D7.1 Summary

Description of a coupled macroeconomic, multi-sector analysis at global scale with first simulation
This report describes results for four marker scenarios from the global models in the top-down analysis in WP7, which provide the boundary conditions for in-depth analysis at the level of EU-27, individual member countries as well as sub-national levels. The marker scenarios will also provide a starting point for a larger number of policy scenarios to be analysed in the next steps of VOLANTE.

Figure: Modified SRES scenario framework for VOLANTE: V-A1 represents a globalised world with little land use change regulation, V-A2 represents a fragmented world with little land use change regulation, V-B1 represents a globalised world with strong land use change regulation, V-B2 represents a fragmented world with strong land use change regulation.

The objectives are to enable integrative land system change assessment by integrating land use models across different sectors and spatial scales (from global to sub-national); to integrate impacts of policy parameters such as taxes, land use regulations and international trade policies on land system change; to understand and explore the interactions between land-use relevant sectors; and to integrate land management information in spatial land allocation models for Europe.

The focus here is on necessary updates compared to the initial modelling and scenario approach. The coupled macroeconomic, multi-sector analysis at global scale combines the macroeconomic growth model ReMIND, combined with the global land use model MAgPIE; the global Computable General Equilibrium Model LEITAP/MAGNET; the global forestry model EPI-GTM; and a global assessment of expansion of urban areas by JRC.