

Forests Multiple Use Management

Renato Rosa

The possible conflict between carbon sequestration and biodiversity has put biodiversity in the centre of the literature debate. In contrast to the usual Hartmann approach, biodiversity considerations are introduced into a multiple species, multi-vintage forest sector model with endogenously determined timber prices and land use allocation. Biodiversity is modelled focusing on structural diversity, i.e, age classes and species distribution. We show that transition dynamics are strongly affected, contaminating both timber and land markets. Moreover, different ecological forest structures have distinct impacts on optimal land use distribution, therefore, affecting also timber prices. Finally, we observe major changes in optimal timber management.

JEL Classification #: Q01, Q23

Keywords: Land allocation model; biodiversity; forest vintages; multi-species; optimal rotation

FEEM – Fondazione Eni Enrico Mattei, Venezia, Italy
renato.nunesrose@feem.it