



International Conference on Biodiversity

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ABSTRACT

INTERNATIONAL CONFERENCE ON BIODIVERSITY

SOCIETY FOR INDOONESIAN BIODIVERSITY

Balikpapan, 14-16 January 2016

Greenpeace action in Kalimantan, December 3, 2015; photo by Ulet Ifansasti

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ABSTRACT

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Balikpapan, 14-16 January 2016

THEME:

**Heart of Borneo: the Conservation, Research and Sustainable use of
Biological Diversity in Borneo**

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TIME SCHEDULE
International Conference on Biodiversity
Society for Indonesian Biodiversity (SIB)
Balikpapan, Indonesia, 14-16 January 2016

TIME	ACTIVITIES	PERSON IN CHARGE	SITE
January 14, 2016			
08.00-09.00	Registration	Committee	Lobby
09.00-09.15	Speech of the Committee	Chairman of the committee	R0
09.15-09.30	Speech of the International Office	Head of International Office of the Mulawarman University	R0
09.30-09.45	Opening speech	Rector of the Mulawarman University	R0
09.45-10.00	Photo Session and Coffee Break	Committee	R0, Lobby
10.00-12.00	Panel 1 Dr. Jatna Supriatna Dr. Mark Rayment	Moderator: Dr. Rudianto Amirta	R0
12.00-13.00	Rest, prayer, lunch	Committee	Lobby
13.00-15.00	Parallel presentation I Group 1: AO-01 to AO-08 Group 2: AO-09 to AO-14, AP-01, BO-01 Group 3: BO-02 to BO-09 Group 4: BO-10 to BO-17 Group 5: BO-18 to BO-25	Moderator: Prof. Harsono Soepardjo Moderator: Prof. Marjenah Moderator: Prof. Lily S.E. Putri Moderator: Dr. Ruhyat Partasasmita Moderator: Dr. Farah Diba	R0 R1 R2 R3 R4
15.00-15.15	Coffee Break	Committee	Lobby
15.15-17.15	Parallel presentation II Group 6: BO-26 to BO-32, BP-01 Group 7: BP-02 to BP-08, CO-01 Group 8: CO-02 to CO-08 Group 9: CO-09 to CO-15 Group 10: CO-16 to CO-22	Moderator: Dr. Abinawanto Moderator: Dr. Rofandi Hartanto Moderator: Prof. Herny E.I. Simbala Moderator: Dr. Hapry F.N. Lapian Moderator: Prof. Dirk Veplun	R0 R1 R2 R3 R4

January 15, 2016

08.00-09.00	Coffee break	Committee	Lobby
09.00-12.00	Panel 2 Prof. Dr. Wolfgang Nellen Prof. Dr. Mashhor Mansor Prof. Dr. Enos Tangke Arung	Moderator: Dr. Irawan W. Kusuma	R0
12.00-13.00	Rest, prayer, lunch	Committee	Lobby
13.00-15.00	Parallel Presentation III Group 11: CO-23 to CO-29 Group 12: CP-30, DO-01 to DO-06 Group 13: DO-07 to DP-02 Group 14: DP-03, EO-01 to EO-06 Group 15: EO-07 to EO-13	Moderator: Cahyo Prayogo, Ph.D. Moderator: Dr. Onrizal Moderator: Dr. Hery Sutejo Moderator: Dr. Taufan Tirkaamiana Moderator: Dr. Khairul A.A. Rahim	R0 R1 R2 R3 R4
15.00-15.15	Coffee Break	Committee	Lobby
15.15-17.15	Parallel Presentation IV Group 16: EO-14 to EO-20 Group 17: EO-21 to EO-27 Group 18: EO-28 to EO-34 Group 19: EO-35 to EO-39, EP-01, EP-02 Group 20: EP-03 to EP-09	Moderator: Dr. Gusti Hardiansyah Moderator: Dr. Suyadi Moderator: Prof. Iwan Suyatna Moderator: Prof. Johan Iskandar Moderator: Dr. Sutawi	R0 R1 R2 R3 R4
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January 16, 2016

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09.00-12.00	Natural tourism at Bukit Bangkirai (canopy trail)	Committee	-
12.00-13.00	Rest, prayer, lunch	Committee	-
13.00-14.30	Shopping time	Committee	-
13.00-15.00	Back to Sepinggan Airport, Balikpapan	Committee	-
15.00	Sepinggan Airport, Balikpapan	Committee	-

Upcoming event: International Conference on Biodiversity, Yogyakarta, Indonesia, 18-19 March 2016

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Kalimantan almost all people practiced dry lands with agroforestry system with application of farming technology. The research had been conducted to analyze the biodiversity and cropping pattern of agroforestry system in three areas (down stream, middle stream and upper stream area). This research used survey method with direct observation of agroforestry system (mixed garden) that was developed by farmer. Total agroforestry system samples for each zone were 10, and the number of farmers was 10. The location of samples and respondents was determined based on ownership and land usage data randomly and or structurally. Plant diversity was counted by using Shannon Index. The results showed that there were differences of species biodiversity and cropping pattern in three areas. In the upper stream, agroforestry practices were in a complex and mixed cropping, with the number of species up to 10. In the middle area, agroforestry practices were a simple agroforestry and the number of species average was 8 species. In the down stream area, the practices were a complex agroforestry which 20 species of trees and 12 species of plant were found. The cropping pattern of cash crops found were single commodity and multi-commodity (alley cropping), regular planting space and planting on the line and blocks. Several criteria to select plants cultivated in agroforestry system of Karang Mumus watershed were easy to sell, high profit/price (economic oriented), and small partially people decided to select plant species based on the daily consumption and the easy to find seed materials.

Agroforestry, cropping pattern, Karang Mumus watershed, plant biodiversity

CO-10

The role of plant parasitic nematodes on agricultural ecosystem productivity in East Kalimantan

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Plant parasitic nematode is one of the most limiting factors for agricultural ecosystem productivity in East Kalimantan. Their occurrence in agricultural field as crop pest usually undistinguished, due to their minute in size and their existent sealed in the roots or soil particles. However, plant parasitic nematode might cause yield loss up to 75%, without showed any disease symptom on crop morphologically. Perennial crop and annual crop under intensive cultivation experience high yield loss due to plant parasitic nematodes. Based on time series observation related to pest management in East Kalimantan, it was determined that plant parasitic nematode existence was neglected and no significant effort to control this pest. So, low agricultural ecosystem productivity in East Kalimantan not only caused by soil fertility problems but also the

impact of population outbreak of plant parasitic nematodes due to inappropriate agricultural practices.

Agricultural ecosystem productivity, East Kalimantan, parasitic nematode

CO-11

Wood density as a proxy for tree functional group recovery after forest disturbance in lowland forest of East Kalimantan, Indonesia

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Fire and logging disturb forests in different ways and may induce differences in tree species composition during the recovery process. Given the high taxonomic tree diversity in tropical forests and low frequency of most species, functional groups are used to analyze responses to disturbance. Wood density serves as proxy for functional groups as it correlates with growth rate and successional status. We compared wood density frequency profiles of forest recovery stages after forest fire and logging activity in lowland forest of East Kalimantan, Indonesia. Species inventory data in a hectare of natural forest, a forest 14 years after selective logging of trees above 60 cm DBH were compared with a forest recovering from subsequent fire events 15 and 30 years ago. The median wood density in the forest after fire disturbance (0.48 g cm^{-3}) differed significantly from undisturbed forest (0.61 g cm^{-3}) and selective logging (0.62 g cm^{-3}), respectively. Forest recovering from fire had 46% of species with light wood (below 0.45 g cm^{-3}) and 21% and 26% of trees with medium wood density in the $0.45\text{-}0.6 \text{ g cm}^{-3}$ and $0.6\text{-}0.75 \text{ g cm}^{-3}$ classes, respectively. Trees in the $0.6\text{-}0.75 \text{ g cm}^{-3}$ and $0.75\text{-}0.9 \text{ g cm}^{-3}$ wood density class were reduced in frequency by 2% compared to undisturbed forest by selective logging, with 3% more trees in the light ($< 0.45 \text{ g cm}^{-3}$) and heavy ($> 0.9 \text{ g cm}^{-3}$) wood density classes. Light wood species are generally fast growing pioneers regenerating in gaps after logging. The increase in species with heavy wood ($> 0.9 \text{ g cm}^{-3}$) may reflect that these are not preferred in logging. We conclude that 30 years after fire, the forest is still in an early regeneration stage, but 14 years after selective logging the tree composition is similar to that of undisturbed forest.

East Kalimantan, fire, lowland forest, selective logging, wood density

CO-12

Dissolved Oxygen budget on silvofishery pond in Mahakam Delta