

Progress of sufficiency of measures analysis related to eutrophication

HELCOM Secretariat
HELCOM ACTION project
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Objective of the analysis:
assess whether existing measures
are sufficient in achieving good
environmental status and
contribute to identifying needs for
new actions



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Analysis of sufficiency of measures (SOM)

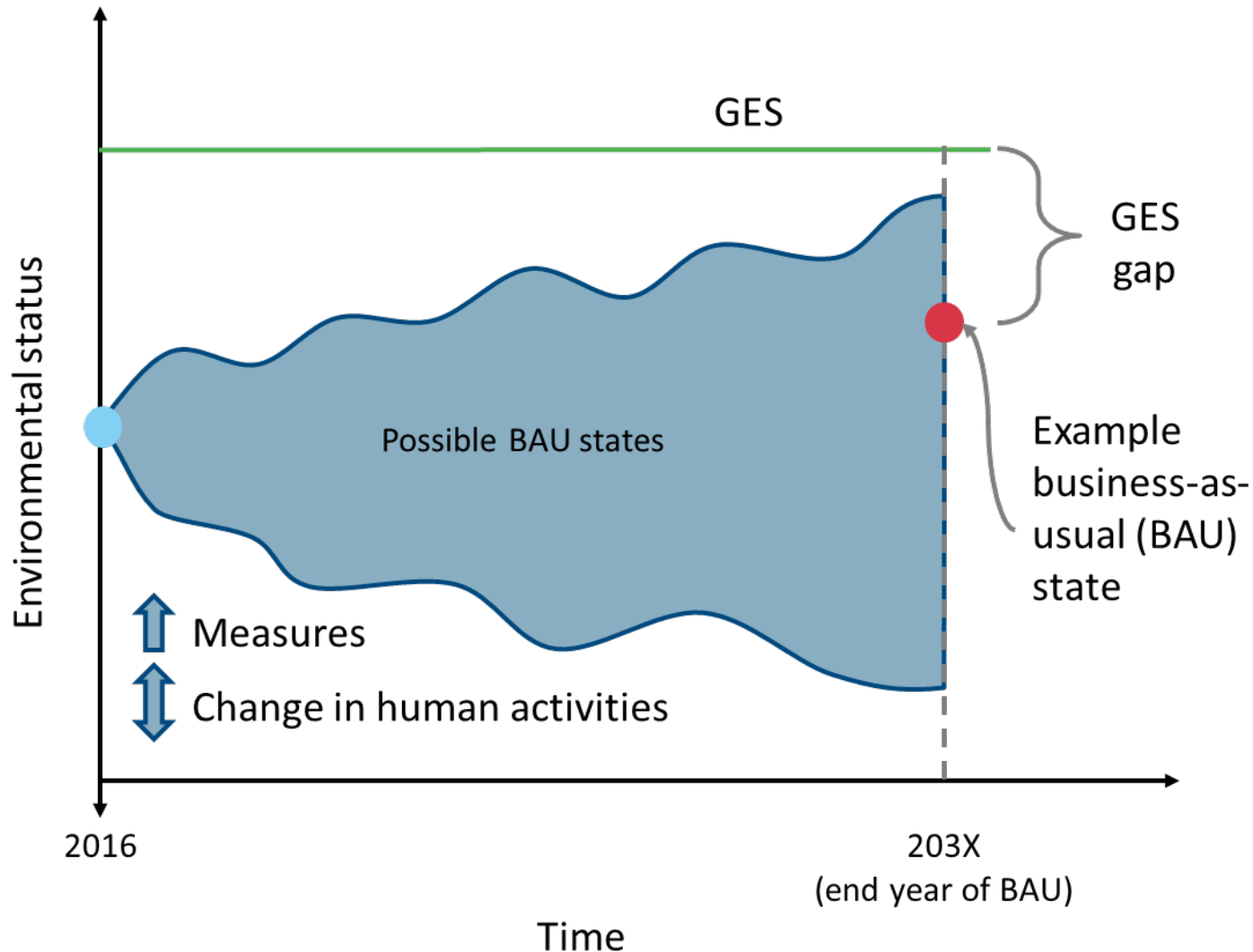
- One of the activities for the HELCOM Baltic Sea Action Plan (BSAP) update
- Carried out by the HELCOM SOM Platform and HELCOM ACTION project in 2019-2020
- Overall SOM approach endorsed by HOD 56-2019 and amended and supported by SOM Platform meetings 1-2019 and 2-2019

Features of the SOM analysis

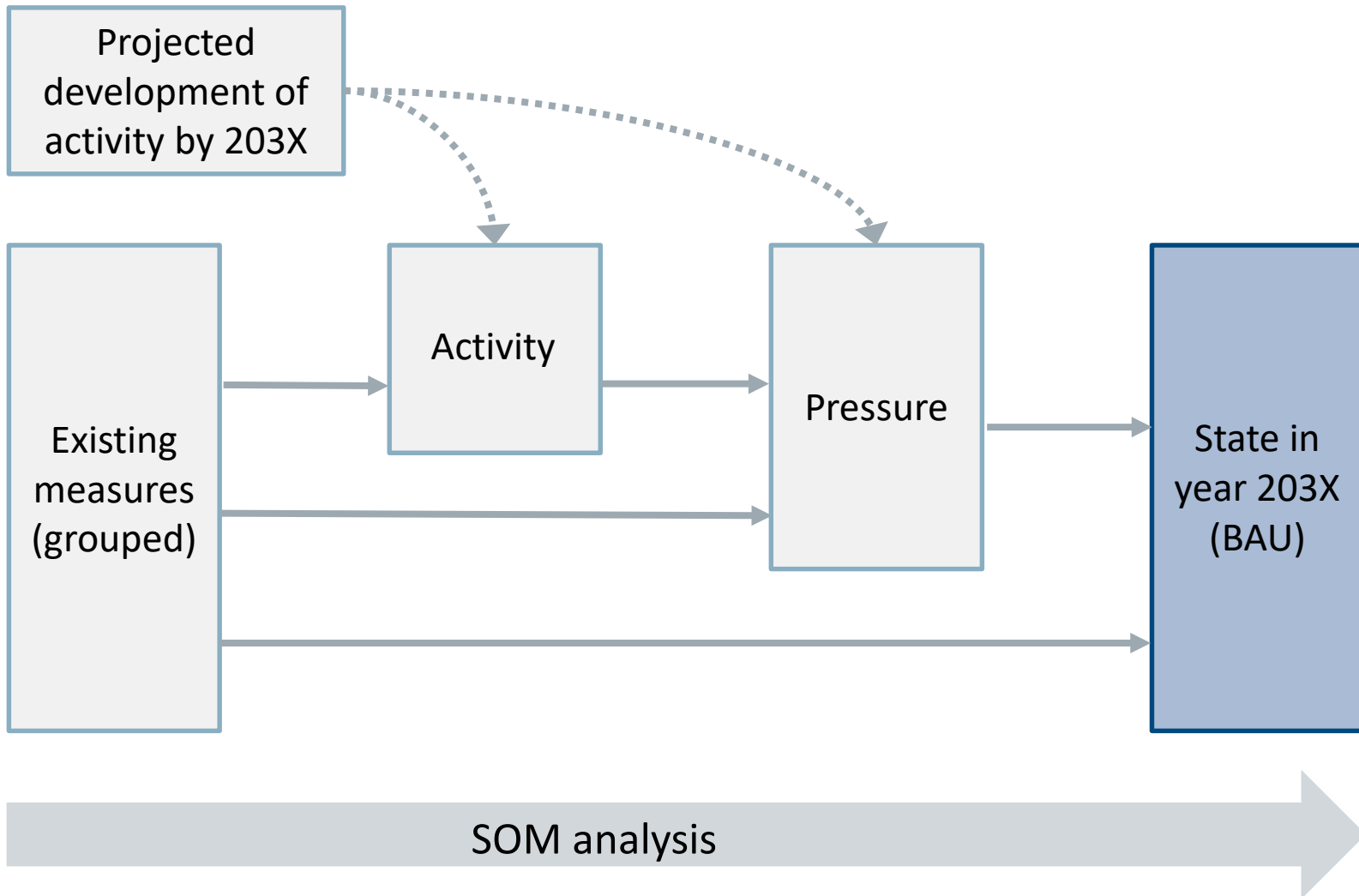
- Supports the BSAP update by
 - assessing how far we are from achieving good status (GES) with existing measures
 - providing information for identifying the need for potential new measures
- First time in this extent in the Baltic Sea region or elsewhere
- Natural and social science approaches
- Same approach across all topics to ensure comparability and coherence (birds, mammals, fish, benthic habitats, hazardous substances, marine litter, underwater noise, non-indigenous species, input of nutrients)



Assessing the business-as-usual (BAU) state for the SOM analysis

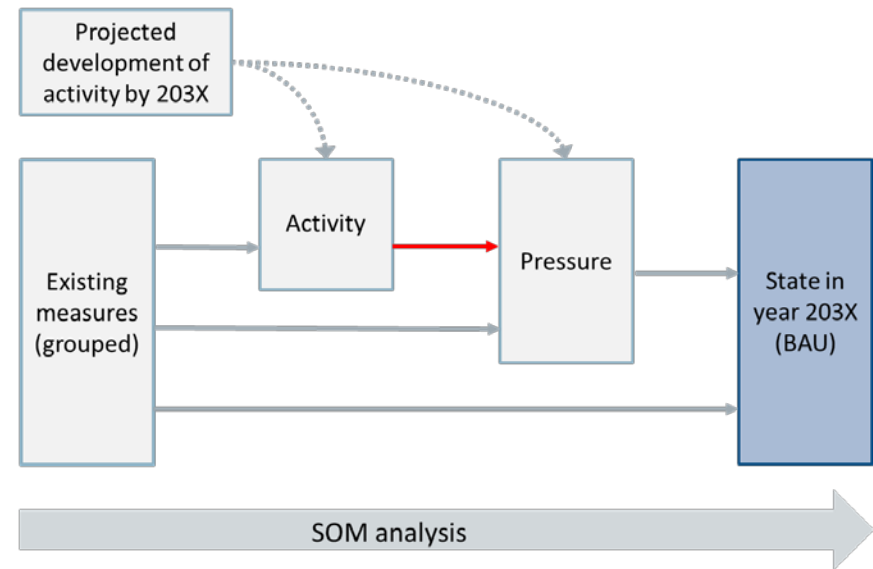


Components of the SOM analysis



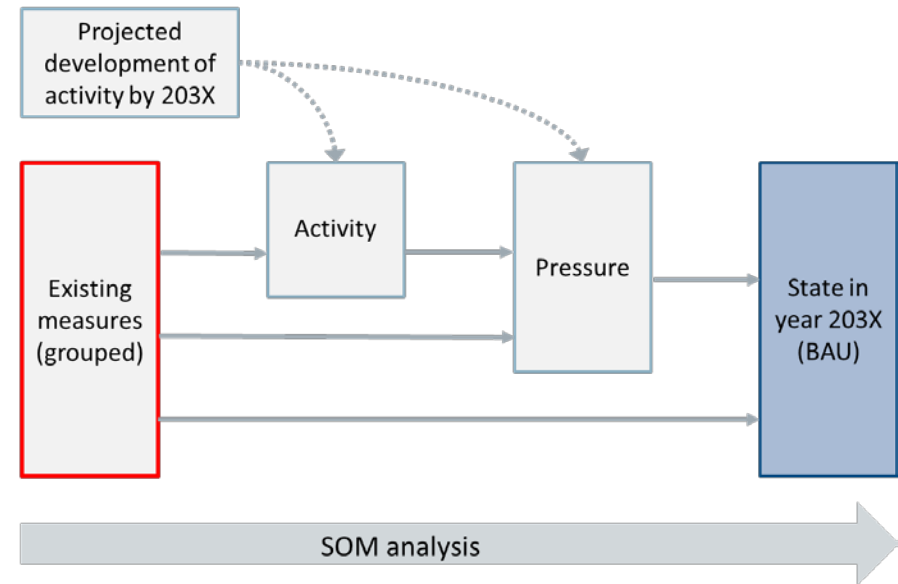
Activity – pressure link

- Contribution (%) of activities to pressures
- Mainly based on expert surveys
- Loss and disturbance to the seabed
 - Approach used in HOLAS II
 - Links percent contribution of activities to the two physical disturbance pressures
- Input of nutrients: data from ACTION WP4 based on PLC-6 pollution load compilation



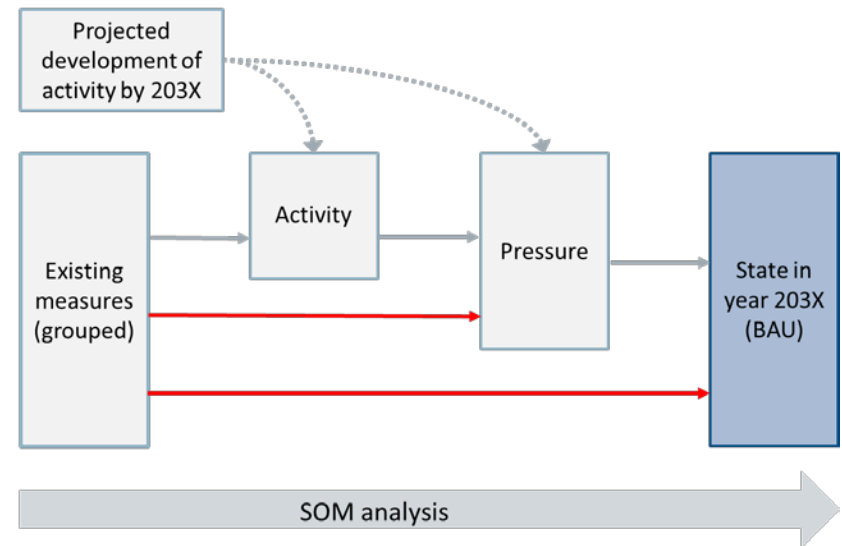
Existing measures

- Measures in existing relevant policies, e.g. current BSAP, MSFD
- Implemented, ongoing and planned in the time frame of BAU
- Grouped to general measure types to reduce the number of measures and improve the feasibility of the analysis



Effectiveness of measures

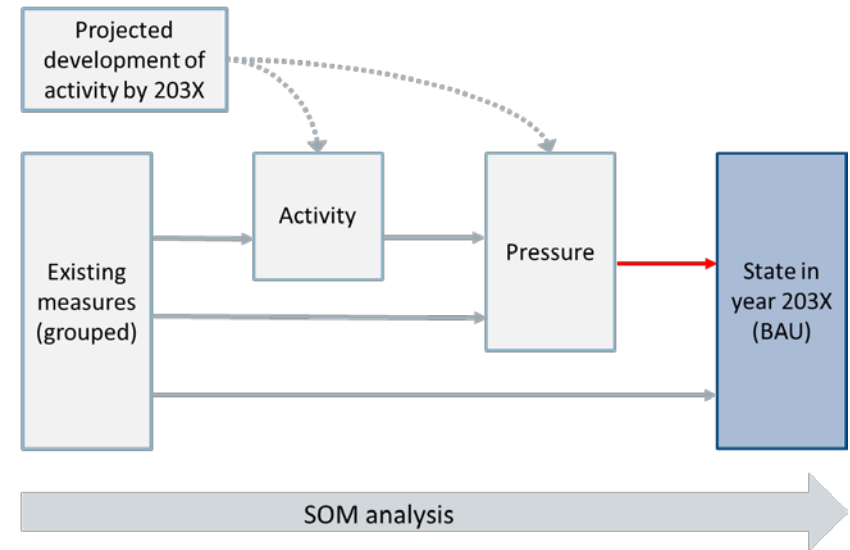
- Reduction in a specific pressure from a specific activity from implementing a generalized measure
- Assessed as a percent (%) change
- Restoration measures
- Based on expert elicitation and existing literature and models



Pressure – state link

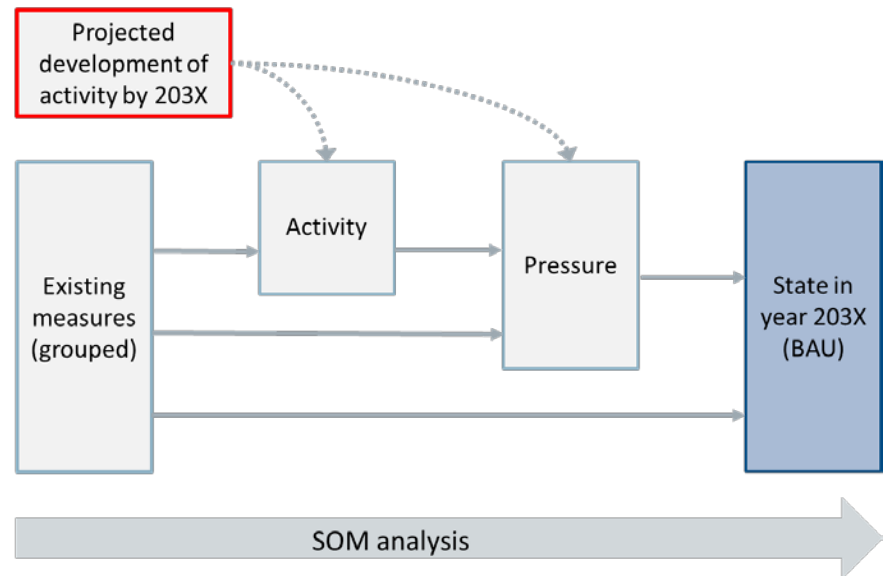
- Links between pressures and state components

- Depending on the existence of GES threshold:
 - Required pressure reduction (in %) to achieve or maintain GES
 - Required pressure reduction (in %) to achieve a specific improvement in the state component
- Mainly based on expert elicitation



Development of human activities

- Changes in human activities over time
- Alternative assumptions possible, e.g. 1) no change, 2) most likely change in activities
- Analysis limited to predominant activities
- National and regional data sources
- Qualitative information translated into percentage change in activity



Current status of SOM work

- Data collection largely ready
 - Expert surveys (almost) ready
 - Literature review partially ongoing
- Methodology ready
- First results becoming available



Results from the SOM analysis

1. Relative contribution of activities to pressures
2. Lists of existing measures and their implementation status
3. Relative effectiveness of measures types in reducing pressures from activities
4. Effectiveness of measure types in reducing pressures (%)
5. The most significant pressures affecting state components
6. Pressure reductions required to achieve GES/status improvements
7. Pressure reductions and status improvements/from existing measures
8. Sufficiency of existing measures to achieve GES/a specific status improvement
9. Information on spatial areas and topics where measures are likely to be insufficient
10. Types of measures still needed and activities/pressures they should target
11. Time lags between measures and environmental state



Input of nutrients in the SOM analysis



Approach

- Same overall approach as for other topics with some adjustments
 - Not as reliant on expert elicitation as other topics
- Majority of input data from ACTION WP4

Data sources

- Activity-pressure contributions: HELCOM Pollution Load Compilation (PLC)
- Effectiveness of measures
 - Wastewater treatment (reductions achieved by implementing the HELCOM Recommendation 28E/5 on municipal wastewater treatment)
 - Atmospheric nitrogen emissions (based on EMEP data and predictions)
 - Scattered dwellings (joint survey with the PLC-7 project)
 - Nutrient runoff from agriculture (expert surveys)

Expert surveys on effectiveness of measures for nutrient runoff from agriculture

- Estimates of the effects of measures based on model results, expert evaluation or both
- Estimates in total or by individual measures (tons or %)
- Separately for nitrogen and phosphorus
- Respondents: HELCOM Agri and nationally nominated experts



Next steps

- SOM Platform 3-2020 meeting 24-26 March
 - Detailed methodology
 - Preliminary results
- Literature review completed in March 2020
- Additional analyses and results March-May
- Validation of data intersessionally or in Working Group meetings in April/May 2020
- BSAP update workshops in May 2020

More information

[Website](#) with SOM materials

[SOM Platform 3-2020](#)