

Melanie Grosse, Wolfram Lorenz, Suria Tarigan, Adam Malik (Eds.)

Tropical Rainforests and Agroforests under Global Change

Proceedings

International Symposium (October 5–9, 2008, Kuta, Bali, Indonesia)



Universitätsdrucke Göttingen



www.storma.de

Melanie Grosse, Wolfram Lorenz, Suria Tarigan, Adam Malik (Eds.)
Tropical Rainforests and Agroforests under Global Change

This work is licensed under the
[Creative Commons](#) License 2.0 “by-nd”,
allowing you to download, distribute and print the
document in a few copies for private or educational
use, given that the document stays unchanged
and the creator is mentioned.
You are not allowed to sell copies of the free version.



erschienen in der Reihe der Universitätsdrucke
im Universitätsverlag Göttingen 2008

Melanie Grosse, Wolfram Lorenz,
Suria Tarigan, Adam Malik (Eds.)

Tropical Rainforests
and Agroforests
under Global Change

Proceedings
International Symposium
October 5-9, 2008,
Kuta, Bali, Indonesia



Universitätsverlag Göttingen
2008

Bibliographische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliographie; detaillierte bibliographische Daten sind im Internet über <<http://dnb.ddb.de>> abrufbar.

Global Forest Decimal Classification: (GFDC) 180, 26, (213.5)

Editors:

Melanie Grosse

Centre for Tropical and Subtropical
Agriculture and Forestry "CeTSAF"
Buesgenweg 1
37077 Goettingen, Germany
mgrande@uni-goettingen.de

Wolfram Lorenz

Centre for Tropical and Subtropical
Agriculture and Forestry "CeTSAF"
Buesgenweg 1
37077 Goettingen, Germany
wlorenz@gwdg.de

Surya Tarigan

Gedung Kerjasama Jerman
Institut Pertanian Bogor
Jl. Raya Gunung Gede
Bogor 16153, Indonesia
storma-ipb@indo.net.id

Adam Malik

Jurusan Manajemen Kehutanan
Fakultas Pertanian
Universitas Tadulako
Kampus Bumi Tondo
Palu 94118, Indonesia
storma-palu@gwdg.de



UNIKASSEL
VERSITÄT



Centre for Tropical and
Subtropical

Agriculture and Forestry
"CeTSAF"
Buesgenweg 1

37077 Göttingen, Germany
Tel: +49 551 399543
Fax +49 551 399658
www.storma.de
storma@gwdg.de

Institut Pertanian Bogor

Jl. Raya Gunung Gede
Bogor 16153, Indonesia
Tel.: +62 251 3461 76
Fax: +62 251 346 177
storma-ipb@indo.net.id

Universitas Tadulako
Kampus Bumi Tondo
Palu 94118, Indonesia
Tel.: +62 451 451 728
Fax: +62 451 451 728
storma-palu@gwdg.de

This work is protected by German Intellectual Property Right Law.

It is also available as an Open Access version through the publisher's homepage and the Online Catalogue of the State and University Library of Goettingen (<http://www.sub.uni-goettingen.de>). Users of the free online version are invited to read, download and distribute it. Users may also print a small number for educational or private use. However they may not sell print versions of the online book.

Satz und Layout: Nils Klann

© 2008 Universitätsverlag Göttingen

<http://univerlag.uni-goettingen.de>

ISBN: 978-3-940344-51-9

Laurène Feintrenie

French Research Institute for Development, France

Ameline Lehebel-Peron, University of Montpellier II, France

Patrice Levang, French Research Institute for Development, France, and CIFOR, France

Evaluation of the production potential of complex agroforests. The example of rubber agroforests in Lubuk Beringin (Indonesia)

Indonesian agroforests, smallholders' plantations combining a large number of perennial species, are known to conserve at least 50% of the biodiversity of the primary forest. In the 1990s, some scholars predicted that all agroforests would be converted into monocrop plantations before the year 2000. Yet, in Jambi province, rubber agroforests (*Hevea brasiliensis*) remain an important component of the landscape. Lubuk Beringin, a small village at the foot of the Kerinci Seblat range (district of Muara Bungo), is a perfect example of a site where jungle rubber is still maintained and renewed. Much attention has been paid to rubber production in different agroforestry systems, influence of plantation density, combination of species, frequency of tapping, etc. However, the production potential of a rubber agroforest does not depend solely on rubber, but also on secondary products. Their potential has generally been neglected because of the difficulty to estimate their production. Indeed it seems impossible to apprehend the diversity of agroforests' vegetal composition, and then of secondary products. Besides, interactions between species and influence of space, light and soil resources on each tree make impossible the automatic generation of different type of agroforests by simple modelling. This work proposes a new method of evaluation of complex agroforestry systems potential, based on small sample of plots, survey and economic modelling.

To evaluate the production potential of rubber agroforests, measures were realized in about 20 plots and followed by interviews with their owners. Plots were selected so as to form a synchronic sequence representing all the phases of an agroforest's cycle of production. The objective was to estimate the whole production of this complex agroforest, which is rich in useful species, like fruit trees, timber trees, aromatic trees, etc. Origin, age and production of each tree were determined during a visit of the plot with the farmer. Then, quantities of each product, seasonality, destination and labour needs were evaluated in a second interview with the farmer. To complete this result and apprehend agroforests' diversity at the village scale, a survey on agroforests vegetal composition and production was conducted in the village, and ended in a typology of agroforests. An economic model of agroforest performances was built for each type; these models show examples of agroforests met in the village, but cannot take into account the high diversity of composition and management of this complex system at the regional level. In a second step we intend to conduct quick surveys in other villages so as to draw new models adapted to their specific agroforests and apprehend the diversity of rubber agroforests in Jambi.

Laurène Feintrenie, l.feintrenie@cgiar.org