EO services contributing to SDGs

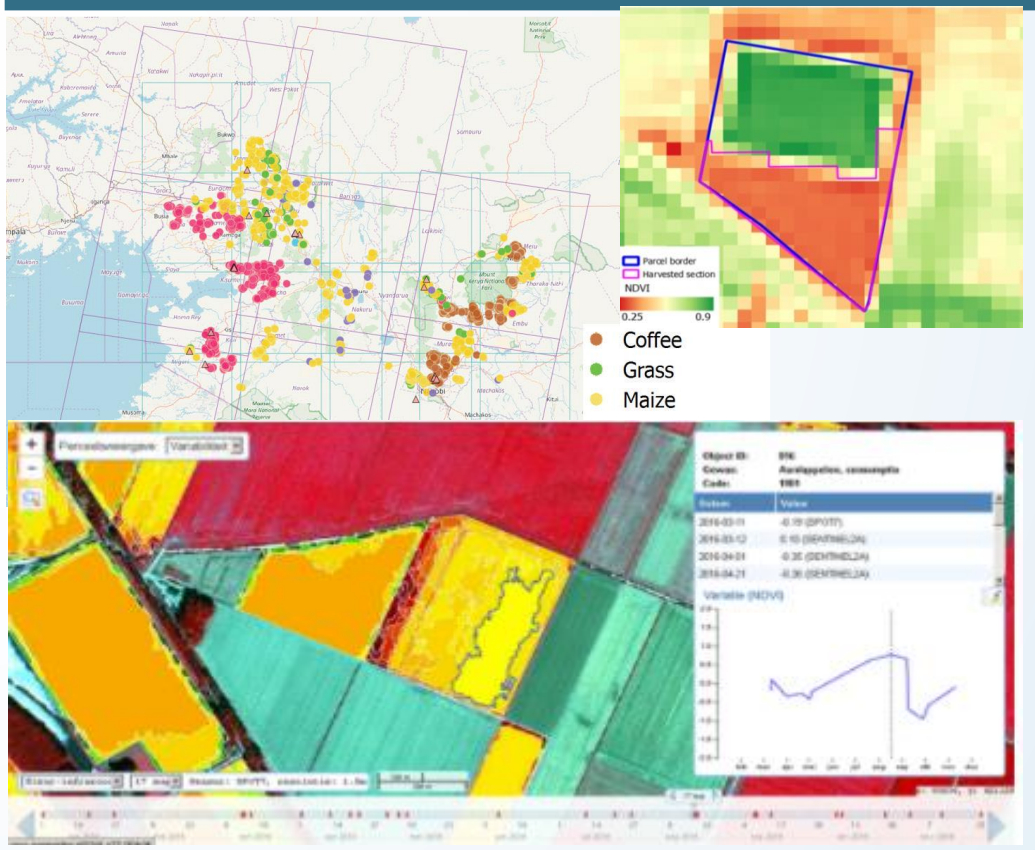
Crop Monitoring for Food Security

- User: smallholder farmers in SSA/Kenya, farm cooperatives, agricultural agencies, finance institutes/banks, providers of advisory services and agri inputs
- Challenge/Needs: Improving yield, input use efficiency and income of smallholder farms in SSA/Kenya by monitoring crop growth at plot level to detect anomalies and deficiencies, and combining satellite data with weather, soil and farm management data to provide timely crop and farm specific advise through SMS.
- Initiative: This development was part of a Public-Private Partnership funded by the Geodata for Agriculture and Water Facility (G4AW) of the Dutch Ministry of Foreign Affairs. The CROPMON project ran from 2015-2019. A new project is in development to continue the work started under the CROPMON project.
- Results: 1) Methods for deriving vegetation indices from satellite imagery and coupling them to specific crop development patterns for coffee, maize, wheat, sugarcane and grassland and 2) identifying under-performing plots. 3) Automatic workflows developed to provide real-time monitoring using a combination of different satellite platforms and sensors 4) Development of a web platform to visualise crop growth and development. 5) A total of 41,000 farms mapped, profiled and provided weekly with farm advisory services by SMS for up to 3 years.
- Impact: Recorded improvements of yield, input use efficiency and farm income ranging up to 40%. Direct reach 196,000 farm households. Estimated indirect reach in excess of 2 million farm households.

- Service Provider: NEO BV

NEO agriculture solutions:
https://g4aw.spaceoffice.nl/en/g4aw-projects/g4aw-projects/13/cropmon.html
https://www.neo.nl/crop-parcel-monitoring/
https://www.neo.nl/precision-agriculture/
https://www.neo.nl/crop-management/

Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.



Crop monitoring using satellite imagery