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Nota di contenuto	1. Management history of the model site, the Deramakot and Tangkulap Forest Reserves -- by Robert C. Ong, Forest Research Centre, Malaysia and Andreas Langner, Kyoto University, Japan -- 2. The application of satellite remote sensing for classifying forest degradation and deriving above-ground biomass estimates -- by Andreas Langner, Kyoto University, Japan and Kanehiro Kitayama, Kyoto University, Japan -- 3. Management effects on tree species diversity and dipterocarp regeneration -- by Nobuo Imai, Kyoto University, Japan, Tatsuyuki Seino, Tsukuba University, Japan, Shin-Ichiro Aiba, Kagoshima University, Japan, Masaaki Takyu, Tokyo University of Agriculture, Japan, Jupiri Titin, Forest Research Centre, Malaysia and Kanehiro Kitayama, Kyoto University, Japan -- 4. Effects of reduced-impact logging on decomposers in the Deramakot Forest Reserve in Borneo -- by Motohiro Hasegawa, Forestry and Forest Products Research Institute, Japan, Arthur Y. C. Chung, Forest Research Centre, Malaysia, Tomohiro Yoshida, Tokyo University of Agriculture and Technology, Japan, Tsutomu Hattori, Forestry and Forest Products Research Institute, Japan, Masahiro Sueyoshi, Forestry and Forest Products Research Institute, Japan, Masamichi T. Ito, Surugadai University, Japan and Satoshi Kita, Kyoto University, Japan -- 5. Co-benefits of sustainable forest management for mammalian biodiversity -- by Hiromitsu Samejima, Kyoto University, Japan, Peter Lagan, Sabah

Forestry Department, Malaysia and Kanehiro Kitayama, Kyoto University, Japan -- 6. Guidelines for establishing conservation areas in sustainable forest management - Developing models to understand habitat suitability for orangutans -- by Masaaki Takyu, Tokyo University of Agriculture, Japan, Hisashi Matsubayashi, Tokyo University of Agriculture, Japan,Nobuhiko Wakamatsu, Tokyo University of Agriculture, Japan, Etsuko Nakazono, Tokyo University of Agriculture, Japan -- 7. Co-benefits of sustainable forest management for carbon sequestration -- by Nobuo Imai, Kyoto University, Japan, Jupiri Titin, Forest Research Centre, Malaysia, Satoshi Kita, Kyoto University, Japan, Robert C. Ong, Forest Research Centre, Malaysia and Kanehiro Kitayama, Kyoto University, Japan -- 8. Syntheses -- by Kanehiro Kitayama, Kyoto University, Japan.

Sommario/riassunto

Tropical rain forests are increasingly expected to serve for climate change mitigation and biodiversity conservation amid global climate change and increasing human demands for land. Natural production forests that are legally designated to produce timber occur widely in the Southeast Asian tropics. Synergizing timber production, climate change mitigation and biodiversity conservation in such tropical production forests is one of the most realistic means to resolve these contemporary global problems. Next-generation sustainable forest management is being practiced in the natural tropical rain forest of a model site in Sabah, Malaysian Borneo, while earlier sustainable management practices have generally failed, leading to extensive deforestation and forest degradation elsewhere in the tropics. Ecologists have examined co-benefits of sustainable forestry in the model forest in terms of forest regeneration, carbon sequestration and biodiversity in comparison to a forest managed by destructive conventional methods. Taxonomic groups studied have included trees, decomposers, soil microbes, insects and mammals. A wide array of field methods and technology has been used including count plots, sensor cameras, and satellite remote-sensing. This book is a compilation of the results of those thorough ecological investigations and elucidates ecological processes of tropical rain forests after logging. The book furnishes useful information for foresters and conservation NGOs, and it also provides baseline information for biologists and ecologists. A further aim is to examine the environmental effects of a forest certification scheme as the model forest has been certified by the Forest Stewardship Council. Taken as a whole, this book proves that the desired synergy is possible.