

## ***Interactive comment on* “The global forest above-ground biomass pool for 2010 estimated from high-resolution satellite observations” by Maurizio Santoro et al.**

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We welcome this independent assessment of the GlobBiomass dataset because Romanian forests were not represented in the plot database. We can explain the large RMSE as a consequence of (i) high AGB in large parts of the country, i.e., in the range where AGB in Europe was often underestimated (Figure 3), (ii) the strong topography of the Carpathian mountains and (iii) the relatively low value of maximum biomass set for this region (note: this was recently recomputed based on additional datasets not available at the time of the study). This interpretation of the errors is in line with interpretation of errors in Table S2 for regions with high carbon stocks. Our understanding

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is that in such regions, the average AGB derived from the GlobBiomass dataset may be an under-estimate; the difference depends on the region, as errors are a consequence of the interplay of multiple factors. For this reason, it is not possible to provide an AGB level above which individual map values should be considered as less reliable. We have added a note in Section 4 to highlight that not everywhere average values (e.g., for countries) have the same reliability.

Nevertheless, in a recent paper, Naesset et al. (2020) demonstrate how global biomass maps locally calibrated on in situ plots can increase the precision of local stock estimates computed from only the plot data.

### References

Næsset, E., McRoberts, R.E., Pekkarinen, A., Saatchi, S., Santoro, M., Trier, O.D., Zahabu, E., and Gobakken, T., Use of local and global maps of forest canopy height and aboveground biomass to enhance local estimates of biomass in miombo woodlands in Tanzania, *International Journal of Applied Earth Observation and Geoinformation* 93. 2020. <https://doi.org/10.1016/j.jag.2020.102138>.

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