GEOGLAM
Global Agricultural Monitoring

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44. We commit to **improve market information and transparency** in order to make international markets for agricultural commodities more effective. To that end, we launched:

- The *"Agricultural Market Information System" (AMIS)* in Rome on September 15, 2011, to improve information on markets...
- The *"Global Agricultural Geo-monitoring Initiative" (GEOGLAM)* in Geneva on September 22-23, 2011. This initiative will coordinate satellite monitoring observation systems in different regions of the world in order to enhance crop production projections...

June 2016:

1. GEOGLAM re-endorsed (G20 meeting, Hangzhou)
2. GEOGLAM, member of the AMIS Secretariat (Rome)
GEOGLAM Structure & Governance

GEOGLAM Advisory Committee
Including G20 Donor representation, program stakeholders

Program Coordinator
+ Secretariat

Implementation Committee
consisting of Implementation Team leads

1. Global / Regional Monitoring Systems
   International/Global

2. National Monitoring Systems
   National / Subnational

3. Monitoring Countries at Risk
   Food Insecure & Most Vulnerable

4. EO Data Acquisition & Dissemination Coordination

5. Research & Development toward Operations

6. Capacity Development for EO-based Monitoring
GEOGLAM Component #1
Global Agricultural Monitoring
Monitoring of Winter-Spring rice

Rice monitoring using Sentinel-1A data

The Mekong Delta, Vietnam
300 km x 300 km
20 m resolution

100 km x 70 km, 20 m resolution

Rice: early stage
Rice: tillering stage
Rice: reproductive stage
Rice: maturity stage
Non rice (forest, other LULC)
Water (ocean, river, aquaculture)
Land outside the Vietnam Mekong delta
GEOGLAM Component #1
Global Agricultural Monitoring
RAPP
Rangelands and Pasture Productivity
The GEOGLAM Rangelands / Pasture lands task

• establish a dedicated global system for observing pastures and rangeland status, biomass dynamics and productivity
  – an improved capacity to manage risk and improve production of animal protein at a range of scales due to a better understanding of the trends in biomass and its use for protein production.
  – the capacity to more effectively manage variability in production due to more timely and accurate national and regional agricultural statistical reporting and early warning of meat production shortfalls.
  – more effective planning based on accurate forecasts of pasture and rangelands productivity variability.
  – improved global understanding of risk across all landscapes as climate and land use change through the addition of these lands into global agricultural monitoring.
RAPP Product

- Vegetation Cover Anomaly (*Rangeland-Pastures*)
  produced monthly & published on RAPP website & twitter account
  

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**Vegetation Cover Anomaly [%]**

Difference between vegetation cover (*) in January 2016 and the mean vegetation cover for January in 2000-2015

* Vegetation cover includes the photosynthetic and non-photosynthetic fractions
gray areas are not rangeland/pastures or have no data

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GEOGLAM Component #3
Countries at risk
First Early Warning Crop Monitor, Feb. 2016

Consensus Map highlighting the poor conditions in Southern Africa for Maize

1 new condition

3 more drivers
Severe drought, associated with one of the strongest El Niño events in the past 50 years, continues to cause widespread damage to crops across the region, raising significant concerns. As a result of dry and hot conditions, it is expected that regional production of major food crops (maize and sorghum) will be critically down. Planted area is significantly reduced, with very poor conditions, and even crop failure, experienced over broad areas. Crops are now largely in late reproductive to grain filling stages, the most sensitive period for crop development, and thus the window of opportunity for recovery of conditions is coming quickly to a close. Conditions continued to deteriorate in February over most areas in the southern half of the region. Seasonal forecasts indicate that the hot and dry conditions will continue through the rest of the season. Maize production forecasts for South Africa, usually an important regional exporter, are projected to be approximately 35% below average. This is the second consecutive poor season in the region. There is serious concern that many countries will need humanitarian assistance, including Zimbabwe, Malawi, Mozambique, Lesotho, Swaziland, Madagascar, and Angola. Significant imports from outside the region will be needed in 2016-2017.

Overall crop conditions in Southeast Asia are mixed as a result of El Niño, which is affecting broad areas across the region and is causing delayed rains and dry conditions. Negative impacts are most notable in Thailand where conditions are poor across the country. The dry season rice is the main crop currently in season in the region with the exception of Indonesia, where the wet season (main crop) is currently growing. Planted area in Thailand and the Philippines has decreased due to insufficient water, and concerns over dry conditions and delayed rains are mounting over the main growing regions in Indonesia.
Southern Africa:

The main season in southern Africa has come to a close, with poor conditions and crop failure throughout large parts of the region due to the severe drought attributed to ENSO. Late season precipitation was mostly too late to improve conditions, however the rainfall did help to replenish soil moisture and water supplies. Serious concerns remain, as humanitarian assistance needs continue to increase across the region due to the poor harvest, especially in the most food insecure areas of Zimbabwe, Malawi, and Mozambique. In South Africa, the main regional exporter, maize production is ca. 40% below the 5-year average, as a result of major yield decreases and large reductions in planted area. As this is the second consecutive season with significantly reduced production, this season’s failed harvests are increasing food security concerns in the region.

West Africa:

In West Africa, the season is off to a promising start throughout the region owing to good weather and sufficient moisture levels. Cumulative rainfall from early April to late May has been average to above average over most of the region. The minor rainfall deficits experienced over small portions of the region during this time period are not expected to affect crop development as rainfall distribution has been good.
83 Countries to be Covered by EWCM
GEOGLAM Achievements
Achievements
Global Crop Monitoring

- about 94% of world agricultural area...