

GFOI R&D Priorities: Refinement and Current Developments

Tuesday, 9. May 2023, 15:30-17:00

**Organized by the GFOI R&D Component as side event for the GFOI Plenary 9-11. May 2023
at FAO HQ in Rome**

Background

The R&D (Research and Development) Coordination fosters a community of experts who aim to address methodological and technical issues hindering countries' forest monitoring capacities and therefore greenhouse gases (GHG) accounting efforts. A pivotal element of GFOI's R&D component is the constant update and refinement of R&D priorities. These priorities are used as input to convene expert meetings, assess the progress of new methods or products towards operationality, provide direct R&D support to countries, and advocate for the funding of key research needs.

The current GFOI R&D priorities were identified in GFOI's 2021 Plenary and GFOI R&D Online Workshop 2021. Both events brought together research experts on Forest Monitoring to assess current R&D progress, identify knowledge gaps, develop concepts to address these gaps and present a priority list of gaps and actions. In addition, earlier this year these priorities were discussed and reviewed with country representatives in the GFOI R&D Coordination Meeting, as part of the GFOI Capacity Building Summit. The current R&D Priorities are:

1. Degradation and Regrowth Mapping
2. Biomass/EF estimation
3. Deforestation Alerts (i.e. Near Real Time Alerting)
4. Land Use and GHGs
5. Uncertainty Analysis (incl. integration of NFIs with space-based data)

Goal and objectives

The purpose of this side event was to review each R&D priority and provide a update on recent research achievements and developments. This will be done through discussions with research and country experts from the aforementioned research fields, with the objective of discussing the current needs and evolving opportunities for tropical forest monitoring.

The side event started with an introduction to the current R&D Priorities, followed by one short presentation and discussion per priority, with the exception of Deforestation Alerts, which had a dedicated side event the following day. After all presentations, a closing discussion was held, in which the presenters and audience discussed ways to move forward as R&D Component in relation to the current needs and emerging opportunities within the forest monitoring research community.

Location

The GFOI Plenary was held in the Austria Room of FAO HQ in Rome, Italy. Virtual participation was also possible.

Organizers

R&D component: Martin Herold (GFZ), Daniela Requena (WUR), and Frank-Martin Seifert (ESA)

Speakers

- Gilberto Câmara - Instituto Nacional de Pesquisas Espaciais (INPE)
- Natalia Málaga – Wageningen University & Research (WUR)
- Chad Babcock – University of Minnesota
- Viola Heinrich – University of Exeter and German Research Centre for Geosciences (GFZ)

Detailed agenda

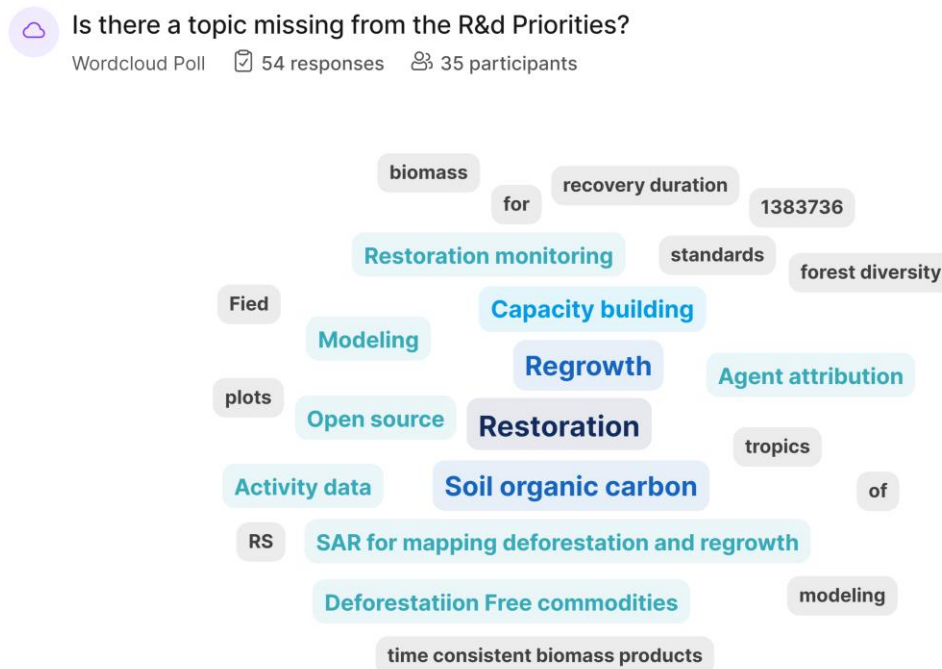
Tuesday 9 May 2023

Session	Time	Presenter(s)
Welcome and Introduction		
Introduction to the R&D Priorities	15.30-15.45	D. Requena Suarez
R&D Priorities: Panel Discussion (Moderator: D Requena Suarez)		
Degradation and Regrowth Mapping (5 min presentation + 10 min discussion)	15.45 – 16.00	G. Câmara, INPE
Biomass/EF Estimation (5 min presentation + 10 min discussion)	16.00 – 16:15	N. Málaga, (WUR)
Uncertainty Analysis (5 min presentation + 10 min discussion)	16.15 – 16.30	C. Babcock (University of Minnesota)
Land Use and GHGs (5 min presentation + 10 min discussion)	16.30 – 16.45	V. Heinrich (University of Exeter, GFZ)
Closing discussion		
R&D Priorities: discussion on ways forward	16:45 – 17:00 pm	M. Herold, D. Requena Suarez

Summary of discussions

After the presentations, a closing discussion took place focusing on two main aspects: (1) the refinement of the existing priorities and (2) the future activities of the GFOI R&D component as a community. These discussions were facilitated through interactive questions posed on Slido, where both the live and virtual audience showed high participation and engagement levels. Furthermore, valuable insights about R&D needs from the audience were discussed.

1. Refinement of R&D Priorities



slido

Figure 1. Word cloud on missing R&D topics

Overall, the identified R&D gaps cover a wide range of topics, including technical aspects such as the use of SAR, accessibility issues related to open source products/platforms and plots, and themes related to forest monitoring like soil organic carbon, commodity mapping, and forest diversity. Notably, the significance of monitoring restoration and forest regrowth was emphasized, aligning with the objectives of the UN Decade on Ecosystem Restoration.

2. Future activities of the GFOI R&D community

Previously, several activities have been organized by or with the GFOI R&D Component to move forward as a community. These include but are not limited to expert meetings on a specific R&D topic, conducting literature reviews, assessing progress of R&D products and techniques (through CALM assessments), providing direct support to countries on R&D topics, advocating for key research needs and stimulating engagement of R&D with other GFOI components.

During this event, participants were asked to keep in mind the main activities that the R&D community should focus on in the coming years.



slido

Figure 2. Summary of feedback on future ways of engagement as R&D community

Expert meetings and workshops on specific R&D topics and collaborative projects were voted as the most important ways of engagement in the future. This was followed by webinars online forums and regular online meetings. Special issues, side events and newsletters were the least mentioned activities, however all of these activities were voted for at least once.

The next workshop focused on the topic of upcoming expert workshops, which were voted as a priority activity for the R&D component (Figure 2). The audience was asked which priorities should be the focus in upcoming expert workshops. In order of importance, the top three R&D priorities for upcoming workshops were Degradation and Regrowth Mapping, Biomass estimation and Uncertainty analysis (Figure 3).

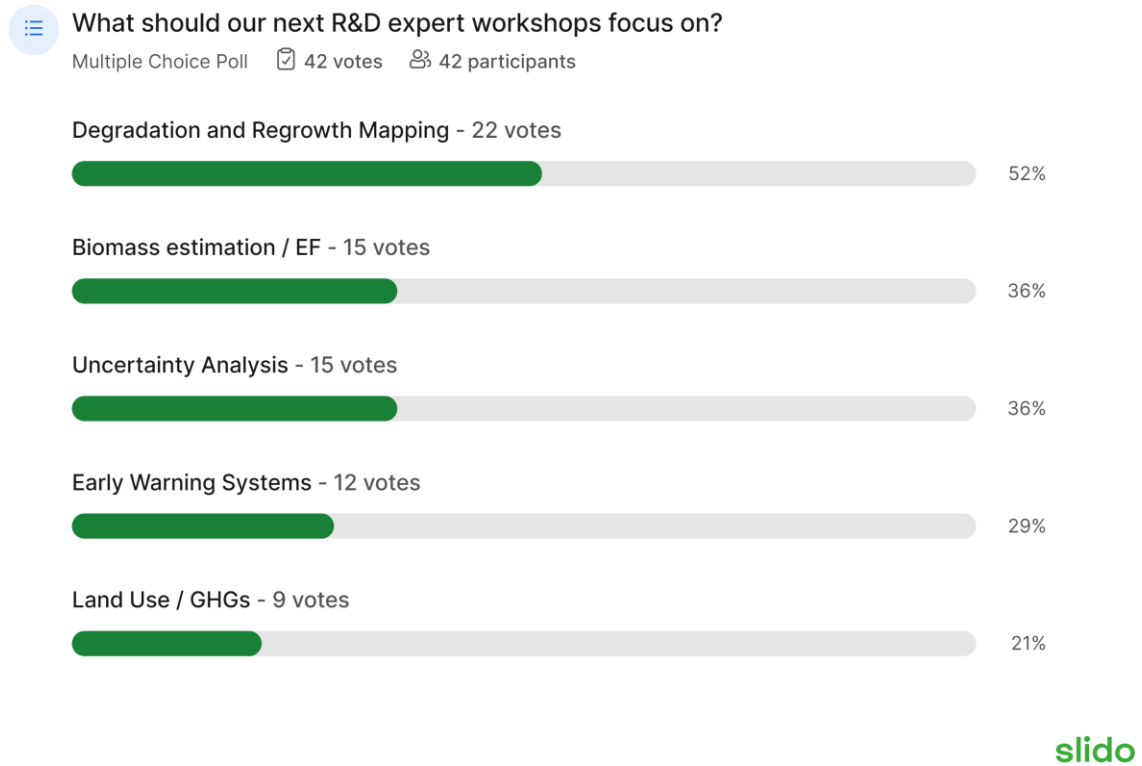


Figure 3. Preference of R&D priorities for upcoming expert workshops

Next steps

The presentations and discussions conducted during the event provided a comprehensive overview of the recent research and development (R&D) accomplishments and advancements. They highlighted both the progress made and the persisting gaps in the field.

The closing discussions, along with the insights gained from the interactive questions, will serve as a foundation for refining the 2021 GFOI R&D priorities and defining the activities to be undertaken in the forthcoming years. These findings will contribute to enhancing the effectiveness and impact of GFOI R&D community.