

## CEMP Appendix BB16: Changes in average trophic level of marine predators (FW4)

(Revised 2017 to reflect method and data source changes)



### Changes in average trophic level of marine predators (Common indicator FW4)

<b>Monitoring Purpose</b>	State/impact	<b>Applicable MSFD GES Criteria</b>	4.2 Proportion of selected species at the top of food webs 4.3 Abundance/distribution of key trophic groups/species
<b>Monitoring Guidelines / Monitoring Method in place</b>	Guidelines relating to the groundfish and beam trawl surveys are available here: <a href="http://www.ices.dk/marine-data/data-portals/Pages/DATRAS-Docs.aspx">http://www.ices.dk/marine-data/data-portals/Pages/DATRAS-Docs.aspx</a> <a href="https://fishdata.sgworksite.org.uk/">https://fishdata.sgworksite.org.uk/</a> Guidelines and information relating to the landings data are available here: <a href="http://www.ices.dk/sites/pub/Publication%20Reports/Cooperative%20Research%20Report%20%28CRR%29/crr311/CRR%20311%20Final.pdf">http://www.ices.dk/sites/pub/Publication%20Reports/Cooperative%20Research%20Report%20%28CRR%29/crr311/CRR%20311%20Final.pdf</a> <a href="http://www.fao.org/fishery/cwp/search/en">http://www.fao.org/fishery/cwp/search/en</a>	<b>Assessment Guidelines</b>	CEMAP Guidelines - FW4
<b>Quality Assurance Procedures in place</b>	ICES Data TypeGuide; National and other	<b>Assessment tools available</b>	An algorithm (R script) to compute the indicator.

<b>Quality Control</b>	Real&DelayedValidation <ul style="list-style-type: none"> <li>o DATRAS</li> <li>o MSFDquality assured groundfish survey monitoring and assessment data products</li> </ul> Other QC <ul style="list-style-type: none"> <li>o Scientific publications and worldwide database</li> <li>o Institutional data control</li> </ul>	<b>Data Custodian</b>	ICES Data Centre Marine Scotland Science - Scottish Government National institutes (e.g. Instituto Español de Oceanografía)	
<b>Element Monitored</b>	Biological feature: Fish and invertebrates	<b>Database</b>	DATRAS, MSFD data products, National databasedata and ICES catch statistics for species biomass. Worldwide trophic level database : Fishbase & Sealifebase Regional trophic level estimations: an excel file for the studied region will be handed containing data (i.e. estimations of trophic levels and sources)	
<b>Parameter Measured</b>	Species population size(biomass)	<b>Indicator Metric</b>	Mean trophic level of ecosystem (based on biomass and trophic level of species). The metric is without unit	
<b>Temporal scope</b>	Start date: FR: 1997 Start date ES: 1989 End date: FR & ES : 9999 Monitoring frequency: annual	<b>Data submission Frequency/ deadline and link to reporting format</b>	Annual submission Deadline throughout year ICES DATRAS reporting format  ( <a href="https://datras.ices.dk/Data_products/ReportingForm at.aspx">https://datras.ices.dk/Data_products/ReportingForm at.aspx</a> )	
<b>Spatial Scope</b>	Continental Shelf (beyond EEZ)			
<b>Nature of Data</b>	Processed data	<b>Aggregation of Data</b>	Other (determined by monitoring program and catch statistics)	

OSPAR Region	I	II	III	IV	V
Contracting Parties monitoring		UK,DE,DK,SE,BE,NO,FR	IE, UK, FR, ES	FR, ES	
Contracting parties supplying data				FR, ES	
Spatial Resolution (proportion)				20%	
Spatial Resolution (Density)				40 ICES statistical rectangles	
Contracting Parties with an "opt out"					