INTRODUCTION

Dipterocarp forest ecosystems in Southeast Asia, very inaccessible, uneven-aged, multilayered, extremely diverse forests, growing year round at very warm temperatures on sites with large amounts of precipitation and often very low soil nutrient stores may, at first encounter, intimidate even experienced foresters from other world regions. Yet, these marvelous forests share facets of ecology, management and use with forests all over the world; basic forestry principles still apply. Some experiences may be transposed, albeit very judiciously.

Examples in this collection include theoretical aspects of ecosystems sustainability, a decision model for management of forests with multiple, possibly conflicting objectives, remote sensing methods for land-use planning, growth and yield simulation and a combined stand and forest level model to assure both sustainability and feasibility in management planning. Reduced impact logging, a very desirable practice all over the world, is applied here in a new context, joint implementation for carbon offsets. Climate change mitigation in the forestry sector may be a very significant new development and a chance for conservation of forests and biodiversity, and for forest management all over the world, but particularly for the Dipterocarp region.

Judicious adaptation of general forestry principles to Dipterocarp forests involves regard for specific constraints, for some imposed by ecology and site. Chapter 1 contains fewer treatises on Dipterocarp forest ecology than initially planned. But important facets such as soil, the incredible diversity of species other than Dipterocarps, hydrology, fire, and an ant-plant association as an example of the myriad of intricate interrelationships among organisms in this forest type, are represented. Forest managers will never know in detail and be able to consider all such mutual influences, but they should be conscious of their existence. Even in regions with a very long forestry tradition and comparatively few tree species, silvics for these species are still being researched. Lack of knowledge and uncertainty will, therefore, likely remain a particularly important feature of Dipterocarp silviculture.

There is virtually no chance to eliminate conversion of Dipterocarp forest ecosystems during the next decades. But perhaps we can at least mitigate and channel deforestation and assure that future land uses will be productive and sustainable. Moreover, in the remaining forests, we may advance conservation and management by refining forest inventories, management planning, silviculture, community-, social- and agroforestry, and harvest practices, and we may take advantage of new options offered by global climate change mitigation. Chapters 2 and 3 treat these aspects, while Chapter 4 centers on rehabilitation of

those millions of hectares of Dipterocarp forests, which have already been degraded by unsustainable harvests, agricultural use or wildfires.

For us, conservation of Dipterocarp forest ecosystems, axiomatically includes management and benign, economic use. The more highly valued all products and functions of these forests become nationally and internationally, the better their chance of survival. Therefore, Chapter 5 addresses the potential of the Dipterocarp forest asset in international trade, and properties and uses for many of its timber species. Curbing logging waste and conversion residues few species now considered commercial needs attention. Moreover, there is a high probability that many general and at least some specific use may exist for almost all tree species of the Dipterocarp forest, and possibly for many species of the entire flora and fauna. A very small sample of such "secondary" products and uses, rattan and Tengkawang butter are included here as examples. A myriad of others exist or still wait for discovery.

There are numerous concepts of the body of forest management knowledge which still await application in Dipterocarp forestry. For example, polycyclic cutting regimes are but a special case of uneven-aged forest management, for which a wealth of new thoughts has accumulated in the global trend towards more natural "new forestry". Site mapping and specific management is barely emergent in Dipterocarp forestry and conservation, but constitutes a very important ecological foundation. Managerial forest economics will become more important in Dipterocarp forestry as management intensity increases and options multiply. Concepts and experiences exist worldwide about management boundary conditions, such as forestry law and policy, private and community forest ownership, forest administration and forest service organization. To simply copy such models without regard for the Dipterocarp forest's uniqueness is not an option, to disregard them entirely a waste.

Last but not least, management and conservation of the Dipterocarp forest must allow for uncertainty and large gaps in knowledge, which are likely to persist. Therefore, in an analogy to forest's classic *Control Method* of the past, considerate management should gauge responses and preserve options for the forest's future.

The Editors