

## ***Interactive comment on “Reconstructing European forest management from 1600 to 2010” by M. J. McGrath et al.***

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The biggest problem in calculating the sources and sinks of carbon from changes in land use and management is the availability of historic data that document what happened, where. Maps of land cover are rare before 1990, and even when national statistics report increases in cropland and pasture areas, those statistics almost never specify the cover types into which those increased areas expanded. This paper by McGrath et al. describes the reconstruction of forest management for Europe, 1600 to 2010. They used both supply and demand approaches to distribute management for fuelwood, industrial charcoal, and timber products, and, after 1828, used forest age reconstructions to help distribute forest management.

The paper presents the data sources and algorithms (and assumptions) that were used

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to construct maps (0.5o x 0.5o resolution) “in as great of detail as possible”. The challenge is not to construct a feasible history; there are many feasible histories. The trick is to extrapolate anecdotal information and information from case studies to large regions and to construct a set of rules so that the results are consistent with the limited data that do exist. McGrath et al. have done that, with a number of examples showing how different assumptions would have varied the results.

The authors end with a number of suggestions as to how the analysis might be improved, but the reconstruction is already better than most and is likely to be difficult to duplicate in many regions outside of Europe or the United States.

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Interactive comment on Biogeosciences Discuss., 12, 5365, 2015.

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