Management of precision: A new step aiming at tropical natural forest sustainability. Braz, E.M. (*Embrapa Florestas, Brazil; evaldo@cnpf.embrapa.br*), Passos, C. (*Forest University of Mato Grosso (UFMT), Brazil; capassos@terra.com.br*), Oliveira, L.C. (*Embrapa Acre, Brazil; lclaudio@cpafac.embrapa.br*), d'Oliveira, M.V.N. (*Embrapa Acre, Brazil; mvno@cpafac.embrapa.br*), Povoa de Mattos, P. (*Embrapa Florestas, Brazil; povoa@cnpf.embrapa.br*).

Knowledge of tropical forest management is fundamental for warranty of the maintenance of forest covering in extensive areas of the world. The methods of tropical forest management have improved over the years; starting with prescriptions for silvicultural treatments, they have developed into studies of forest dynamics under different timber harvesting conditions. The technique of Reduced Impact of Logging (RIL), presented in recent years, has resulted in less soil damage and guarantees greater recovery of soil quality for the next harvesting cycle. In spite of these great efforts, the management of tropical forests is still regarded with distrust by the timber producers. What prevents complete acceptance of the basic approach to natural forest management? First, heterogeneity of the tropical forest would hinder management planning on a global basis. Before adopting any new technology, timber producers want to be assured of the best economic returns. Tools that support adequate planning and analysis in tropical forests should be used more widely; Planning should recognize the heterogeneity of the forest and its species distribution, and optimize their interaction. Optimization will be based on well-known mathematical tools, planning techniques, and operation research. The paper will present this methodology in development and perspectives of this research.