

The study constructed a framework for estimating China's forest age combined remote sensing with machine learning algorithms based on massive field measurements and remote-sensing dataset. The authors could provide a 30-m-resolution forest-age map for accurately understanding the ecological benefits of China's forests and to sustainably manage China's forest resources. However, this paper lacks important details in the introduction, method and discussion, and needs some clarification and improvement, especially the combination of forest disturbance algorithm and machine learning. Currently, for this manuscript, I propose to decide whether to publish it after a **Major Revision**. A few additional comments are given below:

1. The introduction should highlight the innovation, why is it LandTendr algorithm instead of CCDC and other algorithms?
2. Line 86: Why is China divided into these eight vegetation regions?
3. Line 104: Why is there a distinction between planted forest and natural forest, what is the purpose of the authors, respectively, and what is the difference between planted forest and natural forest in algorithm.
4. Line 118: the resolution of Climate data (30 arc-second) is not consistent with it in Table 1.
5. Line 123: Why the PC1 gives annual trends in temperature and precipitation, PC2 gives seasonal variations in temperature and precipitation, and PC3 gives precipitation and temperature extremes?
6. Line 146: The algorithm description and detail of forest age in changed area and forest age in unchanged area is missing.
7. Line 235: which is the year of China's forest age map? Is it 2020? Use LandTendr to look back at the age of forests during 1985-2020, but why not present the age change in the results. Please refer to Xiao, 2023 and Huang, 2023 for details

Xiao, et al. Thirty-meter map of young forest age in China. *Earth Syst. Sci. Data*, 15, 3365–3386, <https://doi.org/10.5194/essd-15-3365-2023>.

Huang, et al. An Algorithm of Forest Age Estimation Based on the Forest Disturbance and Recovery Detection. *IEEE Trans. Geosci. Remote Sens.*

<https://doi.org/10.1109/TGRS.2023.3322163>

8. The discussion part of this paper is a little limited, which is all about input data constraints, having no limitations of the algorithm. whether forest age estimation should be combined with forest restoration and other conditions, and whether the parameters of LandTrendr algorithm will affect the detection results.