

## Satellite Monitoring for Forest Management (SMFM) Project

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### Main progress:

#### 1 Project planning and analysis

The SMFM consultant team held a VC with the World Bank task team leader on June 14, 2018 where the contents and deployment of the SMFM project website was discussed.

The SMFM web page has been finalised and is now hosted under <https://www.smfm-project.com> and it provides links to all major project products including direct links to the code repositories and the always latest development version of the SMFM EO tools. Equally, all monthly progress reports so far submitted are available, as are the main deliverables.

A second video conference was held on June 18, 2018 to discuss improvements to the preparation of working group meetings and to clarify the roles and contributions of all participants. It was agreed that proposed timings of the meetings need to be communicated early enough to all participants for their confirmation of availability. Generally, the working group meetings in Mozambique would be held in Portuguese language, with an opening session in English where the SMFM consultant team would address the meeting to provide updates on project progress but also to explain / remind the purpose and the expected outcome of the meeting.

Required materials and documents to be prepared for the meetings will be discussed in a pre-meeting between the national hub and the SMFM consultant team. In the case of Mozambique, materials need to be available at least 2-3 days ahead of the meeting, especially if translations are required.

#### 1.2.1 Coordinate with activities / resources already committed in partner countries

##### Partner country meetings

- **Zambia:** A joint video conference was held on June 7, 2018 with the Zambia Forestry Department (FD) to discuss necessary steps for the field work training and subsequent data collection. It was confirmed that most of the technical equipment was already available with the FD and would be brought to the training workshop location and to the field sites.

Exact timings for the field work training and the data collection were discussed and agreed. The Zambia focal point requested additional on-site TA support after the field work training to provide assistance and troubleshooting during the initial days of data collection.



- **Mozambique:** The Mozambique Working Group held its first meeting on June 6, 2018 to discuss the dry forest definitions as well as concepts of deforestation. Due to communication and availability restrictions, only the LTS national staff was present at the meeting. Members also discussed the field work plan, the proposed sites and the composition of the field work teams. The WG members agreed to have provincial forestry staff identifying the exact locations for the data collection in the agreed regions.

In addition, it was agreed to have representatives from DINAF and FNDS as team leaders for each field team, and provincial forestry staff as assistants. WG members requested that a draft data collection protocol to be provided by the Consultant team for appreciation. The draft data collection protocol, together with a proposed work plan for the field work and a list of proposed equipment and supplies were then submitted to the Mozambique focal point on June 14, 2018.

Another WG meeting was then scheduled for June 22, 2018 but was finally postponed due to non-availability of key WG members for urgent national matters. The meeting finally was held with restricted participation (FNDS and DINAF<sup>1</sup>) on June 29, 2018 where a proposal for a forest degradation definition was elaborated.

## Technical update:

### 2.1 Design new or enhanced satellite EO methods to address requirements and gaps

In the month of June 2018 field work started in Zambia and LTS technical staff was focusing in the necessary preparations and the training workshop. As a consequence, there has been no major progress on the tool development other than a few corrections and minor improvements.

### 2.3 Obtain / collect in-situ datasets for validation

#### Zambia:

- Staff from LTS and UoE travelled to Lusaka, Zambia to prepare and hold a 3-day training workshop for field data collection at the Graka Lodge in Chongwe. The workshop took place from June 20 to 22 and covered updates on the tool development, a GPS refresher course, design of the field work protocol and field forms, as well as field tests of the developed protocol.
- In total, 11 participants from 5 institutions (Forestry Department, NRSC, Survey Department, UNZA and ZEMA) participated in the training workshop.

<sup>1</sup> DINAF was invited but could not participate due to overlaps with other commitments.





*Figure 1 Fieldwork planning with local forestry officers in Chongwe.*

- One of the main lessons from the protocol development and testing was that the successful detection and location of change events from the Sentinel-2 era (2016 – 2018) in the field is more time consuming than expected. Partly as a consequence of this, the WG decided to reduce the initial 3-4 field sites to two larger ones (surrounding Lusaka and in the Copperbelt), in which change has taken place due to recent de-gazettement of forests. Detailed knowledge of existing events or even reconnaissance activities prior to the actual field work are crucial for efficient field data collection.



*Figure 2 Impressions from the field work showing some of the drivers of woody biomass loss.*

- After the training workshop, the field team split up to carry out the field data collection between June 23 and July 18, 2018 with the back-up team carrying out quality control, backing-up of collected data, and providing assistance. The LTS and UoE team remain in contact with the field teams remotely via WhatsApp. Data collection is progressing well, with the field teams focussing now on the rarer activities resulting in change (e.g. large-scale agriculture, mining).



*Figure 3 Loss of woody biomass in woodlands is often progressive, the result of multiple consecutive activities. This causes difficulties in separation of deforestation and degradation, and in attribution of losses to individual activities.*

- The larger (and rarer) events are readily identified in high resolution satellite imagery, and where gaps exist in the datasets these will be supplemented with events identified with Collect Earth. The workshop attendees opted to not record locations of selective logging due to the time required to record useful data. Instead logging concession data provided by the forest department will be used.

### **Mozambique:**

- The composition of field teams has been reviewed by the WG members to include more staff from provincial forestry administration. Teams will be led by staff from DINAF and FNDS.
- For the time being, the dates for the field work campaign remain set to July 15 - August 15, 2018, however, preparations have not proceeded as quickly as in Zambia and a slight postponement looks increasingly possible.
- WG members requested that LTS provides a draft data collection protocol to be able to assess effort and time requirements for the field work campaign.

### **Issues and potential bottlenecks:**

- 2.3** Previously reported uncertainties around procurement for field work equipment in Zambia have been resolved. While field work supplies have been provided from the World Bank office in Zambia from existing workshop stocks, the technical equipment, such as GPS receivers and laptops have been made available by the WG partners, mainly the Zambia FD. The same approach will have to be applied for the field work in Mozambique.

Ongoing fieldwork is difficult to monitor for quality control purposes from a distance. Whilst we have confidence the field teams are working well, rapid return of data and experiences will be extremely valuable to ensure that relevant lessons can be learned for Mozambique.

