

Response to review 2 to Hassler et al.: “Multivariate characterisation of a blackberry-alder agroforestry system in South Africa: Hydrological, pedological, dendrological and meteorological measurements”

Original review comments in black

Answers in blue italics

The data paper of Hassler et al. stems from an intensive field campaign in which hydrological, pedological, dendrological and meteorological measurements were made in an agroforestry system in South Africa.

The data collection and manuscript are both at a very high level. The manuscript is written and the data is will presented. The only limitation I see is that the paper/dataset has a very limited geographical scope, and hence re-use of the dataset may be limited too. I would honestly just have published this dataset as part of the accompanying paper Hoffmeister et al. (2023) instead of pursuing a separate data paper.

Dear reviewer,

Firstly thank you for taking the time to review our manuscript. We are very happy to hear that you consider it to be of high quality.

We acknowledge the limited geographical scope but would like to point out the potential applications for the data set when placed in such an accessible location such as ESSD.

Some of the data was indeed utilised within Hoffmeister et al. (2023), however the ESSD paper includes more measurements than were analysed for that study, and the data can be used for a range of different other analyses: 1) The multidisciplinary measurements offer possibilities to study interactions of different ecosystem compartments that are otherwise rarely possible in discipline-specific campaigns. 2) The studied example of a (for the region typical) agroforestry system including windbreak and crop can be compared to other windbreak systems as well as to other agroforestry systems. This enables further insights into the varied interactions between the different components of these systems to help elucidate benefits and limitations of introducing agroforestry as a sustainable landuse option in a changing climate. 3) The detailed description of the individual (albeit small) disciplinary datasets supports further testing of methods and specific analyses, e.g. openly providing one of the rare point cloud datasets from terrestrial laser scanning for the trees of the windbreak, or testing feasibility of root water uptake calculations in such a setting.

These further applications support a detailed presentation of the data in ESSD and highlight their relevance, rather than just as a supplement to one study. We already emphasized some of them in section 4 (lines 303-322) of the manuscript, and we will check again if we can expand these examples to show the potential use of the dataset.

Similarly, an ESSD paper also gives space to discuss limitations of the dataset in more detail compared to a mere supplement. We will expand the applications section in this respect to make use of this possibility. For example, one aspect that we will include here (and not only in the site description) is the irrigation scheme that was applied to the crops as this will influence for which purposes the data can be used.