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.

Comment 1: The title "Modelling and Mapping of Aboveground Carbon of Oluwa Forest Reserve Using Landsat 8 TM and Forest Inventory Data" suggests that the paper focuses on mapping the "Aboveground Carbon of Oluwa Forest." However, the introduction states that the primary objective is to "employ remote sensing data to model and create a comprehensive map illustrating the forest reserve's carbon sequestration potential."

The carbon sequestration potential of a forest reserve refers to its ability to absorb and store carbon dioxide (CO2) from the atmosphere. This potential is influenced by several factors, including:

1. Forest Type and Species Composition
2. Age and Density of the Forest
3. Climate and Soil Conditions
4. Management Practices
5. Disturbances

There is a notable discrepancy between the title and the stated objective. If the author aims to use remote sensing (RS) and geographic information systems (GIS) to "create a comprehensive map illustrating the forest reserve's carbon sequestration potential," it is essential to explain how the paper addresses these five factors using RS and GIS technologies.

Could the author clarify how the study incorporates these factors into the RS and GIS analysis to map the carbon sequestration potential, as opposed to just the aboveground carbon stock? This clarification would ensure alignment between the title and the paper's content, thereby enhancing the overall coherence of the research.

Comment 2: What atmospheric corrections or image pre-processing have you performed (geometric, atmospheric, radiometric correction, etc.)?

Comment 3: Please include a figure showing the study area using a satellite image. The figure should clearly display the entire study area (in true or false color) without any clouds or shadows. Additionally, the figure should include a north arrow, scale bar, and map coordinates.

Comment 4: The number of plots is very low for model development.

Comment 5: The results lack proper presentation. Please provide appropriate graphs to show the correlation between in situ data and spectral indices. The results do not match with other research papers that show spectral indices saturate as biomass increases. Additionally, the authors should provide more justification for the very high correlation observed in a high biomass forest.