

# **GEO Global Agricultural Monitoring Agriculture and Food Security**





### **GEOGLAM Mission**

The Group on Earth Observations Global Agricultural Monitoring Initiative (GEOGLAM), mission is to increase market transparency and improve food security by producing and disseminating relevant, timely, and actionable information on agricultural conditions and outlooks of production at national, regional, and global scales.

### **Crop Monitor for AMIS (Major Exporters)**



### **Supporting International Policy Drivers**

GEOGLAM seeks to support key international policy drivers associated with food security. The community is already collaborating with lead partners in international policy such as the UNFCCC, UNDRR, among others, to develop approaches to address climate change mitigation and adaptation as well as disaster risk reduction.





Monthly report focusses on primary commodity crops Integrated Earth observation, conflict, and climate outlooks •40+ institutions contribute, and the result represents a consensus on global conditions

### **Crop Monitor for Early Warning (CM4EW)**



## **UNFCCC** National Adaptation Plans - Technical Guidelines

The GEO supplemental guidance in support of National Adaptation Planning (NAP), shares practical resources, tools and best practices to help countries leverage the capabilities of Earth Observations in their adaptation efforts.

- Climate change, increased disaster risk and unsustainable practices have huge implications on food security
- Climate change is a significant 'hunger-risk multiplier' and fundamental threat to local and global food security, especially in low- and middle-income countries
- National Adaptation Plans (NAPs) provide a means for countries to formulate and implement adaptation options in all national development sectors, key among them, agriculture



GEO GROUP ON EARTH OBSERVATIONS

Integrating Earth Observations into the Formulation and Implementation of National Adaptation Plans: Agriculture and Food Security

GEO Supplement to the UNFCCC NAP Technical Guidelines



Pasture Conditions

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# **Impact Examples**

**Crop Monitor for Food Security:** Uganda

Uganda Crop Monitor August 2017

East Africa & Yemen: End-of-Season Maize Map

- Launched in 2016, based on successes and experiences of the crop monitor for AMIS, partners include major international and national food security organizations
- •Monthly Global monitor that addresses countries that are most at risk of food insecurity
- Provides transparent, multi-sourced consensus assessments of crop growing conditions status likely to impact crop production

### **National and Regional Crop Monitors**



- End-user Driven, National ownership, integrated into existing systems to meet national needs Enhancing regional and global information
- Standardized global approach for crop condition monitoring

- In 2016, GEOGLAM worked with the Office of the Prime Minister in Uganda to develop their national crop monitoring system
- In 2017 the crop monitor provided 3 months early warning of a likely crop failure due to drought, allowing the government enough time to proactively mitigate against the expected loss and damage
- This monitoring triggered the Disaster Risk Financing (DRF) fund to scale-up public works projects in Karamoja, off-setting agricultural losses

### **Monitoring Conflict Areas: Ukraine**

#### **Coordinated Crop Monitoring For the Ministry** of Agriculture

- Planting and Harvest progress- Extent, timing and location
- Crop Type/Crop Area (winter and summer crops)
- Near-Real-Time Crop Condition
- Field Boundary Delineation
- Yield Assessment and Forecasting



**Monitoring Climate Impact:** 

### **Crop Monitor Coverage**



# **Mekong Delta**

El Nino usually results in severe drought in the Mekong Basin causing increased salt-water intrusion into rice growing regions

GEOGLAM-GEORICE related research was able to identify a decrease in Winter-Spring rice harvested compared to previous years

Building on this success, Vietnam National Space Agency launched the Mekong River Basin Rice Monitoring Initiative, for operational monitoring (Cambodia, Laos, Thailand and Vietnam)



**GLOBAL AGRICULTURAL MONITORING** 





