In this paper the authors present an approach for the identification of peat soils by fitting an empirical relationship between the thickness of the organic layer - measured across Sweden - and a continuous soil moisture map. The article is very interesting and quite well written, but I would prefer to see a bit more detailed description of the procedure followed by the authors.

English language and style are quite fine, only a minor spell check is required.

Most of the references are listed without specifying the number of pages. Please carefully check them, since other mistakes are present. All the references in other languages than English should be clearly indicated.

Other specific comments:

- Line 54: Sewell et al (2020) is not reported in the reference list.

- Line 142: please define the acronym SLU, since the readers could not be familiar with it.

- Line 148: please add references for these statistics.
- Line 387: Arrouays et al (2014) is not reported in the reference list.

- Line 388: Jackson et al (2017) is not reported in the reference list.

- Line 458: Nijp et al (2019) is not reported in the reference list.

I recommend to revise the article. Minor revision is necessary.