125,80              | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning             | 232                         | 911                   | 406          | 766          | 297         | 911         | 586          | 604         | 595      | 35                 |
| 233 | Kaas Bredning og Venø Bugt  | 232,233                     | 2,075                 |              |              | 1,872       | 1,563       |              | 1,718       | 1,718    | 17                 |
| 234 | Løgstør Bredning            | 157,158,234,233,236         | 6,752                 |              |              | 1,838       | 4,645       |              | 3,241       | 3,241    | 52                 |
| 235 | Nibe Bredning og Langerak   | 157,158,233,234,235,236,238 | 11,242                |              | 10,730       | 5,118       | 11,242      | 10,730       | 8,180       | 9,455    | 16                 |
| 236 | Thisted Bredning            | 236                         | 1,150                 |              |              | 275         | 586         |              | 431         | 431      | 63                 |
| 238 | Halkær Bredning             | 238                         | 639                   |              |              | 114         | 311         |              | 213         | 213      | 67                 |

**Table A 5. Scenario 1, P50: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs and the corresponding need for reduction in %. Danish P 50%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 511         |              | 623         | 623      | 27                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 417         | 434          | 426         | 430      | 1                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 20          |              | 26          | 26       | 19                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 35          |              | 52          | 52       | 25                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 732          | 897          | 685         | 853         | 815          | 769         | 792      | 27                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 34          | 39          |              | 37          | 37       | 8                  |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 45           | 83           | 46          | 84          | 64           | 65          | 64       | 23                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 1,011       |              | 1,140       | 1,140    | 10                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 155         |              | 194         | 194      | 17                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |
| 46  | Fakse Bugt             | 46,47       | 589                   |              |              | 586         | 589         |              | 588         | 588      | 0                  |
| 47  | Præstø Fjord           | 47          | 232                   |              |              | 176         | 165         |              | 171         | 171      | 26                 |
| 48  | Stege Bugt             | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 49  | Stege Nor                  | 49          | 29                    |              |              | 23          | 16          |              | 19          | 19       | 33                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 184         | 939         |              | 561         | 561      | 40                 |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 0.1         | 4           |              | 2           | 2        | 49                 |
| 59  | Nærå Strand                | 59          | 93                    |              |              | 53          | 68          |              | 60          | 60       | 35                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 5           |              | 6           | 6        | 38                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 69          | 77          |              | 73          | 73       | 44                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 64          | 60          |              | 62          | 62       | 56                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 132         | 174         |              | 153         | 153      | 46                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 21           |              | 21          | 14          | 21           | 18          | 19       | 8                  |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 176         | 293         |              | 235         | 235      | 23                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 977         | 1,225       | 987          | 1,101       | 1,044    | 19                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 721         | 667          | 970         | 819      | 33                 |
| 95  | Storebælt SV               | 95          | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV               | 96, 84, 85  | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt                | 101         | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |

| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 139         |              | 122         | 122      | 39                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 265         |             |              | 265         | 265      | 28                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 43          | 37          |              | 40          | 40       | 31                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 165         | 129         |              | 147         | 147      | 11                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 57          | 69          |              | 63          | 63       | 16                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,900       |             |              | 1,900       | 1,900    | 8                  |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,541       |             |              | 4,541       | 4,541    | 48                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 3,074        |              | 841         |             | 3,074        | 841         | 1,957    | 36                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 3,042       |             |              | 3,042       | 3,042    | 0                  |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 533         | 994         |              | 763         | 763      | 23                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 579          | 538          | 555         | 502         | 558          | 529         | 543      | 6                  |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 321          |              | 277         | 343         | 321          | 310         | 315      | 37                 |
| 125 | Kolding Fjord, ydre    | 124,125                       | 547                   |              |              | 286         | 450         |              | 368         | 368      | 33                 |
| 127 | Horsens Fjord, ydre    | 127,128                       | 836                   |              |              | 555         | 469         |              | 512         | 512      | 39                 |
| 128 | Horsens Fjord, indre   | 128                           | 785                   |              |              | 417         | 470         |              | 443         | 443      | 44                 |

| No. | Name                                                                     | Aggregation              | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------------|--------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 129 | Nissum Fjord, Ydre                                                       | 129,131,130              | 2,301                 |              |              | 2,301       | 1,375       |              | 1,838       | 1,838    | 20                 |
| 130 | Nissum Fjord, mellem                                                     | 130,131                  | 1,937                 |              |              | 1,937       | 436         |              | 1,187       | 1,187    | 39                 |
| 131 | Nissum Fjord, Felsted Kog                                                | 131                      | 1,783                 | 1,783        |              | 0           | 1,396       | 1,783        | 698         | 1,241    | 30                 |
| 132 | Ringkøbing Fjord                                                         | 132                      | 5,045                 |              | 4,638        | 5,045       | 4,447       | 4,638        | 4,746       | 4,692    | 7                  |
| 133 | Vesterhavet, nord                                                        | 133,129,130<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre                                                     | 136                      | 2,980                 | 2,980        | 2,166        | 2,980       | 2,166       | 2,573        | 2,573       | 2,573    | 14                 |
| 137 | Randers Fjord, ydre                                                      | 136,137                  | 3,122                 | 3,122        | 2,191        | 3,122       | 2,191       | 2,657        | 2,657       | 2,657    | 15                 |
| 138 | Hevring Bugt                                                             | 138, 137,<br>136         | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                                                                   | 139                      | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst                                                            | 140                      | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig                                                             | 141                      | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord                                                             | 142                      | 4                     |              |              | 4           | 3           |              | 3           | 3        | 18                 |
| 144 | Knebel Vig                                                               | 144                      | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                                                                 | 144,145                  | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord                                                          | 146                      | 143                   |              |              | 143         | 121         |              | 132         | 132      | 8                  |
| 147 | Århus Bugt og Begtrup Vig                                                | 144,145,147              | 703                   | 703          | 703          | 692         | 703         | 703          | 698         | 700      | 0                  |
| 154 | Kattegat Læsø                                                            | 154                      | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |
| 157 | Bjørnholms Bugt, Riisgårde<br>Bredning, Skive Fjord og<br>Lovns Bredning | 157,158                  | 3,651                 |              |              | 1,214       | 2,678       |              | 1,946       | 1,946    | 47                 |
| 158 | Hjarbæk Fjord                                                            | 158                      | 1,852                 |              |              | 688         | 1,207       |              | 947         | 947      | 49                 |



| No. | Name                                       | Aggregation                            | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|----------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 159 | Mariager Fjord, indre                      | 159                                    | 491                   |              |              | 109         | 351         |              | 230         | 230      | 53                 |
| 160 | Mariager Fjord, ydre                       | 159,160                                | 962                   |              |              | 962         | 865         |              | 913         | 913      | 5                  |
| 165 | Isefjord, indre                            | 165                                    | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                      | 1,2,24,165,200                         | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                  | 201                                    | 1,179                 | 990          |              | 1,179       | 1,179       | 990          | 1,179       | 1,084    | 8                  |
| 204 | Jammerland Bugt og Musholm Bugt            | 204                                    | 1,381                 |              |              | 1,381       | 564         |              | 972         | 972      | 30                 |
| 206 | Smålandsfarvandet, åbne del                | 16,17,18,25,35,36,37,206               | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                              | 207                                    | 359                   |              |              | 357         | 291         |              | 324         | 324      | 10                 |
| 208 | Femerbælt                                  | 207,208,209                            | 1,337                 |              |              | 896         | 1,337       |              | 1,116       | 1,116    | 16                 |
| 209 | Rødsand og Bredningen                      | 209                                    | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                               | 212                                    | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                         | 68,72,212,214                          | 532                   | 171          | 399          | 171         | 427         | 285          | 299         | 292      | 45                 |
| 216 | Lillebælt, syd                             | 87,101,102,103,104,105,110,113,116,216 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |
| 217 | Lillebælt Bredningen                       | 74,82,106,108,109,217                  | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,127,128,142,219            | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |

| No. | Name                        | Aggregation                 | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|-----------------------------|-----------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 221 | Skagerrak                   | 221                         | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt        | 222,159,160                 | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt          | 122,123,224                 | 1,398                 |              |              | 525         | 1,398       |              | 962         | 962      | 31                 |
| 225 | Nordlige Kattegat ÅlbækBugt | 225                         | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen        | 231,124,125,80              | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning             | 232                         | 911                   | 476          | 836          | 297         | 911         | 656          | 604         | 630      | 31                 |
| 233 | Kaas Bredning og Venø Bugt  | 232,233                     | 2,075                 |              |              | 2,027       | 1,898       |              | 1,962       | 1,962    | 5                  |
| 234 | Løgstør Bredning            | 157,158,234,233,236         | 6,752                 |              |              | 1,838       | 5,106       |              | 3,472       | 3,472    | 49                 |
| 235 | Nibe Bredning og Langerak   | 157,158,233,234,235,236,238 | 11,242                |              | 11,153       | 6,620       | 11,242      | 11,153       | 8,931       | 10,042   | 11                 |
| 236 | Thisted Bredning            | 236                         | 1,150                 |              |              | 289         | 626         |              | 458         | 458      | 60                 |
| 238 | Halkær Bredning             | 238                         | 639                   |              |              | 330         | 494         |              | 412         | 412      | 36                 |

## Appendix B: Scenario 2 results

**Table B-1. Scenario 2, P0: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

The table shows both the individual calculations as well as the averaged water specific MAIs (without any aggregation) and the corresponding need for reduction in %. Danish P 0%

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord,ydre    | 1,2         | 853                   |              |              | 735         | 490         |              | 613         | 613      | 28                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 396         | 434          | 415         | 425      | 2                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 16          |              | 24          | 24       | 25                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 34          |              | 52          | 52       | 26                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 600          | 804          | 685         | 849         | 702          | 767         | 734      | 32                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 32          | 33          |              | 33          | 33       | 17                 |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 13           | 50           | 46          | 84          | 32           | 65          | 48       | 42                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 738         |              | 1,003       | 1,003    | 21                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 131         |              | 182         | 182      | 22                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 46  | Fakse Bugt                 | 46,47       | 589                   |              |              | 589         | 589         |              | 589         | 589      | 0                  |
| 47  | Præstø Fjord               | 47          | 232                   |              |              | 161         | 141         |              | 151         | 151      | 35                 |
| 48  | Stege Bugt                 | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |
| 49  | Stege Nor                  | 49          | 29                    |              |              | 22          | 15          |              | 18          | 18       | 36                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 939         | 939         |              | 939         | 939      | 0                  |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 4           | 4           |              | 4           | 4        | 0                  |
| 59  | Nærrå Strand               | 59          | 93                    |              |              | 22          | 22          |              | 22          | 22       | 76                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 4           |              | 5           | 5        | 41                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 48          | 42          |              | 45          | 45       | 65                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 34          | 34          |              | 34          | 34       | 76                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 81          | 118         |              | 100         | 100      | 65                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 20           |              | 21          | 12          | 20           | 16          | 18       | 13                 |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 152         | 274         |              | 213         | 213      | 30                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 930         | 1,062       | 987          | 996         | 992      | 23                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 390         | 667          | 805         | 736      | 40                 |

| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 95  | Storebælt SV           | 95                            | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV           | 96, 84, 85                    | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt            | 101                           | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 134         |              | 119         | 119      | 40                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 171         |             |              | 171         | 171      | 53                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 31          | 23          |              | 27          | 27       | 52                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 152         | 74          |              | 113         | 113      | 32                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 49          | 61          |              | 55          | 55       | 26                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,500       |             |              | 1,500       | 1,500    | 27                 |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,014       |             |              | 4,014       | 4,014    | 54                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 841          |              | 841         |             | 841          | 841         | 841      | 73                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 1,539       |             |              | 1,539       | 1,539    | 49                 |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 493         | 994         |              | 743         | 743      | 25                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 552          | 468          | 550         | 499         | 510          | 524         | 517      | 11                 |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 188          |              | 251         | 289         | 188          | 270         | 229      | 54                 |

| No. | Name                      | Aggregation               | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|---------------------------|---------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 125 | Kolding Fjord, ydre       | 124,125                   | 547                   |              |              | 255         | 415         |              | 335         | 335      | 39                 |
| 127 | Horsens Fjord, ydre       | 127,128                   | 836                   |              |              | 510         | 450         |              | 480         | 480      | 43                 |
| 128 | Horsens Fjord, indre      | 128                       | 785                   |              |              | 408         | 451         |              | 429         | 429      | 45                 |
| 129 | Nissum Fjord, Ydre        | 129,131,130               | 2,301                 |              |              | 1,297       | 974         |              | 1,136       | 1,136    | 51                 |
| 130 | Nissum Fjord, mellem      | 130,131                   | 1,937                 |              |              | 837         | 436         |              | 637         | 637      | 67                 |
| 131 | Nissum Fjord, Felsted Kog | 131                       | 1,783                 | 1,783        |              | 662         | 662         | 1,783        | 662         | 1,222    | 31                 |
| 132 | Ringkøbing Fjord          | 132                       | 5,045                 |              | 1,679        | 5,045       | 1,917       | 1,679        | 3,481       | 2,580    | 49                 |
| 133 | Vesterhavet, nord         | 133,129,130,<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre      | 136                       | 2,980                 | 2,980        | 1,477        | 2,980       | 1,477       | 2,229        | 2,229       | 2,229    | 25                 |
| 137 | Randers Fjord, ydre       | 136,137                   | 3,122                 | 3,122        | 1,213        | 3,122       | 1,213       | 2,168        | 2,168       | 2,168    | 31                 |
| 138 | Hevring Bugt              | 138, 137,<br>136          | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                    | 139                       | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst             | 140                       | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig              | 141                       | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord              | 142                       | 4                     |              |              | 4           | 3           |              | 3           | 3        | 20                 |
| 144 | Knebel Vig                | 144                       | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                  | 144,145                   | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord           | 146                       | 143                   |              |              | 143         | 47          |              | 95          | 95       | 34                 |
| 147 | Århus Bugt og Begtrup Vig | 144,145,147               | 703                   | 689          | 703          | 692         | 703         | 696          | 698         | 697      | 1                  |
| 154 | Kattegat Læsø             | 154                       | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |

| No. | Name                                                               | Aggregation                        | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------|------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 157 | Bjørnholms Bugt, Riisgårde Bredning, Skive Fjord og Lovns Bredning | 157,158                            | 3,651                 |              |              | 1,018       | 1,623       |              | 1,321       | 1,321    | 64                 |
| 158 | Hjarbæk Fjord                                                      | 158                                | 1,852                 |              |              | 440         | 670         |              | 555         | 555      | 70                 |
| 159 | Mariager Fjord, indre                                              | 159                                | 491                   |              |              | 80          | 192         |              | 136         | 136      | 72                 |
| 160 | Mariager Fjord, ydre                                               | 159,160                            | 962                   |              |              | 783         | 516         |              | 649         | 649      | 32                 |
| 165 | Isefjord, indre                                                    | 165                                | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                                              | 1,2,24,165,200                     | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                                          | 201                                | 1,179                 | 1,179        |              | 1,179       | 1,179       | 1,179        | 1,179       | 1,179    | 0                  |
| 204 | Jammerland Bugt og Musholm Bugt                                    | 204                                | 1,381                 |              |              | 1,381       | 549         |              | 965         | 965      | 30                 |
| 206 | Smålandsfarvandet, åbne del                                        | 16,17,18,25,35,36,37,206           | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                                                      | 207                                | 359                   |              |              | 349         | 279         |              | 314         | 314      | 12                 |
| 208 | Femerbælt                                                          | 207,208,209                        | 1,337                 |              |              | 874         | 1,337       |              | 1,105       | 1,105    | 17                 |
| 209 | Rødsand og Bredningen                                              | 209                                | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                                                       | 212                                | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                                                 | 68,72,212,214                      | 532                   | 171          | 384          | 171         | 427         | 278          | 299         | 288      | 46                 |
| 216 | Lillebælt, syd                                                     | 87,101,102,103,104,105,110,113,116 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |

| No. | Name                                       | Aggregation                             | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|-----------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 217 | Lillebælt Bredningen                       | 74,82,106,1<br>08,109,217               | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,<br>127,128,142<br>,146,219 | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |
| 221 | Skagerrak                                  | 221                                     | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt                       | 222,159,160                             | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt                         | 122,123,224                             | 1,398                 |              |              | 806         | 1,398       |              | 1,102       | 1,102    | 21                 |
| 225 | Nordlige Kattegat ÅlbækBugt                | 225                                     | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen                       | 231,124,125<br>,80                      | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning                            | 232                                     | 911                   | 313          | 660          | 297         | 911         | 486          | 604         | 545      | 40                 |
| 233 | Kaas Bredning og Venø Bugt                 | 232,233                                 | 2,075                 |              |              | 1,661       | 1,060       |              | 1,361       | 1,361    | 34                 |
| 234 | Løgstør Bredning                           | 157,158,234<br>,233,236                 | 6,752                 |              |              | 1,838       | 3,948       |              | 2,893       | 2,893    | 57                 |
| 235 | Nibe Bredning og Langerak                  | 157,158,<br>233,234,<br>235,236,<br>238 | 11,242                |              | 10,084       | 3,190       | 10,200      | 10,084       | 6,695       | 8,390    | 25                 |
| 236 | Thisted Bredning                           | 236                                     | 1,150                 |              |              | 269         | 524         |              | 396         | 396      | 66                 |
| 238 | Halkær Bredning                            | 238                                     | 639                   |              |              | 114         | 114         |              | 114         | 114      | 82                 |



**Table B-2. Scenario 2, P10: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs and the corresponding need for reduction in %. Danish P 10%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 494         |              | 615         | 615      | 28                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 400         | 434          | 417         | 426      | 2                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 17          |              | 24          | 24       | 24                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 34          |              | 52          | 52       | 26                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 625          | 823          | 685         | 850         | 724          | 767         | 746      | 31                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 33          | 34          |              | 34          | 34       | 15                 |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 13           | 57           | 46          | 84          | 35           | 65          | 50       | 40                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 797         |              | 1,033       | 1,033    | 19                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 136         |              | 185         | 185      | 21                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |
| 46  | Fakse Bugt             | 46,47       | 589                   |              |              | 589         | 589         |              | 589         | 589      | 0                  |
| 47  | Præstø Fjord           | 47          | 232                   |              |              | 164         | 146         |              | 155         | 155      | 33                 |
| 48  | Stege Bugt             | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 49  | Stege Nor                  | 49          | 29                    |              |              | 22          | 15          |              | 19          | 19       | 35                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 939         | 939         |              | 939         | 939      | 0                  |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 4           | 4           |              | 4           | 4        | 0                  |
| 59  | Nærå Strand                | 59          | 93                    |              |              | 26          | 23          |              | 24          | 24       | 74                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 4           |              | 5           | 5        | 40                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 51          | 49          |              | 50          | 50       | 61                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 34          | 34          |              | 34          | 34       | 76                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 86          | 130         |              | 108         | 108      | 62                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 21           |              | 21          | 13          | 21           | 17          | 19       | 11                 |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 156         | 278         |              | 217         | 217      | 29                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 939         | 1,095       | 987          | 1,017       | 1,002    | 22                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 453         | 667          | 836         | 752      | 38                 |
| 95  | Storebælt SV               | 95          | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV               | 96, 84, 85  | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt                | 101         | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |

| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 135         |              | 120         | 120      | 40                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 188         |             |              | 188         | 188      | 49                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 33          | 26          |              | 30          | 30       | 49                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 165         | 85          |              | 125         | 125      | 24                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 51          | 63          |              | 57          | 57       | 24                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,575       |             |              | 1,575       | 1,575    | 23                 |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,014       |             |              | 4,014       | 4,014    | 54                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 841          |              | 841         |             | 841          | 841         | 841      | 73                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 1,840       |             |              | 1,840       | 1,840    | 40                 |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 500         | 994         |              | 747         | 747      | 25                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 567          | 482          | 551         | 500         | 524          | 525         | 525      | 9                  |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 204          |              | 256         | 300         | 204          | 278         | 241      | 52                 |
| 125 | Kolding Fjord, ydre    | 124,125                       | 547                   |              |              | 261         | 422         |              | 341         | 341      | 38                 |
| 127 | Horsens Fjord, ydre    | 127,128                       | 836                   |              |              | 518         | 455         |              | 487         | 487      | 42                 |
| 128 | Horsens Fjord, indre   | 128                           | 785                   |              |              | 410         | 455         |              | 432         | 432      | 45                 |

| No. | Name                                                                     | Aggregation              | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------------|--------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 129 | Nissum Fjord, Ydre                                                       | 129,131,130              | 2,301                 |              |              | 1,380       | 1,056       |              | 1,218       | 1,218    | 47                 |
| 130 | Nissum Fjord, mellem                                                     | 130,131                  | 1,937                 |              |              | 925         | 436         |              | 681         | 681      | 65                 |
| 131 | Nissum Fjord, Felsted Kog                                                | 131                      | 1,783                 | 1,783        |              | 662         | 662         | 1,783        | 662         | 1,222    | 31                 |
| 132 | Ringkøbing Fjord                                                         | 132                      | 5,045                 |              | 1,679        | 5,045       | 2,429       | 1,679        | 3,737       | 2,708    | 46                 |
| 133 | Vesterhavet, nord                                                        | 133,129,130<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre                                                     | 136                      | 2,980                 | 2,980        | 1,477        | 2,980       | 1,477       | 2,229        | 2,229       | 2,229    | 25                 |
| 137 | Randers Fjord, ydre                                                      | 136,137                  | 3,122                 | 3,122        | 1,412        | 3,122       | 1,412       | 2,267        | 2,267       | 2,267    | 27                 |
| 138 | Hevring Bugt                                                             | 138, 137,<br>136         | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                                                                   | 139                      | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst                                                            | 140                      | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig                                                             | 141                      | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord                                                             | 142                      | 4                     |              |              | 4           | 3           |              | 3           | 3        | 20                 |
| 144 | Knebel Vig                                                               | 144                      | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                                                                 | 144,145                  | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord                                                          | 146                      | 143                   |              |              | 143         | 59          |              | 101         | 101      | 29                 |
| 147 | Århus Bugt og Begtrup Vig                                                | 144,145,147              | 703                   | 703          | 703          | 692         | 703         | 703          | 698         | 700      | 0                  |
| 154 | Kattegat Læsø                                                            | 154                      | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |
| 157 | Bjørnholms Bugt, Riisgårde<br>Bredning, Skive Fjord og<br>Lovns Bredning | 157,158                  | 3,651                 |              |              | 1,018       | 1,852       |              | 1,435       | 1,435    | 61                 |
| 158 | Hjarbæk Fjord                                                            | 158                      | 1,852                 |              |              | 480         | 781         |              | 631         | 631      | 66                 |

| No. | Name                                       | Aggregation                            | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|----------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 159 | Mariager Fjord, indre                      | 159                                    | 491                   |              |              | 84          | 225         |              | 155         | 155      | 68                 |
| 160 | Mariager Fjord, ydre                       | 159,160                                | 962                   |              |              | 822         | 597         |              | 710         | 710      | 26                 |
| 165 | Isefjord, indre                            | 165                                    | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                      | 1,2,24,165,200                         | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                  | 201                                    | 1,179                 | 1,179        |              | 1,179       | 1,179       | 1,179        | 1,179       | 1,179    | 0                  |
| 204 | Jammerland Bugt og Musholm Bugt            | 204                                    | 1,381                 |              |              | 1,381       | 552         |              | 966         | 966      | 30                 |
| 206 | Smålandsfarvandet, åbne del                | 16,17,18,25,35,36,37,206               | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                              | 207                                    | 359                   |              |              | 351         | 281         |              | 316         | 316      | 12                 |
| 208 | Femerbælt                                  | 207,208,209                            | 1,337                 |              |              | 878         | 1,337       |              | 1,107       | 1,107    | 17                 |
| 209 | Rødsand og Bredningen                      | 209                                    | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                               | 212                                    | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                         | 68,72,212,214                          | 532                   | 171          | 387          | 171         | 427         | 279          | 299         | 289      | 46                 |
| 216 | Lillebælt, syd                             | 87,101,102,103,104,105,110,113,116,216 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |
| 217 | Lillebælt Bredningen                       | 74,82,106,108,109,217                  | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,127,128,142,219            | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |

| No. | Name                        | Aggregation                 | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|-----------------------------|-----------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 221 | Skagerrak                   | 221                         | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt        | 222,159,160                 | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt          | 122,123,224                 | 1,398                 |              |              | 806         | 1,398       |              | 1,102       | 1,102    | 21                 |
| 225 | Nordlige Kattegat ÅlbækBugt | 225                         | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen        | 231,124,125,80              | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning             | 232                         | 911                   | 343          | 695          | 297         | 911         | 519          | 604         | 562      | 38                 |
| 233 | Kaas Bredning og Venø Bugt  | 232,233                     | 2,075                 |              |              | 1,729       | 1,228       |              | 1,479       | 1,479    | 29                 |
| 234 | Løgstør Bredning            | 157,158,234,233,236         | 6,752                 |              |              | 1,838       | 4,181       |              | 3,009       | 3,009    | 55                 |
| 235 | Nibe Bredning og Langerak   | 157,158,233,234,235,236,238 | 11,242                |              | 10,301       | 3,795       | 10,877      | 10,301       | 7,336       | 8,819    | 22                 |
| 236 | Thisted Bredning            | 236                         | 1,150                 |              |              | 269         | 545         |              | 407         | 407      | 65                 |
| 238 | Halkær Bredning             | 238                         | 639                   |              |              | 114         | 127         |              | 120         | 120      | 81                 |

**Table B-3. Scenario 2, P20: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs and the corresponding need for reduction in %. Danish P 20%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 499         |              | 617         | 617      | 28                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 404         | 434          | 419         | 427      | 2                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 18          |              | 25          | 25       | 22                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 34          |              | 52          | 52       | 25                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 651          | 841          | 685         | 850         | 746          | 768         | 757      | 30                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 33          | 35          |              | 34          | 34       | 13                 |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 19           | 64           | 46          | 84          | 41           | 65          | 53       | 36                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 854         |              | 1,061       | 1,061    | 16                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 140         |              | 187         | 187      | 20                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |
| 46  | Fakse Bugt             | 46,47       | 589                   |              |              | 589         | 589         |              | 589         | 589      | 0                  |
| 47  | Præstø Fjord           | 47          | 232                   |              |              | 167         | 151         |              | 159         | 159      | 32                 |
| 48  | Stege Bugt             | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 49  | Stege Nor                  | 49          | 29                    |              |              | 22          | 15          |              | 19          | 19       | 35                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 939         | 939         |              | 939         | 939      | 0                  |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 4           | 4           |              | 4           | 4        | 0                  |
| 59  | Nærå Strand                | 59          | 93                    |              |              | 31          | 34          |              | 33          | 33       | 65                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 4           |              | 5           | 5        | 40                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 55          | 56          |              | 56          | 56       | 57                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 34          | 34          |              | 34          | 34       | 76                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 96          | 141         |              | 119         | 119      | 58                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 21           |              | 21          | 13          | 21           | 17          | 19       | 10                 |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 161         | 282         |              | 222         | 222      | 27                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 949         | 1,128       | 987          | 1,038       | 1,013    | 21                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 520         | 667          | 870         | 768      | 37                 |
| 95  | Storebælt SV               | 95          | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV               | 96, 84, 85  | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt                | 101         | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |



| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 136         |              | 120         | 120      | 40                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 206         |             |              | 206         | 206      | 44                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 35          | 29          |              | 32          | 32       | 45                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 165         | 97          |              | 131         | 131      | 21                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 52          | 64          |              | 58          | 58       | 22                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,653       |             |              | 1,653       | 1,653    | 20                 |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,014       |             |              | 4,014       | 4,014    | 54                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 1,093        |              | 841         |             | 1,093        | 841         | 967      | 69                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 2,170       |             |              | 2,170       | 2,170    | 29                 |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 508         | 994         |              | 751         | 751      | 24                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 579          | 496          | 552         | 500         | 537          | 526         | 532      | 8                  |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 227          |              | 261         | 311         | 227          | 286         | 257      | 49                 |
| 125 | Kolding Fjord, ydre    | 124,125                       | 547                   |              |              | 267         | 429         |              | 348         | 348      | 36                 |
| 127 | Horsens Fjord, ydre    | 127,128                       | 836                   |              |              | 527         | 458         |              | 493         | 493      | 41                 |
| 128 | Horsens Fjord, indre   | 128                           | 785                   |              |              | 411         | 459         |              | 435         | 435      | 45                 |

| No. | Name                                                                     | Aggregation              | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------------|--------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 129 | Nissum Fjord, Ydre                                                       | 129,131,130              | 2,301                 |              |              | 1,494       | 1,137       |              | 1,315       | 1,315    | 43                 |
| 130 | Nissum Fjord, mellem                                                     | 130,131                  | 1,937                 |              |              | 1,067       | 436         |              | 752         | 752      | 61                 |
| 131 | Nissum Fjord, Felsted Kog                                                | 131                      | 1,783                 | 1,783        |              | 662         | 836         | 1,783        | 749         | 1,266    | 29                 |
| 132 | Ringkøbing Fjord                                                         | 132                      | 5,045                 |              | 1,679        | 5,045       | 2,937       | 1,679        | 3,991       | 2,835    | 44                 |
| 133 | Vesterhavet, nord                                                        | 133,129,130<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre                                                     | 136                      | 2,980                 | 2,980        | 1,618        | 2,980       | 1,618       | 2,299        | 2,299       | 2,299    | 23                 |
| 137 | Randers Fjord, ydre                                                      | 136,137                  | 3,122                 | 3,122        | 1,610        | 3,122       | 1,610       | 2,366        | 2,366       | 2,366    | 24                 |
| 138 | Hevring Bugt                                                             | 138, 137,<br>136         | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                                                                   | 139                      | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst                                                            | 140                      | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig                                                             | 141                      | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord                                                             | 142                      | 4                     |              |              | 4           | 3           |              | 3           | 3        | 19                 |
| 144 | Knebel Vig                                                               | 144                      | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                                                                 | 144,145                  | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord                                                          | 146                      | 143                   |              |              | 143         | 75          |              | 109         | 109      | 24                 |
| 147 | Århus Bugt og Begtrup Vig                                                | 144,145,147              | 703                   | 703          | 703          | 692         | 703         | 703          | 698         | 700      | 0                  |
| 154 | Kattegat Læsø                                                            | 154                      | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |
| 157 | Bjørnholms Bugt, Riisgårde<br>Bredning, Skive Fjord og<br>Lovns Bredning | 157,158                  | 3,651                 |              |              | 1,018       | 2,071       |              | 1,545       | 1,545    | 58                 |
| 158 | Hjarbæk Fjord                                                            | 158                      | 1,852                 |              |              | 525         | 890         |              | 708         | 708      | 62                 |

| No. | Name                                       | Aggregation                                        | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|----------------------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 159 | Mariager Fjord, indre                      | 159                                                | 491                   |              |              | 89          | 258         |              | 174         | 174      | 65                 |
| 160 | Mariager Fjord, ydre                       | 159,160                                            | 962                   |              |              | 869         | 671         |              | 770         | 770      | 20                 |
| 165 | Isefjord, indre                            | 165                                                | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                      | 1,2,24,165,2<br>00                                 | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                  | 201                                                | 1,179                 | 1,179        |              | 1,179       | 1,179       | 1,179        | 1,179       | 1,179    | 0                  |
| 204 | Jammerland Bugt og Musholm Bugt            | 204                                                | 1,381                 |              |              | 1,381       | 555         |              | 968         | 968      | 30                 |
| 206 | Smålandsfarvandet, åbne del                | 16,17,18,25,<br>35,36,37,20<br>6                   | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                              | 207                                                | 359                   |              |              | 352         | 284         |              | 318         | 318      | 11                 |
| 208 | Femerbælt                                  | 207,208,209                                        | 1,337                 |              |              | 883         | 1,337       |              | 1,110       | 1,110    | 17                 |
| 209 | Rødsand og Bredningen                      | 209                                                | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                               | 212                                                | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                         | 68,72,212,2<br>14                                  | 532                   | 171          | 390          | 171         | 427         | 281          | 299         | 290      | 46                 |
| 216 | Lillebælt, syd                             | 87,101,102,<br>103,104,105<br>,110,113,11<br>4,216 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |
| 217 | Lillebælt Bredningen                       | 74,82,106,1<br>08,109,217                          | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,<br>127,128,142<br>,146,219            | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |

| No. | Name                        | Aggregation                 | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|-----------------------------|-----------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 221 | Skagerrak                   | 221                         | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt        | 222,159,160                 | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt          | 122,123,224                 | 1,398                 |              |              | 806         | 1,398       |              | 1,102       | 1,102    | 21                 |
| 225 | Nordlige Kattegat ÅlbækBugt | 225                         | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen        | 231,124,125,80              | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning             | 232                         | 911                   | 374          | 731          | 297         | 911         | 552          | 604         | 578      | 37                 |
| 233 | Kaas Bredning og Venø Bugt  | 232,233                     | 2,075                 |              |              | 1,800       | 1,396       |              | 1,598       | 1,598    | 23                 |
| 234 | Løgstør Bredning            | 157,158,234,233,236         | 6,752                 |              |              | 1,838       | 4,413       |              | 3,125       | 3,125    | 54                 |
| 235 | Nibe Bredning og Langerak   | 157,158,233,234,235,236,238 | 11,242                |              | 10,516       | 4,436       | 11,242      | 10,516       | 7,839       | 9,178    | 18                 |
| 236 | Thisted Bredning            | 236                         | 1,150                 |              |              | 269         | 565         |              | 417         | 417      | 64                 |
| 238 | Halkær Bredning             | 238                         | 639                   |              |              | 114         | 219         |              | 167         | 167      | 74                 |

**Table B-4. Scenario 2, P30: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs and the corresponding need for reduction in %. Danish P 30%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 503         |              | 619         | 619      | 27                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 409         | 434          | 421         | 428      | 1                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 19          |              | 25          | 25       | 21                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 35          |              | 52          | 52       | 25                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 678          | 860          | 685         | 851         | 769          | 768         | 769      | 29                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 33          | 37          |              | 35          | 35       | 11                 |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 28           | 70           | 46          | 84          | 49           | 65          | 57       | 32                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 908         |              | 1,088       | 1,088    | 14                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 145         |              | 189         | 189      | 19                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |
| 46  | Fakse Bugt             | 46,47       | 589                   |              |              | 589         | 589         |              | 589         | 589      | 0                  |
| 47  | Præstø Fjord           | 47          | 232                   |              |              | 170         | 156         |              | 163         | 163      | 30                 |
| 48  | Stege Bugt             | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 49  | Stege Nor                  | 49          | 29                    |              |              | 22          | 16          |              | 19          | 19       | 34                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 939         | 939         |              | 939         | 939      | 0                  |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 4           | 4           |              | 4           | 4        | 0                  |
| 59  | Nærå Strand                | 59          | 93                    |              |              | 37          | 45          |              | 41          | 41       | 55                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 4           |              | 5           | 5        | 39                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 60          | 63          |              | 61          | 61       | 53                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 39          | 34          |              | 36          | 36       | 74                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 108         | 152         |              | 130         | 130      | 54                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 21           |              | 21          | 14          | 21           | 17          | 19       | 9                  |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 166         | 286         |              | 226         | 226      | 26                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 958         | 1,161       | 987          | 1,060       | 1,023    | 20                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 587         | 667          | 904         | 785      | 36                 |
| 95  | Storebælt SV               | 95          | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV               | 96, 84, 85  | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt                | 101         | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |

| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 137         |              | 121         | 121      | 40                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 225         |             |              | 225         | 225      | 39                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 38          | 31          |              | 34          | 34       | 40                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 165         | 108         |              | 137         | 137      | 17                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 53          | 66          |              | 60          | 60       | 20                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,733       |             |              | 1,733       | 1,733    | 16                 |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,014       |             |              | 4,014       | 4,014    | 54                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 1,899        |              | 841         |             | 1,899        | 841         | 1,370    | 55                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 2,533       |             |              | 2,533       | 2,533    | 17                 |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 517         | 994         |              | 755         | 755      | 24                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 579          | 510          | 553         | 501         | 544          | 527         | 536      | 7                  |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 253          |              | 266         | 322         | 253          | 294         | 274      | 46                 |
| 125 | Kolding Fjord, ydre    | 124,125                       | 547                   |              |              | 273         | 436         |              | 355         | 355      | 35                 |
| 127 | Horsens Fjord, ydre    | 127,128                       | 836                   |              |              | 537         | 463         |              | 500         | 500      | 40                 |
| 128 | Horsens Fjord, indre   | 128                           | 785                   |              |              | 413         | 462         |              | 438         | 438      | 44                 |

| No. | Name                                                                     | Aggregation              | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------------|--------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 129 | Nissum Fjord, Ydre                                                       | 129,131,130              | 2,301                 |              |              | 1,660       | 1,217       |              | 1,439       | 1,439    | 37                 |
| 130 | Nissum Fjord, mellem                                                     | 130,131                  | 1,937                 |              |              | 1,332       | 436         |              | 884         | 884      | 54                 |
| 131 | Nissum Fjord, Felsted Kog                                                | 131                      | 1,783                 | 1,783        |              | 835         | 1,026       | 1,783        | 930         | 1,357    | 24                 |
| 132 | Ringkøbing Fjord                                                         | 132                      | 5,045                 |              | 2,381        | 5,045       | 3,443       | 2,381        | 4,244       | 3,313    | 34                 |
| 133 | Vesterhavet, nord                                                        | 133,129,130<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre                                                     | 136                      | 2,980                 | 2,980        | 1,802        | 2,980       | 1,802       | 2,391        | 2,391       | 2,391    | 20                 |
| 137 | Randers Fjord, ydre                                                      | 136,137                  | 3,122                 | 3,122        | 1,804        | 3,122       | 1,804       | 2,463        | 2,463       | 2,463    | 21                 |
| 138 | Hevring Bugt                                                             | 138, 137,<br>136         | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                                                                   | 139                      | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst                                                            | 140                      | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig                                                             | 141                      | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord                                                             | 142                      | 4                     |              |              | 4           | 3           |              | 3           | 3        | 19                 |
| 144 | Knebel Vig                                                               | 144                      | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                                                                 | 144,145                  | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord                                                          | 146                      | 143                   |              |              | 143         | 90          |              | 116         | 116      | 18                 |
| 147 | Århus Bugt og Begtrup Vig                                                | 144,145,147              | 703                   | 703          | 703          | 692         | 703         | 703          | 698         | 700      | 0                  |
| 154 | Kattegat Læsø                                                            | 154                      | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |
| 157 | Bjørnholms Bugt, Riisgårde<br>Bredning, Skive Fjord og<br>Lovns Bredning | 157,158                  | 3,651                 |              |              | 1,018       | 2,282       |              | 1,650       | 1,650    | 55                 |
| 158 | Hjarbæk Fjord                                                            | 158                      | 1,852                 |              |              | 573         | 998         |              | 786         | 786      | 58                 |



| No. | Name                                       | Aggregation                                        | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|----------------------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 159 | Mariager Fjord, indre                      | 159                                                | 491                   |              |              | 95          | 290         |              | 193         | 193      | 61                 |
| 160 | Mariager Fjord, ydre                       | 159,160                                            | 962                   |              |              | 926         | 740         |              | 833         | 833      | 13                 |
| 165 | Isefjord, indre                            | 165                                                | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                      | 1,2,24,165,2<br>00                                 | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                  | 201                                                | 1,179                 | 1,179        |              | 1,179       | 1,179       | 1,179        | 1,179       | 1,179    | 0                  |
| 204 | Jammerland Bugt og Musholm Bugt            | 204                                                | 1,381                 |              |              | 1,381       | 558         |              | 969         | 969      | 30                 |
| 206 | Smålandsfarvandet, åbne del                | 16,17,18,25,<br>35,36,37,20<br>6                   | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                              | 207                                                | 359                   |              |              | 354         | 286         |              | 320         | 320      | 11                 |
| 208 | Femerbælt                                  | 207,208,209                                        | 1,337                 |              |              | 887         | 1,337       |              | 1,112       | 1,112    | 17                 |
| 209 | Rødsand og Bredningen                      | 209                                                | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                               | 212                                                | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                         | 68,72,212,2<br>14                                  | 532                   | 171          | 393          | 171         | 427         | 282          | 299         | 290      | 45                 |
| 216 | Lillebælt, syd                             | 87,101,102,<br>103,104,105<br>,110,113,11<br>4,216 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |
| 217 | Lillebælt Bredningen                       | 74,82,106,1<br>08,109,217                          | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,<br>127,128,142<br>,146,219            | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |

| No. | Name                        | Aggregation                 | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|-----------------------------|-----------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 221 | Skagerrak                   | 221                         | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt        | 222,159,160                 | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt          | 122,123,224                 | 1,398                 |              |              | 806         | 1,398       |              | 1,102       | 1,102    | 21                 |
| 225 | Nordlige Kattegat ÅlbækBugt | 225                         | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen        | 231,124,125,80              | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning             | 232                         | 911                   | 406          | 766          | 297         | 911         | 586          | 604         | 595      | 35                 |
| 233 | Kaas Bredning og Venø Bugt  | 232,233                     | 2,075                 |              |              | 1,872       | 1,563       |              | 1,718       | 1,718    | 17                 |
| 234 | Løgstør Bredning            | 157,158,234,233,236         | 6,752                 |              |              | 1,838       | 4,645       |              | 3,241       | 3,241    | 52                 |
| 235 | Nibe Bredning og Langerak   | 157,158,233,234,235,236,238 | 11,242                |              | 10,730       | 5,118       | 11,242      | 10,730       | 8,180       | 9,455    | 16                 |
| 236 | Thisted Bredning            | 236                         | 1,150                 |              |              | 275         | 586         |              | 431         | 431      | 63                 |
| 238 | Halkær Bredning             | 238                         | 639                   |              |              | 114         | 311         |              | 213         | 213      | 67                 |

**Table B-5. Scenario 2, P50: Water body-specific MAIs based on the two individual indicators chlorophyll-a (Chl-a) and light penetration depth (light) estimated from statistical models (STAT) or mechanistic models (MEK), respectively.**

**The table shows both the individual calculations as well as the averaged water specific MAIs and the corresponding need for reduction in %. Danish P 50%**

| No. | Name                   | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 1   | Roskilde Fjord, ydre   | 1,2         | 853                   |              |              | 735         | 511         |              | 623         | 623      | 27                 |
| 2   | Roskilde Fjord, indre  | 2           | 434                   | 434          |              | 434         | 417         | 434          | 426         | 430      | 1                  |
| 6   | Nordlige Øresund       | 6           | 1,149                 |              |              | 1,149       | 1,149       |              | 1,149       | 1,149    | 0                  |
| 16  | Korsør Nor             | 16          | 32                    |              |              | 32          | 20          |              | 26          | 26       | 19                 |
| 17  | Basnæs Nor             | 17          | 70                    |              |              | 70          | 35          |              | 52          | 52       | 25                 |
| 18  | Holsteinborg Nor       | 18          | 26                    |              |              | 26          | 26          |              | 26          | 26       | 0                  |
| 24  | Isefjord, ydre         | 24,165      | 1,079                 | 732          | 897          | 685         | 853         | 815          | 769         | 792      | 27                 |
| 25  | Skælskør Fjord og Nor  | 25          | 40                    |              |              | 34          | 39          |              | 37          | 37       | 8                  |
| 28  | Sejerø Bugt            | 28          | 198                   |              |              | 198         | 198         |              | 198         | 198      | 0                  |
| 29  | Kalundborg Fjord       | 29          | 84                    | 45           | 83           | 46          | 84          | 64           | 65          | 64       | 23                 |
| 34  | Smålandsfarvandet, syd | 34          | 543                   |              |              | 543         | 543         |              | 543         | 543      | 0                  |
| 35  | Karrebæk Fjord         | 35          | 1,268                 |              |              | 1,268       | 1,011       |              | 1,140       | 1,140    | 10                 |
| 36  | Dybsø Fjord            | 36          | 59                    |              |              | 59          | 59          |              | 59          | 59       | 0                  |
| 37  | Avnø Fjord             | 37          | 234                   |              |              | 234         | 155         |              | 194         | 194      | 17                 |
| 38  | Guldborgsund           | 38          | 374                   |              |              | 374         | 374         |              | 374         | 374      | 0                  |
| 44  | Hjelm Bugt             | 44          | 87                    |              |              | 87          | 87          |              | 87          | 87       | 0                  |
| 45  | Grønsund               | 45          | 298                   |              |              | 298         | 146         |              | 222         | 222      | 26                 |
| 46  | Fakse Bugt             | 46,47       | 589                   |              |              | 589         | 589         |              | 589         | 589      | 0                  |
| 47  | Præstø Fjord           | 47          | 232                   |              |              | 176         | 165         |              | 171         | 171      | 26                 |
| 48  | Stege Bugt             | 48,49       | 298                   |              |              | 298         | 298         |              | 298         | 298      | 0                  |

| No. | Name                       | Aggregation | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|----------------------------|-------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 49  | Stege Nor                  | 49          | 29                    |              |              | 23          | 16          |              | 19          | 19       | 33                 |
| 56  | Østersøen, Bornholm        | 56          | 939                   |              |              | 939         | 939         |              | 939         | 939      | 0                  |
| 57  | Østersøen, Christiansø     | 57          | 4                     |              |              | 4           | 4           |              | 4           | 4        | 0                  |
| 59  | Nærå Strand                | 59          | 93                    |              |              | 53          | 68          |              | 60          | 60       | 35                 |
| 62  | Lillestrand                | 62          | 9                     |              |              | 7           | 5           |              | 6           | 6        | 38                 |
| 68  | Lindelse Nor               | 68          | 41                    |              |              | 41          | 41          |              | 41          | 41       | 0                  |
| 72  | Kløven                     | 72          | 28                    |              |              | 28          | 28          |              | 28          | 28       | 0                  |
| 74  | Bredningen                 | 74          | 130                   |              |              | 69          | 77          |              | 73          | 73       | 44                 |
| 80  | Gamborg Fjord              | 80          | 83                    |              |              | 69          | 83          |              | 76          | 76       | 8                  |
| 82  | Aborg Minde Nor            | 82          | 140                   |              |              | 64          | 60          |              | 62          | 62       | 56                 |
| 83  | Holckenhavn Fjord          | 83          | 284                   |              |              | 132         | 174         |              | 153         | 153      | 46                 |
| 84  | Kerteminde Fjord           | 84,85       | 43                    |              |              | 27          | 43          |              | 35          | 35       | 19                 |
| 85  | Kertinge Nor               | 85          | 21                    | 21           |              | 21          | 14          | 21           | 18          | 19       | 8                  |
| 86  | Nyborg Fjord               | 83,86       | 305                   |              |              | 176         | 293         |              | 235         | 235      | 23                 |
| 87  | Helnæs Bugt                | 87          | 186                   |              |              | 67          | 186         |              | 127         | 127      | 32                 |
| 89  | Lunkebugten                | 89          | 18                    |              |              | 5           | 18          |              | 12          | 12       | 36                 |
| 90  | Langelandssund             | 83,86,89,90 | 737                   |              |              | 558         | 737         |              | 648         | 648      | 12                 |
| 92  | Odense Fjord, ydre         | 92,93       | 1,282                 | 810          | 1,164        | 977         | 1,225       | 987          | 1,101       | 1,044    | 19                 |
| 93  | Odense Fjord, Seden Strand | 93          | 1,220                 |              | 667          | 1,220       | 721         | 667          | 970         | 819      | 33                 |
| 95  | Storebælt SV               | 95          | 141                   |              |              | 41          | 141         |              | 91          | 91       | 36                 |
| 96  | Storebælt NV               | 96, 84, 85  | 199                   |              |              | 38          | 199         |              | 118         | 118      | 41                 |
| 101 | Genner Bugt                | 101         | 42                    |              |              | 13          | 30          |              | 21          | 21       | 49                 |

| No. | Name                   | Aggregation                   | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|------------------------|-------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 102 | Åbenrå Fjord           | 102                           | 126                   | 59           |              | 59          | 101         | 59           | 80          | 69       | 45                 |
| 103 | Als Fjord              | 103,104,105                   | 290                   |              |              | 72          | 290         |              | 181         | 181      | 38                 |
| 104 | Als Sund               | 104                           | 65                    |              |              | 65          | 65          |              | 65          | 65       | 0                  |
| 105 | Augustenborg Fjord     | 105                           | 85                    | 85           |              | 85          | 85          | 85           | 85          | 85       | 0                  |
| 106 | Haderslev Fjord        | 106                           | 200                   |              |              | 104         | 139         |              | 122         | 122      | 39                 |
| 107 | Juvre Dyb              | 107                           | 366                   |              |              | 265         |             |              | 265         | 265      | 28                 |
| 108 | Avnø Vig               | 108                           | 58                    |              |              | 43          | 37          |              | 40          | 40       | 31                 |
| 109 | Hejlsminde Nor         | 109                           | 165                   |              |              | 165         | 129         |              | 147         | 147      | 11                 |
| 110 | Nybøl Nor              | 110                           | 74                    |              |              | 57          | 69          |              | 63          | 63       | 16                 |
| 111 | Lister Dyb             | 111                           | 2,059                 |              |              | 1,900       |             |              | 1,900       | 1,900    | 8                  |
| 113 | Flensborg Fjord, indre | 113                           | 43                    | 19           |              | 19          | 43          | 19           | 31          | 25       | 42                 |
| 114 | Flensborg Fjord, ydre  | 110,113,114                   | 242                   | 242          |              | 242         | 242         | 242          | 242         | 242      | 0                  |
| 119 | Vesterhavet, syd       | 119, 107,<br>111, 121,<br>120 | 8,746                 |              |              | 4,541       |             |              | 4,541       | 4,541    | 48                 |
| 120 | Knudedyb               | 120                           | 3,074                 | 3,074        |              | 841         |             | 3,074        | 841         | 1,957    | 36                 |
| 121 | Grådyb                 | 121                           | 3,042                 |              |              | 3,042       |             |              | 3,042       | 3,042    | 0                  |
| 122 | Vejle Fjord, ydre      | 122,123                       | 994                   |              |              | 533         | 994         |              | 763         | 763      | 23                 |
| 123 | Vejle Fjord, indre     | 123                           | 579                   | 579          | 538          | 555         | 502         | 558          | 529         | 543      | 6                  |
| 124 | Kolding Fjord, indre   | 124                           | 503                   | 321          |              | 277         | 343         | 321          | 310         | 315      | 37                 |
| 125 | Kolding Fjord, ydre    | 124,125                       | 547                   |              |              | 286         | 450         |              | 368         | 368      | 33                 |
| 127 | Horsens Fjord, ydre    | 127,128                       | 836                   |              |              | 555         | 469         |              | 512         | 512      | 39                 |
| 128 | Horsens Fjord, indre   | 128                           | 785                   |              |              | 417         | 470         |              | 443         | 443      | 44                 |

| No. | Name                                                                     | Aggregation              | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------------------------------------|--------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 129 | Nissum Fjord, Ydre                                                       | 129,131,130              | 2,301                 |              |              | 2,301       | 1,375       |              | 1,838       | 1,838    | 20                 |
| 130 | Nissum Fjord, mellem                                                     | 130,131                  | 1,937                 |              |              | 1,937       | 436         |              | 1,187       | 1,187    | 39                 |
| 131 | Nissum Fjord, Felsted Kog                                                | 131                      | 1,783                 | 1,783        |              | 0           | 1,396       | 1,783        | 698         | 1,241    | 30                 |
| 132 | Ringkøbing Fjord                                                         | 132                      | 5,045                 |              | 4,638        | 5,045       | 4,447       | 4,638        | 4,746       | 4,692    | 7                  |
| 133 | Vesterhavet, nord                                                        | 133,129,130<br>,131, 132 | 7,423                 |              |              | 7,423       |             |              | 7,423       | 7,423    | 0                  |
| 136 | Randers Fjord, indre                                                     | 136                      | 2,980                 | 2,980        | 2,166        | 2,980       | 2,166       | 2,573        | 2,573       | 2,573    | 14                 |
| 137 | Randers Fjord, ydre                                                      | 136,137                  | 3,122                 | 3,122        | 2,191        | 3,122       | 2,191       | 2,657        | 2,657       | 2,657    | 15                 |
| 138 | Hevring Bugt                                                             | 138, 137,<br>136         | 3,251                 |              |              | 3,251       | 3,251       |              | 3,251       | 3,251    | 0                  |
| 139 | Anholt                                                                   | 139                      | 7                     |              |              | 7           | 7           |              | 7           | 7        | 0                  |
| 140 | Djursland Øst                                                            | 140                      | 649                   |              |              | 378         | 649         |              | 514         | 514      | 21                 |
| 141 | Ebeltoft Vig                                                             | 141                      | 14                    |              |              | 14          | 14          |              | 14          | 14       | 0                  |
| 142 | Stavns Fjord                                                             | 142                      | 4                     |              |              | 4           | 3           |              | 3           | 3        | 18                 |
| 144 | Knebel Vig                                                               | 144                      | 16                    |              |              | 10          | 16          |              | 13          | 13       | 19                 |
| 145 | Kalø Vig                                                                 | 144,145                  | 222                   | 222          | 222          | 222         | 222         | 222          | 222         | 222      | 0                  |
| 146 | Norsminde Fjord                                                          | 146                      | 143                   |              |              | 143         | 121         |              | 132         | 132      | 8                  |
| 147 | Århus Bugt og Begtrup Vig                                                | 144,145,147              | 703                   | 703          | 703          | 692         | 703         | 703          | 698         | 700      | 0                  |
| 154 | Kattegat Læsø                                                            | 154                      | 55                    |              |              | 55          | 55          |              | 55          | 55       | 0                  |
| 157 | Bjørnholms Bugt, Riisgårde<br>Bredning, Skive Fjord og<br>Lovns Bredning | 157,158                  | 3,651                 |              |              | 1,214       | 2,678       |              | 1,946       | 1,946    | 47                 |
| 158 | Hjarbæk Fjord                                                            | 158                      | 1,852                 |              |              | 688         | 1,207       |              | 947         | 947      | 49                 |

| No. | Name                                       | Aggregation                            | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|--------------------------------------------|----------------------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 159 | Mariager Fjord, indre                      | 159                                    | 491                   |              |              | 109         | 351         |              | 230         | 230      | 53                 |
| 160 | Mariager Fjord, ydre                       | 159,160                                | 962                   |              |              | 962         | 865         |              | 913         | 913      | 5                  |
| 165 | Isefjord, indre                            | 165                                    | 975                   | 439          |              | 482         | 975         | 439          | 729         | 584      | 40                 |
| 200 | Kattegat Nordsjælland                      | 1,2,24,165,200                         | 2,155                 |              |              | 2,155       | 637         |              | 1,396       | 1,396    | 35                 |
| 201 | Køge Bugt                                  | 201                                    | 1,179                 | 1,179        |              | 1,179       | 1,179       | 1,179        | 1,179       | 1,179    | 0                  |
| 204 | Jammerland Bugt og Musholm Bugt            | 204                                    | 1,381                 |              |              | 1,381       | 564         |              | 972         | 972      | 30                 |
| 206 | Smålandsfarvandet, åbne del                | 16,17,18,25,35,36,37,206               | 2,017                 |              |              | 2,017       | 1,657       |              | 1,837       | 1,837    | 9                  |
| 207 | Nakskov Fjord                              | 207                                    | 359                   |              |              | 357         | 291         |              | 324         | 324      | 10                 |
| 208 | Femerbælt                                  | 207,208,209                            | 1,337                 |              |              | 896         | 1,337       |              | 1,116       | 1,116    | 16                 |
| 209 | Rødsand og Bredningen                      | 209                                    | 410                   |              |              | 222         | 279         |              | 250         | 250      | 39                 |
| 212 | Fåborg Fjord                               | 212                                    | 22                    |              |              | 10          | 22          |              | 16          | 16       | 27                 |
| 214 | Det sydfynske Øhav                         | 68,72,212,214                          | 532                   | 171          | 399          | 171         | 427         | 285          | 299         | 292      | 45                 |
| 216 | Lillebælt, syd                             | 87,101,102,103,104,105,110,113,116,216 | 1,332                 |              |              | 463         | 1,332       |              | 898         | 898      | 33                 |
| 217 | Lillebælt Bredningen                       | 74,82,106,108,109,217                  | 914                   | 286          | 286          | 383         | 914         | 286          | 648         | 467      | 49                 |
| 219 | Århus Bugt, syd, Samsø og Nordlige Bælthav | 59,62,92,93,127,128,142,219            | 2,694                 |              |              | 668         | 2,694       |              | 1,681       | 1,681    | 38                 |

| No. | Name                        | Aggregation                 | Average annual N-load | Chl-a (STAT) | Light (STAT) | Chl-a (MEK) | Light (MEK) | N-MAI (STAT) | N-MAI (MEK) | Avg. MAI | Avg. reduction [%] |
|-----|-----------------------------|-----------------------------|-----------------------|--------------|--------------|-------------|-------------|--------------|-------------|----------|--------------------|
| 221 | Skagerrak                   | 221                         | 1,409                 |              |              | 1,409       |             |              | 1,409       | 1,409    | 0                  |
| 222 | Kattegat Ålborg Bugt        | 222,159,160                 | 2,034                 |              |              | 2,034       | 2,034       |              | 2,034       | 2,034    | 0                  |
| 224 | Nordlige Lillebælt          | 122,123,224                 | 1,398                 |              |              | 806         | 1,398       |              | 1,102       | 1,102    | 21                 |
| 225 | Nordlige Kattegat ÅlbækBugt | 225                         | 715                   |              |              | 715         | 715         |              | 715         | 715      | 0                  |
| 231 | Lillebælt Snævringen        | 231,124,125,80              | 800                   |              |              | 189         | 145         |              | 167         | 167      | 79                 |
| 232 | Nissum Bredning             | 232                         | 911                   | 476          | 836          | 297         | 911         | 656          | 604         | 630      | 31                 |
| 233 | Kaas Bredning og Venø Bugt  | 232,233                     | 2,075                 |              |              | 2,027       | 1,898       |              | 1,962       | 1,962    | 5                  |
| 234 | Løgstør Bredning            | 157,158,234,233,236         | 6,752                 |              |              | 1,838       | 5,106       |              | 3,472       | 3,472    | 49                 |
| 235 | Nibe Bredning og Langerak   | 157,158,233,234,235,236,238 | 11,242                |              | 11,153       | 6,620       | 11,242      | 11,153       | 8,931       | 10,042   | 11                 |
| 236 | Thisted Bredning            | 236                         | 1,150                 |              |              | 289         | 626         |              | 458         | 458      | 60                 |
| 238 | Halkær Bredning             | 238                         | 639                   |              |              | 330         | 494         |              | 412         | 412      | 36                 |



Technical  
University  
of Denmark

DTU Aqua  
Henrik Dams Allé  
DK-2800 Kgs. Lyngby

[www.aqua.dtu.dk](http://www.aqua.dtu.dk)