GFOI Plenary. Monday 12 March 2018

R&D (Research and Development) Coordination Component meeting

Open meeting – all are welcome to attend

Identification of research / capacity gaps

Cloud computing
- Training examples do exist: EO college https://eo-college.org/landingpage
- There are some reservations about using it due to privacy concerns, however, some of these are misunderstandings (for example, a computer connected to the internet is potentially more unsecure than data stored in the cloud).
- Concerns over longevity / continuity – how long will these systems be available for?
- Nepal confirmed that they are expecting to need large datasets processing – and this cannot be done locally, so the cloud would be a good solution.
- Infrastructure platforms from Copernicus can be included.

Early Warning systems
- A key need is that the country has the capacity to respond to these alerts.
- Crucial to remember what this is for – not applicable for area estimation.
- Request for these in terms of logging and fire detection – specific drivers.
- Tradeoffs between time lag of alerts and confidence in the results.

Tree crop mapping (distinguishing them from natural forests)
- Very important for countries with lots of tree crops.

Incorporating the Sentinels into monitoring
- Cannot simply add into Landsat time series for example.
- Must utilize huge potential here.

AI / machine learning
- Essentially this is covered by time series work – as this is machine learning.
- Pattern detection for degradation was one suggestion for this.
- More research level (before pre-operational) tasks.

Monitoring frequency and uncertainties – Pontus..
- Pontus presented some difficulties with providing good estimates (of deforestation for example) in short monitoring periods.
- In some cases, short monitoring periods are requested – for example yearly deforestation reporting.
- Increasing the regularity of monitoring means fewer changes, and therefore larger confidence intervals. If the changes are small, with large CIs then it is possible to report no change – payments must be based on statistically significant differences.
- These tradeoffs should be considered.

Regeneration

- There have been several workshops on this in the past, however, topic remains an important research gap. This is important for countries such as Ghana, where shade trees are grown for cocoa production.

Discussion on ongoing R&D activities

CALM framework

The need for such a tool was discussed, and it was agreed that this could be very valuable.

Training materials

The need to update these was noted.

Research teams

In the future, the process by which the component engages with research institutions will be updated, meaning more research institutions will be included as partners – exactly how this will be managed is to be discussed.

Needs based research is key- and prioritization is a must since there are more topics than we can cover.

Data component co-ordination

This was highlighted as an important and urgent topic, and is to be discussed.

Data sharing for research use

This could be an activity which relates to all the components of GFOI. Data (examples and case studies, and also field data such as ground plots which can be used for map validation) would be used for research and training. Partnerships with institutions would be arranged through a structured mechanism.

Agenda and presentations

09:00	Introduction: R&D component of GFOI	Martin Herold
09:15	Update on recent activities - Lessons learned from Accuracy Assessments in the context of REDD+: Uncertainties from AD and EFs - Criteria for consistently assessing levels of maturity (CALM) of REDD+ concepts - Training materials for forest monitoring and reporting	Sarah Carter
09:35	Technical progress from R&D teams (with inputs from the teams, including SilvaCarbon)	Ake Rosenqvist (presentation delivered by Martin Herold, with inputs from the teams)
10:10	The importance of the time dimension in monitoring forest change, and relevance for uncertainty estimation	Pontus Olofsson
10:30	*Coffee break*	
11:00	Discussions: • Next steps for the R&D component (based on the presentations) • Other needs for the R&D component, including priorities for new guidance • Joint work and academic collaborations • Interaction with ongoing the Early Warning work (*note that a session on Early warning will follow in the afternoon and participants are also invited to join that session*) • Next steps on the Accuracy Assessment theme • Incorporating Sentinel data / Copernicus into REDD+ MRV	Martin Herold
12:30	Closing meeting	

Participants:

1	Lenin Beltram	OTCA
2	Joao Manuel de Brito Carreiras	UK National Centre for Earth Observation
3	Sarah Carter	Wageningen University / GFOI R&D manager
4	Chyri-Rong Chiou	National Taiwan University
5	Felix Cremer	Jena University
6	Sasha Beth Gottlieb	USFS International Programs, USA
7	Martin Herold	Wageningen University / GFOI R&D lead
8	Shiva Khanal	
9	Erik Lindquist	SEPAL, FAO
10	Nicolas A Mann	UK
11	Alex Moad	USFS International Programs, USA
12	Yakubu Mohammed	Forestry Commission, Ghana
13I	Brice Mora	Consultant, GFOI Early Warning group
14	Pontus Olofsson	Boston University
15	Yam Prasad Pokaharel	Nepal
16	Bradley C. Reed	USGS, USA
17	Franky Zamzani	MoEF, Indonesia
18	Andrein Giaveirah	