

## EUNIS habitat type F3.1e, predicted habitat suitability - version 1, June 2016

The modelled suitability for the EUNIS habitat type 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. Note however that it is not representing the actual distribution of the habitat type.

Also note that predictions are less reliable due to data deficiency in the eastern part of Europe, and to a lesser extent to the Scandinavian countries.

Geographic restriction for plot observations: n/a

Remarks: Poor model, too much affected by the distribution of input data with a high concentration in NL and CZ.

Prediction in eastern part of Europe (Caucasus, Türkiye) uncertain due to lack of data for that area.

### Simple

<b>Date (Publication)</b>	2016-07-01																	
<b>Date (Creation)</b>	2016-07-06																	
<b>Edition</b>	01																	
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<b>Status</b>	Obsolete																	
<b>Point of contact</b>	<table border="1"> <thead> <tr> <th>Organisation name</th> <th>Individual name</th> <th>Electronic mail address</th> <th>Website</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>European Environment Agency</td> <td></td> <td>sdi@eea.europa.eu</td> <td><a href="http://www.eea.europa.eu">http://www.eea.europa.eu</a></td> <td>Point of contact</td> </tr> <tr> <td>European Environment Agency</td> <td></td> <td>sdi@eea.europa.eu</td> <td></td> <td>Custodian</td> </tr> </tbody> </table>	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		
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### Point of contact

No information provided.

<b>Maintenance and update frequency</b>	Unknown
<b>GEMET - INSPIRE themes, version 1.0</b>	<ul style="list-style-type: none"> <li>Habitats and biotopes</li> </ul>
<b>GEMET</b>	<ul style="list-style-type: none"> <li>tundra</li> <li>natural area</li> <li>terrestrial ecosystem</li> <li>heathland</li> </ul>
<b>Keywords</b>	
<b>Keywords</b>	
<b>Place</b>	<ul style="list-style-type: none"> <li>Europe</li> </ul>
<b>EEA topics</b>	<ul style="list-style-type: none"> <li>Biodiversity</li> </ul>
<b>Use limitation</b>	

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<b>Access constraints</b>	Other restrictions
<b>Other constraints</b>	<a href="#">no limitations to public access</a>
<b>Spatial representation type</b>	Grid
<b>Distance</b>	1 1 km
<b>Language of dataset</b>	English
<b>Character set</b>	UTF8
<b>Topic category</b>	<ul style="list-style-type: none"><li>• Biota</li></ul>

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<b>Begin date</b>	1940-01-01		
<b>End date</b>	2011-12-31		
<b>Coordinate reference system identifier</b>	<a href="#">EPSG:3035</a>		
<b>Distribution format</b>	• GeoTIFF ( )		
<b>OnLine resource</b>	<b>Protocol</b>	<b>Linkage</b>	<b>Name</b>
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	WWW:URL	<a href="https://sdi.eea.europa.eu/data/e880ed9f-ca7d-4e60-b381-50024253b2ce">https://sdi.eea.europa.eu/data/e880ed9f-ca7d-4e60-b381-50024253b2ce</a>	Direct download
<b>Hierarchy level</b>	Dataset		

## Conformance result

<b>Date (Publication)</b>	2010-12-08
<b>Explanation</b>	See the referenced specification

<b>Statement</b>	<p>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 ( <a href="http://www.cs.princeton.edu/~schapire/maxent/">http://www.cs.princeton.edu/~schapire/maxent/</a> ). The grid values in the map represent the probability (ranging from 0-1) that the cell is suitable for the habitat.</p> <p>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 (Phillips 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.</p> <p>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 &amp; Distance to water (rivers, lakes, sea).</p> <p>Statistical output of the model:</p> <p>#Training samples: 1665</p> <p>Regularized training gain: 0.7057</p>
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Unregularized training gain: 0.7759

Iterations: 500

Training AUC: 0.8197

#Test samples: 185

Test gain: 0.7384

Test AUC: 0.8155

AUC Standard Deviation: 0.0108

#Background points: 6663

bio\_12\_etr2\_ras contribution: 3.2244

bio\_15\_etr2\_ras contribution: 0.8685

bio\_18\_etr2\_ras contribution: 11.9079

bio\_4\_etr2\_ras contribution: 56.5248

bio\_8\_etr2\_ras contribution: 0.9434

bld\_m\_sd1\_1km\_eu\_ll contribution: 5.5983

cecum\_m\_sd1\_1km\_eu\_ll contribution: 4.2608

clyppt\_m\_sd1\_1km\_eu\_ll contribution: 0.5767

crvol\_m\_sd1\_1km\_eu\_ll contribution: 0.112

dist2water1km contribution: 0.7498

orcdrc\_m\_sd1\_1km\_eu\_ll contribution: 0.1846

pet\_he\_yr contribution: 11.7472

phihox\_m\_sd1\_1km\_eu\_ll contribution: 1.965

sltppt\_m\_sd1\_1km\_eu\_ll contribution: 0.2574

sndppt\_m\_sd1\_1km\_eu\_ll contribution: 0.0726

solar\_1km contribution: 1.0066

bio\_12\_etr2\_ras permutation importance: 4.3068

bio\_15\_etr2\_ras permutation importance: 3.5265

bio\_18\_etr2\_ras permutation importance: 7.3009

bio\_4\_etr2\_ras permutation importance: 54.8839

bio\_8\_etr2\_ras permutation importance: 3.4455

bld\_m\_sd1\_1km\_eu\_ll permutation importance: 3.2858

cecum\_m\_sd1\_1km\_eu\_ll permutation importance: 1.8059

clyppt\_m\_sd1\_1km\_eu\_ll permutation importance: 1.6408

crvol\_m\_sd1\_1km\_eu\_ll permutation importance: 0.4793

dist2water1km permutation importance: 0.6822

orcdrc\_m\_sd1\_1km\_eu\_ll permutation importance: 0.5076

pet\_he\_yr permutation importance: 11.8806

phihox\_m\_sd1\_1km\_eu\_ll permutation importance: 4.5996

sltppt\_m\_sd1\_1km\_eu\_ll permutation importance: 0.656

sndppt\_m\_sd1\_1km\_eu\_ll permutation importance: 0.1469

solar\_1km permutation importance: 0.8517

Entropy: 8.1011

Prevalence (average of logistic output over background sites): 0.2443

Fixed cumulative value 1 cumulative threshold: 1

Fixed cumulative value 1 logistic threshold: 0.097  
Fixed cumulative value 1 area: 0.5586  
Fixed cumulative value 1 training omission: 0.003  
Fixed cumulative value 1 test omission: 0.0162  
Fixed cumulative value 1 binomial probability: 1.20E-31  
Fixed cumulative value 5 cumulative threshold: 5  
Fixed cumulative value 5 logistic threshold: 0.2449  
Fixed cumulative value 5 area: 0.4668  
Fixed cumulative value 5 training omission: 0.0198  
Fixed cumulative value 5 test omission: 0.0378  
Fixed cumulative value 5 binomial probability: 7.17E-42  
Fixed cumulative value 10 cumulative threshold: 10  
Fixed cumulative value 10 logistic threshold: 0.3307  
Fixed cumulative value 10 area: 0.4057  
Fixed cumulative value 10 training omission: 0.0637  
Fixed cumulative value 10 test omission: 0.0649  
Fixed cumulative value 10 binomial probability: 5.30E-49  
Minimum training presence cumulative threshold: 0.1629  
Minimum training presence logistic threshold: 0.0102  
Minimum training presence area: 0.6689  
Minimum training presence training omission: 0  
Minimum training presence test omission: 0  
Minimum training presence binomial probability: 5.40E-22  
10 percentile training presence cumulative threshold: 13.9992  
10 percentile training presence logistic threshold: 0.3789  
10 percentile training presence area: 0.3698  
10 percentile training presence training omission: 0.0997  
10 percentile training presence test omission: 0.1027  
10 percentile training presence binomial probability: 2.90E-50  
Equal training sensitivity and specificity cumulative threshold: 30.0774  
Equal training sensitivity and specificity logistic threshold: 0.4703  
Equal training sensitivity and specificity area: 0.2649  
Equal training sensitivity and specificity training omission: 0.2649  
Equal training sensitivity and specificity test omission: 0.2703  
Equal training sensitivity and specificity binomial probability: 7.36E-47  
Maximum training sensitivity plus specificity cumulative threshold: 13.1789  
Maximum training sensitivity plus specificity logistic threshold: 0.3716  
Maximum training sensitivity plus specificity area: 0.3766  
Maximum training sensitivity plus specificity training omission: 0.0907  
Maximum training sensitivity plus specificity test omission: 0.0919  
Maximum training sensitivity plus specificity binomial probability: 1.19E-50  
Equal test sensitivity and specificity cumulative threshold: 29.3532

Equal test sensitivity and specificity logistic threshold: 0.468

Equal test sensitivity and specificity area: 0.2689

Equal test sensitivity and specificity training omission: 0.2589

Equal test sensitivity and specificity test omission: 0.2703

Equal test sensitivity and specificity binomial probability: 1.17E-45

Maximum test sensitivity plus specificity cumulative threshold: 13.4574

Maximum test sensitivity plus specificity logistic threshold: 0.3745

Maximum test sensitivity plus specificity area: 0.3742

Maximum test sensitivity plus specificity training omission: 0.0949

Maximum test sensitivity plus specificity test omission: 0.0919

Maximum test sensitivity plus specificity binomial probability: 3.24E-51

Balance training omission, predicted area and threshold value cumulative threshold: 1.1194

Balance training omission, predicted area and threshold value logistic threshold: 0.1061

Balance training omission, predicted area and threshold value area: 0.5534

Balance training omission, predicted area and threshold value training omission: 0.003

Balance training omission, predicted area and threshold value test omission: 0.0162

Balance training omission, predicted area and threshold value binomial probability: 2.59E-32

Equate entropy of thresholded and original distributions cumulative threshold: 3.366

Equate entropy of thresholded and original distributions logistic threshold: 0.2025

Equate entropy of thresholded and original distributions area: 0.495

Equate entropy of thresholded and original distributions training omission: 0.012

Equate entropy of thresholded and original distributions test omission: 0.0216

Equate entropy of thresholded and original distributions binomial probability: 8.43E-40

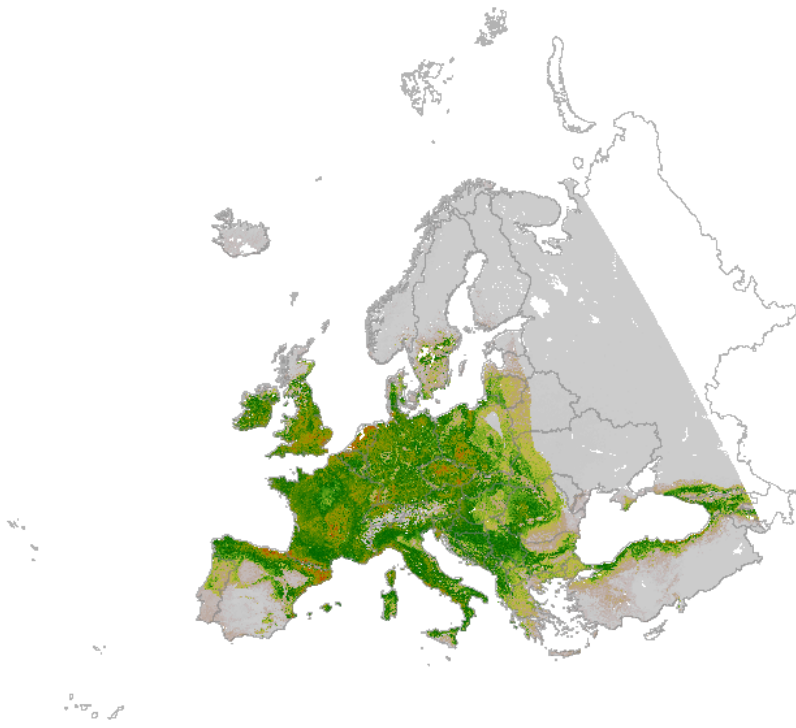
**Source**

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**Metadata**

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<b>Metadata author</b>	<b>Organisation name</b>	<b>Individual name</b>	<b>Electronic mail address</b> <b>Website Role</b>
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**Overviews**



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