Special Issue

Estimating Above-Ground Biomass and Above-Ground Carbon by Remote Sensing Data

Message from the Guest Editors

Today, forests stand as a powerful ally in the battle against climate change and, if managed properly, they can prevent emissions from deforestation and forest degradation and act as critical carbon sinks. The urgency of safeguarding these ecosystems has never been greater and accurately measuring their aboveground biomass (AGB) and carbon storage (AGC) is a major step toward this goal. This Special Issue aims to bring together scientists and specialists developing and applying new remote sensing approaches in an effort to improve our understanding of the biomass and carbon dynamics of forest ecosystems. The topics covered in this Special Issue include, but are not exclusive to, the following: 1. New methods to assess biomass and carbon in forest ecosystems using remote sensing;

- 2. New sensors and new data fusion approaches;
- Temporal assessment of biomass and carbon dynamics;
- 4. Biomass and carbon assessment via proximal sensing, i.e., TLS, photogrammetry, etc.;
- 5. Spatial and temporal uncertainty assessments;
- 6. Impact of forest disturbances on biomass and carbon balance;
- 7. Large-scale monitoring of biomass and carbon dynamics;
- 8. Cloud computing approaches.

Guest Editors

Dr. Elia Vangi

Prof. Dr. Gherardo Chirici

Dr. Alessio Collalti

Deadline for manuscript submissions

31 October 2025



an Open Access Journal by MDPI

Impact Factor 4.1 CiteScore 8.6



mdpi.com/si/195845

Remote Sensing
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
remotesensing@mdpi.com

mdpi.com/journal/remotesensing





an Open Access Journal by MDPI

Impact Factor 4.1 CiteScore 8.6



About the Journal

Message from the Editor-in-Chief

Remote Sensing is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peerreview process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend Remote Sensing for your best research publications for a fast dissemination of your research.

Editor-in-Chief

Dr. Prasad S. Thenkabail

Senior Scientist (ST), U. S. Geological Survey (USGS), USGS Western Geographic Science Center (WGSC), 2255, N. Gemini Dr., Flagstaff, AZ 86001, USA

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, PubAg, GeoRef, Astrophysics Data System, Inspec, dblp, and other databases.

Journal Rank:

JCR - Q1 (Geosciences, Multidisciplinary) / CiteScore - Q1 (General Earth and Planetary Sciences)

