EEA geospatial data catalogue

EUNIS habitat type F6.8a, 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 uncertain due to lack of data for that area.

Simple

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Edition	01
Citation identifier	eea_r_3035_1_km_eunis-hab-f6-8a_p_1940-2011_v01_r00
Status	Obsolete

Point of contact

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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-f6-8a_p_1940-2011_v01_r00/F6-8a_ed1.tif	
WWW:URL	https://sdi.eea.europa.eu/data/186b79ed-f69d-441f-9ace-240219fedfd1	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: 62

Regularized training gain: 2.5337

Unregularized training gain: 2.895

Iterations: 500

Training AUC: 0.9759

#Test samples: 6

Test gain: 1.9924

Test AUC: 0.911

AUC Standard Deviation: 0.0701

#Background points: 5043

bio_12_etrs2_ras contribution: 6.3801

bio_15_etrs2_ras contribution: 3.2556

bio_18_etrs2_ras contribution: 16.0861

bio_4_etrs2_ras contribution: 3.4085

bio_8_etrs2_ras contribution: 2.8701

bld_m_sd1_1km_eu_ll contribution: 3.8742

cecsum_m_sd1_1km_eu_ll contribution: 0.3583

clyppt_m_sd1_1km_eu_ll contribution: 9.1065

crfvol_m_sd1_1km_eu_ll contribution: 0.0369

dist2water1km contribution: 0.5444

orcdrc_m_sd1_1km_eu_ll contribution: 14.3859

pet_he_yr contribution: 39.1685

sltppt_m_sd1_1km_eu_ll contribution: 0.3013

sndppt_m_sd1_1km_eu_ll contribution: 0.2237

solar_1km contribution: 0

bio_12_etrs2_ras permutation importance: 1.4553

bio_15_etrs2_ras permutation importance: 4.6929

bio_18_etrs2_ras permutation importance: 66.9819

bio_4_etrs2_ras permutation importance: 1.021

bio_8_etrs2_ras permutation importance: 4.512

bld_m_sd1_1km_eu_ll permutation importance: 0.4252

cecsum_m_sd1_1km_eu_ll permutation importance: 1.0774

clyppt_m_sd1_1km_eu_ll permutation importance: 9.6844

crfvol_m_sd1_1km_eu_ll permutation importance: 0

dist2water1km permutation importance: 0.5658

orcdrc_m_sd1_1km_eu_ll permutation importance: 1.4233

pet_he_yr permutation importance: 1.2228

sltppt_m_sd1_1km_eu_ll permutation importance: 6.5177

sndppt_m_sd1_1km_eu_ll permutation importance: 0.4204

solar_1km permutation importance: 0

Training gain without bio_12_etrs2_ras: 2.5336

Training gain without bio_15_etrs2_ras: 2.4716

Training gain without bio_18_etrs2_ras: 2.4615

Training gain without bio_4_etrs2_ras: 2.5174

Training gain without bio_8_etrs2_ras: 2.4977

Training gain without bld_m_sd1_1km_eu_ll: 2.5259

Training gain without cecsum_m_sd1_1km_eu_ll: 2.5105

Training gain without clyppt_m_sd1_1km_eu_ll: 2.4806

Training gain without crfvol_m_sd1_1km_eu_ll: 2.5297

Training gain without dist2water1km: 2.5232

Training gain without orcdrc_m_sd1_1km_eu_ll: 2.507

Training gain without pet_he_yr: 2.531

Training gain without sltppt_m_sd1_1km_eu_ll: 2.5166

Training gain without sndppt_m_sd1_1km_eu_ll: 2.5157

Training gain without solar_1km: 2.538

Training gain with only bio_12_etrs2_ras: 1.1405

Training gain with only bio_15_etrs2_ras: 0.5535

Training gain with only bio_18_etrs2_ras: 1.5715

Training gain with only bio_4_etrs2_ras: 0.4312

Training gain with only bio_8_etrs2_ras: 0.2887

Training gain with only bld_m_sd1_1km_eu_ll: 1.6367

Training gain with only cecsum_m_sd1_1km_eu_ll: 0.267

Training gain with only clyppt_m_sd1_1km_eu_ll: 0.8249

Training gain with only crfvol_m_sd1_1km_eu_ll: 0.4017

Training gain with only dist2water1km: 0.0393

Training gain with only orcdrc_m_sd1_1km_eu_ll: 1.0898

Training gain with only pet_he_yr: 1.8273

Training gain with only sltppt_m_sd1_1km_eu_ll: 0.2561

Training gain with only sndppt_m_sd1_1km_eu_ll: 0.4928

Training gain with only solar_1km: 0.217

Test gain without bio_12_etrs2_ras: 2.0403

Test gain without bio_15_etrs2_ras: 2.1408

Test gain without bio_18_etrs2_ras: 1.9313

Test gain without bio_4_etrs2_ras: 1.8717

Test gain without bio_8_etrs2_ras: 2.0972

Test gain without bld_m_sd1_1km_eu_ll: 2.1033

Test gain without cecsum_m_sd1_1km_eu_ll: 2.0316

Test gain without clyppt_m_sd1_1km_eu_ll: 1.8957

Test gain without crfvol_m_sd1_1km_eu_ll: 1.9728

Test gain without dist2water1km: 1.9991

Test gain without orcdrc_m_sd1_1km_eu_ll: 1.9508

Test gain without pet_he_yr: 1.968

Test gain without sltppt_m_sd1_1km_eu_ll: 1.9584

Test gain without sndppt_m_sd1_1km_eu_ll: 1.9617

Test gain without solar_1km: 2.0117

Test gain with only bio_12_etrs2_ras: 1.0569

Test gain with only bio_15_etrs2_ras: 0.3347

Test gain with only bio_18_etrs2_ras: 1.4122

Test gain with only bio_4_etrs2_ras: 0.4442

Test gain with only bio_8_etrs2_ras: 0.4373

Test gain with only bld_m_sd1_1km_eu_ll: 1.0035

Test gain with only cecsum_m_sd1_1km_eu_ll: 0.4234

Test gain with only clyppt_m_sd1_1km_eu_ll: 0.8272

Test gain with only crfvol_m_sd1_1km_eu_ll: 0.0243

Test gain with only dist2water1km: 0.0249

Test gain with only orcdrc_m_sd1_1km_eu_ll: 1.2319

Test gain with only pet_he_yr: 1.5559

Test gain with only sltppt_m_sd1_1km_eu_ll: 0.2031

Test gain with only sndppt_m_sd1_1km_eu_ll: 0.177

Test gain with only solar_1km: 0.2118

AUC without bio_12_etrs2_ras: 0.912

AUC without bio_15_etrs2_ras: 0.9208

AUC without bio_18_etrs2_ras: 0.9179

AUC without bio_4_etrs2_ras: 0.9046

AUC without bio_8_etrs2_ras: 0.9215

AUC without bld_m_sd1_1km_eu_ll: 0.9142

AUC without cecsum_m_sd1_1km_eu_ll: 0.9123

AUC without clyppt_m_sd1_1km_eu_ll: 0.9131

AUC without crfvol_m_sd1_1km_eu_ll: 0.9131

AUC without dist2water1km: 0.9139

AUC without orcdrc_m_sd1_1km_eu_ll: 0.9108

AUC without pet_he_yr: 0.912

AUC without sltppt_m_sd1_1km_eu_ll: 0.9093

AUC without sndppt_m_sd1_1km_eu_ll: 0.9078

AUC without solar_1km: 0.9121

AUC with only bio_12_etrs2_ras: 0.8335

AUC with only bio_15_etrs2_ras: 0.7373

AUC with only bio_18_etrs2_ras: 0.8725

AUC with only bio_4_etrs2_ras: 0.7556

AUC with only bio_8_etrs2_ras: 0.7228

AUC with only bld_m_sd1_1km_eu_ll: 0.8745

AUC with only cecsum_m_sd1_1km_eu_ll: 0.7477

AUC with only clyppt_m_sd1_1km_eu_ll: 0.8496

AUC with only crfvol_m_sd1_1km_eu_ll: 0.6508

AUC with only dist2water1km: 0.5773

AUC with only orcdrc_m_sd1_1km_eu_ll: 0.7936

AUC with only pet_he_yr: 0.9088

AUC with only sltppt_m_sd1_1km_eu_ll: 0.6383

AUC with only sndppt_m_sd1_1km_eu_ll: 0.6382

AUC with only solar_1km: 0.6303

Entropy: 6.0229

Prevalence (average of logistic output over background sites): 0.0388

Fixed cumulative value 1 cumulative threshold: 1

Fixed cumulative value 1 logistic threshold: 0.0079

Fixed cumulative value 1 area: 0.3056

Fixed cumulative value 1 training omission: 0.0161

Fixed cumulative value 1 test omission: 0.1667

Fixed cumulative value 1 binomial probability: 1.19E-02

Fixed cumulative value 5 cumulative threshold: 5

Fixed cumulative value 5 logistic threshold: 0.0483

Fixed cumulative value 5 area: 0.1503

Fixed cumulative value 5 training omission: 0.0161

Fixed cumulative value 5 test omission: 0.1667

Fixed cumulative value 5 binomial probability: 4.03E-04

Fixed cumulative value 10 cumulative threshold: 10

Fixed cumulative value 10 logistic threshold: 0.1037

Fixed cumulative value 10 area: 0.0974

Fixed cumulative value 10 training omission: 0.0323

Fixed cumulative value 10 test omission: 0.1667

Fixed cumulative value 10 binomial probability: 4.82E-05

Minimum training presence cumulative threshold: 0.2129

Minimum training presence logistic threshold: 0.0017

Minimum training presence area: 0.4727

Minimum training presence training omission: 0

Minimum training presence test omission: 0

Minimum training presence binomial probability: 1.12E-02

10 percentile training presence cumulative threshold: 26.2915

10 percentile training presence logistic threshold: 0.2985

10 percentile training presence area: 0.0403

10 percentile training presence training omission: 0.0968

10 percentile training presence test omission: 0.1667

10 percentile training presence binomial probability: 6.13E-07

Equal training sensitivity and specificity cumulative threshold: 16.811

Equal training sensitivity and specificity logistic threshold: 0.1974

Equal training sensitivity and specificity area: 0.0644

Equal training sensitivity and specificity training omission: 0.0645

Equal training sensitivity and specificity test omission: 0.1667

Equal training sensitivity and specificity binomial probability: 6.31E-06

Maximum training sensitivity plus specificity cumulative threshold: 14.3848

Maximum training sensitivity plus specificity logistic threshold: 0.1627

Maximum training sensitivity plus specificity area: 0.0732

Maximum training sensitivity plus specificity training omission: 0.0323

	Maximum training sensitivity plus specificity test omission: 0.1667 Maximum training sensitivity plus specificity binomial probability: 1.18E-05 Equal test sensitivity and specificity cumulative threshold: 4.1619 Equal test sensitivity and specificity logistic threshold: 0.0362 Equal test sensitivity and specificity area: 0.1666 Equal test sensitivity and specificity training omission: 0.0161 Equal test sensitivity and specificity test omission: 0.1667 Equal test sensitivity and specificity binomial probability: 6.62E-04 Maximum test sensitivity plus specificity cumulative threshold: 30.1379 Maximum test sensitivity plus specificity logistic threshold: 0.3359 Maximum test sensitivity plus specificity area: 0.0335 Maximum test sensitivity plus specificity training omission: 0.1613 Maximum test sensitivity plus specificity test omission: 0.1667 Maximum test sensitivity plus specificity binomial probability: 2.47E-07 Balance training omission, predicted area and threshold value cumulative threshold: 3.7219 Balance training omission, predicted area and threshold value logistic threshold: 0.0316 Balance training omission, predicted area and threshold value area: 0.1769 Balance training omission, predicted area and threshold value training omission: 0.0161 Balance training omission, predicted area and threshold value test omission: 0.1667 Balance training omission, predicted area and threshold value binomial probability: 8.86E-04 Equate entropy of thresholded and original distributions cumulative threshold: 12.6664 Equate entropy of thresholded and original distributions logistic threshold: 0.1383 Equate entropy of thresholded and original distributions area: 0.0813 Equate entropy of thresholded and original distributions training omission: 0.0323 Equate entropy of thresholded and original distributions test omission: 0.1667 Equate entropy of thresholded and original distributions binomial probability: 1.99E-05
Source	•

Metadata

File identifier	186b79ed-f69d-441f-9ace-240219fedfd1 XML
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Character set	UTF8
Hierarchy level	Dataset
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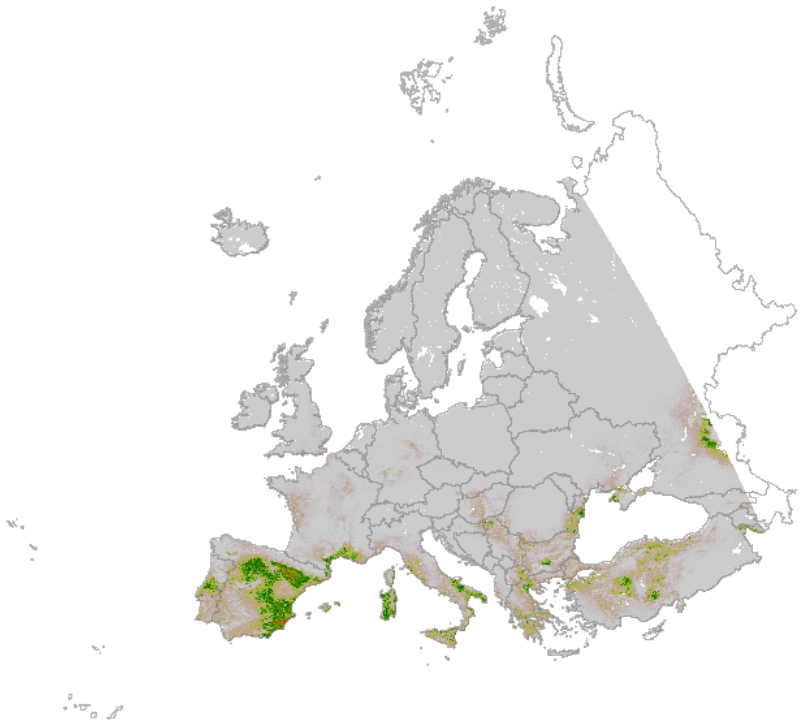
Metadata standard version	1.0
Metadata author	**Organisation name** / **Individual name** / **Electronic mail address** / **Website** / **Role** European Environment Agency / / sdi@eea.europa.eu / / Point of contact

Overviews



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