Research Report of the NIES/FRIM/UPM joint Research Project (1999)

CONTENTS

I EFFECTS OF DEFORESTATION AND FOREST DETERIORATION ON PRODUCTIVITY AND MATER CYCLE OF ECOSYSTEM OF TROPICAL FORESTS.

1. Recent biomass change in a tropical primary forest in Pasoh : Current status for evaluating carbon-sequestering function.

Nur Supardi (FRIM) Eng Seng Quah (FRIM) Kazuhiko Hoshizaki (NIES) Kaoru Niiyama (FFPRI) Katsuhiko Kimura (Fukushima Univ.) Tamon Yamashita (Shimane Univ.) Yukiko Bekku (NIPR) Toshinori Okuda (NIES) Hiroshi Takeda (Kyoto Univ.) Yanhong Tang (NIES) Naoki Adachi (JST)

2. Spatial and temporal variations in soil respiration rate in a tropical primary forest.

Yukiko Bekku (NIPR) Hiroshi Koizumi (Gifu Univ.) Kazuhiko Hoshizaki (NIES) Tamon Yamashita (Shimane Univ.) Toshinori Okuda (NIES)

3. A multichannel technique for measuring the spatial variability concurrently with temporal variation of soil CO2 fluxes in forest ecosystems.

Mohamad Awang (UPM) N. Manokaran (FRIM)

Wan Rashidah Wan Abdul Kadir (FRIM)

Naishen Liang (NIES) Toshinori Okuda (NIES)

II THE EFFECTS OF FRAGMENTATION AND LOGGING ACTIVITIES ON TROPICAL FOREST DYNAMICS AND WILDLIFE

- Fruiting behavior of *Shorea curtisii* in logged and unlogged primary hill dipterocarp forests in Peninsular Malaysia.
 Abd. Rahman Kassim (FRIM) Azizi Ripin (FRIM) Kaoru Niiyama (FFPRI) Hiroyuki Tanouchi (FFPRI, Hokkaido) S. Appanah (FRIM) Shigeo Iida (FFPRI, Hokkaido)
- 2. Gene flow between natural and selectively logged forests of Shorea curtisii in Peninsular Malaysia.
 Norwati Muhammad (FRIM) Yoshihiko Tsumura (FFPRI)
 Chai Ting Lee (FRIM) Tokuko Ujino (FFPRI)
 Lee Soo Leong (FRIM)
- 3. Canopy trapping : A new method to study arboreal mammal community. Nor Azman Hussein (FRIM) Masatoshi Yasuda (FFPRI)

III EFFECTS OF FOREST DETERIORATION ON BIODIVERSITY

1. Effect of selective logging on canopy and stand structure in as lowland dipterocarp forest in Peninsular Malaysia.

N. Manokaran (FRIM)	Toshinori Okuda (NIES)
Nor Azman Hussein (FRIM)	Mariko Suzuki (NIES)
Eng Seng Quah (FRIM)	Naoki Adachi (JST)

Comparison of mode and cause of treefalls and branchfalls between primary and the secondary forests in Pasoh Forest Reserve.
 N. Manokaran (FRIM) Naoki Adachi (JST)

Naoki Adachi (JST) Toshinori Okuda (NIES)

3. Sunfleck contribution to leaf carbon gain in *Shorea macrophyll* a grown in a gap and the understory of a tropical secondary forest.

N. Manokaran (FRIM)	Yanhong Tang (NIES)
M. Awang (UPM)	Toshinori Okuda (NIES)
Abdul Rahim Nik (FRIM)	Makoto Tani (Kyoto Univ.)

4. Microhabitat preferences of two sympatric Scaphium species in a 50-ha plot in the Pasoh

Forest Reserve (Malaysia). N. Manokaran (FRIM)

Toshihiro Yamada (Kumamoto Prefectural Univ.) Toshinori Okuda (NIES)

5. Estimation of gene flow inferred from paternity analysis in tropical rain forest tree : *Neobalanocarpus heimii* (Dipterocarpaceae).

Chai Ting Lee (FRIM)Akihiro Konuma (NIES)Soon Leong Lee (FRIM)Toshinori Okuda (NIES)

6. Leaf dynamics of seedlings of tropical rain forest trees in Peninsular Malaysia.
 N. Manokaran (FRIM) Shinya Numata (TMU)

Naoki Kachi (TMU) Toshinori Okuda (NIES)

IV MANAGEMENT AND CONSERVATION OF LANDSCAPE IN TROPICAL REGION

 Strong light and high temperature stress on the photosynthetic system of four major Dipterocarps.

Lai Hoe Ang (FRIM)

Mitsutoshi Kitao (FFPRI) Hiroyuki Tobita (FFPRI) Yutaka Maruyama (FFPRI, Hokkaido) Shiro Okuda (FFPRI) Akira Uemura (FFPRI) Atsushi Ishida (FFPRI) Yoosuke Matsumoto (FFPRI)

 2. Seasonal soil water storage changes in tropical rainforest, Peninsular Malaysia. *Abdul Rahim Nik (FRIM) Shoji Noguchi (FFPRI) Baharuddin Kasran (FRIM) Yoshio Tsuboyama (FFPRI) Azman Hassan (FRIM) Makoto Tani (Kyoto Univ.)*

V DEVELOPMENT OF LOGGING SYSTEM WITH LOW DISTURBANCE TO FOREST ECOSYSTEM

1. Report on low environmental impact methods of harvesting timber. Ahmad Che Abdul Salam (FRIM) Shozo sasaki (JIRCAS) Azman Hassan (FRIM) Takeshi Yamada (FFPRI)

VI EVALUATION OF ECOLOGICAL SERVICE OF TROPICAL FORESTS ON THE **BASIS OF ENVIRONMENTAL ECONOMICS**

1. Conjoint analysis for land use attributes inclusive of tropical forests. Woon Weng Chuen (FRIM) Toyoaki Washida (Kobe Univ.) Koichi Kuriyama (Waseda Univ.)

Toshinori Okuda (NIES)