EEA geospatial data catalogue

EUNIS Littoral biogenic habitat types (salt marshes), predicted distribution of habitat suitability - version 1, Nov. 2021

This metadata corresponds to the EUNIS Littoral biogenic habitat (salt marshes) types, predicted distribution of habitat suitability dataset.

Littoral habitats are those formed by animals such as worms and mussels or plants (salt marshes).

The verified littoral biogenic habitat samples used are derived from the Braun-Blanquet database (http://www.sci.muni.cz/botany/vegsci/braun_blanquet.php?lang=en) which is a centralised database of vegetation plots and comprises copies of national and regional databases using a unified taxonomic reference database. The geographic extent of the distribution data are all European countries except Armenia and Azerbaijan.

The modelled suitability for EUNIS saltmarsh habitat types is an indication of where conditions are favourable for the habitat type based on sample plot data (Braun-Blanquet database) and the Maxent software package. The modelled suitability map may be used as a proxy for the geographical distribution of the habitat type. However, note that it is not representing the actual distribution of the habitat type. As predictors for the suitabilty modelling not only Climate and Soil parameters have been taken into account, but also so-called RS-EVB's, Remote Sensing-enabled Essential Biodiversity Variables like Landuse, Vegetation height, Phenology, LAI(Leave Area Index) and Population density. Because the EBV's are restricted by the extent of the Remote Sensing data (EEA38 countries and the United Kingdom) the modelling result does also not go beyond this boundary. The dataset is provided both in Geodatabase and Geopackage formats.

The Training map files show the modelled suitable distribution, omitting the 10% of occurrence records in the least suitable environment under the assumption that they are not representative of the overall suitable habitat distribution. The 10 percentile training presence is an arbitrary threshold which omits all regions with habitat suitability lower than the suitability values for the lowest 10% of occurrence records.

Simple

Date (Publication)	2021-11-15
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Point of contact

Organisation name	Individual name	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

Point of contact

No information provided.

Maintenance and update frequency	Not planned
GEMET - INSPIRE themes, version 1.0	• Habitats and biotopes
Keywords	
Keywords	
GEMET	• natural area • modelling

	• salt marsh • terrestrial ecosystem • habitat
Continents, countries, sea regions of the world.	• EEA38 (from 2020) • United Kingdom
Spatial scope	• European
EEA topics	• Biodiversity
EEA Management Plan	• 2021 1.1.4
Access constraints	Other restrictions
Other constraints	no limitations to public access
Use constraints	Other restrictions
Other constraints	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 (https://www.eea.europa.eu/legal/copyright). Copyright holder: European Environment Agency (EEA).
Spatial representation type	Grid
Distance	1 km
Language of dataset	English
Topic category	• Biota

71.16	N	27.64	S	44.81	E	-31.28	W

Begin date	1940-01-01
End date	2017-12-31
Coordinate reference system identifier	EPSG:3035
Distribution format	• Geopackage (1) • GDB ( )

OnLine resource

Protocol	Linkage	Name
EEA:FOLDERPATH	https://sdi.eea.europa.eu/webdav/datastore/public/eea_r_3035_1_km_eunis-hab-m_p_1940-2017_v01_r00/	
WWW:URL	https://sdi.eea.europa.eu/data/5b3e4da9-4c14-498c-b20e-bc514470eab5	Direct download
ESRI:REST	https://bio.discomap.eea.europa.eu/arcgis/rest/services/EUNIS/Mosaic_Saltmarshes/ImageServer	Suitability Layer
OGC:WMS	https://bio.discomap.eea.europa.eu/arcgis/services/EUNIS/Mosaic_Saltmarshes/ImageServer/WMSServer?request=GetCapabilities&service=WMS	

Hierarchy level	Dataset

Conformance result

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

Statement

The database compiled for the Braun-Blanquet project is a compilation of various national and regional vegetation databases. The maintenance of these databases is in principle in the hands of the custodians. However, before uploading the databases into Braun-Blanquet database a quality check is performed by Alterra and Masaryk University. If possible, detected errors are corrected and reported back to the data provider. For the modelling of the habitat suitability map the Maxent software is used (http://www.cs.princeton.edu/~schapire/maxent/). The grid values in the map represent the probability (ranging from 0-1) that the cell is suitable for the habitat.

The grid file represents the habitat suitability of the EUNIS type. For the modelling the widely used software Maxent for maximum entropy modelling of species' geographic distributions was used. Maxent is a general-purpose machine-learning method with a simple and precise mathematical formulation, and has a number of aspects that make it well-suited for species distribution modelling when only presence (occurrence) data but not absence data are available (Philips et al. 2006). Because EUNIS habitats have a particular species composition, they are assumed to respond to specific ecological requirements, allowing us to generate correlative estimates of geographic distributions. Modelling habitats that have been floristically defined is a well-known procedure for ecological modelling at local scales, and a promising technique to be applied also at the continental level.

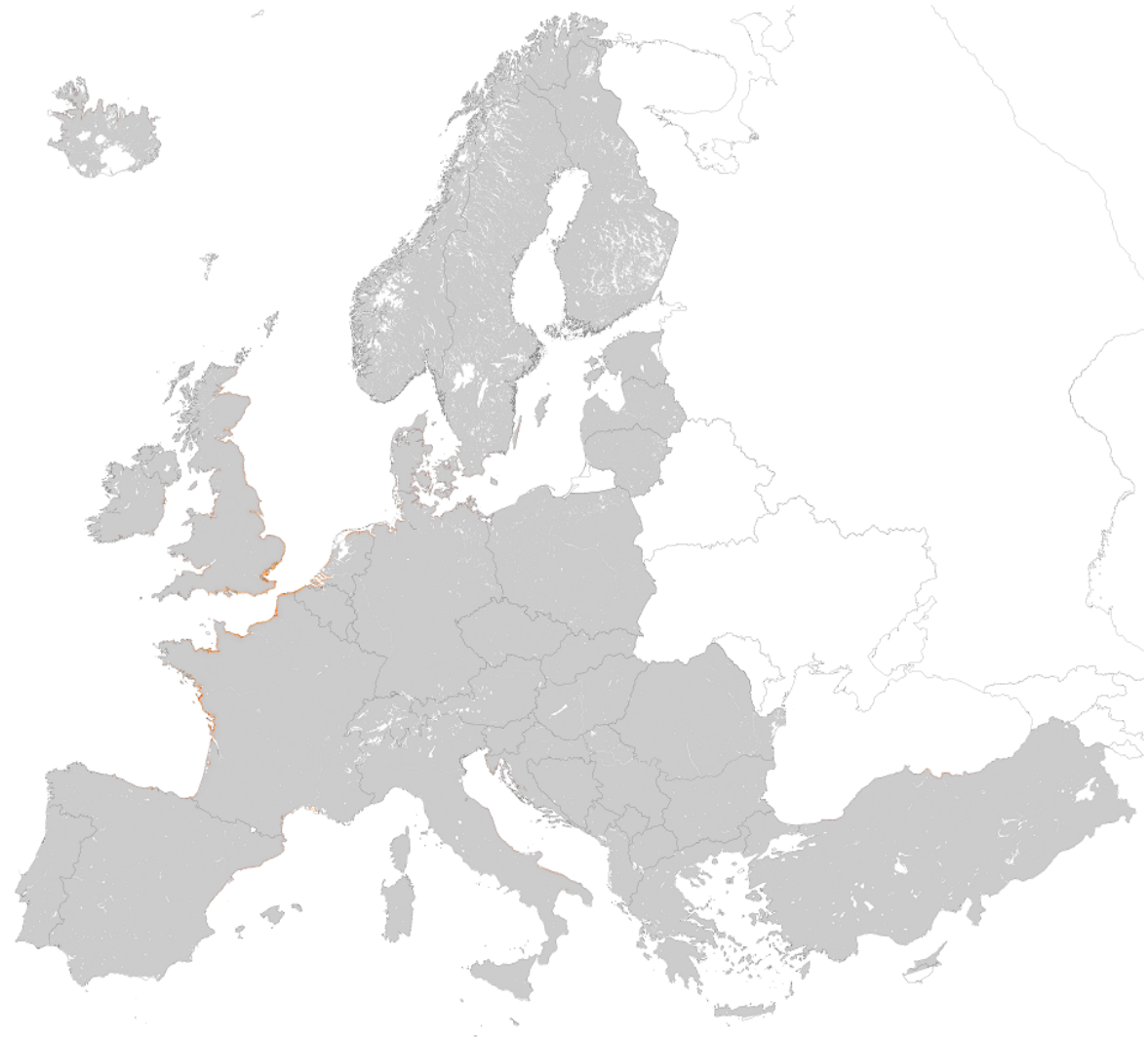
The Maxent method considers presence data (known observations of a given entity) and the so-called background data. Background data comprise a set of points used to describe the environmental variation of the study area according to the available environmental layers. It is assumed that these layers represent well the most important ecological gradients on a European scale. As layers the following environmental parameters have been used: Potential Evapotranspiration, Topsoil pH, Solar radiation, Temperature

	Seasonality (standard deviation *100), Mean Temperature of Wettest Quarter, Annual Precipitation, Precipitation Seasonality (Coefficient of Variation), Precipitation of Warmest Quarter & Distance to water (rivers, lakes, sea) and the RS-EBV's (Remote Sensing-enabled Essential Biodiversity Variables) Inundation; occurrence, Phenology; End of Season (day number), Phenology; Length of season (days), Phenology; Low of season (day number), Phenology; NDVI mean, Phenology; NDVI seasonality, Phenology; Peak of season (day number), Phenology; Start of Season (day number), Vegetation height (m); Population density. For more information on the RS-EBV's see https://www.synbiosys.alterra.nl/nextgeoss/docs/Description_Abiotic_and_RSEBVs.pdf More information on the generation of the spatial files is provided in the documents available for download together with the dataset.
Source	• EUNIS Littoral biogenic habitat types (salt marshes), distribution based on vegetation plot data - version 1, Nov. 2021

Metadata

File identifier	5b3e4da9-4c14-498c-b20e-bc514470eab5 XML
Metadata language	English
Character set	UTF8
Hierarchy level	Dataset
Date stamp	2023-12-04T12:59:12.579Z
Metadata standard name	ISO 19115/19139
Metadata standard version	1.0
Metadata author	**Organisation name** / **Individual name** / **Electronic mail address** / **Website** / **Role** European Environment Agency / / sdi@eea.europa.eu / / Point of contact

Overviews



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