

EUNIS habitat type F9.3, 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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	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	<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/9312f79c-94fe-4d15-90c2-8371fb28826f	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: 198</p> <p>Regularized training gain: 2.3239</p>
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Unregularized training gain: 2.5425
Iterations: 500
Training AUC: 0.972
#Test samples: 22
Test gain: 2.3505
Test AUC: 0.9649
AUC Standard Deviation: 0.0068
#Background points: 5140
bio_12_etr2_ras contribution: 0.4784
bio_15_etr2_ras contribution: 3.1528
bio_18_etr2_ras contribution: 38.0612
bio_4_etr2_ras contribution: 0.1564
bio_8_etr2_ras contribution: 0.8456
bld_m_sd1_1km_eu_ll contribution: 35.2455
cecum_m_sd1_1km_eu_ll contribution: 0.0865
clyppt_m_sd1_1km_eu_ll contribution: 7.2877
crvol_m_sd1_1km_eu_ll contribution: 0.5201
dist2water1km contribution: 0.1944
orcdrc_m_sd1_1km_eu_ll contribution: 0.29
pet_he_yr contribution: 7.2959
sltppt_m_sd1_1km_eu_ll contribution: 2.3526
sndppt_m_sd1_1km_eu_ll contribution: 0.8838
solar_1km contribution: 3.1492
bio_12_etr2_ras permutation importance: 0.0878
bio_15_etr2_ras permutation importance: 6.5436
bio_18_etr2_ras permutation importance: 59.4637
bio_4_etr2_ras permutation importance: 0.9375
bio_8_etr2_ras permutation importance: 2.7788
bld_m_sd1_1km_eu_ll permutation importance: 3.756
cecum_m_sd1_1km_eu_ll permutation importance: 0.8737
clyppt_m_sd1_1km_eu_ll permutation importance: 10.267
crvol_m_sd1_1km_eu_ll permutation importance: 3.1304
dist2water1km permutation importance: 0.4427
orcdrc_m_sd1_1km_eu_ll permutation importance: 0.7543
pet_he_yr permutation importance: 3.5857
sltppt_m_sd1_1km_eu_ll permutation importance: 2.037
sndppt_m_sd1_1km_eu_ll permutation importance: 0.31
solar_1km permutation importance: 5.0318
Training gain without bio_12_etr2_ras: 2.3214
Training gain without bio_15_etr2_ras: 2.2756
Training gain without bio_18_etr2_ras: 2.302
Training gain without bio_4_etr2_ras: 2.32
Training gain without bio_8_etr2_ras: 2.3084

Training gain without bld_m_sd1_1km_eu_ll: 2.325

Training gain without cecsum_m_sd1_1km_eu_ll: 2.3229

Training gain without clyppt_m_sd1_1km_eu_ll: 2.3078

Training gain without crvol_m_sd1_1km_eu_ll: 2.2911

Training gain without dist2water1km: 2.3186

Training gain without orcdrc_m_sd1_1km_eu_ll: 2.3237

Training gain without pet_he_yr: 2.3023

Training gain without sltppt_m_sd1_1km_eu_ll: 2.3202

Training gain without sndppt_m_sd1_1km_eu_ll: 2.3193

Training gain without solar_1km: 2.3129

Training gain with only bio_12_etr2_ras: 0.6892

Training gain with only bio_15_etr2_ras: 1.0505

Training gain with only bio_18_etr2_ras: 1.6658

Training gain with only bio_4_etr2_ras: 0.305

Training gain with only bio_8_etr2_ras: 0.4187

Training gain with only bld_m_sd1_1km_eu_ll: 1.6355

Training gain with only cecsum_m_sd1_1km_eu_ll: 0.2501

Training gain with only clyppt_m_sd1_1km_eu_ll: 0.9911

Training gain with only crvol_m_sd1_1km_eu_ll: 0.3139

Training gain with only dist2water1km: 0.0781

Training gain with only orcdrc_m_sd1_1km_eu_ll: 0.7096

Training gain with only pet_he_yr: 1.563

Training gain with only sltppt_m_sd1_1km_eu_ll: 0.2563

Training gain with only sndppt_m_sd1_1km_eu_ll: 0.4807

Training gain with only solar_1km: 0.52

Test gain without bio_12_etr2_ras: 2.3239

Test gain without bio_15_etr2_ras: 2.3132

Test gain without bio_18_etr2_ras: 2.359

Test gain without bio_4_etr2_ras: 2.3115

Test gain without bio_8_etr2_ras: 2.3134

Test gain without bld_m_sd1_1km_eu_ll: 2.2592

Test gain without cecsum_m_sd1_1km_eu_ll: 2.3481

Test gain without clyppt_m_sd1_1km_eu_ll: 2.295

Test gain without crvol_m_sd1_1km_eu_ll: 2.3769

Test gain without dist2water1km: 2.3254

Test gain without orcdrc_m_sd1_1km_eu_ll: 2.381

Test gain without pet_he_yr: 2.2282

Test gain without sltppt_m_sd1_1km_eu_ll: 2.2967

Test gain without sndppt_m_sd1_1km_eu_ll: 2.2821

Test gain without solar_1km: 2.3615

Test gain with only bio_12_etr2_ras: 1.0251

Test gain with only bio_15_etr2_ras: 0.8818

Test gain with only bio_18_etr2_ras: 1.8308
Test gain with only bio_4_etr2_ras: 0.3942
Test gain with only bio_8_etr2_ras: 0.5683
Test gain with only bld_m_sd1_1km_eu_II: 1.6782
Test gain with only cecsum_m_sd1_1km_eu_II: -0.0869
Test gain with only clyppt_m_sd1_1km_eu_II: 0.8157
Test gain with only crvol_m_sd1_1km_eu_II: 0.1303
Test gain with only dist2water1km: 0.2204
Test gain with only orcdrc_m_sd1_1km_eu_II: 0.6504
Test gain with only pet_he_yr: 1.9534
Test gain with only sltppt_m_sd1_1km_eu_II: 0.3548
Test gain with only sndppt_m_sd1_1km_eu_II: 0.287
Test gain with only solar_1km: 0.2802
AUC without bio_12_etr2_ras: 0.9636
AUC without bio_15_etr2_ras: 0.9633
AUC without bio_18_etr2_ras: 0.9653
AUC without bio_4_etr2_ras: 0.9635
AUC without bio_8_etr2_ras: 0.9634
AUC without bld_m_sd1_1km_eu_II: 0.9619
AUC without cecsum_m_sd1_1km_eu_II: 0.9645
AUC without clyppt_m_sd1_1km_eu_II: 0.9625
AUC without crvol_m_sd1_1km_eu_II: 0.9656
AUC without dist2water1km: 0.9631
AUC without orcdrc_m_sd1_1km_eu_II: 0.9656
AUC without pet_he_yr: 0.9601
AUC without sltppt_m_sd1_1km_eu_II: 0.963
AUC without sndppt_m_sd1_1km_eu_II: 0.9623
AUC without solar_1km: 0.9651
AUC with only bio_12_etr2_ras: 0.8486
AUC with only bio_15_etr2_ras: 0.8469
AUC with only bio_18_etr2_ras: 0.9391
AUC with only bio_4_etr2_ras: 0.7473
AUC with only bio_8_etr2_ras: 0.7807
AUC with only bld_m_sd1_1km_eu_II: 0.9361
AUC with only cecsum_m_sd1_1km_eu_II: 0.5654
AUC with only clyppt_m_sd1_1km_eu_II: 0.8411
AUC with only crvol_m_sd1_1km_eu_II: 0.6483
AUC with only dist2water1km: 0.7084
AUC with only orcdrc_m_sd1_1km_eu_II: 0.8126
AUC with only pet_he_yr: 0.9497
AUC with only sltppt_m_sd1_1km_eu_II: 0.7377
AUC with only sndppt_m_sd1_1km_eu_II: 0.6992
AUC with only solar_1km: 0.7147

Entropy: 6.2387

Prevalence (average of logistic output over background sites): 0.048

Fixed cumulative value 1 cumulative threshold: 1

Fixed cumulative value 1 logistic threshold: 0.0166

Fixed cumulative value 1 area: 0.1745

Fixed cumulative value 1 training omission: 0

Fixed cumulative value 1 test omission: 0

Fixed cumulative value 1 binomial probability: 2.09E-17

Fixed cumulative value 5 cumulative threshold: 5

Fixed cumulative value 5 logistic threshold: 0.125

Fixed cumulative value 5 area: 0.1089

Fixed cumulative value 5 training omission: 0.0152

Fixed cumulative value 5 test omission: 0.0455

Fixed cumulative value 5 binomial probability: 1.19E-19

Fixed cumulative value 10 cumulative threshold: 10

Fixed cumulative value 10 logistic threshold: 0.218

Fixed cumulative value 10 area: 0.0844

Fixed cumulative value 10 training omission: 0.0455

Fixed cumulative value 10 test omission: 0.0909

Fixed cumulative value 10 binomial probability: 6.63E-20

Minimum training presence cumulative threshold: 1.1601

Minimum training presence logistic threshold: 0.0213

Minimum training presence area: 0.1663

Minimum training presence training omission: 0

Minimum training presence test omission: 0

Minimum training presence binomial probability: 7.28E-18

10 percentile training presence cumulative threshold: 20.3928

10 percentile training presence logistic threshold: 0.3493

10 percentile training presence area: 0.0582

10 percentile training presence training omission: 0.096

10 percentile training presence test omission: 0.1818

10 percentile training presence binomial probability: 3.39E-19

Equal training sensitivity and specificity cumulative threshold: 14.5887

Equal training sensitivity and specificity logistic threshold: 0.2787

Equal training sensitivity and specificity area: 0.0706

Equal training sensitivity and specificity training omission: 0.0707

Equal training sensitivity and specificity test omission: 0.0909

Equal training sensitivity and specificity binomial probability: 1.91E-21

Maximum training sensitivity plus specificity cumulative threshold: 5.5286

Maximum training sensitivity plus specificity logistic threshold: 0.1362

Maximum training sensitivity plus specificity area: 0.1053

Maximum training sensitivity plus specificity training omission: 0.0152

Maximum training sensitivity plus specificity test omission: 0.0455

Maximum training sensitivity plus specificity binomial probability: 5.80E-20

Equal test sensitivity and specificity cumulative threshold: 9.7867

Equal test sensitivity and specificity logistic threshold: 0.2133

Equal test sensitivity and specificity area: 0.0852

Equal test sensitivity and specificity training omission: 0.0455

Equal test sensitivity and specificity test omission: 0.0909

Equal test sensitivity and specificity binomial probability: 7.95E-20

Maximum test sensitivity plus specificity cumulative threshold: 3.1746

Maximum test sensitivity plus specificity logistic threshold: 0.0853

Maximum test sensitivity plus specificity area: 0.1243

Maximum test sensitivity plus specificity training omission: 0.0101

Maximum test sensitivity plus specificity test omission: 0

Maximum test sensitivity plus specificity binomial probability: 1.20E-20

Balance training omission, predicted area and threshold value cumulative threshold: 1.1601

Balance training omission, predicted area and threshold value logistic threshold: 0.0213

Balance training omission, predicted area and threshold value area: 0.1663

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: 7.28E-18

Equate entropy of thresholded and original distributions cumulative threshold: 6.5344

Equate entropy of thresholded and original distributions logistic threshold: 0.155

Equate entropy of thresholded and original distributions area: 0.0996

Equate entropy of thresholded and original distributions training omission: 0.0253

Equate entropy of thresholded and original distributions test omission: 0.0455

Equate entropy of thresholded and original distributions binomial probability: 1.83E-20

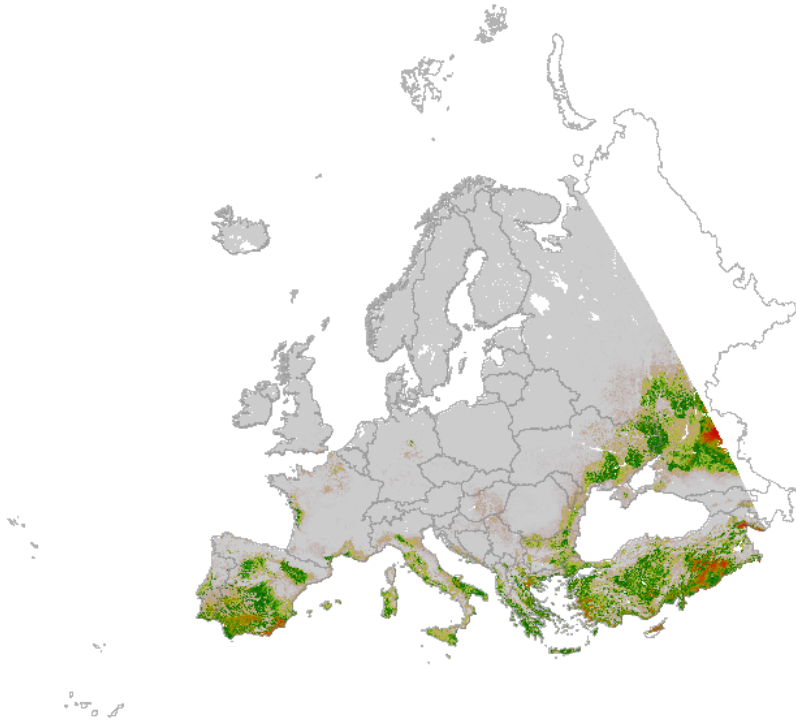
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Metadata

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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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