



# Functional trait map of southeast Asia (Leaf mass per area)

## 1. IDENTIFICATION INFORMATION

Name	Functional trait map of southeast Asia (Leaf mass per area)
Metadata Identifier	GRENE_ei_EcoBiodiv_TraitMap_SE_Asia_LMA20230727091936-en

## 2. CONTACT

### 2.1 CONTACT on DATASET

Name	Michio Oguro
Organization	Tohoku University
E-mail	mogu@biology.tohoku.ac.jp

Name	Tohru Nakashizuka
Organization	Tohoku University
E-mail	toron@m.tohoku.ac.jp

### 2.2 CONTACT on PROJECT

## 3. DOCUMENT AUTHOR

Name	Michio Oguro
Organization	Tohoku University
E-mail	mogu@biology.tohoku.ac.jp

## 4. DATASET CREATOR

Name	Michio Oguro
Organization	Tohoku University

Name	Tohru Nakashizuka
Organization	Tohoku University

Name	Hiroko Kurokawa
Organization	Forestry and Forest Products Research Institute

Name	Masahiro Aiba
Organization	Tohoku University

---

## 5. DATE OF THIS DOCUMENT

2023-07-27

## 6. DATE OF DATASET

creation : 2016-03-01

## 7. DATASET OVERVIEW

### 7.1 Abstract

This data contains leaf mass per area (LMA) map of southeast Asia. For the details of data provision and term of use, please contact us by e-mail.

### 7.2 Topic Category(ISO19139)

environment

biota

### 7.3 Temporal Extent

Begin Date	1998-04-01
End Date	2000-03-31
Temporal Characteristics	The duration of satellite images which used for creation of original vegetation map were acquired

### 7.4 Geographic Bounding Box

North latitude bound	29.659077285
West longitude bound	87.682992715
Eastbound longitude	155.004410515
South latitude bound	-12.109773175

### 7.5 Grid

Dimension Name	Dimension Size (slice number of the dimension)	Resolution Unit
row	42	4678 (deg)
column	67	7540 (deg)

### 7.6 Geographic Description

## 7.7 Keywords

### 7.7.1 Keywords on Dataset

Keyword Type	Keyword	Keyword thesaurus Name
theme	Ecosystems, Biodiversity	GEOSS
theme	Biosphere > Terrestrial Ecosystems > Forests, Biosphere > Terrestrial Ecosystems > Alpine/Tundra, Biosphere > Terrestrial Ecosystems > Montane Habitats, Biosphere > Terrestrial Ecosystems > Shrubland/Scrub, Biosphere > Ecological Dynamics > Community Dynamics > Biodiversity Functions, Land Surface > Land Use/Land Cover > Land Resources, Biosphere > Terrestrial Ecosystems > Wetlands > Peatlands, Biosphere > Terrestrial Ecosystems > Wetlands > Swamps	GCMD_science
theme	BIOGEOSCIENCES > Ecosystems, structure and dynamics, BIOGEOSCIENCES > Biodiversity	AGU
theme	Biodiversity, Ecosystem Function/Dynamics	GEO_COP
place	Asia > Eastern Asia > Japan	Country
discipline	Leaf mass per area, LMA	No_Dictionary

### 7.7.2 Keywords on Project

## 7.8 Online Resource

## 7.9 Data Environmental Information

Value of 0 denotes sea/water/no vegetation pixel. Value of  $-1.7e+308$  denotes NoData.

## 7.10 Distribution Information

name	version	specification
TIFF	6.0	GeoTIFF

# 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

Two vegetation maps of insular and continental southeast Asia (Stibig et al. 2002; Stibig and Beuchle 2003) were combined to make a vegetation map of whole southeast Asia. To classify secondary vegetation by its primary vegetation type, primary vegetation type of pixels denoting secondary vegetation were estimated by a statistical model in which climate condition (WorldClim, Hijmans et al. 2002) and soil type (Harmonized World Soil Database, FAO/IIASA/ISRIC/ISSCAS/JRC, 2012) are used

as predictor variable. The leaf lignin concentration map was made by assigning values of leaf mass per area ( $\log_{10}(\text{g}/\text{m}^2)$ ) for each pixel of this new vegetation map based on their vegetation type.

## 8.1.2 Data Source

Data Source Citation Name	Description of derived parameters and processing techniques used
Stibig, Beuchle, and Janvier (2002) Forest cover map of insular southeast Asia at 1:5 500 000 derived from SPOT-VEGETATION satellite images. TREES Publication Series D: Thematic outputs n° 3.	
Stibig and Beuchle (2003) Forest cover map of continental southeast Asia at 1:4 000 000 derived from SPOT4-VEGETATION satellite images. TREES Publication Series D: Thematic outputs n° 4.	
Hijmans, R.J., S.E. Cameron, J.L. Parra, P.G. Jones and A. Jarvis, 2005. Very high resolution interpolated climate surfaces for global land areas. International Journal of Climatology 25: 1965-1978.	
FAO/IIASA/ISRIC/ISSCAS/JRC, 2012. Harmonized World Soil Database (version 1.2). FAO, Rome, Italy and IIASA, Laxenburg, Austria.	

## 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

### 12.2 Acknowledge the Project

## 13. REFERENCES