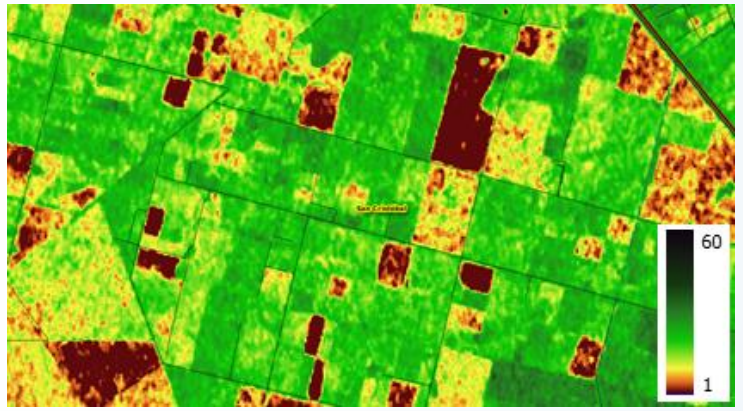
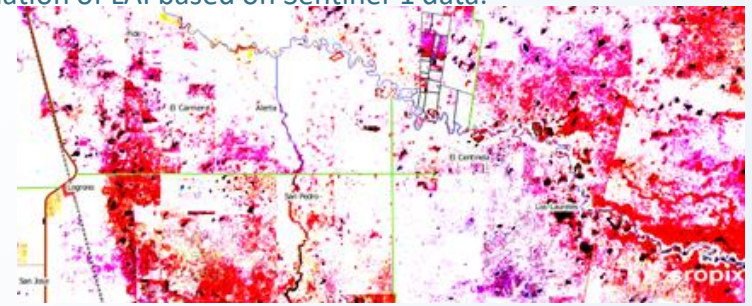
Crop monitoring based on Sentinel-1 SAR data

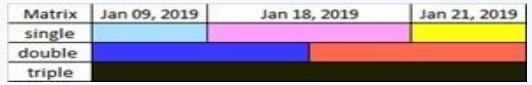
- User: Local authorities / NGOs
- Needs: Gapless time-series data with high spatial and temporal resolution for crop monitoring, change detection and yield estimation.
- Challenge: Implementation of early warning in case of hazards and loss estimation on broad scale to mitigate food shortages.
- Initiative: Use reliable Sentinel-1 data and derive different indices to monitor anomalies in crop growth, biomass development, drought condition and leaf area index (LAI) for yield approximation.
- Results: Permanent crop monitoring and change detection seasonal and perennial (baseline). Yield forecast based on LAI. Support for insurance schemes and disaster management.
- Service Provider: cropix

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.



Approximation of LAI based on Sentinel-1 data.





Flooding event: extent and duration

https://cropix.ch/imap-en/