

## Supplementary Material for the paper

### **A new European plant-specific emission inventory of biogenic volatile organic compounds for use in atmospheric transport models**

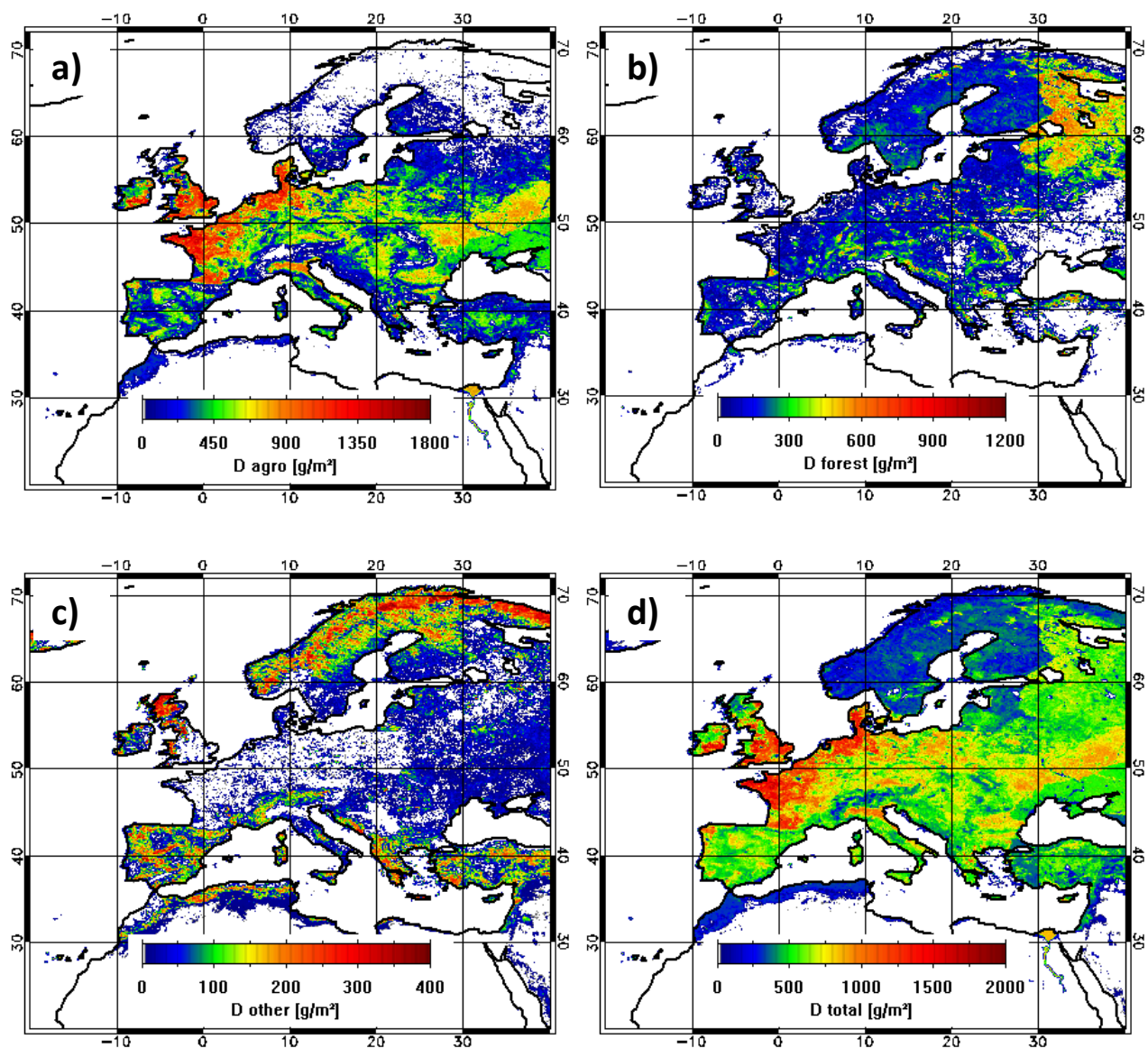
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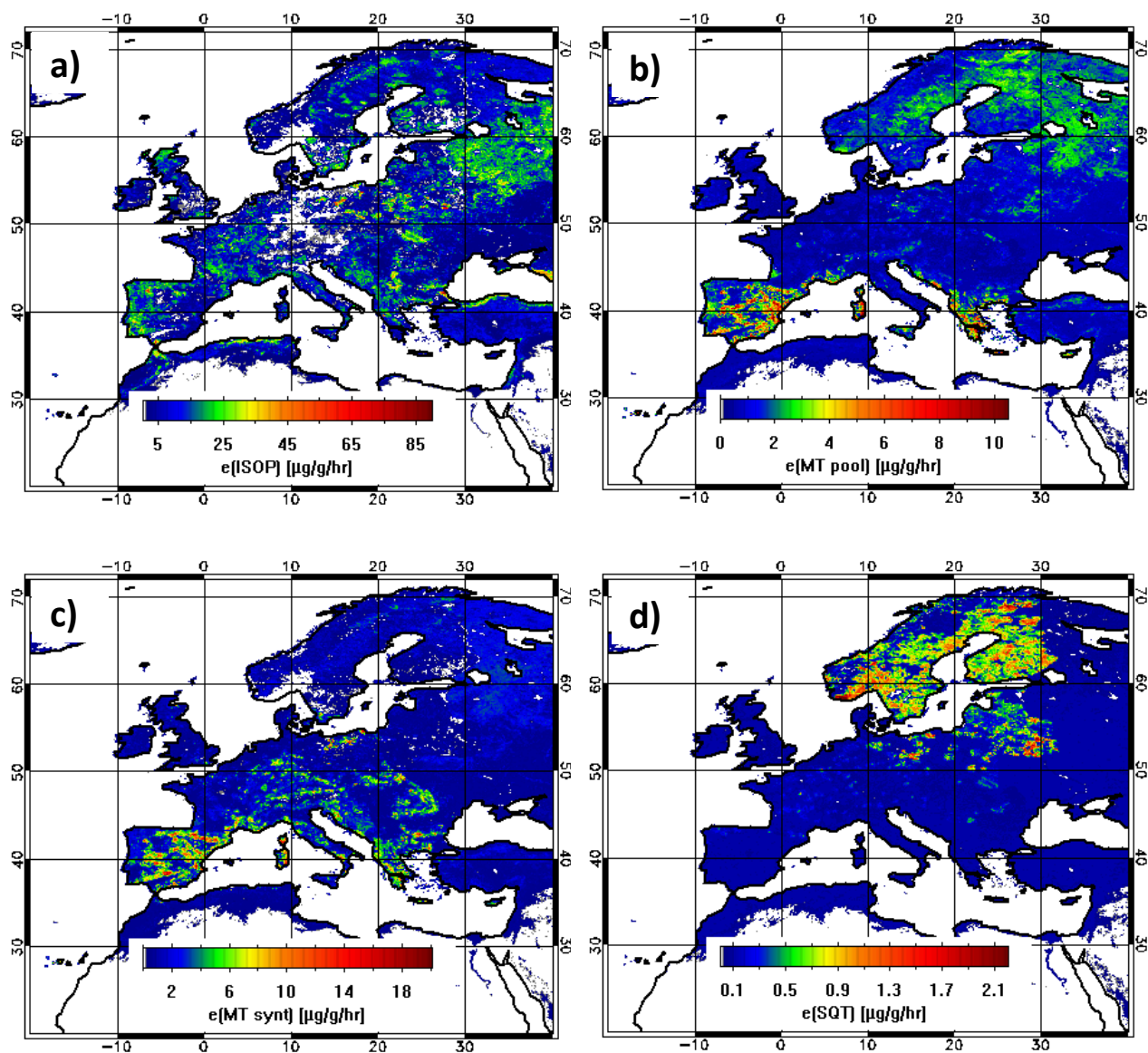
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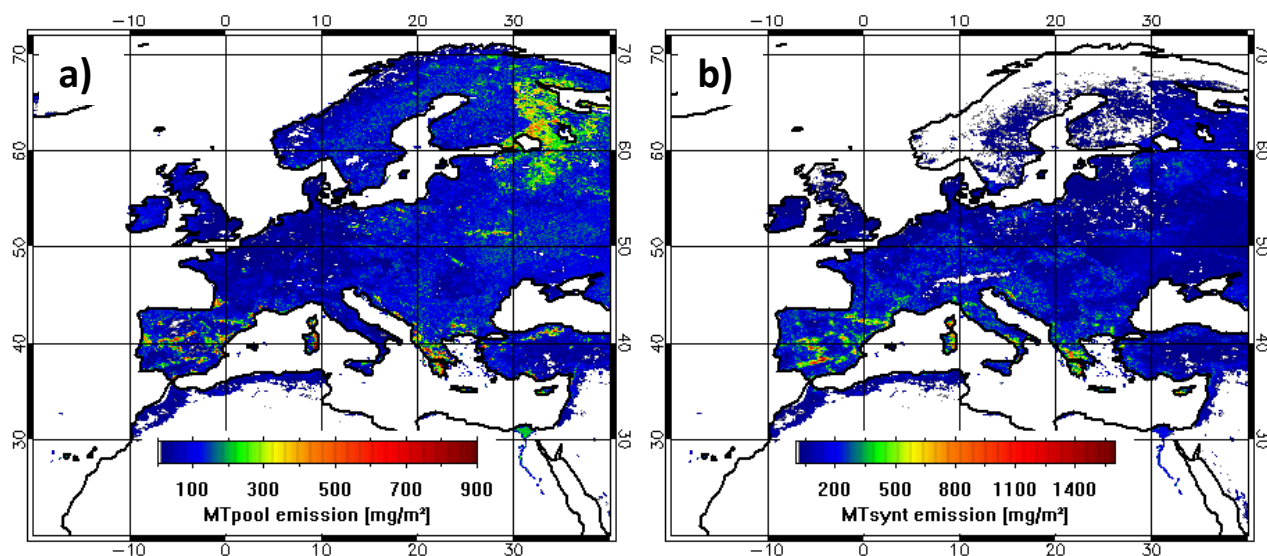
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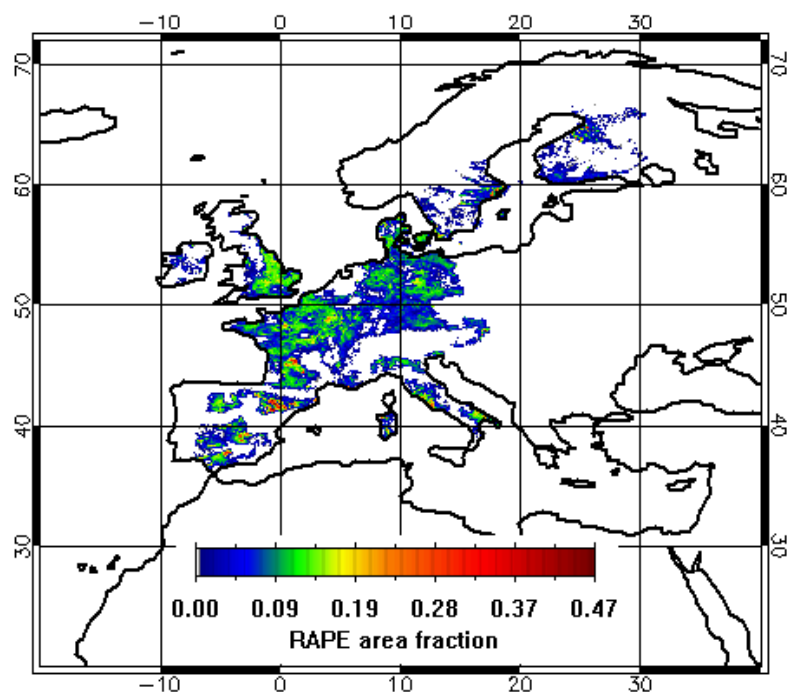
**Figure A1:** European foliar biomass density (in  $\text{g m}^{-2}$ ) distributions: a) Agriculture land use (crop species from the *Agricultural Land Use Map*) and agriculture vegetation classes from CLC/GLC2000), b) Forest land use (tree species from the *Tree Species Map* and forest vegetation classes from CLC/GLC2000), c) Other land use (vegetation classes from CLC/GLC2000), d) Total land use.



**Figure A2:** European BVOC standard emission potential (in  $\mu\text{g g}_{\text{DW}}^{-1} \text{h}^{-1}$ ) distributions: a) isoprene, b) monoterpenes (pool), c) monoterpenes (synthesis), d) sesquiterpenes. Standard conditions are 30°C leaf temperature and  $1000 \mu\text{mol m}^{-2} \text{s}^{-1}$  photosynthetic photon flux density (PPFD).



**Figure A3:** European emission (in  $\text{mg m}^{-2}$ ) distribution for July 2005 of: a) monoterpenes (pool emission), b) monoterpenes (newly synthesized emission). Emissions shown here are assessed with the assumption that terpenes and other VOC emitted by plants are directly emitted into the atmosphere, ignoring eventual oxidation and losses within the canopy.



**Figure A4:** European coverage with rape cultivations, given as relative fraction of covered area in a grid cell of the model. Data from the *Agricultural Land Use Map* (Leip et al., 2008).