

Advances in Asian Human-Environmental Research

Noboru Ishikawa  
Ryoji Soda *Editors*

# Anthropogenic Tropical Forests

Human–Nature Interfaces on the  
Plantation Frontier



Springer

# **Advances in Asian Human-Environmental Research**

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Editors

# Anthropogenic Tropical Forests

Human–Nature Interfaces on the Plantation  
Frontier

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Kyoto, Japan  
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Noboru Ishikawa  
Ryoji Soda

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# Abbreviations and Acronyms

ACA	acacia plantations
ADB	Asian Development Bank
AIC	Akaike information criterion
ALOS PALSAR	Advanced Land-Observing Satellite Phased Array type L-band Synthetic Aperture Radar
AMFMU	Anap-Muput Forest Management Unit
ANOVA	analysis of variance
APKINDO	Asosiasi Panel Kayu Indonesia (Indonesian Wood Panel Producers Association)
AQSIQ	Chinese State Administration of Quality Supervision, Inspection and Quarantine
ASDU	Anap Sustainable Development Unit
AU	approximately unbiased
brglm	bias reduction in binomial-response GLM
C	carbon
CAR	corrective action request
CBD	Convention on Biological Diversity
CH <sub>4</sub>	methane
CI	confidence interval
CO <sub>2</sub>	carbon dioxide
CRF	communally reserved forest
dbh	diameter at breast height
DFR	Deramakot Forest Reserve
DIC	deviance information criterion
DOC	dissolved organic carbon
DOM	dissolved organic matter
EEM	excitation-emission matrix
ENSO	El Niño–Southern Oscillation
EU	European Union
EUTR	EU Timber Regulation
FAO	Food and Agriculture Organisation (United Nations)

FLAASH	Fast Line-of-sight Atmospheric Analysis of Spectral Hypercubes
FLEGT	Forest Law Enforcement, Governance and Trade Action Plan
FMU	forest management unit
FOA	Farmers' Organisation Authority
FOR	natural or mature secondary forests
FSC	Forest Stewardship Council
FSC P&C	Forest Stewardship Council Principles and Criteria
GDP	gross domestic product
GHG	greenhouse gas
GIS	geographic information system
GIZ	Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
GLM	generalised linear model
glm.nb	negative binomial GLM
GTZ	Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation)
ha	hectare
HCVF	high conservation value forest
IPCC	Intergovernmental Panel on Climate Change
ISCC	International Sustainability and Carbon Certification
ITCZ	intertropical convergence zone
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organisation
JAS	Japan Agricultural Standard
LEI	Lembaga Ekolabel Indonesia (Indonesian Ecolabelling Institute)
LiDAR	light detection and ranging
LNG	liquefied natural gas
LOG	logged forests
LPF	licence for planted forest area
m	metre
M-NJWG	Malaysia–Netherlands Joint Working Group on Forestry
MC&I	Malaysian Criteria, Indicators, Activities and Standards of Performance for Forest Management Certification
MCMC	Markov chain Monte Carlo
MCMCglmm	MCMC generalised linear mixed model
MFMA	model forest management area
mm	millimetre
MPOB	Malaysian Palm Oil Board
MTC	Malaysia Timber Council
MTCC	Malaysian Timber Certification Council
MTCS	Malaysian Timber Certification Scheme
MTIB	Malaysia Timber Industry Board
MTR	mean trapping rate
N <sub>2</sub> O	nitrous oxide
NCSFM	National Committee of Sustainable Forest Management

NDVI	normalised difference vegetation index
NGO	non-governmental organisation
NTCC	National Timber Certification Council
NTTA	Netherlands Timber Trade Association
OIL	oil palm plantations
ONI	Oceanic Niño Index
OPEC	Organisation of the Petroleum Exporting Countries
PARAFAC	parallel factor analysis
PEAT	tropical low-lying peatlands
PEFC	Programme for the Endorsement of Forest Certification
PETRONAS	Petroleum Nasional Berhad
PHPL	Pengelolaan Hutan Produksi Lestari (Sustainable Production Forest Management)
POC	particulate organic carbon
pvcclus	hierarchical clustering with $p$ values
REDD-plus	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
RIL	reduced-impact logging
RSPO	Roundtable on Sustainable Palm Oil
RU	Raman unit
SALCRA	Sarawak Land Consolidation and Rehabilitation Authority
SCORE	Sarawak Corridor of Renewable Energy
SCS	Scientific Certification Systems
SEALPA	South-East Asia Lumber Producers' Association
SFC	Sarawak Forestry Corporation
SGS	Société Générale de Surveillance
SRTM	Shuttle Radar Topography Mission
SS	suspended sediment
STIDC	Sarawak Timber Industry Development Corporation
STLVS	Sarawak Timber Legality Verification System
SVLK	Sistem Verifikasi Legalitas Kayu (Timber Legality Verification System)
TRMM	Tropical Rainfall Measuring Mission
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change
UNIMAS	Universiti Malaysia Sarawak
WWF-Malaysia	World Wildlife Fund-Malaysia

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