

Preface

Suriname is one of the most forested tropical countries. So far, deforestation has not been severe, probably because of the relatively small population, lack or inadequacy of a road infrastructure in the hinterlands, and low pressure for converting the forest into agricultural land. Moreover, harvestable commercial volumes in its forests are rather low as compared to some other tropical forest areas.

Nevertheless, the timber value of these forests has long been recognized, and after the Second World War it was decided to develop a logging industry in the so-called Forest Belt, a 50 – 200 kilometers wide, accessible zone of lowland rainforests across the northern part of the country. The Suriname Forest Service ('s Lands Bosbeheer, LBB) developed and for some time stood as a model forestry institution in the region. It aimed at the application of evidence-based silvicultural systems for the management of the permanent forest estate and at raising its production of useful timber. To achieve this, the Suriname Forest Service closely cooperated with forestry experts. Joop Schulz, Jan Boerboom and Reitze de Graaf played pioneering roles in developing forest management systems in which natural regeneration of commercial timber trees was an important feature, and forestry experiments were set up and monitored.

After the independence of Suriname, in 1975, the involvement of Wageningen forestry experts in Surinamese forestry initially stayed firm, and in 1978 a new cooperation agreement was signed between the Anton de Kom University of Suriname and Wageningen University (then Wageningen Agricultural University – Landbouwhogeschool Wageningen) to further develop a forest management system for the sustainable production of timber (Project LH/UvS 01 also registered as MAB project 949). New experiments were set up at the field stations of the Centre for Agricultural Research in Suriname (CELOS) at Mapane and Kabo in the district of Para. LBB (Kenneth Tjon and Jaap de Vletter) initiated some experiments in the Mapane area too.

Reitze de Graaf advocated the development of a polycyclic silvicultural system in Suriname, as against the earlier experiments with monocyclic approaches. Soon Reitze de Graaf, Wyb Jonkers and John Hendrison developed the theory, designed the experiments and collected the necessary experimental data on the basis of which the CELOS Silvicultural System (CSS) and the CELOS Harvesting System (CHS) were formulated and integrated into the CELOS Management System (CMS) for sustained forest exploitation and timber production. They formed a team with Onno Boxman, Jan Consen, Rein Poels (†2007), John Procter (†1979), Pieter Schmidt, Renate Tjon Lim Sang and Frank Vreden at CELOS, and this core of CMS-researchers attracted, stimulated and supervised other researchers, including many Surinamese and Dutch students in their practical training phase, to study various aspects of the natural and treated forests in the experimental plots at Mapane and Kabo and elsewhere in Suriname. Many inventories, measurements, monitoring censuses and a great deal of supplementary research were done, and a wealth of important data was gathered. In 1983 political developments caused the interruption of these research activities for a considerable number of years. In

subsequent years Gerold Zondervan, then at CELOS, later at WWF Guianas, played a very significant role in preserving the experimental plots at Mapane and Kabo, emphasized their importance for forestry research, and encouraged re-starting the investigations.

The results of these research projects in the tropical forest of Suriname have been reported in four Ph.D.-dissertations (issued in the series Ecology and Management of the Tropical Rain Forest in Suriname), many M.Sc.-theses, a number of publications in professional journals and books, and many internal reports (see Annex 1). But they have never been integrated in a comprehensive publication, evaluating the results so far obtained.

In recent decades the interest in and importance of reduced impact logging and sustainable forest management strongly increased, and the interest in the CMS also grew, in Suriname and in other Latin American countries. As the documentation on this system was so widely scattered, it has proved difficult to readily gather an adequate account of the usefulness of the system. There was a clear need for a synthesis, bringing together a description of the CMS principles, its underlying yield model, its associated silvicultural treatments, as well as a balanced assessment of its long-term effects on the silvicultural and ecological dynamics and biological value of the managed forests, as apparent from the various studies carried out in the experimental stands. Such a synthesis would show the potential of the CMS to serve as a proper guide for forestry management in the region and beyond.

At long last, the decision to produce such an integrated account was taken at the occasion of the farewell meeting for Reitze de Graaf, in 2005, when he retired from Wageningen University. The result is this book. It was initiated by Frits (G.M.J.) Mohren, and enthusiastically supported by CELOS (Rick O. van Ravenswaay, Rudi F. van Kanten), Tropenbos International Suriname and WWF Guianas. They encouraged the authors, including the core researchers who had worked in project LH/UvS 01 during 1977 to 1983 that directly led to the CELOS Management System, to embark on writing the chapters. They accessed relevant information and documentation from the CELOS archives and elsewhere, and recent information that had become available from re-measurements of the CELOS plots. It was decided to not just restrict the book to the CMS-related work in Suriname, but to also briefly assess the experiences with other forestry systems aimed at reduced impact logging or sustainable forest management in the tropics.

This book, with contributions from 25 authors, tells in brief the history of forestry in Suriname and some other tropical countries. It reveals how the work on forestry in Suriname led to the development of a potentially sustainable forest management system, integrating a harvesting and a silvicultural system. And it documents the long-term effects of applying this system as apparent from a great deal of research in experimental forest stands of CELOS in Suriname. This information holds the evidence to determine the potential of the CELOS Management System to serve as a model for other systems of sustainable management of tropical forests in Suriname and beyond, particularly in other Latin American countries in the region with similar forests.

This book makes the theoretical basis of the system, and the practical results as apparent from extensive and long-term experimental work in forest plots, readily available for a large readership, for those working in tropical forestry and forestry policy, as well as

for those with just a general interest in tropical forests. This ecological, silvicultural and practical knowledge allows evaluation of the CMS in terms of present concepts and policies on tropical forests and tropical forestry, including the important developments in these fields since the Conference of Rio de Janeiro (1992), the introduction of forest certification standards and the developments around REDD(+). Is the CMS suitable as a source of inspiration, and a model that can be adapted for further development into a full-scale, practical and feasible silvicultural management system for tropical forests?

I congratulate the 25 authors with this book, and I thank them sincerely for the pleasant and efficient cooperation towards its completion. I trust that it will be well received.

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