Review of: "Modelling and Mapping of Aboveground Carbon of Oluwa Forest Reserve Using LandSat 8 TM and Forest Inventory Data"

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Potential competing interests: No potential competing interests to declare.

Here are some potential areas that could be considered as weak points or limitations based on common challenges in similar studies:

1. Sample size: The study mentions that 20 grids were randomly selected as sample plots for data collection. The small sample size may limit the representativeness of the findings and the ability to generalize the results to the entire forest reserve.

2. Data collection methods: The study describes the use of field-based inventory methods for collecting data on tree variables such as diameter at breast height (Dbh) and tree height. However, it does not provide detailed information on the methodology used or potential sources of error or bias in the data collection process.

3. Remote sensing data limitations: The study relies on remote sensing data, specifically LandSat Thematic Mapper data, to estimate spectral indices and model aboveground carbon sequestration. The accuracy and reliability of the results may be influenced by the quality of the remote sensing data, data preprocessing techniques, and the availability of ground-based inventory data for calibration and validation.

4. Generalizability: The study focuses on the Oluwa Forest Reserve in Ondo State, Nigeria. The specific characteristics of this forest reserve, such as its biodiversity, size, and environmental conditions, may limit the generalizability of the findings to other forest ecosystems or regions.

5. Cost and complexity: The study highlights that estimating forest aboveground biomass and carbon can be a complex and costly endeavor requiring expertise and equipment. While the use of remote sensing and GIS technologies may offer some efficiency, the overall cost and complexity of the methodology used could be a potential limitation for replication or application in other contexts.