EEA geospatial data catalogue

EUNIS habitat type F6.1a, 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

Date (Publication)	2016-07-01
Date (Creation)	2016-07-06
Edition	01
Citation identifier	eea_r_3035_1_km_eunis-hab-f6-1a_p_1940-2011_v01_r00
Status	Obsolete

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	Unknown
EEA topics	• Biodiversity
GEMET - INSPIRE themes, version 1.0	• Habitats and biotopes
GEMET	• heathland • terrestrial ecosystem • natural area • tundra
Keywords	
Keywords	
Place	• 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	• Biota

71.00	N	34.50	S	46.00	E	-24.50	W

Begin date	1940-01-01
End date	2011-12-31
Coordinate reference system identifier	EPSG:3035
Distribution format	• GeoTIFF ( )

OnLine resource

Protocol	Linkage	Name
EEA:FILEPATH	https://sdi.eea.europa.eu/webdav/datastore/public/eea_r_3035_1_km_eunis-hab-f6-1a_p_1940-2011_v01_r00/F6-1a_ed1.tif	
WWW:URL	https://sdi.eea.europa.eu/data/6174a354-c2a4-4b44-b029-d26df6044058	Direct download

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).

Statistical output of the model:

#Training samples: 755

Regularized training gain: 1.2949

Unregularized training gain: 1.3929

Iterations: 500

Training AUC: 0.9066

#Test samples: 83

Test gain: 1.2734

Test AUC: 0.8951

AUC Standard Deviation: 0.0105

#Background points: 5543

bio_12_etrs2_ras contribution: 0.2318

bio_15_etrs2_ras contribution: 6.7018

bio_18_etrs2_ras contribution: 4.066

bio_4_etrs2_ras contribution: 13.2573

bio_8_etrs2_ras contribution: 0.3284

bld_m_sd1_1km_eu_ll contribution: 3.7736

cecsum_m_sd1_1km_eu_ll contribution: 0.3458

clyppt_m_sd1_1km_eu_ll contribution: 8.9195

crfvol_m_sd1_1km_eu_ll contribution: 6.6706

dist2water1km contribution: 0.4612

orcdrc_m_sd1_1km_eu_ll contribution: 0.115

pet_he_yr contribution: 40.1732

sltppt_m_sd1_1km_eu_ll contribution: 0.7076

sndppt_m_sd1_1km_eu_ll contribution: 14.1712

solar_1km contribution: 0.077

bio_12_etrs2_ras permutation importance: 0.7942

bio_15_etrs2_ras permutation importance: 13.2695

bio_18_etrs2_ras permutation importance: 10.9101

bio_4_etrs2_ras permutation importance: 14.5952

bio_8_etrs2_ras permutation importance: 1.2088

bld_m_sd1_1km_eu_ll permutation importance: 7.9741

cecsum_m_sd1_1km_eu_ll permutation importance: 3.1065

clyppt_m_sd1_1km_eu_ll permutation importance: 4.0297

crfvol_m_sd1_1km_eu_ll permutation importance: 10.5767

dist2water1km permutation importance: 0.745

orcdrc_m_sd1_1km_eu_ll permutation importance: 0.2357

pet_he_yr permutation importance: 18.8432

sltppt_m_sd1_1km_eu_ll permutation importance: 0.7303

sndppt_m_sd1_1km_eu_ll permutation importance: 12.4635

solar_1km permutation importance: 0.5175

Training gain without bio_12_etrs2_ras: 1.2928

Training gain without bio_15_etrs2_ras: 1.2621

Training gain without bio_18_etrs2_ras: 1.2884

Training gain without bio_4_etrs2_ras: 1.2594

Training gain without bio_8_etrs2_ras: 1.2935

Training gain without bld_m_sd1_1km_eu_ll: 1.2758

Training gain without cecsum_m_sd1_1km_eu_ll: 1.292

Training gain without clyppt_m_sd1_1km_eu_ll: 1.2902

Training gain without crfvol_m_sd1_1km_eu_ll: 1.2733

Training gain without dist2water1km: 1.2911

Training gain without orcdrc_m_sd1_1km_eu_ll: 1.294

Training gain without pet_he_yr: 1.2679

Training gain without sltppt_m_sd1_1km_eu_ll: 1.2942

Training gain without sndppt_m_sd1_1km_eu_ll: 1.2835

Training gain without solar_1km: 1.2952

Training gain with only bio_12_etrs2_ras: 0.2033

Training gain with only bio_15_etrs2_ras: 0.1337

Training gain with only bio_18_etrs2_ras: 0.5914

Training gain with only bio_4_etrs2_ras: 0.3227

Training gain with only bio_8_etrs2_ras: 0.1846

Training gain with only bld_m_sd1_1km_eu_ll: 0.4475

Training gain with only cecsum_m_sd1_1km_eu_ll: 0.3033

Training gain with only clyppt_m_sd1_1km_eu_ll: 0.6491

Training gain with only crfvol_m_sd1_1km_eu_ll: 0.349

Training gain with only dist2water1km: 0.0159

Training gain with only orcdrc_m_sd1_1km_eu_ll: 0.1721

Training gain with only pet_he_yr: 0.7536

Training gain with only sltppt_m_sd1_1km_eu_ll: 0.3141

Training gain with only sndppt_m_sd1_1km_eu_ll: 0.6153

Training gain with only solar_1km: 0.2031

Test gain without bio_12_etrs2_ras: 1.2825

Test gain without bio_15_etrs2_ras: 1.255

Test gain without bio_18_etrs2_ras: 1.2774

Test gain without bio_4_etrs2_ras: 1.2277

Test gain without bio_8_etrs2_ras: 1.2675

Test gain without bld_m_sd1_1km_eu_ll: 1.2571

Test gain without cecsum_m_sd1_1km_eu_ll: 1.2775

Test gain without clyppt_m_sd1_1km_eu_ll: 1.2518

Test gain without crfvol_m_sd1_1km_eu_ll: 1.2364

Test gain without dist2water1km: 1.2812

Test gain without orcdrc_m_sd1_1km_eu_ll: 1.2564

Test gain without pet_he_yr: 1.2776

Test gain without sltppt_m_sd1_1km_eu_ll: 1.271

Test gain without sndppt_m_sd1_1km_eu_ll: 1.2635

Test gain without solar_1km: 1.2776

Test gain with only bio_12_etrs2_ras: 0.1371

Test gain with only bio_15_etrs2_ras: 0.0859

Test gain with only bio_18_etrs2_ras: 0.4889

Test gain with only bio_4_etrs2_ras: 0.3427

Test gain with only bio_8_etrs2_ras: 0.2839

Test gain with only bld_m_sd1_1km_eu_ll: 0.378

Test gain with only cecsum_m_sd1_1km_eu_ll: 0.263

Test gain with only clyppt_m_sd1_1km_eu_ll: 0.7177

Test gain with only crfvol_m_sd1_1km_eu_ll: 0.4066

Test gain with only dist2water1km: 0.0075

Test gain with only orcdrc_m_sd1_1km_eu_ll: 0.0822

Test gain with only pet_he_yr: 0.6418

Test gain with only sltppt_m_sd1_1km_eu_ll: 0.3907

Test gain with only sndppt_m_sd1_1km_eu_ll: 0.6685

Test gain with only solar_1km: 0.088

AUC without bio_12_etrs2_ras: 0.896

AUC without bio_15_etrs2_ras: 0.8933

AUC without bio_18_etrs2_ras: 0.895

AUC without bio_4_etrs2_ras: 0.8904

AUC without bio_8_etrs2_ras: 0.894

AUC without bld_m_sd1_1km_eu_ll: 0.8931

AUC without cecsum_m_sd1_1km_eu_ll: 0.8955

AUC without clyppt_m_sd1_1km_eu_ll: 0.8925

AUC without crfvol_m_sd1_1km_eu_ll: 0.8915

AUC without dist2water1km: 0.8957

AUC without orcdrc_m_sd1_1km_eu_ll: 0.8932

AUC without pet_he_yr: 0.8949

AUC without sltppt_m_sd1_1km_eu_ll: 0.8947

AUC without sndppt_m_sd1_1km_eu_ll: 0.8939

AUC without solar_1km: 0.8957

AUC with only bio_12_etrs2_ras: 0.6478

AUC with only bio_15_etrs2_ras: 0.6199

AUC with only bio_18_etrs2_ras: 0.7713

AUC with only bio_4_etrs2_ras: 0.6868

AUC with only bio_8_etrs2_ras: 0.7145

AUC with only bld_m_sd1_1km_eu_ll: 0.7456

AUC with only cecsum_m_sd1_1km_eu_ll: 0.689

AUC with only clyppt_m_sd1_1km_eu_ll: 0.8055

AUC with only crfvol_m_sd1_1km_eu_ll: 0.7155

AUC with only dist2water1km: 0.5635

AUC with only orcdrc_m_sd1_1km_eu_ll: 0.6267

AUC with only pet_he_yr: 0.7974

AUC with only sltppt_m_sd1_1km_eu_ll: 0.7242

AUC with only sndppt_m_sd1_1km_eu_ll: 0.804

AUC with only solar_1km: 0.6293

Entropy: 7.3276

Prevalence (average of logistic output over background sites): 0.1336

Fixed cumulative value 1 cumulative threshold: 1

Fixed cumulative value 1 logistic threshold: 0.0309

Fixed cumulative value 1 area: 0.3877

Fixed cumulative value 1 training omission: 0.0066

Fixed cumulative value 1 test omission: 0.012

Fixed cumulative value 1 binomial probability: 1.56E-29

Fixed cumulative value 5 cumulative threshold: 5

Fixed cumulative value 5 logistic threshold: 0.1715

Fixed cumulative value 5 area: 0.2652

Fixed cumulative value 5 training omission: 0.0252

Fixed cumulative value 5 test omission: 0.0482

Fixed cumulative value 5 binomial probability: 7.00E-46

Fixed cumulative value 10 cumulative threshold: 10

Fixed cumulative value 10 logistic threshold: 0.2808

Fixed cumulative value 10 area: 0.2185

Fixed cumulative value 10 training omission: 0.045

Fixed cumulative value 10 test omission: 0.0843

Fixed cumulative value 10 binomial probability: 1.27E-53

Minimum training presence cumulative threshold: 0.0978

Minimum training presence logistic threshold: 0.0033

Minimum training presence area: 0.5786

Minimum training presence training omission: 0

Minimum training presence test omission: 0

Minimum training presence binomial probability: 3.76E-15

10 percentile training presence cumulative threshold: 15.2489

10 percentile training presence logistic threshold: 0.3627

10 percentile training presence area: 0.1887

10 percentile training presence training omission: 0.0993

10 percentile training presence test omission: 0.0964

10 percentile training presence binomial probability: 1.62E-62

Equal training sensitivity and specificity cumulative threshold: 21.0523

Equal training sensitivity and specificity logistic threshold: 0.4111

Equal training sensitivity and specificity area: 0.1636

Equal training sensitivity and specificity training omission: 0.1642

Equal training sensitivity and specificity test omission: 0.1928

Equal training sensitivity and specificity binomial probability: 7.05E-57

Maximum training sensitivity plus specificity cumulative threshold: 10.1536

Maximum training sensitivity plus specificity logistic threshold: 0.2825

Maximum training sensitivity plus specificity area: 0.2174

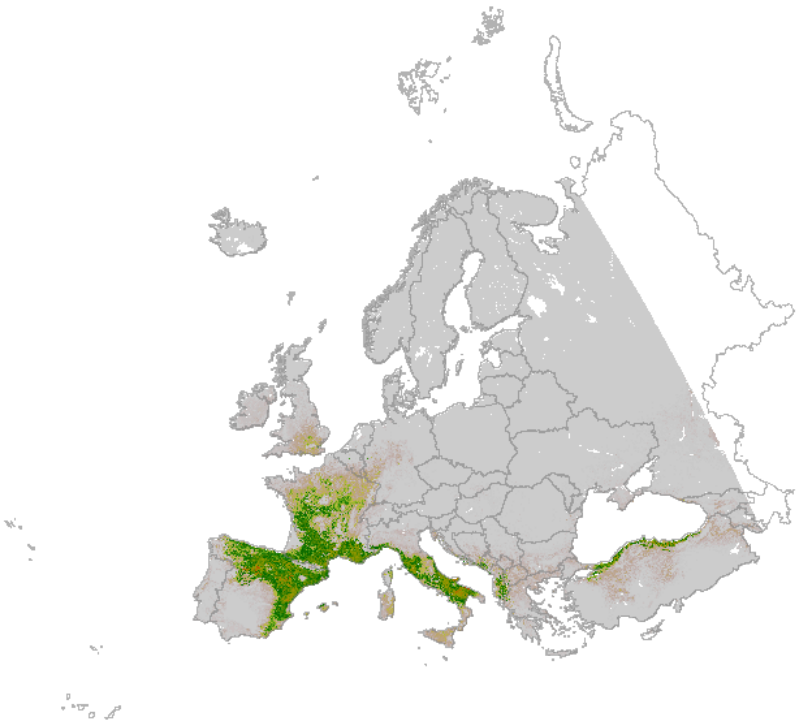
Maximum training sensitivity plus specificity training omission: 0.045

	Maximum training sensitivity plus specificity test omission: 0.0843 Maximum training sensitivity plus specificity binomial probability: 5.73E-54 Equal test sensitivity and specificity cumulative threshold: 19.4655 Equal test sensitivity and specificity logistic threshold: 0.3992 Equal test sensitivity and specificity area: 0.1699 Equal test sensitivity and specificity training omission: 0.143 Equal test sensitivity and specificity test omission: 0.1687 Equal test sensitivity and specificity binomial probability: 3.20E-58 Maximum test sensitivity plus specificity cumulative threshold: 15.6974 Maximum test sensitivity plus specificity logistic threshold: 0.3687 Maximum test sensitivity plus specificity area: 0.1865 Maximum test sensitivity plus specificity training omission: 0.102 Maximum test sensitivity plus specificity test omission: 0.0964 Maximum test sensitivity plus specificity binomial probability: 2.00E-63 Balance training omission, predicted area and threshold value cumulative threshold: 2.0331 Balance training omission, predicted area and threshold value logistic threshold: 0.067 Balance training omission, predicted area and threshold value area: 0.3294 Balance training omission, predicted area and threshold value training omission: 0.0132 Balance training omission, predicted area and threshold value test omission: 0.0241 Balance training omission, predicted area and threshold value binomial probability: 2.52E-36 Equate entropy of thresholded and original distributions cumulative threshold: 4.3713 Equate entropy of thresholded and original distributions logistic threshold: 0.1483 Equate entropy of thresholded and original distributions area: 0.2744 Equate entropy of thresholded and original distributions training omission: 0.0199 Equate entropy of thresholded and original distributions test omission: 0.0482 Equate entropy of thresholded and original distributions binomial probability: 8.30E-44
Source	•

Metadata

File identifier	6174a354-c2a4-4b44-b029-d26df6044058 XML
Metadata language	English
Character set	UTF8
Hierarchy level	Dataset
Date stamp	2022-02-01T08:45:12.081Z
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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