

The TREES-3 project of the European Commission's Joint Research Centre (JRC) aims at producing estimates on tree cover change over the tropics for the years 1990-2000-2005 derived from high resolution Landsat-type satellite imagery. The method is based on a systematic sampling approach where at each intersection of the 1 degree lines of latitude and longitude a sample will be located. The standard sample size is taken as 20*20 km around each intersection of the 1 degree lines of latitude and longitude (see figure below for the West Africa window).

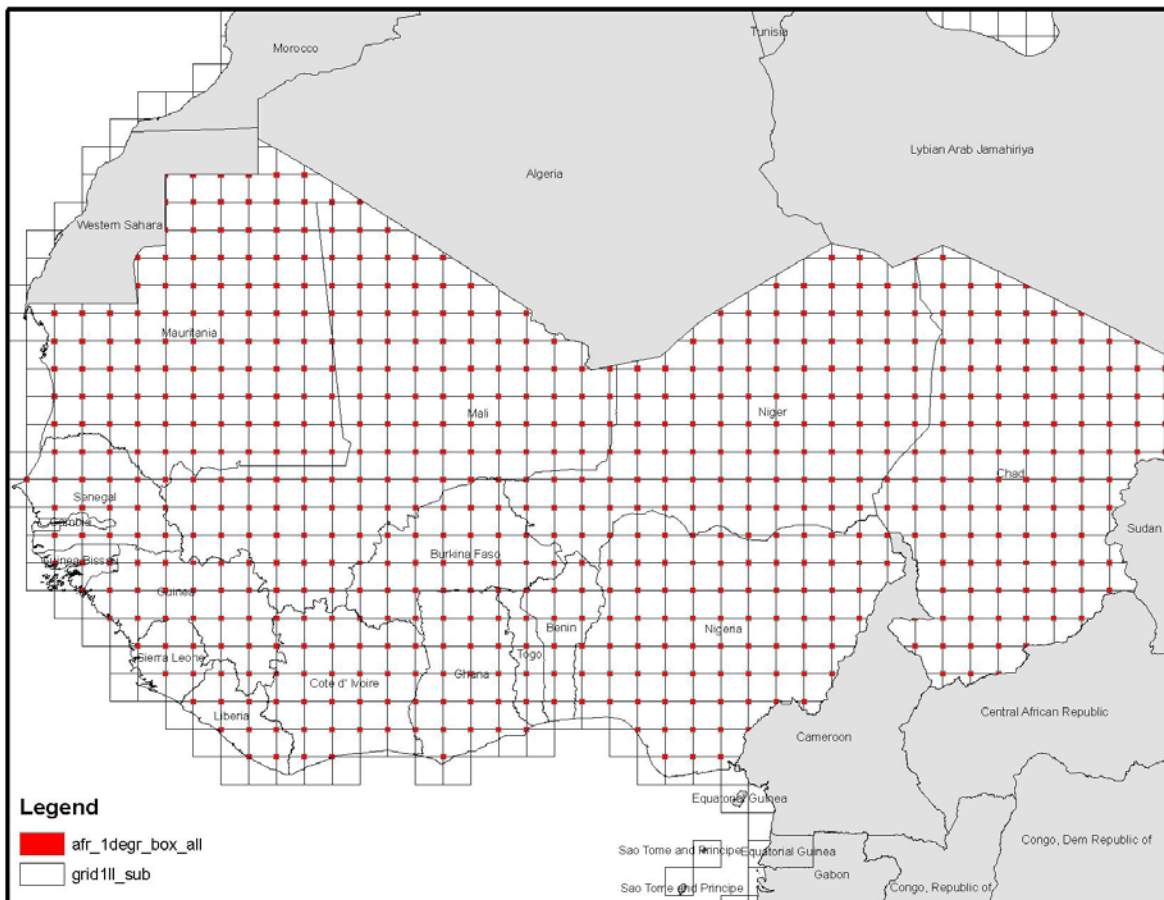


Figure 1: The West Africa region overlaid with the 1*1 degree lat lon grid and the 20*20 km samples

This work is done in the framework of the Remote Sensing Survey (RSS) of the Forest Resource Assessment 2010 (FRA-2010) initiative of FAO.

The TREES-3 project developed a consistent methodology across the tropics, including the following processing steps:

- Satellite imagery data selection and screening
- Data pre-processing

- Image segmentation using a 5 ha Minimum Mapping Unit
- Semi automated labeling of segments into land cover classes
- **Visual validation of pre-labeled land cover by regional experts**
- Production of estimates of tree cover change at regional scale (West Africa, ...)
- Land cover results are made available to FAO and its national partners for further elaboration of land use change estimates.

The FAO will use the validated land cover results produced by JRC with its regional partners to produce land-use information on reduced-size boxes of 10 km X 10 km with its network of national partners. The regional partners can also contribute as national partners for the land use task coordinated by FAO responsibility.

In the JRC processing steps the visual validation of pre-labeled land cover by regional experts is of utmost importance to obtain accurate and reliable results. For the West Africa region about 500 sample sites will be processed and will need to be validated by regional experts. For this task a dedicated and user friendly interface tool has been developed by JRC to allow the operator to quickly screen the images together with the corresponding pre-labeled maps and to correct them as appropriate.

For this purpose the JRC TREES-3 group will organize a regional workshop in late 2009 / beginning 2010 (in a West African country still to be defined or at JRC in Italy) where a selected number of remote sensing and forestry/land cover experts will be invited to validate the pre-labeled land cover classes together with the JRC and FAO team. The invited experts will benefit from technical expertise through their participation in the FAO FRA-2010 global Remote Sensing Survey for which the JRC TREES project is responsible of the first step of land cover assessment. Expenses for the participation to the land cover workshops (flight ticket, accommodation and daily allowances) will be covered by JRC.