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Development of an innovative data visualisation/sharing platform on forest cover loss in Uganda and development of SDSS for forest department in Bhutan



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ProMS Platform Highlights (Uganda example)

- The piloted visualisation platform allows assessing rate of forest loss and its causes
- Recent spatial data including multispectral satellite images (Sentinel-2),
 Forest and woodland, Protected areas, Forest loss, Population density,
 Roads, Waterbodies, District, Region and Country boundaries are
 currently displayed on the platform
- Forest loss data can be updated through cloud-computing with regular intervals
- Mobile application allows offline map navigation to the verification sites and recording field notes, photos and attaching documents in field
- Web interface supports allocating field sample plots and sharing their locations by e-mail, generating maps, monitoring field data collection progress and verifying the field collected information with background satellite imagery, among other things

Mapping effort: Recent forest cover loss 2017-2019

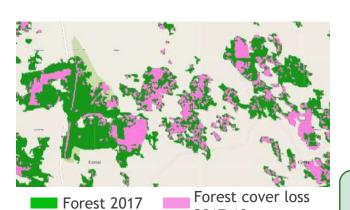
- Sentinel-2 dry-season images from Dec 2017 and Dec 2019 (optical data)
- Sentinel-1 radar images of the same months

Reference forest/woodland cover 2017 (source: NFA)

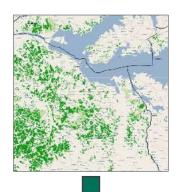
Manually digitized example areas of forest loss and no-change







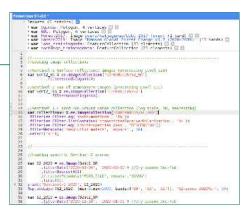
2017-19



Automatic image processing in **Google Earth Engine**

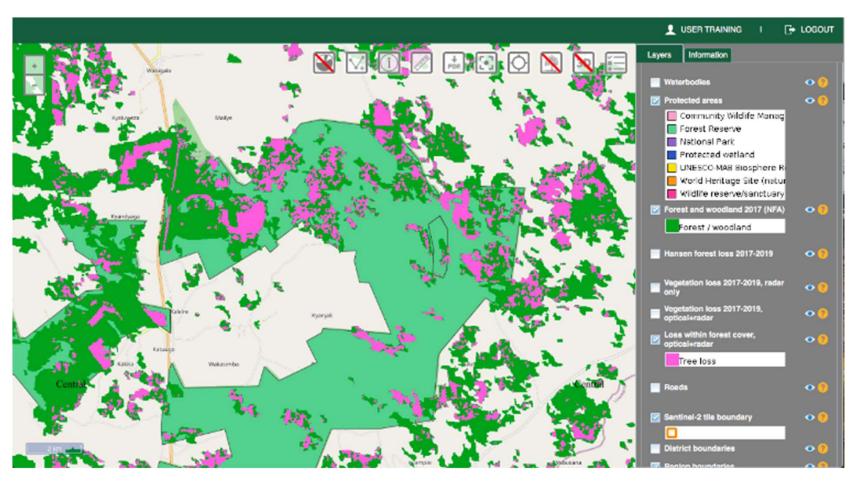
Forest cover loss within the reference forest cover





Data integration on the platform (web & mobile interface)

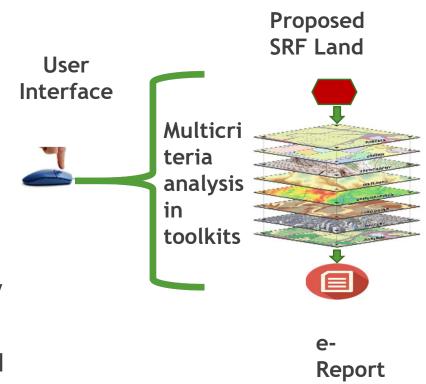
- Configuration of the compiled background reference maps on the platform via WMS service (GeoServer, PostGIS database)
- Upload and configuration of the created forest cover loss map



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SDSS Highlights (Bhutan example)

- Collect and store the key DoFPS data sets related to Forestry Clearance process in a centralized database
- Share data within the DoFPS for different levels through Portal
- Support DoFPS in issuance of Forestry Clearance
 - GIS based system to facilitate informed, unbiased and expeditious decisions on Forestry Clearance
 - Provide rapid appraisal of project proposal and deliver result of analysis in a few minutes
 - Access to the system to all Functional divisions,
 Territorial divisions and Protected Areas



with

Map