

2. Silviculture in African moist forests : *do we have new answers to old questions?*

Gourlet-Fleury Sylvie¹, Bertault Jean-Guy¹, Billand Alain¹, Bernard Dupuy², de Madron Luc Durrieu³, Fargeot Christian¹, Forni Eric¹, Maître Henri-Félix¹, Nasi Robert⁴

The silviculture of African tropical moist forests has a long history punctuated with (few) successes and (many) failures. The European foresters in charge of managing forests in the African colonies realized early – e.g. 1900 in Nigeria – that they were facing a complex ecosystem with a low volume per ha of commercial timber. Somewhat a different situation than the one faced by foresters in South-East Asia where forests were rich in commercial timber of the Dipterocarpaceae family. Confronted to a highly dispersed, highly valuable timber resource and entrenched in their temperate forester culture they worked on ways to produce “the greatest timber volume, as homogenous as possible”. Two main schools of thought confronted one another, promoting respectively natural regeneration vs artificial regeneration techniques. In the 1970’s, realizing the many difficulties and costs linked to enrichment planting, French foresters decided to focus on silvicultural operations targeted at future crop trees, rather than trying to actively favor regeneration. But they came quickly to consider that logging will in most cases be the only economically feasible silvicultural operation in the course of a felling cycle. Attention shifted to establishing simple logging rules supposedly ensuring long-term timber production. Today, we face what foresters in the 30’s and 40’s had anticipated: the “picking” of a small number of valuable light-demanding trees through highly selective logging is slowly but surely exhausting these populations as canopy is not opened enough to allow regeneration. In countries where industrial logging started early, several important commercial species like *Assamela* – *Pericopsis elata* – and most species of *Entandrophragma* are becoming rare and some logging companies are beginning to turn to silviculture, thus demonstrating the modernity of old questions ... and the urgency of finding answers. We went back over 64 years of publications on silvicultural trials in the journal *Bois et Forêts des Tropiques* to highlight the conditions of success, and to propose ways forward.

Keywords :

Silviculture, African moist forests, timber logging, regeneration

Orator : Sylvie Gourlet-Fleury

Complete Authors addresses including Institution :

1 CIRAD-ES, UR Biens et Services des Ecosystèmes Forestiers Tropicaux, Campus International de Baillarguet TA C-105/D, 34398 Montpellier Cedex 5 –

2 CIRAD DGDRS, TA 181, 04-Avenue Agropolis, 34398 Montpellier Cedex 5 –

3 Independent forest expert, 25 chemin de Prarlary, 43750 Vals-près-le-Puy –

4 CIFOR – Forest and Environment Program, PO Box 0113 BOCBD, 16000 Bogor, Indonesia