

EUNIS habitat type F2.1, 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: -

Simple

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	European Environment Agency		sdi@eea.europa.eu	Custodian

Point of contact

No information provided.

Maintenance and update frequency	Unknown
EEA topics	<ul style="list-style-type: none"> Biodiversity
GEMET - INSPIRE themes, version 1.0	<ul style="list-style-type: none"> Habitats and biotopes
GEMET	<ul style="list-style-type: none"> natural area tundra terrestrial ecosystem heathland
Keywords	
Keywords	
Place	<ul style="list-style-type: none"> Europe
Use limitation	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 (http://www.eea.europa.eu/legal/copyright). Copyright holder: European Environment Agency (EEA).

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

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Begin date	1940-01-01		
End date	2011-12-31		
Coordinate reference system identifier	EPSG:3035		
Distribution format	• GeoTIFF ()		
OnLine resource	Protocol	Linkage	Name
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	WWW:URL	https://sdi.eea.europa.eu/data/209c0933-b2b2-458a-b414-9512b2c3ee42	Direct download
Hierarchy level	Dataset		

Conformance result

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

Statement	<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 (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.</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 & Distance to water (rivers, lakes, sea).</p> <p>Statistical output of the model:</p> <p>#Training samples: 450</p> <p>Regularized training gain: 1.9963</p>
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Unregularized training gain: 2.1532

Iterations: 500

Training AUC: 0.9564

#Test samples: 49

Test gain: 1.848

Test AUC: 0.9398

AUC Standard Deviation: 0.0099

#Background points: 5208

bio_12_etr2_ras contribution: 0.6612

bio_15_etr2_ras contribution: 1.1556

bio_18_etr2_ras contribution: 7.7665

bio_4_etr2_ras contribution: 0.5363

bio_8_etr2_ras contribution: 0.5955

bld_m_sd1_1km_eu_ll contribution: 0.162

cecum_m_sd1_1km_eu_ll contribution: 3.4397

clyppt_m_sd1_1km_eu_ll contribution: 1.2574

crvol_m_sd1_1km_eu_ll contribution: 1.2559

dist2water1km contribution: 0.0459

orcdrc_m_sd1_1km_eu_ll contribution: 0.2008

pet_he_yr contribution: 63.9081

sltppt_m_sd1_1km_eu_ll contribution: 0.4298

sndppt_m_sd1_1km_eu_ll contribution: 1.7674

solar_1km contribution: 16.818

bio_12_etr2_ras permutation importance: 9.0678

bio_15_etr2_ras permutation importance: 1.0445

bio_18_etr2_ras permutation importance: 6.1868

bio_4_etr2_ras permutation importance: 2.9482

bio_8_etr2_ras permutation importance: 0.963

bld_m_sd1_1km_eu_ll permutation importance: 0.3476

cecum_m_sd1_1km_eu_ll permutation importance: 4.1786

clyppt_m_sd1_1km_eu_ll permutation importance: 3.5105

crvol_m_sd1_1km_eu_ll permutation importance: 1.2313

dist2water1km permutation importance: 0.4094

orcdrc_m_sd1_1km_eu_ll permutation importance: 2.252

pet_he_yr permutation importance: 56.9659

sltppt_m_sd1_1km_eu_ll permutation importance: 1.278

sndppt_m_sd1_1km_eu_ll permutation importance: 5.6766

solar_1km permutation importance: 3.9398

Training gain without bio_12_etr2_ras: 1.9797

Training gain without bio_15_etr2_ras: 1.9833

Training gain without bio_18_etr2_ras: 1.9839

Training gain without bio_4_etr2_ras: 1.9836

Training gain without bio_8_etr2_ras: 1.9938

Training gain without bld_m_sd1_1km_eu_ll: 1.9945

Training gain without cecsum_m_sd1_1km_eu_ll: 1.9856

Training gain without clyppt_m_sd1_1km_eu_ll: 1.9781

Training gain without crvol_m_sd1_1km_eu_ll: 1.9886

Training gain without dist2water1km: 1.9977

Training gain without orcdrc_m_sd1_1km_eu_ll: 1.9948

Training gain without pet_he_yr: 1.8636

Training gain without sltppt_m_sd1_1km_eu_ll: 1.9923

Training gain without sndppt_m_sd1_1km_eu_ll: 1.9885

Training gain without solar_1km: 1.9873

Training gain with only bio_12_etr2_ras: 1.0985

Training gain with only bio_15_etr2_ras: 0.4773

Training gain with only bio_18_etr2_ras: 1.1407

Training gain with only bio_4_etr2_ras: 0.3458

Training gain with only bio_8_etr2_ras: 0.6267

Training gain with only bld_m_sd1_1km_eu_ll: 0.8155

Training gain with only cecsum_m_sd1_1km_eu_ll: 1.0129

Training gain with only clyppt_m_sd1_1km_eu_ll: 0.4152

Training gain with only crvol_m_sd1_1km_eu_ll: 0.7608

Training gain with only dist2water1km: 0.1826

Training gain with only orcdrc_m_sd1_1km_eu_ll: 0.7832

Training gain with only pet_he_yr: 1.6746

Training gain with only sltppt_m_sd1_1km_eu_ll: 0.474

Training gain with only sndppt_m_sd1_1km_eu_ll: 0.879

Training gain with only solar_1km: 1.1885

Test gain without bio_12_etr2_ras: 1.8094

Test gain without bio_15_etr2_ras: 1.8271

Test gain without bio_18_etr2_ras: 1.837

Test gain without bio_4_etr2_ras: 1.8238

Test gain without bio_8_etr2_ras: 1.8478

Test gain without bld_m_sd1_1km_eu_ll: 1.8473

Test gain without cecsum_m_sd1_1km_eu_ll: 1.8665

Test gain without clyppt_m_sd1_1km_eu_ll: 1.8348

Test gain without crvol_m_sd1_1km_eu_ll: 1.8463

Test gain without dist2water1km: 1.8485

Test gain without orcdrc_m_sd1_1km_eu_ll: 1.8601

Test gain without pet_he_yr: 1.8003

Test gain without sltppt_m_sd1_1km_eu_ll: 1.8503

Test gain without sndppt_m_sd1_1km_eu_ll: 1.9392

Test gain without solar_1km: 1.8294

Test gain with only bio_12_etr2_ras: 1.2271

Test gain with only bio_15_etr2_ras: 0.5735

Test gain with only bio_18_etr2_ras: 1.0485
Test gain with only bio_4_etr2_ras: 0.2636
Test gain with only bio_8_etr2_ras: 0.744
Test gain with only bld_m_sd1_1km_eu_ll: 0.8923
Test gain with only cecsum_m_sd1_1km_eu_ll: 1.232
Test gain with only clyppt_m_sd1_1km_eu_ll: 0.4895
Test gain with only crvol_m_sd1_1km_eu_ll: 0.8688
Test gain with only dist2water1km: 0.2424
Test gain with only orcdrc_m_sd1_1km_eu_ll: 0.8698
Test gain with only pet_he_yr: 1.5794
Test gain with only sltppt_m_sd1_1km_eu_ll: 0.4824
Test gain with only sndppt_m_sd1_1km_eu_ll: 0.7106
Test gain with only solar_1km: 1.3587
AUC without bio_12_etr2_ras: 0.9379
AUC without bio_15_etr2_ras: 0.9392
AUC without bio_18_etr2_ras: 0.9398
AUC without bio_4_etr2_ras: 0.9383
AUC without bio_8_etr2_ras: 0.9399
AUC without bld_m_sd1_1km_eu_ll: 0.9402
AUC without cecsum_m_sd1_1km_eu_ll: 0.9409
AUC without clyppt_m_sd1_1km_eu_ll: 0.9396
AUC without crvol_m_sd1_1km_eu_ll: 0.9397
AUC without dist2water1km: 0.9401
AUC without orcdrc_m_sd1_1km_eu_ll: 0.9404
AUC without pet_he_yr: 0.937
AUC without sltppt_m_sd1_1km_eu_ll: 0.9407
AUC without sndppt_m_sd1_1km_eu_ll: 0.9445
AUC without solar_1km: 0.9384
AUC with only bio_12_etr2_ras: 0.8903
AUC with only bio_15_etr2_ras: 0.7946
AUC with only bio_18_etr2_ras: 0.8745
AUC with only bio_4_etr2_ras: 0.6871
AUC with only bio_8_etr2_ras: 0.8101
AUC with only bld_m_sd1_1km_eu_ll: 0.8209
AUC with only cecsum_m_sd1_1km_eu_ll: 0.8895
AUC with only clyppt_m_sd1_1km_eu_ll: 0.7415
AUC with only crvol_m_sd1_1km_eu_ll: 0.8427
AUC with only dist2water1km: 0.6933
AUC with only orcdrc_m_sd1_1km_eu_ll: 0.8379
AUC with only pet_he_yr: 0.9222
AUC with only sltppt_m_sd1_1km_eu_ll: 0.7564
AUC with only sndppt_m_sd1_1km_eu_ll: 0.8291
AUC with only solar_1km: 0.9044

Entropy: 6.5721

Prevalence (average of logistic output over background sites): 0.0665

Fixed cumulative value 1 cumulative threshold: 1

Fixed cumulative value 1 logistic threshold: 0.0208

Fixed cumulative value 1 area: 0.236

Fixed cumulative value 1 training omission: 0.0067

Fixed cumulative value 1 test omission: 0.0204

Fixed cumulative value 1 binomial probability: 7.53E-35

Fixed cumulative value 5 cumulative threshold: 5

Fixed cumulative value 5 logistic threshold: 0.1294

Fixed cumulative value 5 area: 0.1517

Fixed cumulative value 5 training omission: 0.0178

Fixed cumulative value 5 test omission: 0.1224

Fixed cumulative value 5 binomial probability: 7.61E-46

Fixed cumulative value 10 cumulative threshold: 10

Fixed cumulative value 10 logistic threshold: 0.2127

Fixed cumulative value 10 area: 0.1187

Fixed cumulative value 10 training omission: 0.0622

Fixed cumulative value 10 test omission: 0.1633

Fixed cumulative value 10 binomial probability: 8.87E-55

Minimum training presence cumulative threshold: 0.1255

Minimum training presence logistic threshold: 0.0014

Minimum training presence area: 0.4384

Minimum training presence training omission: 0

Minimum training presence test omission: 0

Minimum training presence binomial probability: 1.16E-15

10 percentile training presence cumulative threshold: 15.1848

10 percentile training presence logistic threshold: 0.2834

10 percentile training presence area: 0.0966

10 percentile training presence training omission: 0.1

10 percentile training presence test omission: 0.2245

10 percentile training presence binomial probability: 1.52E-58

Equal training sensitivity and specificity cumulative threshold: 14.9092

Equal training sensitivity and specificity logistic threshold: 0.2821

Equal training sensitivity and specificity area: 0.0977

Equal training sensitivity and specificity training omission: 0.0978

Equal training sensitivity and specificity test omission: 0.2245

Equal training sensitivity and specificity binomial probability: 9.25E-58

Maximum training sensitivity plus specificity cumulative threshold: 6.7873

Maximum training sensitivity plus specificity logistic threshold: 0.161

Maximum training sensitivity plus specificity area: 0.1379

Maximum training sensitivity plus specificity training omission: 0.0244

Maximum training sensitivity plus specificity test omission: 0.1224

Maximum training sensitivity plus specificity binomial probability: 2.77E-51

Equal test sensitivity and specificity cumulative threshold: 7.9141

Equal test sensitivity and specificity logistic threshold: 0.1765

Equal test sensitivity and specificity area: 0.1302

Equal test sensitivity and specificity training omission: 0.0356

Equal test sensitivity and specificity test omission: 0.1224

Equal test sensitivity and specificity binomial probability: 8.37E-55

Maximum test sensitivity plus specificity cumulative threshold: 1.4623

Maximum test sensitivity plus specificity logistic threshold: 0.0341

Maximum test sensitivity plus specificity area: 0.2129

Maximum test sensitivity plus specificity training omission: 0.0111

Maximum test sensitivity plus specificity test omission: 0.0204

Maximum test sensitivity plus specificity binomial probability: 1.47E-39

Balance training omission, predicted area and threshold value cumulative threshold: 1.3547

Balance training omission, predicted area and threshold value logistic threshold: 0.0316

Balance training omission, predicted area and threshold value area: 0.2174

Balance training omission, predicted area and threshold value training omission: 0.0067

Balance training omission, predicted area and threshold value test omission: 0.0204

Balance training omission, predicted area and threshold value binomial probability: 1.40E-38

Equate entropy of thresholded and original distributions cumulative threshold: 6.9218

Equate entropy of thresholded and original distributions logistic threshold: 0.1614

Equate entropy of thresholded and original distributions area: 0.1371

Equate entropy of thresholded and original distributions training omission: 0.0267

Equate entropy of thresholded and original distributions test omission: 0.1224

Equate entropy of thresholded and original distributions binomial probability: 1.28E-51

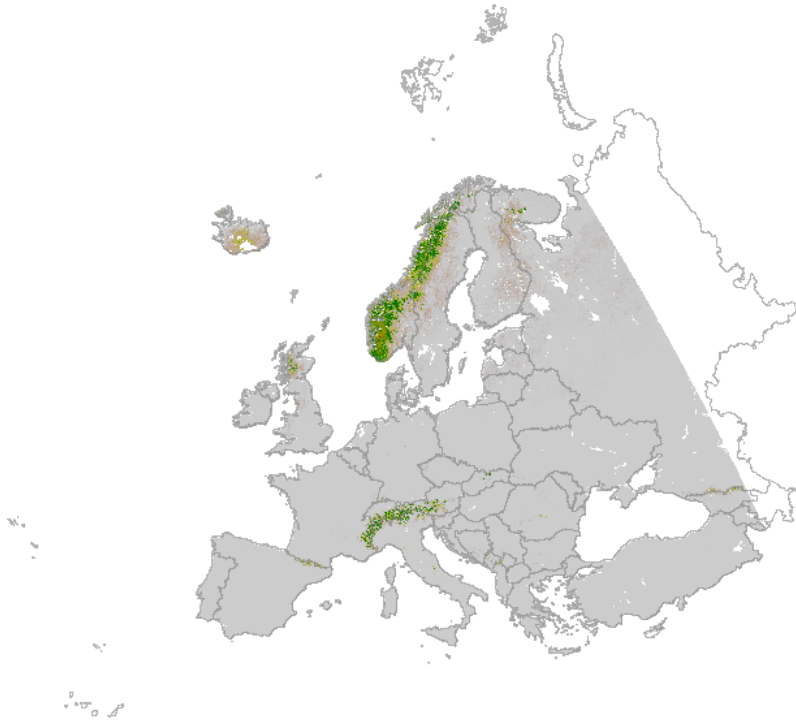
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Metadata

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Metadata standard name	ISO 19115/19139		
Metadata standard version	1.0		
Metadata author	Organisation name	Individual name	Electronic mail address Website Role
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Overviews



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