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Biogeosciences
Discussions

Interactive comment on "Temporal and spatial decoupling of CO_2 and N_2O soil emissions in a Mediterranean riparian forest" *by* Sílvia Poblador et al.

Anonymous Referee #1

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The manuscript title is not clear for the air emission or soil emission. The paper purpose needs to be sharpened. The details of CO2 and N2O measurement, emission calculation formulas, quality assurance, and statistical models should be given in method section. 1. In title: What is the CO2 and N2O soil emissions? It should be the CO2 and N2O emissions from soil. And in the context, "decoupling" is not discussed. 2. Row 69-80: one sentence is needed to clearly express the paper purpose. 3. Sections 2 and 3 may merge into one section as methodology section. 4. Can you give a schematic graph to show CO2 and N2O sampling locations in three zones and sampling schedules? 5. How did you measure CO2 in three zone at the same time with one sampling system? 6. Row 111: did you directly place the SRC-1 soil chamber on

top of the soil surface? 7. What standard operation procedures did you follow for CO2 and N2O measurement? How did you conduct the QA/QC? Or are you sure that your measurements were accurate? 8. What is your CO2 and N2O emission calculation formulae? 9. Rows 113 to 114: "CO2 emissions rates were calculated as the amount of CO2 accumulated in the head-space of the EGM-4 chamber after an incubation time of c.a. 120 s." Please make sure that is EGM-4 chamber or SRC-1 soil chamber? 10. In 3.3 section: can you give statistical model for each analysis 11. Can you give a graph to show CO2 and N2O concentrations or emission during June measurement with time to show real measurement? 12. How do you conclude the decoupling of CO2 and N2O emission from soils in time and location? 13. In conclusion, you may report your own conclusions. Why did you cite the references in your conclusion? What is your meaning about the large emission of GHG?

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