EEA geospatial data catalogue

EUNIS habitat type F6.7, 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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Edition	01
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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	Unknown
GEMET - INSPIRE themes, version 1.0	• Habitats and biotopes
GEMET	• natural area • tundra • terrestrial ecosystem • heathland
Keywords	
Keywords	
Place	• Europe
EEA topics	• 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	• 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-f6-7_p_1940-2011_v01_r00/F6-7_ed1.tif	
WWW:URL	https://sdi.eea.europa.eu/data/d85846cf-bd5b-4c9e-bd28-14ee1b2304fd	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: 24

Regularized training gain: 3.9274

Unregularized training gain: 4.4227

Iterations: 500

Training AUC: 0.9961

#Test samples: 2

Test gain: 4.3971

Test AUC: 0.9968

AUC Standard Deviation: 0.0006

#Background points: 5018

bio_12_etrs2_ras contribution: 3.5452

bio_15_etrs2_ras contribution: 1.9717

bio_18_etrs2_ras contribution: 0.0221

bio_4_etrs2_ras contribution: 1.3211

bio_8_etrs2_ras contribution: 0

bld_m_sd1_1km_eu_ll contribution: 17.2713

cecsum_m_sd1_1km_eu_ll contribution: 0.3305

clyppt_m_sd1_1km_eu_ll contribution: 0

crfvol_m_sd1_1km_eu_ll contribution: 0.3214

dist2water1km contribution: 2.2883

orcdrc_m_sd1_1km_eu_ll contribution: 36.0461

pet_he_yr contribution: 15.4644

sltppt_m_sd1_1km_eu_ll contribution: 21.1382

sndppt_m_sd1_1km_eu_ll contribution: 0

solar_1km contribution: 0.2797

bio_12_etrs2_ras permutation importance: 2.0027

bio_15_etrs2_ras permutation importance: 1.063

bio_18_etrs2_ras permutation importance: 0.7619

bio_4_etrs2_ras permutation importance: 2.3401

bio_8_etrs2_ras permutation importance: 0

bld_m_sd1_1km_eu_ll permutation importance: 74.3025

cecsum_m_sd1_1km_eu_ll permutation importance: 1.4095

clyppt_m_sd1_1km_eu_ll permutation importance: 0

crfvol_m_sd1_1km_eu_ll permutation importance: 0

dist2water1km permutation importance: 0.3701

orcdrc_m_sd1_1km_eu_ll permutation importance: 0.0834

pet_he_yr permutation importance: 2.9569

sltppt_m_sd1_1km_eu_ll permutation importance: 13.2297

sndppt_m_sd1_1km_eu_ll permutation importance: 0

solar_1km permutation importance: 1.4802

Training gain without bio_12_etrs2_ras: 3.8924

Training gain without bio_15_etrs2_ras: 3.8655

Training gain without bio_18_etrs2_ras: 3.9261

Training gain without bio_4_etrs2_ras: 3.8786

Training gain without bio_8_etrs2_ras: 3.9231

Training gain without bld_m_sd1_1km_eu_ll: 3.7399

Training gain without cecsum_m_sd1_1km_eu_ll: 3.9095

Training gain without clyppt_m_sd1_1km_eu_ll: 3.9211

Training gain without crfvol_m_sd1_1km_eu_ll: 3.9231

Training gain without dist2water1km: 3.8775

Training gain without orcdrc_m_sd1_1km_eu_ll: 3.9247

Training gain without pet_he_yr: 3.89

Training gain without sltppt_m_sd1_1km_eu_ll: 3.7867

Training gain without sndppt_m_sd1_1km_eu_ll: 3.9221

Training gain without solar_1km: 3.9035

Training gain with only bio_12_etrs2_ras: 1.3562

Training gain with only bio_15_etrs2_ras: 0.3848

Training gain with only bio_18_etrs2_ras: 1.3901

Training gain with only bio_4_etrs2_ras: 0.6484

Training gain with only bio_8_etrs2_ras: 0.2176

Training gain with only bld_m_sd1_1km_eu_ll: 2.457

Training gain with only cecsum_m_sd1_1km_eu_ll: 0.8482

Training gain with only clyppt_m_sd1_1km_eu_ll: 0.7163

Training gain with only crfvol_m_sd1_1km_eu_ll: 0.6358

Training gain with only dist2water1km: 0.0506

Training gain with only orcdrc_m_sd1_1km_eu_ll: 2.0218

Training gain with only pet_he_yr: 2.1376

Training gain with only sltppt_m_sd1_1km_eu_ll: 1.1601

Training gain with only sndppt_m_sd1_1km_eu_ll: 1.1125

Training gain with only solar_1km: 0.2369

Test gain without bio_12_etrs2_ras: 4.4276

Test gain without bio_15_etrs2_ras: 4.2745

Test gain without bio_18_etrs2_ras: 4.3974

Test gain without bio_4_etrs2_ras: 4.3466

Test gain without bio_8_etrs2_ras: 4.3722

Test gain without bld_m_sd1_1km_eu_ll: 4.1797

Test gain without cecsum_m_sd1_1km_eu_ll: 4.3802

Test gain without clyppt_m_sd1_1km_eu_ll: 4.4035

Test gain without crfvol_m_sd1_1km_eu_ll: 4.3838

Test gain without dist2water1km: 4.3739

Test gain without orcdrc_m_sd1_1km_eu_ll: 4.3681

Test gain without pet_he_yr: 4.257

Test gain without sltppt_m_sd1_1km_eu_ll: 4.3537

Test gain without sndppt_m_sd1_1km_eu_ll: 4.4064

Test gain without solar_1km: 4.1663

Test gain with only bio_12_etrs2_ras: 0.7313

Test gain with only bio_15_etrs2_ras: 0.8871

Test gain with only bio_18_etrs2_ras: 1.9519

Test gain with only bio_4_etrs2_ras: 1.3971

Test gain with only bio_8_etrs2_ras: 0.4746

Test gain with only bld_m_sd1_1km_eu_ll: 2.9343

Test gain with only cecsum_m_sd1_1km_eu_ll: 0.8253

Test gain with only clyppt_m_sd1_1km_eu_ll: 0.7779

Test gain with only crfvol_m_sd1_1km_eu_ll: 0.8564

Test gain with only dist2water1km: 0.0174

Test gain with only orcdrc_m_sd1_1km_eu_ll: 1.5202

Test gain with only pet_he_yr: 2.9046

Test gain with only sltppt_m_sd1_1km_eu_ll: 1.219

Test gain with only sndppt_m_sd1_1km_eu_ll: 1.0581

Test gain with only solar_1km: 0.78

AUC without bio_12_etrs2_ras: 0.997

AUC without bio_15_etrs2_ras: 0.996

AUC without bio_18_etrs2_ras: 0.9969

AUC without bio_4_etrs2_ras: 0.9961

AUC without bio_8_etrs2_ras: 0.9968

AUC without bld_m_sd1_1km_eu_ll: 0.9955

AUC without cecsum_m_sd1_1km_eu_ll: 0.9962

AUC without clyppt_m_sd1_1km_eu_ll: 0.9968

AUC without crfvol_m_sd1_1km_eu_ll: 0.9966

AUC without dist2water1km: 0.9969

AUC without orcdrc_m_sd1_1km_eu_ll: 0.9967

AUC without pet_he_yr: 0.996

AUC without sltppt_m_sd1_1km_eu_ll: 0.9968

AUC without sndppt_m_sd1_1km_eu_ll: 0.9968

AUC without solar_1km: 0.9958

AUC with only bio_12_etrs2_ras: 0.8585

AUC with only bio_15_etrs2_ras: 0.9605

AUC with only bio_18_etrs2_ras: 0.9442

AUC with only bio_4_etrs2_ras: 0.9575

AUC with only bio_8_etrs2_ras: 0.8629

AUC with only bld_m_sd1_1km_eu_ll: 0.9833

AUC with only cecsum_m_sd1_1km_eu_ll: 0.8353

AUC with only clyppt_m_sd1_1km_eu_ll: 0.8117

AUC with only crfvol_m_sd1_1km_eu_ll: 0.8384

AUC with only dist2water1km: 0.5449

AUC with only orcdrc_m_sd1_1km_eu_ll: 0.9374

AUC with only pet_he_yr: 0.9843

AUC with only sltppt_m_sd1_1km_eu_ll: 0.8967

AUC with only sndppt_m_sd1_1km_eu_ll: 0.8683

AUC with only solar_1km: 0.9298

Entropy: 4.5847

Prevalence (average of logistic output over background sites): 0.0091

Fixed cumulative value 1 cumulative threshold: 1

Fixed cumulative value 1 logistic threshold: 0.0054

Fixed cumulative value 1 area: 0.0793

Fixed cumulative value 1 training omission: 0

Fixed cumulative value 1 test omission: 0

Fixed cumulative value 1 binomial probability: 6.29E-03

Fixed cumulative value 5 cumulative threshold: 5

Fixed cumulative value 5 logistic threshold: 0.0448

Fixed cumulative value 5 area: 0.0323

Fixed cumulative value 5 training omission: 0

Fixed cumulative value 5 test omission: 0

Fixed cumulative value 5 binomial probability: 1.04E-03

Fixed cumulative value 10 cumulative threshold: 10

Fixed cumulative value 10 logistic threshold: 0.1038

Fixed cumulative value 10 area: 0.0193

Fixed cumulative value 10 training omission: 0

Fixed cumulative value 10 test omission: 0

Fixed cumulative value 10 binomial probability: 3.74E-04

Minimum training presence cumulative threshold: 16.1171

Minimum training presence logistic threshold: 0.2352

Minimum training presence area: 0.0128

Minimum training presence training omission: 0

Minimum training presence test omission: 0

Minimum training presence binomial probability: 1.63E-04

10 percentile training presence cumulative threshold: 25.4166

10 percentile training presence logistic threshold: 0.3692

10 percentile training presence area: 0.0088

10 percentile training presence training omission: 0.0833

10 percentile training presence test omission: 0

10 percentile training presence binomial probability: 7.69E-05

Equal training sensitivity and specificity cumulative threshold: 16.1171

Equal training sensitivity and specificity logistic threshold: 0.2352

Equal training sensitivity and specificity area: 0.0128

Equal training sensitivity and specificity training omission: 0

Equal training sensitivity and specificity test omission: 0

Equal training sensitivity and specificity binomial probability: 1.63E-04

Maximum training sensitivity plus specificity cumulative threshold: 16.1171

Maximum training sensitivity plus specificity logistic threshold: 0.2352

Maximum training sensitivity plus specificity area: 0.0128

Maximum training sensitivity plus specificity training omission: 0

	Maximum training sensitivity plus specificity test omission: 0 Maximum training sensitivity plus specificity binomial probability: 1.63E-04 Equal test sensitivity and specificity cumulative threshold: 52.733 Equal test sensitivity and specificity logistic threshold: 0.5889 Equal test sensitivity and specificity area: 0.0034 Equal test sensitivity and specificity training omission: 0.375 Equal test sensitivity and specificity test omission: 0 Equal test sensitivity and specificity binomial probability: 1.15E-05 Maximum test sensitivity plus specificity cumulative threshold: 52.733 Maximum test sensitivity plus specificity logistic threshold: 0.5889 Maximum test sensitivity plus specificity area: 0.0034 Maximum test sensitivity plus specificity training omission: 0.375 Maximum test sensitivity plus specificity test omission: 0 Maximum test sensitivity plus specificity binomial probability: 1.15E-05 Balance training omission, predicted area and threshold value cumulative threshold: 1.3503 Balance training omission, predicted area and threshold value logistic threshold: 0.0078 Balance training omission, predicted area and threshold value area: 0.0686 Balance training omission, predicted area and threshold value training omission: 0 Balance training omission, predicted area and threshold value test omission: 0 Balance training omission, predicted area and threshold value binomial probability: 4.70E-03 Equate entropy of thresholded and original distributions cumulative threshold: 10.1085 Equate entropy of thresholded and original distributions logistic threshold: 0.1038 Equate entropy of thresholded and original distributions area: 0.0193 Equate entropy of thresholded and original distributions training omission: 0 Equate entropy of thresholded and original distributions test omission: 0 Equate entropy of thresholded and original distributions binomial probability: 3.74E-04
Source	•

Metadata

File identifier	d85846cf-bd5b-4c9e-bd28-14ee1b2304fd XML
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Hierarchy level	Dataset
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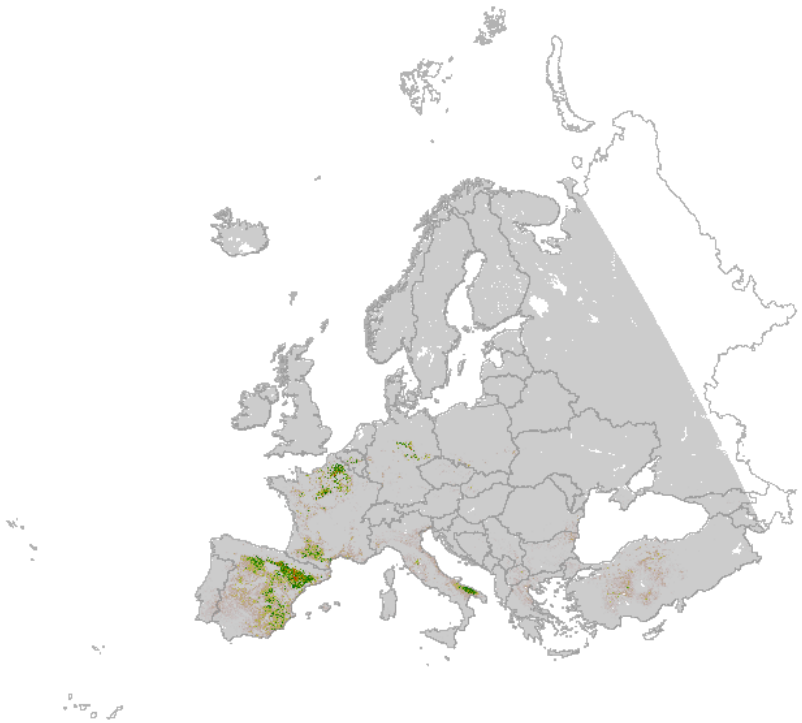
Overviews



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