GMFS
Global Monitoring for Food Security

Satellite data support service for existing early warning systems

http://www.gmfs.info

Global Monitoring for Food Security

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Consortium: Vito, Sarmap, EFTAS, Ulg, ITA, FCS, GIM, AVIA-GIS, Trasys, Esys, Microsoft, EARS,

Strategy Group: FAO, WFP, JRC, FEWS

User Board: FAO, WFP, JRC, SADC-RRSU, AGRHYMET, RCMRD

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Policy drivers

- Support European policy on food aid and development
- Support international & global agreements such as WFS, WSSD, MDGs

Users

- 30+ user organizations & networks
- Annually renewed agreements with legally mandated organizations (SLA's)

Examples:

MoA Malawi, FMoA Sudan, CSA Ethiopia, FAO, WFP, JRC, MINAG Mozambique, CSE & DAPS Senegal, AGRHYMET, SADC, RCMRD, ….)

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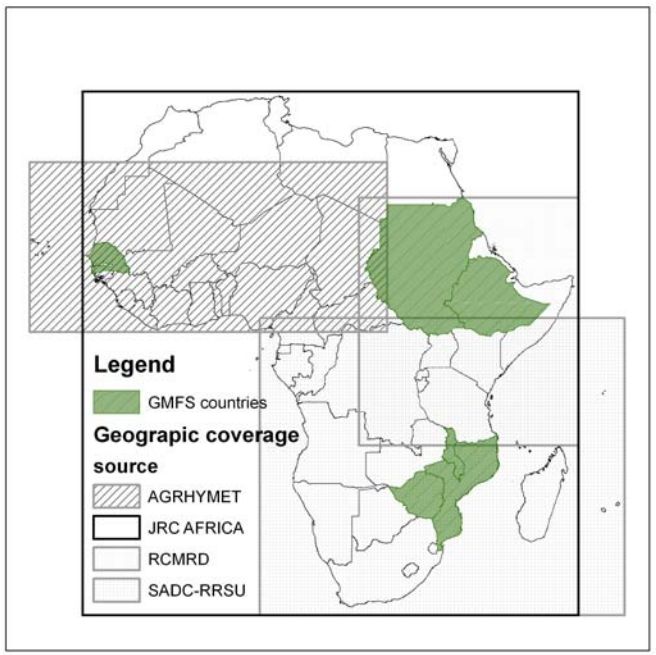
Service portfolio

GMFS provides four information services:

- Early Warning service (continental)
- Agricultural mapping service (national)
- Yield assessment service (national)
- EO based support to FAO/WFP CFSAMs

+ Support to Users: training, capacity blding ...



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Early Warning Service

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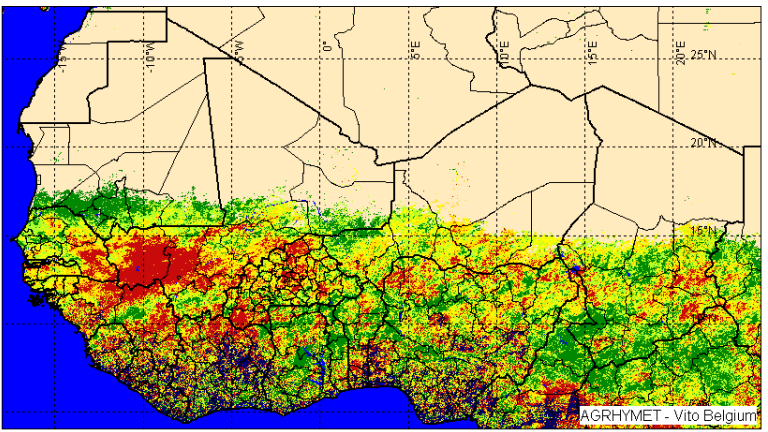
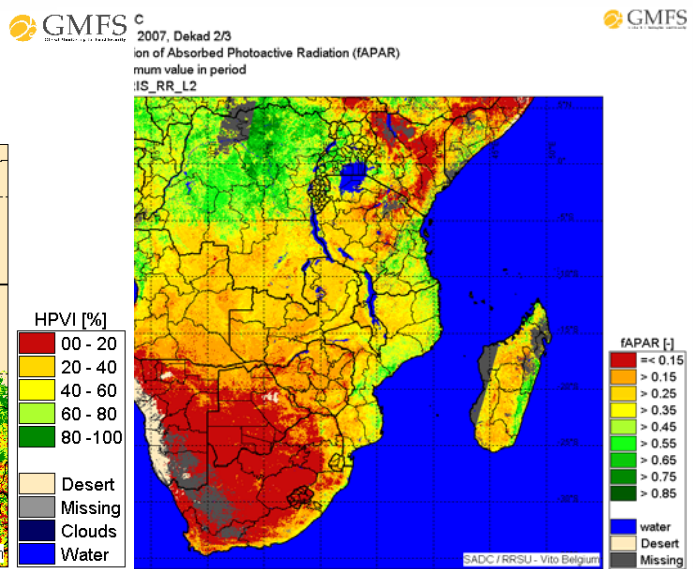
Low resolution 1km, 10-day indicators

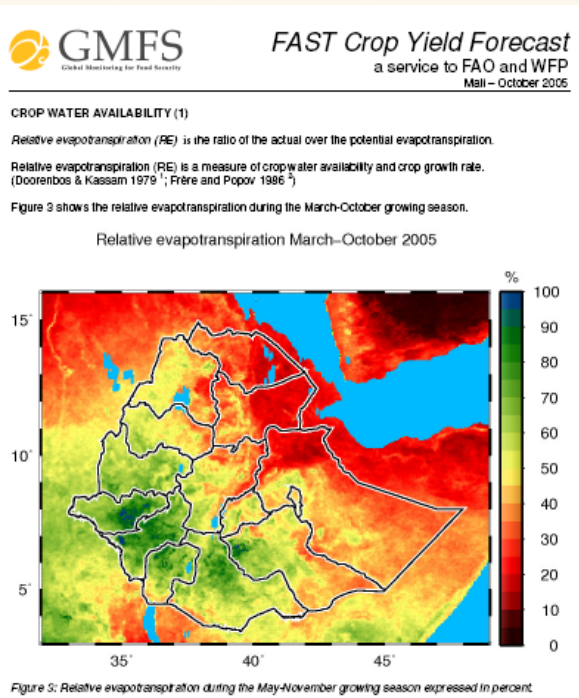
- Vegetation Productivity Indicator (SPOT-VGT)
- Dry Matter Productivity (MERIS)
- FAPAR (MERIS)
- MSG based indicators

=> Delivery via FTP and satcom (ESA/DDS & EUMETCast)

Region: CILSS
Period: June, 2007, Dekad 3/3
Theme: Normalized Difference Vegetation Index (NDVI)
Historical Probability VI (HPVI = VPI)
Source: SPOT-VEGETATION







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Agricultural Mapping

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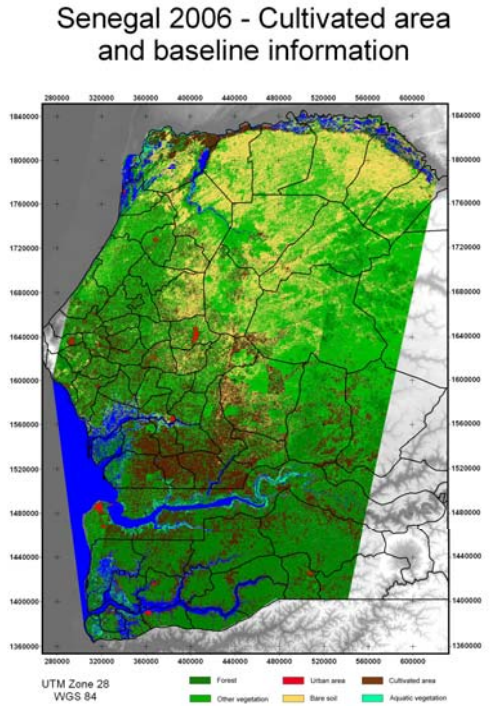
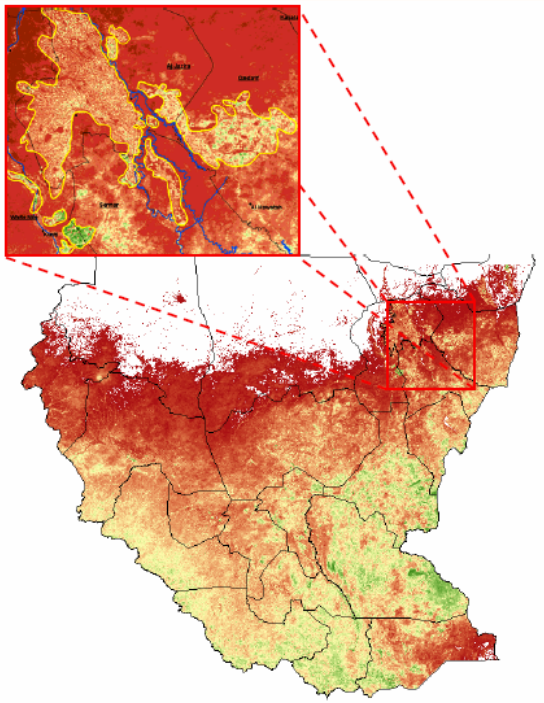
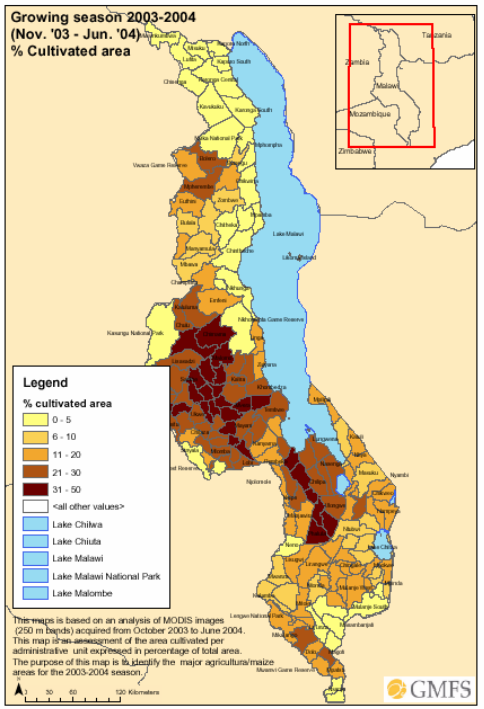
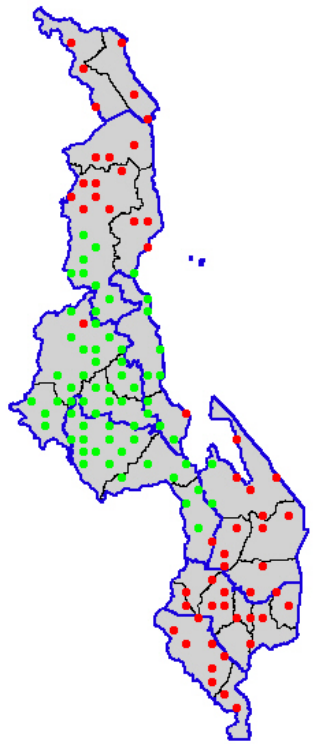
Seasonal Mapping (20-300m)

- Malawi, Zimbabwe, Ethiopia, Sudan, Senegal
- Extent of Cultivation (MERIS-FR)
- Sub-national non-specific crop area (ASAR, SPOT, Landsat, AWiFS, ...)









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Yield Forecasting

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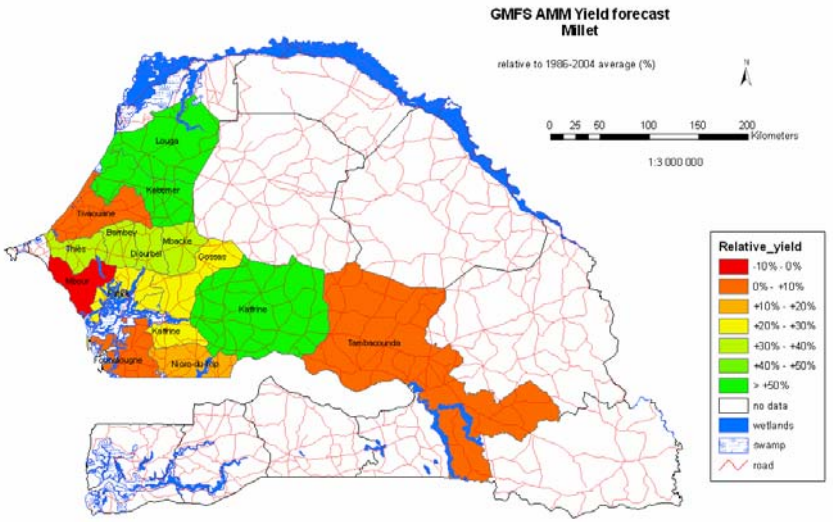
Crop Yield Forecasting

- Malawi, Senegal
- Integrated with existing local agromet modelling capacity
- Multiple regression based on EO + Meteo driven AgroMetShell, trained on past yields.



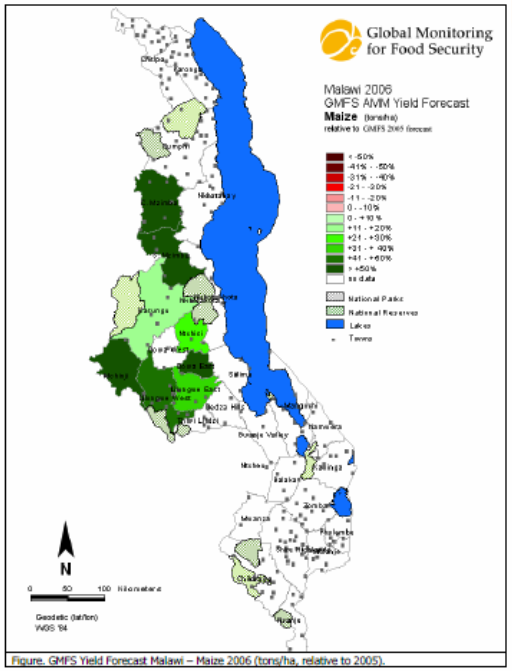


Figure. GMFS Yield Forecast Malawi – Maize 2006 (tons/ha, relative to 2005).

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CFSAMs

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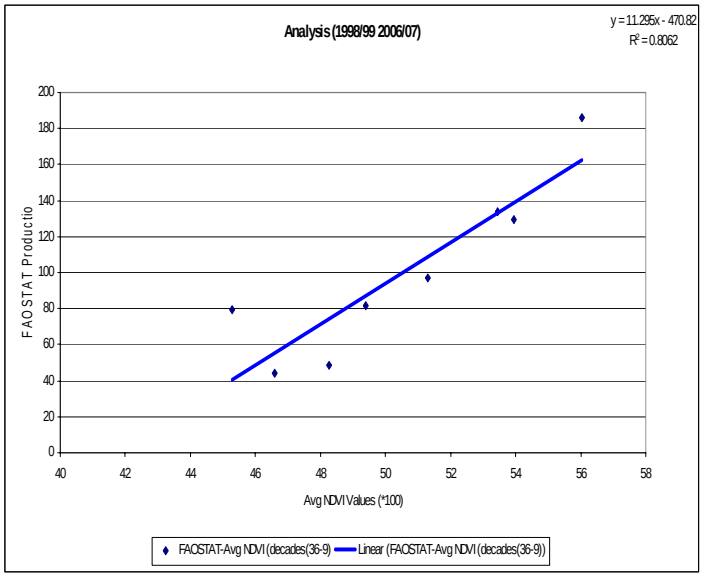
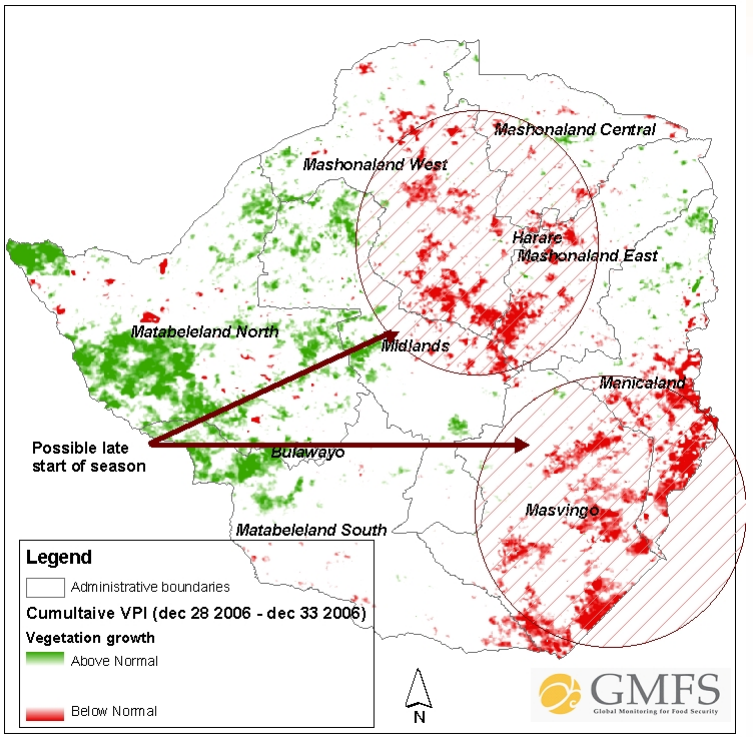
EO based support to CFSAMs

- Ad-hoc rapid support
- Assist both planning and post-mission assessment
- 24 crop yield forecast bulletins supplied to FAO/WFP since 2006





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User Support

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Support, Training and Capacity Building

- GMFS staff located at SADC-RRSU, RCMRD, CSE
- GeoNetwork set up at AGRHYMET, SADC, RCMRD
- ESA/DDS installed at AGRHYMET, RCMRD, CSE
- On-site training in EO and field survey techniques
- Efforts to work directly with African users to integrate EO services into their decision making

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