G20 Global Agriculture Monitoring Initiative

GEOGLAM

UPDATE: GEOGLAM Revision, The Next 5 Years
GEOGLAM Origins: The G20 Policy Mandate

In 2011 the G20 launched GEOGLAM as part of the action plan to reduce market volatility by improving information on crop conditions using Earth observations. The mandate has since expanded to address early warning for food insecure regions.
Monitoring the Major Crop Producers

Using Earth observations, and regional expertise GEOGLAM produces a monthly crop monitor for the Agricultural market Information System (AMIS).

GEOGLAM Monthly Crop Monitor for AMIS

September, 2018
Beyond the major commodity crops, GEOGLAM monitors regionally important food crops monthly to provide early warning in regions susceptible to food insecurity.
The G20 Endorsed GEOGLAM and AMIS:
• On July 28th the G20 Agriculture Ministers agreed to continue support for GEOGLAM
• They recognized the Key contributions our community makes to market and food security

The G20 Declaration, Also of Note:
• Fully embraced the Paris Accord and a commitment to support developing nations (US excluded)
• Fully embraced the UN 2030 Agenda and SDG’s
• Asked MACS to give science contributions to improving risk assessments and management tools

The 2019 G20 Will be Hosted by Japan

“We undertake to continue support for GEOGLAM’s activities on enhancing national and global agricultural monitoring using earth observations. We recognize this as amongst the key mechanisms to promote transparent markets and food security”
Evolving Priorities-SDG’s, Paris and Sendai:

GEOGLAM Monitors Variables that are Fundamental to Understanding State and Change in the Agricultural Landscape
GEOGLAM Support for the UN 2030 Sustainable Development Goals

Mapping GEOGLAM to the SDG’s

GEOGLAM is already contributing to SDG outcomes through:

• Timely
• Accurate
• Synoptic
• Repeatable
• Easy to understand
• Actionable information

An Example:

• Since 2013 GEOGLAM has delivered information to AMIS, helping to limit extreme food price volatility, directly contributing to target 2.c
Mapping GEOGLAM to the Paris Accord

The 5 Pillars
- Adaptation
- Loss and Damage
- Capacity Development
- National Reporting
- Mitigation

GEOGLAM is Already Supporting
- Tracking Agricultural Land Use State and Change; Impact of Climate on Ag Production; Developing national Capacity

Example
- Crop mapping provides insight into how the agricultural landscape is adapting to climate change

GEOGLAM Support for the Paris Climate Accord
Tracking crop condition
- Near real time information informs proactive response to loss and damage

Early warning
- Monitoring impacts on crop growth are resulting in proactive program response, saving millions of dollars while improving quality of life

Example:
- Uganda used the crop monitor to provide policymakers a head start on an emerging drought, saving millions and helping up to 150,000 people

“In the past we always reacted to crop failure, spending billions of shillings to provide food aid in the region. 2017 was the first time we acted proactively because we had clear evidence from satellite data very early in the season”
Martin Owor, Commissioner Office of the Prime Minister (OPM)
GEOGLAM Priorities, Responding to New Policy Drivers

• Establish more quantitative metrics around essential agriculture variables related to crop production
  – To support our current priorities (G20 and Early Warning) and new policy drivers (SDG’s, Climate and Disasters)

• Move beyond within season crop condition to monitoring the changes in agricultural land use and production over multiple time frames (e.g. Annual, Inter-Annual, Decadal)

• Strengthen the transition from Research to Operations for crop monitoring at the national level

• Working with CEOS promote international virtual constellations of observing systems, identify current observation and information gaps and define analysis ready and application ready data needs

• Develop an action plan for data management and analytics (cloud/cube)

• Develop a Knowledge Management System (KMS) to hold contributory project results
  – tools, best practices, information products, etc.
Responding to Evolving Policy Drivers

How are we responding: 2018 All About Understanding GEOGLAM Needs and the Way Forward

• Increased Engagement within Community, Expanded Executive Committee
• Documenting GEOGLAM/CEOS Requirements, April JRC
• Action Plan for Computing Infrastructure and Knowledge Management, Sanya August
• Broadening the CEOS Relationship – ARD, ARD+, Computing Infrastructure, and Product Validation, September JRC
• Developing the GEOGLAM Research Agenda
Actions to Implement the New GEOGLAM Vision

• Renew GEOGLAM Data Requirements for CEOS and Expand to Include Infrastructure Needs

• Redesign the GEOGLAM Website and Create a GEOGLAM Knowledge Hub*
  – Develop Best Practice Documents
  – Retain, Manage and Disseminate GEOGLAM community intellectual property
  – Starting point for institutions interested in operational agricultural monitoring

• Develop a Federated Approach to Analytical Infrastructures for GEOGLAM*

• Develop a “Essential Agricultural Variables” for GEOGLAM*

• Develop A Community Research and Development Agenda for GEOGLAM*

*Will be discussed in more detail on Wednesday
Impact of New Activities on GEOGLAM R&D Community

• Develop A Community Research and Development Agenda for GEOGLAM
  – Operational R and D
  – Identify and clarify GEOGLAM research priorities
  – Support Funders by providing a priori assessment of our research needs
  – Support Research teams (they have a GEOGLAM document to reference when going for competitive research funds)
    – Better understanding of how R&D fits into the big picture of operational monitoring systems

• Develop Best Practice Documents
  – Crop Mapping (state and change)
  – Crop condition
  – Yield Forecasting
  – Agricultural management practices