EEA geospatial data catalogue

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

Identification info

Date (Creation)	2019-05-08
Date (Publication)	2020-05-27
Edition	01.00
Citation identifier	eea_v_4258_20_km_beat_p_2011-2016_v01_r00
Citation identifier	DAT-235-en

Point of contact

Organisation	Individual	Electronic mail address	Website	Role
European Environment Agency		sdi@eea.europa.eu	http://www.eea.europa.eu	Point of contact
European Environment Agency		sdi@eea.europa.eu		Custodian

Spatial representation type	Vector

Spatial resolution

Spatial resolution	20 km

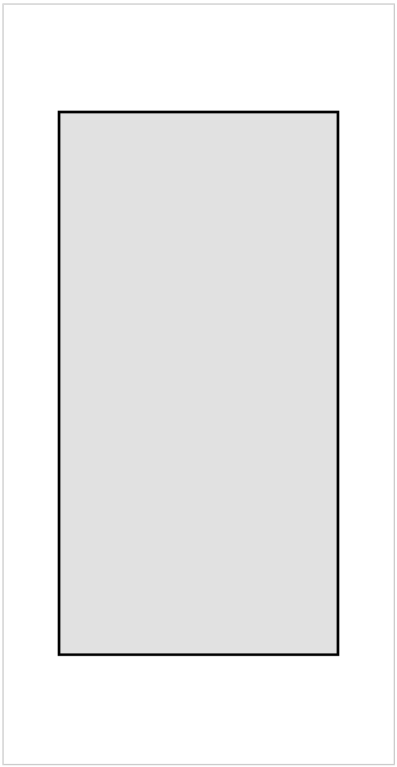
Spatial resolution

Spatial resolution	100 km

Topic category	• Environment

Extent

84.60	N	33.06	S	40.44	E	-31.42	W



Temporal extent

Time period	2011-01-01 2016-12-31
Maintenance and update frequency	Not planned
GEMET - INSPIRE themes, version 1.0	• Oceanographic geographical features • Sea regions
GEMET	• marine pollution • water • sea water • marine ecosystem • marine environment • marine monitoring • sea • coastal water • deep sea • in situ
Continents, countries, sea regions of the world.	• Norwegian Sea • Baltic Sea • Mediterranean Sea, Eastern Basin • North Sea • Bay of Biscay • North Atlantic Ocean • Mediterranean Sea • Kattegat • Mediterranean Sea, Western Basin • Ionian Sea • Adriatic Sea • Black Sea • Celtic Sea

	• Barents Sea • Aegean Sea • English Channel • Tyrrhenian Sea
Spatial scope	• European
EEA topics	• Water
EEA Management Plan	• 2019 1.6.2

Resource constraints

Access constraints	Other restrictions
Other constraints	no limitations to public access

Resource constraints

Use constraints	Other restrictions
Other constraints	License CC-BY 4.0 (https://creativecommons.org/licenses/by/4.0/). Copyright holder: European Environment Agency (EEA).
Language	English

Distribution Information

Distribution format	• SHP
OnLine resource	https://sdi.eea.europa.eu/webdav/datastore/public/eea_v_4258_20_km_beat_p_2011-2016_v01_r00
OnLine resource	Direct download
OnLine resource	
OnLine resource	

Data quality info

Hierarchy level	Dataset

Report

Result

Title	Commission Regulation (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services
Date (Publication)	2010-12-08
Explanation	See the referenced specification

Resource lineage

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).

	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 .
Hierarchy level	Dataset
Source	• EEA marine assessment grid, Jan. 2017

Reference System Information

Reference System Information

Code	EPSG:4258

Metadata

Metadata identifier	70064384-f3b7-49ad-b137-bdf31af82158
Language	English
Character encoding	UTF8

Contact

Organisation	Individual	Electronic mail address	Website	Role
European Environment Agency		sdi@eea.europa.eu		Point of contact

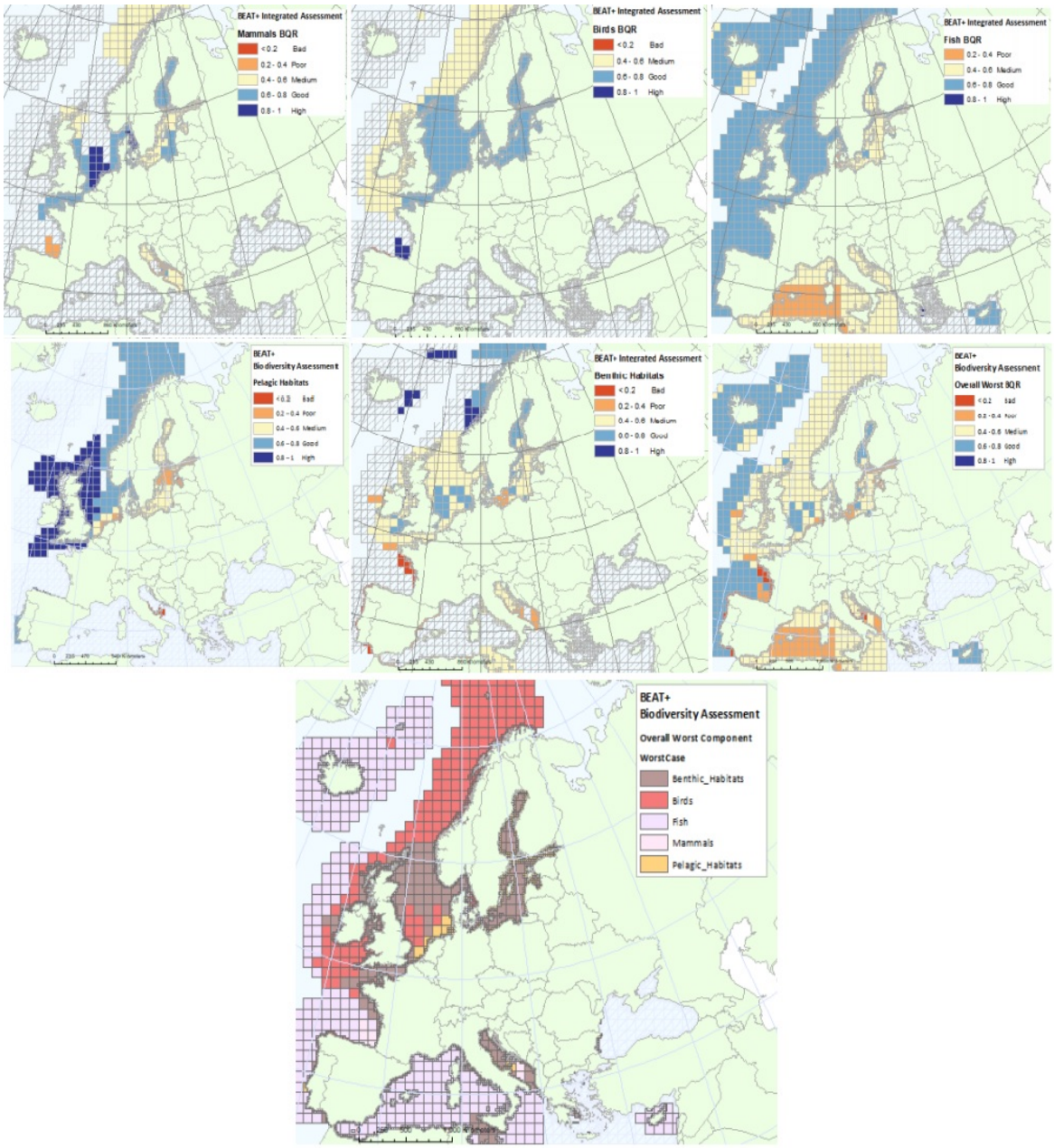
Type of resource

Resource type	Dataset
Metadata linkage	https://sdi.eea.europa.eu/catalogue/srv/api/records/70064384-f3b7-49ad-b137-bdf31af82158?language=all
Date info (Creation)	2021-07-01T11:13:44.904Z
Date info (Revision)	2025-12-02T12:41:49.469766Z

Metadata standard

Title	ISO 19115/19139
Edition	1.0

Overviews



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