

EUNIS habitat type F5.2, 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: Prediction in eastern part of Europe (Türkiye) uncertain due to lack of data for that area.

Simple

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	European Environment Agency		sdi@eea.europa.eu	Custodian

Point of contact

No information provided.

Maintenance and update frequency	Unknown
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
EEA topics	<ul style="list-style-type: none"> Biodiversity
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/79ff3c28-2f7a-4b1f-9bcd-9958bd93a1d0	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: 894</p> <p>Regularized training gain: 1.2056</p>
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Unregularized training gain: 1.2932

Iterations: 500

Training AUC: 0.896

#Test samples: 99

Test gain: 1.2505

Test AUC: 0.8916

AUC Standard Deviation: 0.0095

#Background points: 5563

bio_12_etr2_ras contribution: 0.7252

bio_15_etr2_ras contribution: 7.0148

bio_18_etr2_ras contribution: 43.1301

bio_4_etr2_ras contribution: 2.3359

bio_8_etr2_ras contribution: 1.0568

bld_m_sd1_1km_eu_ll contribution: 0.7121

cecum_m_sd1_1km_eu_ll contribution: 2.3304

clyppt_m_sd1_1km_eu_ll contribution: 15.6443

crvol_m_sd1_1km_eu_ll contribution: 0.1013

dist2water1km contribution: 1.3011

orcdrc_m_sd1_1km_eu_ll contribution: 1.0934

pet_he_yr contribution: 19.0313

sltppt_m_sd1_1km_eu_ll contribution: 5.0247

sndppt_m_sd1_1km_eu_ll contribution: 0.3943

solar_1km contribution: 0.1041

bio_12_etr2_ras permutation importance: 2.1861

bio_15_etr2_ras permutation importance: 12.6142

bio_18_etr2_ras permutation importance: 18.111

bio_4_etr2_ras permutation importance: 2.3407

bio_8_etr2_ras permutation importance: 3.9781

bld_m_sd1_1km_eu_ll permutation importance: 8.0687

cecum_m_sd1_1km_eu_ll permutation importance: 3.532

clyppt_m_sd1_1km_eu_ll permutation importance: 7.098

crvol_m_sd1_1km_eu_ll permutation importance: 0.7357

dist2water1km permutation importance: 0.6488

orcdrc_m_sd1_1km_eu_ll permutation importance: 2.4227

pet_he_yr permutation importance: 29.9998

sltppt_m_sd1_1km_eu_ll permutation importance: 5.6409

sndppt_m_sd1_1km_eu_ll permutation importance: 2.0732

solar_1km permutation importance: 0.5502

Training gain without bio_12_etr2_ras: 1.2013

Training gain without bio_15_etr2_ras: 1.1892

Training gain without bio_18_etr2_ras: 1.1859

Training gain without bio_4_etr2_ras: 1.2008

Training gain without bio_8_etr2_ras: 1.1979

Training gain without bld_m_sd1_1km_eu_ll: 1.1995

Training gain without cecsum_m_sd1_1km_eu_ll: 1.202

Training gain without clyppt_m_sd1_1km_eu_ll: 1.1984

Training gain without crvol_m_sd1_1km_eu_ll: 1.2033

Training gain without dist2water1km: 1.2037

Training gain without orcdrc_m_sd1_1km_eu_ll: 1.1999

Training gain without pet_he_yr: 1.1832

Training gain without sltppt_m_sd1_1km_eu_ll: 1.1943

Training gain without sndppt_m_sd1_1km_eu_ll: 1.2018

Training gain without solar_1km: 1.2056

Training gain with only bio_12_etr2_ras: 0.1618

Training gain with only bio_15_etr2_ras: 0.5217

Training gain with only bio_18_etr2_ras: 0.8223

Training gain with only bio_4_etr2_ras: 0.245

Training gain with only bio_8_etr2_ras: 0.3212

Training gain with only bld_m_sd1_1km_eu_ll: 0.5661

Training gain with only cecsum_m_sd1_1km_eu_ll: 0.2921

Training gain with only clyppt_m_sd1_1km_eu_ll: 0.6441

Training gain with only crvol_m_sd1_1km_eu_ll: 0.147

Training gain with only dist2water1km: 0.1292

Training gain with only orcdrc_m_sd1_1km_eu_ll: 0.1302

Training gain with only pet_he_yr: 0.6664

Training gain with only sltppt_m_sd1_1km_eu_ll: 0.3591

Training gain with only sndppt_m_sd1_1km_eu_ll: 0.2585

Training gain with only solar_1km: 0.1527

Test gain without bio_12_etr2_ras: 1.2349

Test gain without bio_15_etr2_ras: 1.2059

Test gain without bio_18_etr2_ras: 1.26

Test gain without bio_4_etr2_ras: 1.255

Test gain without bio_8_etr2_ras: 1.2379

Test gain without bld_m_sd1_1km_eu_ll: 1.2625

Test gain without cecsum_m_sd1_1km_eu_ll: 1.2524

Test gain without clyppt_m_sd1_1km_eu_ll: 1.2543

Test gain without crvol_m_sd1_1km_eu_ll: 1.2543

Test gain without dist2water1km: 1.2694

Test gain without orcdrc_m_sd1_1km_eu_ll: 1.2495

Test gain without pet_he_yr: 1.1884

Test gain without sltppt_m_sd1_1km_eu_ll: 1.2264

Test gain without sndppt_m_sd1_1km_eu_ll: 1.2511

Test gain without solar_1km: 1.254

Test gain with only bio_12_etr2_ras: 0.1303

Test gain with only bio_15_etr2_ras: 0.4661

Test gain with only bio_18_etr2_ras: 0.6402
Test gain with only bio_4_etr2_ras: 0.2172
Test gain with only bio_8_etr2_ras: 0.4028
Test gain with only bld_m_sd1_1km_eu_ll: 0.4662
Test gain with only cecsum_m_sd1_1km_eu_ll: 0.2434
Test gain with only clyppt_m_sd1_1km_eu_ll: 0.7091
Test gain with only crvol_m_sd1_1km_eu_ll: 0.2077
Test gain with only dist2water1km: 0.0871
Test gain with only orcdrc_m_sd1_1km_eu_ll: 0.0485
Test gain with only pet_he_yr: 0.7167
Test gain with only sltppt_m_sd1_1km_eu_ll: 0.3823
Test gain with only sndppt_m_sd1_1km_eu_ll: 0.3553
Test gain with only solar_1km: 0.1306
AUC without bio_12_etr2_ras: 0.8895
AUC without bio_15_etr2_ras: 0.8869
AUC without bio_18_etr2_ras: 0.8931
AUC without bio_4_etr2_ras: 0.8923
AUC without bio_8_etr2_ras: 0.8896
AUC without bld_m_sd1_1km_eu_ll: 0.893
AUC without cecsum_m_sd1_1km_eu_ll: 0.8919
AUC without clyppt_m_sd1_1km_eu_ll: 0.892
AUC without crvol_m_sd1_1km_eu_ll: 0.8913
AUC without dist2water1km: 0.8934
AUC without orcdrc_m_sd1_1km_eu_ll: 0.8913
AUC without pet_he_yr: 0.8857
AUC without sltppt_m_sd1_1km_eu_ll: 0.8887
AUC without sndppt_m_sd1_1km_eu_ll: 0.8922
AUC without solar_1km: 0.8923
AUC with only bio_12_etr2_ras: 0.6278
AUC with only bio_15_etr2_ras: 0.7562
AUC with only bio_18_etr2_ras: 0.8011
AUC with only bio_4_etr2_ras: 0.6683
AUC with only bio_8_etr2_ras: 0.7503
AUC with only bld_m_sd1_1km_eu_ll: 0.7591
AUC with only cecsum_m_sd1_1km_eu_ll: 0.6912
AUC with only clyppt_m_sd1_1km_eu_ll: 0.8184
AUC with only crvol_m_sd1_1km_eu_ll: 0.6774
AUC with only dist2water1km: 0.5777
AUC with only orcdrc_m_sd1_1km_eu_ll: 0.6044
AUC with only pet_he_yr: 0.8029
AUC with only sltppt_m_sd1_1km_eu_ll: 0.7402
AUC with only sndppt_m_sd1_1km_eu_ll: 0.7368
AUC with only solar_1km: 0.6264

Entropy: 7.4257

Prevalence (average of logistic output over background sites): 0.1471

Fixed cumulative value 1 cumulative threshold: 1

Fixed cumulative value 1 logistic threshold: 0.0298

Fixed cumulative value 1 area: 0.4228

Fixed cumulative value 1 training omission: 0

Fixed cumulative value 1 test omission: 0

Fixed cumulative value 1 binomial probability: 1.52E-31

Fixed cumulative value 5 cumulative threshold: 5

Fixed cumulative value 5 logistic threshold: 0.1808

Fixed cumulative value 5 area: 0.2986

Fixed cumulative value 5 training omission: 0.0201

Fixed cumulative value 5 test omission: 0.0404

Fixed cumulative value 5 binomial probability: 3.89E-47

Fixed cumulative value 10 cumulative threshold: 10

Fixed cumulative value 10 logistic threshold: 0.2718

Fixed cumulative value 10 area: 0.2468

Fixed cumulative value 10 training omission: 0.0738

Fixed cumulative value 10 test omission: 0.1111

Fixed cumulative value 10 binomial probability: 5.65E-50

Minimum training presence cumulative threshold: 1.4416

Minimum training presence logistic threshold: 0.0469

Minimum training presence area: 0.3895

Minimum training presence training omission: 0

Minimum training presence test omission: 0

Minimum training presence binomial probability: 6.50E-36

10 percentile training presence cumulative threshold: 12.6367

10 percentile training presence logistic threshold: 0.3032

10 percentile training presence area: 0.227

10 percentile training presence training omission: 0.0996

10 percentile training presence test omission: 0.1414

10 percentile training presence binomial probability: 3.66E-51

Equal training sensitivity and specificity cumulative threshold: 20.6783

Equal training sensitivity and specificity logistic threshold: 0.4018

Equal training sensitivity and specificity area: 0.1821

Equal training sensitivity and specificity training omission: 0.1823

Equal training sensitivity and specificity test omission: 0.2222

Equal training sensitivity and specificity binomial probability: 1.57E-53

Maximum training sensitivity plus specificity cumulative threshold: 8.6839

Maximum training sensitivity plus specificity logistic threshold: 0.2506

Maximum training sensitivity plus specificity area: 0.258

Maximum training sensitivity plus specificity training omission: 0.0548

Maximum training sensitivity plus specificity test omission: 0.101

Maximum training sensitivity plus specificity binomial probability: 1.92E-48

Equal test sensitivity and specificity cumulative threshold: 19.3268

Equal test sensitivity and specificity logistic threshold: 0.3858

Equal test sensitivity and specificity area: 0.1884

Equal test sensitivity and specificity training omission: 0.1667

Equal test sensitivity and specificity test omission: 0.1919

Equal test sensitivity and specificity binomial probability: 2.56E-56

Maximum test sensitivity plus specificity cumulative threshold: 3.5748

Maximum test sensitivity plus specificity logistic threshold: 0.14

Maximum test sensitivity plus specificity area: 0.3212

Maximum test sensitivity plus specificity training omission: 0.0089

Maximum test sensitivity plus specificity test omission: 0.0101

Maximum test sensitivity plus specificity binomial probability: 2.30E-46

Balance training omission, predicted area and threshold value cumulative threshold: 2.277

Balance training omission, predicted area and threshold value logistic threshold: 0.0842

Balance training omission, predicted area and threshold value area: 0.3525

Balance training omission, predicted area and threshold value training omission: 0.0022

Balance training omission, predicted area and threshold value test omission: 0.0101

Balance training omission, predicted area and threshold value binomial probability: 1.63E-40

Equate entropy of thresholded and original distributions cumulative threshold: 4.7895

Equate entropy of thresholded and original distributions logistic threshold: 0.1753

Equate entropy of thresholded and original distributions area: 0.3016

Equate entropy of thresholded and original distributions training omission: 0.0179

Equate entropy of thresholded and original distributions test omission: 0.0404

Equate entropy of thresholded and original distributions binomial probability: 1.84E-46

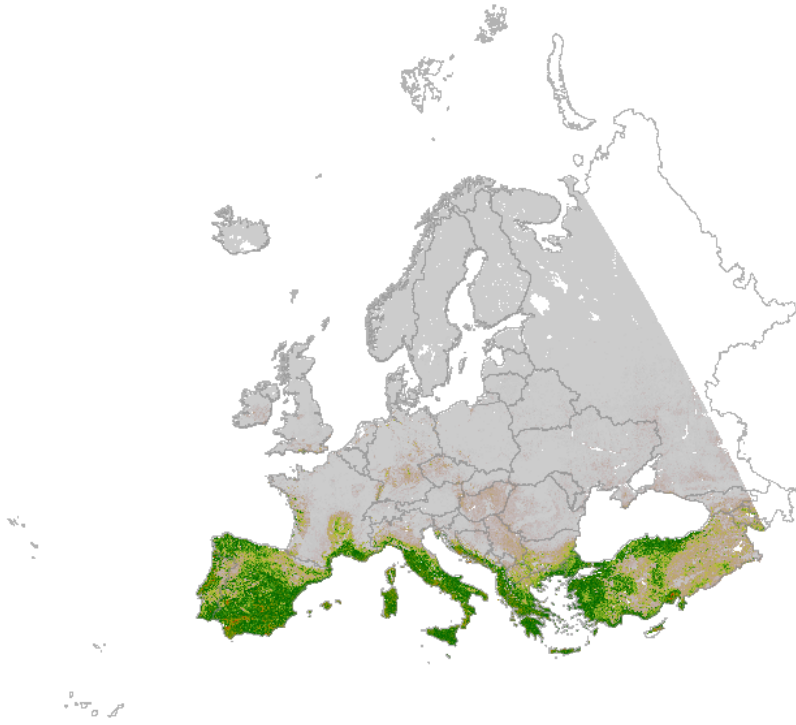
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Metadata standard version	1.0		
Metadata author	Organisation name	Individual name	Electronic mail address Website Role
	European Environment Agency		sdi@eea.europa.eu Point of contact

Overviews



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