

## BEAT+ Integrated classification of biodiversity condition in Europe's seas, May 2020

The BEAT+ tool builds on the EEA assessment tools developed and applied in the context of assessing the degree of contamination (CHASE+), eutrophication (HEAT+) and biodiversity (BEAT+) in Europe's seas. BEAT+ makes use of the same data sets and threshold values used in these assessments but recombines these in a new framework that addresses 'biodiversity condition'.

BEAT+ has been designed to provide an assessment of the spatial variability of a range of biodiversity components by combining existing biodiversity indicators. The tool integrates data from normalised indicators to identify worst case status measures for different biodiversity components. The results are then linked to a standard gridE based Spatial Assessment Unit (SAU) which is used both for biodiversity and for pressures assessments (Andersen et al., 2014). These grid-based SAUs not only allow alignment of indicators for biodiversity and for pressures but provide a means for combining large assessment areas (e.g. for wideranging species) with point data collected from biological surveys e.g. WFD monitoring.

BEAT+ tool works by calculating a Biological Quality Ratio (BQR) which is an aggregated score of indicator outcomes within a grid square. To allow objective comparison, the indicator outcomes are normalised to a scale of 0 to 1, with five status classes at equal intervals on that scale (from Bad starting at 0, Poor at 0.2, Medium at 0.4, Good at 0.6 and High at 0.8). By this means, indicators based on different biological criteria can be aggregated in a consistent way.

This metadata refers to dataset providing the results of classification of biodiversity status using the BEAT+ tool. The status is evaluated in five classes, where High and Good are recognised as 'non-problem areas' and Moderate, Poor and Bad are recognised as 'problem areas'. The dataset covers:

- BQR Assessment of all marine mammals combined (mainly focused on coastal and relatively stable inshore populations of seals, dolphins and porpoises)
- BQR Assessment of seabirds and wading birds
- BQR Assessment of commercial fish (as these have agreed targets defined on biomass and fishing mortality)
- BQR Assessment of pelagic habitats
- BQR Assessment of benthic habitats
- BQR Assessment of worst-performing biodiversity groups
- An overall synthesis of the Biological Quality Ratios (BQR) values (showing which are the worst -lowest- BQR values in each assessment grid cell. The 'worst' value is used here to identify the biological group most at risk, rather than averaging over all groups to avoid over-emphasis on groups with more intensive monitoring).

As reference, please consult the ETC/ICM Report 3/2019: Biodiversity in Europe's seas: <https://www.eionet.europa.eu/etcs/etc-icm/products/biodiversity-in-europes-seas>. The indicator BEAT+ Integrated Assessment Worst Case BQR has been used in the EEA report 17/2019 "Marine Messages II": <https://www.eea.europa.eu/publications/marine-messages-2>.

### Simple

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Point of contact	Organisation name	Individual name	Electronic mail address	Website Role
	European Environment Agency		sdi@eea.europa.eu	<a href="http://www.eea.europa.eu">http://www.eea.europa.eu</a> Point of contact
	European Environment Agency		sdi@eea.europa.eu	Custodian
Maintenance and update frequency	Not planned			
GEMET - INSPIRE themes, version 1.0	<ul style="list-style-type: none"> <li>• <a href="#">Oceanographic geographical features</a></li> <li>• <a href="#">Sea regions</a></li> </ul>			
Keywords				

<b>Keywords</b>	
<b>GEMET</b>	<ul style="list-style-type: none"> <li>• coastal water</li> <li>• marine pollution</li> <li>• water</li> <li>• marine monitoring</li> <li>• marine environment</li> <li>• sea</li> <li>• marine ecosystem</li> <li>• sea water</li> <li>• deep sea</li> </ul>
<b>Continents, countries, sea regions of the world.</b>	<ul style="list-style-type: none"> <li>• Norwegian Sea</li> <li>• North Sea</li> <li>• Mediterranean Sea, Eastern Basin</li> <li>• Bay of Biscay</li> <li>• English Channel</li> <li>• Baltic Sea</li> <li>• Barents Sea</li> <li>• Celtic Sea</li> <li>• Adriatic Sea</li> <li>• Black Sea</li> <li>• Ionian Sea</li> <li>• Kattegat</li> <li>• Mediterranean Sea, Western Basin</li> <li>• Tyrrhenian Sea</li> <li>• North Atlantic Ocean</li> <li>• Mediterranean Sea</li> <li>• Aegean Sea</li> </ul>
<b>Spatial scope</b>	<ul style="list-style-type: none"> <li>• European</li> </ul>
<a href="#">EEA topics</a>	<ul style="list-style-type: none"> <li>• Water</li> </ul>
<b>EEA Management Plan</b>	<ul style="list-style-type: none"> <li>• 2019 1.6.2</li> </ul>
<b>Access constraints</b>	Other restrictions
<b>Other constraints</b>	<a href="#">no limitations to public access</a>
<b>Use constraints</b>	Other restrictions
<b>Other constraints</b>	EEA standard re-use policy: unless otherwise indicated, re-use of content on the EEA website for commercial or non-commercial purposes is permitted free of charge, provided that the source is acknowledged ( <a href="http://www.eea.europa.eu/legal/copyright">http://www.eea.europa.eu/legal/copyright</a> ). Copyright holder: European Environment Agency (EEA).
<b>Spatial representation type</b>	Vector
<b>Distance</b>	20 km

Distance	100 km
Language of dataset	English
Topic category	<ul style="list-style-type: none"><li>• Environment</li></ul>



Begin date	2011-01-01		
End date	2016-12-31		
Coordinate reference system identifier	<a href="#">EPSG:4258</a>		
Distribution format	• SHP ( )		
OnLine resource	<b>Protocol</b>  EEA:FOLDERPATH  WWW:URL  OGC:WMS  ESRI:REST	<b>Linkage</b>  <a href="https://sdi.eea.europa.eu/webdav/datastore/public/eea_v_4258_20_km_beat_p_2011-2016_v01_r00/">https://sdi.eea.europa.eu/webdav/datastore/public/eea_v_4258_20_km_beat_p_2011-2016_v01_r00/</a>  <a href="https://sdi.eea.europa.eu/data/70064384-f3b7-49ad-b137-bdf31af82158">https://sdi.eea.europa.eu/data/70064384-f3b7-49ad-b137-bdf31af82158</a>  <a href="https://water.discomap.eea.europa.eu/arcgis/services/Marine/BEAT_assessment/MapServer/WMServer?request=GetCapabilities&amp;service=WMS">https://water.discomap.eea.europa.eu/arcgis/services/Marine/BEAT_assessment/MapServer/WMServer?request=GetCapabilities&amp;service=WMS</a>  <a href="https://water.discomap.eea.europa.eu/arcgis/rest/services/Marine/BEAT_assessment/MapServer">https://water.discomap.eea.europa.eu/arcgis/rest/services/Marine/BEAT_assessment/MapServer</a>	<b>Name</b>          Direct download
Hierarchy level	Dataset		

Conformance result

Date (Publication)	2010-12-08
Explanation	See the referenced specification

Statement	The BEAT+ tool itself is anchored in earlier versions of the tool developed and tested by Helcom (2010a) and the EUfunded Devotes project (Uusitalo et al., 2016; Nygård et al., 2018). The indicators used for assessing biodiversity conditions across Europe' seas range from planktonic organisms over benthic communities to fish, seabirds, reptiles and marine mammals — and each indicator is represented by two numerical values, a figure representing biodiversity and a figure representing agreed target values (e.g. from Helcom, the OSPAR Commission, maximum sustainable yield (MSY).
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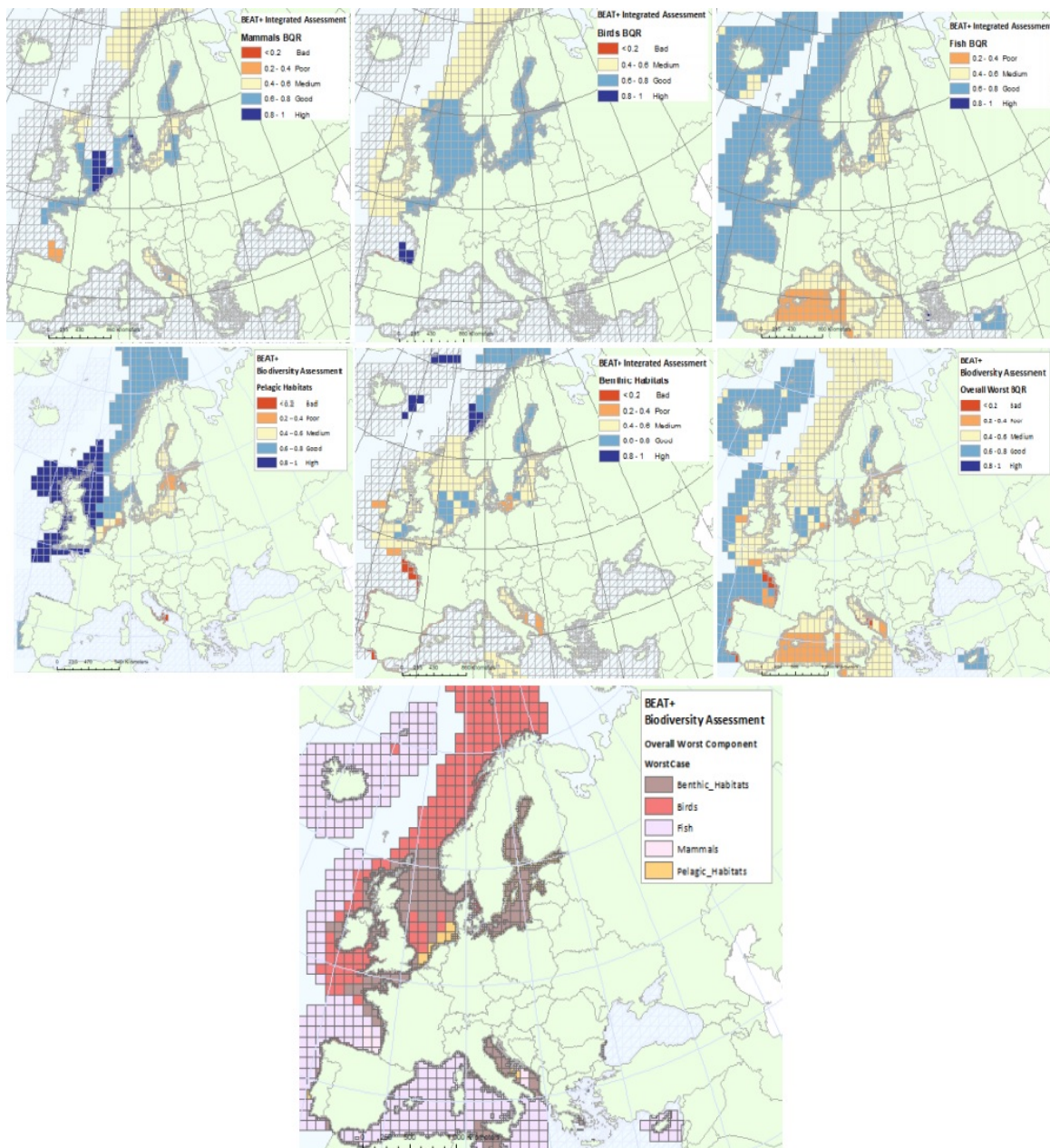
As reference, please consult the ETC/ICM Report 3/2019: Biodiversity in Europe's seas: <https://www.eionet.europa.eu/etcs/etc-icm/products/biodiversity-in-europes-seas>. The indicator BEAT+ Integrated Assessment Worst Case BQR has been used in the EEA report 17/2019 "Marine Messages II": <https://www.eea.europa.eu/publications/marine-messages-2>.

Source	<ul style="list-style-type: none"><li>• <a href="#">EEA marine assessment grid, Jan. 2017</a></li></ul>
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Metadata

File identifier	70064384-f3b7-49ad-b137-bdf31af82158 <a href="#">XML</a>										
Metadata language	English										
Character set	UTF8										
Hierarchy level	Dataset										
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Metadata standard name	ISO 19115/19139										
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Metadata author	<table><tr><th>Organisation name</th><th>Individual name</th><th>Electronic mail address</th><th>Website Role</th></tr><tr><td>European Environment Agency</td><td></td><td>sdi@eea.europa.eu</td><td>Point of contact</td></tr></table>	Organisation name	Individual name	Electronic mail address	Website Role	European Environment Agency		sdi@eea.europa.eu	Point of contact		
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Overviews



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