Contents

Tropical rainforests and agroforests under global change: Ecological and socio-economic valuations – an introduction
Teja Tscharntke, Christoph Leuschner, Edzo Veldkamp, Heiko Faust, Edi Guhardja, Arifuddin Bidin .......................... 1

Part I Agroforestry management in an ecological and socio-economic context

Biodiversity patterns and trophic interactions in human-dominated tropical landscapes in Sulawesi (Indonesia): plants, arthropods and vertebrates
Yann Clough, Stefan Abrahamczyk, Marc-Oliver Adams, Alam Anshary, Nunik Ariyanti, Lydia Betz, Damayanti Buchori, Daniele Cicuzza, Kevin Darras, Dadang Dwi Putra, Brigitte Fiala, S. Robbert Gradstein, Michael Kessler, Alexandra-Maria Klein, Ramadhanil Pitopang, Bandung Sahari, Christoph Scherber, Christian H. Schulze, Shahabuddin, Simone Sporn, Kathrin Stenchly, Sri S. Tjitrosedirdjo, Thomas C. Wanger, Maria Weist, Arno Wielgoss, Teja Tscharntke .... 15

The potential of land-use systems for maintaining tropical forest butterfly diversity
Christian H. Schulze, Stefan Schneeweih, Konrad Fiedler ............ 73

Insect pollinator communities under changing land-use in tropical landscapes: implications for agricultural management in Indonesia
Bandung Sahari, Akhmad Rizali, Damayanti Buchori .................... 97
Structure and management of cocoa agroforestry systems in Central Sulawesi across an intensification gradient
Jana Juhrbandt, Thomas Duwe, Jan Barkmann, Gerhard Gerold, Rainer Marggraf ................................................................. 115

Land tenure rights, village institutions, and rainforest conversion in Central Sulawesi (Indonesia)
Jan Barkmann, Günter Burkard, Heiko Faust, Michael Fremerey, Sebastian Koch, Agus Lanini .................................................... 141

Rural income dynamics in post-crisis Indonesia: evidence from Central Sulawesi
Jan Priebe, Robert Rudolf, Julian Weisbrod, Stephan Klasen, Iman Sugema, Nunung Nuryartono .................................................. 161

Gender division of labor in agroforestry activities within households: a case of Wonogiri - Central Java - Indonesia
Herien Puspitawati, Ma’mun Sarma............................................. 177

The robustness of indicator based poverty assessment tools in changing environments - empirical evidence from Indonesia
Xenia van Edig, Stefan Schwarze, Manfred Zeller ............................. 191

Demography, development, and deforestation at the rainforest margin in Indonesia
Stephan Klasen, Heiko Faust, Michael Grimm, Stefan Schwarze ........ 213

Part II Climate change effects on tropical rainforests and agroforests

Functional biodiversity and climate change along an altitudinal gradient in a tropical mountain rainforest
Jörg Bendix, Hermann Behling, Thorsten Peters, Michael Richter, Erwin Beck ................................................................. 239

Spatiotemporal trends of forest cover change in Southeast Asia
Stefan Erasmi, Muhammad Ardiansyah, Pavel Propastin, Alfredo Huete. 269

Comparison of tree water use characteristics in reforestation and agroforestry stands across the tropics
Diego Dierick, Norbert Kunert, Michael Köhler, Luitgard Schwendenmann, Dirk Hölscher ..................................................... 293
A comparison of throughfall rate and nutrient fluxes in rainforest and cacao plantation in Central Sulawesi, Indonesia  
*Carsten Gutzler, Stefan Koehler, Gerhard Gerold* 309

Effects of “ENSO-events” and rainforest conversion on river discharge in Central Sulawesi (Indonesia)  
*Gerhard Gerold, Constanze Leemhuis* 327

Adaptation to climate change in Indonesia - livelihood strategies of rural households in the face of ENSO related droughts  
*Norbert B. Binternagel, Jana Juhrbandt, Sebastian Koch, Mangku Purnomo, Stefan Schwarze, Jan Barkmann, Heiko Faust* 351

Terrestrial herb communities of tropical submontane and tropical montane forests in Central Sulawesi, Indonesia  
*Daniele Cicuzza, Michael Kessler, Ramadhanil Pitopang, Sri S. Tjitrosoedirdjo, S. Robbert Gradstein* 377

The hydraulic performance of tropical rainforest trees in their perhumid environment - is there evidence for drought vulnerability?  
*Alexandra Zach, Bernhard Schuldt, Viviana Horna, Soekisman Tjitrosemito, Christoph Leuschner* 391

### Part III Integrated concepts of land use in tropical landscapes

Principle and practice of the buffer zone in biosphere reserves: from global to local – general perspective from managers versus local perspective from villagers in Central Sulawesi, Indonesia  
*Marion Mehring, Susanne Stoll-Kleemann* 413

Institutions for environmental service payment programmes - evidence of community resource management arrangements in Central Sulawesi, Indonesia  
*Christina Seeberg-Elverfeldt, Stefan Schwarze, Heiko Faust* 431

Agricultural expansion in the Brazilian state of Mato Grosso; implications for C stocks and greenhouse gas emissions  
*Eleanor Milne, Carlos Eduardo P. Cerri, João Luis Nunes Carvalho* 447
Contribution of agroforestry to biodiversity and livelihoods improvement in rural communities of Southern African regions
Kanungwe Felix Kalaba, Paxie Chirwa, Stephen Syampungani, Clifford Oluyede Ajayi .......................................................... 461

Human ecological dimensions in sustainable utilization and conservation of tropical mountain rain forests under global change in southern Ecuador
Perdita Pohle, Andrés Gerique, Martina Park, María Fernanda López Sandoval ................................................................. 477

Linkages between poverty and sustainable agricultural and rural development in the uplands of Southeast Asia
Manfred Zeller, Tina Beuchelt, Isabel Fischer, Franz Heidhues .......... 511

Index of keywords .......................................................... 529
Tropical Rainforests and Agroforests under Global Change
Ecological and Socio-economic Valuations
Tscharntke, T.; Leuschner, C.; Veldkamp, E.; Faust, H.; Guhardja, E.; Bidin, A. (Eds.)
2010, XV, 519 p. 86 illus., 10 illus. in color., Hardcover
ISBN: 978-3-642-00492-6