Baltic Marine Environment Protection Commission

Working Group on the State of the Environment and Nature Conservation

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Background

Document 4J-30 provides a summary of the core indicators with remaining study reservations and Contracting Parties with remaining study reservations are invited to clarify their position.

In order to fulfil this request for coastal fish indicators, an ad hoc expert was organized last week in Germany. Key elements of the outcome for the indicators “Abundance of coastal fish key functional groups” and “Abundance of key coastal fish species” are outlined in the attached document.

Action requested

The Meeting is invited to take note of the document.

Assessment of the coastal fish indicators by German experts

1) Abundance of coastal fish key functional groups

2) Abundance of key coastal fish species

Is the concept senseful? No

Is the GES threshold senseful? No.

- Baseline approach (deviation from a defined baseline is assessed) is not applicable for time series < 15 years, hence not applicable for German data.
- Alternatively, a trend based approach has to be used
- In both cases, information value is not clear (changes compared with a defined status, but what does this change actually means and does this defined status really reflects GES?)

Relevance/application? Not applicable as indicators for biodiversity, indicator is scientifically premature

- After further development possible application as indicator under D4 foodwebs.

Criticisms/ suggestions for improvement

Abundance of key coastal fish species:

- For detailed information concerning biodiversity of the coastal fish community more or other species should be considered but in most cases there is a lack of appropriate data
- no load specific response of the indicator
- Danish monitoring data from recreational fishery: no comparability with monitoring data from scientific surveys
- Indicator more likely reflects habitat quality but not suitable as indicator for biodiversity of the fish community, since the indicator only considers the abundance of specific key species
- It is questionable whether different key species with strong different ecological characteristics (flounder, perch, cod) can be combined in one indicator
- Selection of species: coastal areas are rather the peripheral areas of the natural occurrence of flounder and cod and thus are not representative for the whole Baltic Sea area
- There are already ICES assessments for the cod stocks
- Effects of eutrophication on the species composition and abundance/biomass have to be expected. Catches have increased through eutrophication (also perch, pikeperch)→ therefore data originating from the period before the strong eutrophication should be used for GES definition
- Sweden stated that there was no eutrophication problem in Swedish waters in the baseline period
- In Germany currently no targeted long term coastal fish monitoring exists→ lack of data concerning abundance of coastal fish

Both indicators:

- For an informative coastal fish monitoring, standardized fishing gear and a standardized monitoring concept is urgently needed as described in HELCOM Coastal Fish Monitoring Guidelines
- Some aspects of indicator concept are unclear: Consideration of different ontogenetic states? Differentiation between benthic/pelagic spawners?
- It is unclear, to which criteria monitoring stations have been selected
- No clear pressure/state relation, indicators show changes in the food webs without any information about possible causes (eutrophication? fisheries? others?)
- Both indicators can be rather classified as surveillance-indicators
- Both are premature and not applicable for biodiversity assessment, but could be further developed as food web indicators
- Consideration of trophic levels would be senseful, a balanced ratio between the trophic levels would be desirable (possible indication for GES?).