I presented the results of a study (The seed dispersal of the afro- tropical tree species *Staudtia kamerunensis* (Myristicaceae)) conducted in Congo D.R. by F. Trolliet under my supervision, in collaboration with M.-C. Huynen of ULg and P.-M. Forget of the Museum of Natural History of Paris.

I first presented the framework of the study which is the Belgian Science Policy (BELSPO) financed BIOSERF project (http://www.belspo.be/belspo/ssd/science/projects/BIOSERF_EN.pdf). The objectives are to explore the evolution of a social-ecological system, with a focus on ecosystem services and assess their sustainability in an area of evergreen tropical forest under increasing human pressure and climate change. We use mathematical models and the study is centred on the Lake Tumba WWF Landscape in RD-Congo. I also explain how the CARAIB dynamic vegetation model works.

The main results of the seed dispersal study are that dispersal failure (1) increases with hunting intensity and with forest availability of the fruits of the focal species, and (2) decreases with proportion of forest around the focal trees and the abundance of the main remaining disperser (*Bycanistes albotialis*, a little hornbill). In this kind of studies, results are often that there is competition for food resources among the species of dispersers. Therefore, when the population of one species decreased, for instance by hunting, the remaining species benefit of this new situation. In this study, the hypothesis is that the abundance of disperser is so low that there are no longer able to consume all the available fruits and there remains no competition for food resources.

A part of the data of the dispersal study has been used in combination with literature data to build a dispersal module for the CARAIB model (BOE Master final work of W. Coos, 2011, ULg). The module is able to produce spatial images of a dispersal kernel, by simulating the random flight of hornbill swallowing the seeds of the sampled trees. The module was also used to simulate the seed rain of *S. kamerunensis* over the landscape derived from a classified satellite picture