Evapotranspiration

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transpiration processes, including microclimate, plant biophysics for site specific species and landscape heterogeneity, making accurate assessment of ET a challenge.

Frequency / timeliness

Frequency: daily

Timeliness: near real-time

Delivery / output format

Data type: raster

File format: GeoTIFF

Accessibility

Products derived from MODIS satellite data are freely accessible (https://lpdaac.usgs.gov/products/mod16a2v006/). Data for Africa can be accessed through an FAO data portal (https://wapor.apps.fao.org/catalog/WAPOR_2/1).

CHALLENGES ADDRESSED - USE CASE(S)

Product development:

- Index insurance: Toolbox for indices
- Index insurance: Relation between weather events and impact on crop productivity
 Index insurance: Functionalities of plants, chemical reactions, early stress detection
- Index insurance: Platform for crop health products
- Information on crop rotation
- Risk exposure (product design and customer communication)
- Study relations between climatological events and crop production proxies at large scale

Product Sales:

- Pre-contractual consulting (show-case risk exposure)
 Greater acceptance of index covers by farmers
- Regular market penetration review Risk alerts

Underwriting:

- Seasonal portfolio monitoring
- Online platforms or easy-to-use interfaces integrating various data sources (e.g. vegetation stress, field boundary changes, comparison, etc.)
 Actual crop health (vegetation)
- Procure better reinsurance terms/capacity from enhanced insurance practice Identification of productive units
- Identification of vegetation stages (identify most sensitive stages when crop is the most vulnerable to a risk, e.g. flowering stage)
- Crop calendar and crop practices

Loss Adjustment:

- · Benchmark physical field observations against yield loss detection (e.g. product calibration)
- · Risk mapping against crop's vegetation stages Increase credibility of loss adjustment (e.g. show EO data/visualization to support loss adjustment communication to farmer)
 Enhance field survey (better precision with EO data support)
- Detect crop damage at field level
- Assess crop damage at field level
 Distinct field heterogeneity with crop damage

Claims handling:

· Quality control assessment of claims before pay-out