GRENE_ei_EcoBiodiv_MAPHATJP_dataset

1. IDENTIFICATION INFORMATION

Name	GRENE_ei_EcoBiodiv_MAPHATJP_dataset
Edition	0.9
Abbreviation	MAPHATJP
Metadata Identifier	GRENE_ei_EcoBiodiv_MAPHATJP20240612163941-en

2. CONTACT

2.1 CONTACT on DATASET

Name	Osamu
Organization	The University of Tokyo
Address	3-8-1 Komaba, Meguro-ku, Tokyo, 153-8902, Japan
TEL	+81-3-5454-4305
FAX	+81-3-5454-4305
E-mail	osamu@darwin.c.u-tokyo.ac.jp

2.2 CONTACT on PROJECT

3. DOCUMENT AUTHOR

Name	Osamu
Organization	The University of Tokyo
E-mail	osamu@darwin.c.u-tokyo.ac.jp

4. DATASET CREATOR

Name	Masayuki U. Saito
Organization	Tokyo University of Agriculture and Technology
E-mail	saito.ume@gmail.com

5. DATE OF THIS DOCUMENT

2024-06-12

6. DATE OF DATASET

creation : 2016-03-18

revision : 2016-04-01

7. DATASET OVERVIEW

7.1 Abstract

This is the model projection data of potential habitats for 1188 Japanese plant species. The spatial resolution of the data is the standard Japanese third-order mesh composed approximately 1 km × 1 km cells. To estimate the distribution of potential habitats, the presence data of plants extracted from a vegetation survey carried out from 2000 to 2012 by the Ministry of the Environment is used as a response variable. Mean annual temperature, total summer (May to September) and winter precipitation (December to March), topographic wetness index (TWI), geomorphological classification (lowland, hill and mountain), each presence-absence of volcanic product, limestone and ultrabasic rock, each proportion of secondary vegetation, plantation, agricultural area and urban area are used as environmental predictors. All response variables and environmental predictors are prepared in the standard Japanese third-order mesh. Only proportions of land use (secondary vegetation, plantation, agricultural area and urban area) are caluculated from each target cell and its 8 neighboring cells. MaxEnt software (http://www.cs.princeton.edu/ schapire/maxent/) is used for modelling habitat distribution of each plant species.

7.2 Topic Category(ISO19139)

environment

biota

7.3 Temporal Extent

Begin Date	2000-01-01
End Date	2012-12-31

7.4 Geographic Bounding Box

North bound latitude	45.508
West bound longitude	122.875
Eastbound longitude	145.762
South bound latitude	24.000

7.5 Grid

Dimension Name	Dimension Size (slice number of the dimension)	Resolution Unit
row	1	30 (second)
column	1	45 (second)

7.6 Geographic Description

7.7 Keywords

7.7.1 Keywords on Dataset

Keyword Type	Keyword	Keyword thesaurus Name
place	Asia > Eastern Asia > Japan	Country
theme	Ecosystems, Biodiversity	GEOSS
theme	Biodiversity	GEO_COP

7.7.2 Keywords on Project

7.8 Online Resource

Dataset download site : http://gnetum.c.u-tokyo.ac.jp/maphatjp/

7.9 Data Environmental Information

7.10 Distribution Information

name	version	specification
CSV	RFC 4180	
GeoTIFF	TIFF 6.0	

8. DATA PROCESSING

8.1 Data Processing (1)

8.1.1 General Explanation of the data producer's knowledge about the lineage of a dataset

Environmental variables used in the dataset.

01. mean annual temperature: calculated form WorldClim v1.4 (Hijmans et al., 2005).

02. total summer precipitation (May to September): calculated form WorldClim v1.4 (Hijmans et al., 2005).

03. total winter precipitation (December to March): calculated form WorldClim v1.4 (Hijmans et al., 2005).

04. topographic wetness index (TWI): calculated from 50 m cell elevation data obtained from the Geographical Survey Institute (2001).

05. geomorphological classification (three categories: lowland, hill and mountain): reclassified from the land classification of a third-order mesh by Wakamatsu et al. (2005).

06. presence-absence of volcanic product: extracted from land classification mesh data compiled by the Ministry of Land, Infrastructure, Transport and Tourism (1979).

07. presence-absence of limestone: extracted from land classification mesh data compiled by the Ministry of Land, Infrastructure, Transport and Tourism (1979).

08. presence-absence of ultrabasic rock: extracted from land classification mesh data compiled by the Ministry of Land, Infrastructure, Transport and Tourism (1979).

09. proportion of secondary vegetation: extracted from the vegetation map compliled by the Ministry of the Environment (1999) that was reclassified by the criteria of Ogawa et al. (2013) and Akasaka et al. (2014). Proportion is caluculated from 3 x 3 cells (a target cell and the 8 adjacent cells immediately surrounding it).

10. proportion of plantation: extracted from the vegetation map compliled by the Ministry of the Environment (1999) that was reclassified by the criteria of Ogawa et al. (2013) and Akasaka et al. (2014). Proportion is caluculated from 3 x 3 cells (a target cell and the 8 adjacent cells immediately surrounding it).

11. proportion of agricultural area: extracted from the vegetation map compliled by the Ministry of the Environment (1999) that was reclassified by the criteria of Ogawa et al. (2013) and Akasaka et al. (2014). Proportion is caluculated from 3 x 3 cells (a target cell and the 8 adjacent cells immediately surrounding it).

12. proportion of urban area: extracted from the vegetation map compliled by the Ministry of the Environment (1999) that was reclassified by the criteria of Ogawa et al. (2013) and Akasaka et al. (2014). Proportion is caluculated from 3 x 3 cells (a target cell and the 8 adjacent cells immediately surrounding it).

Response variable used in the dataset.

01. plant occurrence: extracted from the result of the 6th and 7th vegetation survey (2000-2012) conducted by the Ministry of the Environment. 1188 plant species present at more than 50 sites are targeted. YList (Yonekura and Kajita, 2003) is used as a Taxonomic authority file (TAF) of Japanese vernacular and scentific name of each plant species.

8.1.2 Data Source

Data Source Citation Name	Description of derived parameters and processing techniques used

9. DATA REMARKS

10. DATA POLICY

10.1 Data Policy by the Data Provider

10.2 Data Policy by the Project

11. LICENSE

12. DATA SOURCE ACKNOWLEDGEMENT

12.1 Acknowledge the Data Provider

Please cite as follows when you want to use the dataset: Saito M.U., Kurashima O., Ito M., 2016. Maps of potential habitats for Japanese plant species. Available at http://gnetum.c.u-tokyo.ac.jp/maphatjp/.

12.2 Acknowledge the Project

13. REFERENCES