GEOGLAM Crop Monitor
Adapting a global process to meet national need

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GEOGLAM: The GEO Global Agricultural Monitoring Initiative
(Adopted alongside AMIS by G20 under French Presidency 2011)

Vision:
Strengthen international community’s capacity to provide actionable, science-driven, open, information at sub-national to global scales, in support of policies, investments and decisions, in food security, & ag. Markets

• Through use of coordinated Earth Observations (EO)
• Building on existing systems

G20 Final Declaration

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" (GEO-GLAM) 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 and weather forecasting data.

impelementation of the concrete initiatives of the 2011 G20 Action Plan on Food Price Volatility and Agriculture in dedicated forums: Agricultural Market Information System (AMIS) and the Rapid Response Forum, GEO Global Agricultural Monitoring Initiative (GEOGLAM) for market and production international monitoring, and risk management tools, such as the Platform for
EO Data Coordination
- Acquisition
- Access
- Continuity

Operational R&D
- Method Development & Improvement

Research-to-Operations
- Capacity Development for EO

Strengthened Monitoring Systems
- National • Regional • Global

Science-Based Information
- Decision • Policy • Action

Outlooks for Markets & Trade

National & International Food Policy

Agricultural Subsidies

Farm Advisory & Extension

Sustainable Development Goals

Vulnerability & Impact Assessments

Support to Food Aid Organizations

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The GEOGLAM Operational Components

1. Global / Regional Monitoring Systems
   International/Global

2. National Monitoring Systems
   National / Subnational

3. Monitoring Countries at Risk
   Food Insecure and Most Vulnerable

4. EO Data Acquisition & Dissemination Coordination

5. Research & Development toward Operations

6. Capacity Development for EO
AMIS: Agricultural Market Information System

Improve market information and transparency

inter-Agency Platform to enhance food market transparency and encourage coordination of policy action in response to market uncertainty

www.amis-outlook.org
Launch of Global Operational Crop Assessments: AMIS Request to GEOGLAM

• Provision of timely and transparent monthly crop condition assessments in primary agricultural production areas
• Reflecting an international consensus, building on existing systems
• Four Major Crops: Wheat, maize, soybean, rice
• Focus: main production/export countries (AMIS Countries), stabilizing/calming markets, avoid unexpected food price shocks
• Output: Crop Monitor, published in Market Monitor
Focus on primary production and export countries
Close to 40 contributing organizations

• First time the international community comes together to produce operational crop assessments
• Bridging the gap between the EO, Policy and Economics communities
In 2017 there were 138 contributors from 62 organizations in 28 countries and 16 inter-governmental organizations actively participating in the GEOGLAM community.
Crop condition and driver map synthesizing information for all four AMIS crops. Crops that are in other than favorable conditions are displayed on the map with their crop symbol. (Cropland area shown is an aggregation of all cropland areas)
Crop Monitor for Early Warning

- Grew out of the success of the AMIS Crop Monitor
- Recognition even more pressing need for enhanced, reliable, vetted information on crop conditions within countries at risk
- Response to the Early Warning Community’s request
Objective and Partners

• Exchange information, build consensus and reduce uncertainty in countries most vulnerable to food insecurity, to strengthen agricultural decision making

• Monthly publication, first bulletin published Feb 2016
  • Building on AMIS CM bulletin
  • 14 crops: main food security crops for each region

• Strong focus on continued expansion to regional networks, and national partners

Quality of the product depends on the inputs and commitment of the contributors
Countries Covered: AMIS vs. EW

Covering 94% of global agricultural lands
The reporting process is carried out globally every month on the web-based Crop Assessment Tool.
Crop Monitor for Early Warning Bulletin
www.cropmonitor.org

No. 27 – May 2018
www.cropmonitor.org

Crop Monitor
EARLY WARNING

Overview:
In West Africa, main season maize planting continues in the south and conditions are favourable. In northern East Africa, the long season is underway in Ethiopia and there is concern due to dry conditions in the north. In the south of the region, planting continues for main season crops and conditions are favorable with timely onset of rains and abundant rainfall in April. In the Middle East, winter wheat is mixed due to dry conditions and ongoing conflict. In North Africa, winter wheat conditions have improved from early season dryness and are favourable. In Southern Africa, main season maize harvest will finish in May and production prospects are mixed due to permanent damage from earlier season dryness. In Central and South Asia, dry conditions and reduced snowpack continue to impact winter and spring wheat crops and are expected to impact production. In Southeast Asia, dry season rice harvest is in high season and conditions are favourable. In Central America and the Caribbean, land preparations for the pre-rainy season are underway and planting will start next month.

Contents:
Conditions at a Glance ............................................................... 2
La Niña Update ........................................................................ 3
East Africa & Yemen .................................................................. 4
West Africa .............................................................................. 5
Middle East & North Africa .................................................. 6
Southern Africa ........................................................................ 7
Central & South Asia ............................................................... 8
Southwest Asia ......................................................................... 9
Central America & Caribbean ................................................ 9
Appendix – Terminology & Definitions .................................... 10
Already informing agricultural decisions

ARC, South Africa
There is urgent need for members states and development partners to determine the scale and extent of the possible impact of the prolonged dry spell on the agricultural season (crop and livestock) to inform appropriate response actions for food security and nutrition and build the resilience of vulnerable populations in the region. Recommended actions include increased monitoring of the situation, ascertaining available cereal stocks, fast-tracking of planned crop assessments and annual vulnerability assessments for early warning and early action and increasing off season production where possible.

Next Step: Develop Rapid Response mechanism for more detailed and frequent assessments
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Development of National Crop Monitors, Facilitating National Food Security Reports

The Inter-Ministerial/Agencies Monthly National Integrated Multi-Hazard Early Warning Bulletin, published by the Uganda Office of the Prime Minister

U-NIEWS DISTRIBUTION
- 7,000 people by Email (Ministers, MP’s, Ministries, technical offices...)
- 15 million phones; SMS
- 200 publications distributed to top leaders

Replicable and scalable over other countries

Uganda National Integrated Multi-Hazard Early Warning System (U-NIEWS)

ICPAC Regional Crop Monitor, launched May 2018

- Replicable and scalable at the regional scale

**EASTERN AFRICA CROP MONITOR BULLETIN**

- Overview
  - Eastern Africa has been experiencing average to above average favorable crop conditions.
  - Watch conditions prevailed in Rwanda, Burundi for rice, a season maize mostly due to water logging and flooding.
  - Poor conditions have been reported in Rwanda due to rains.
  - Prices of grain staples in the region were below the 5-year average. With inbound stocks from Tanzania expected to decrease towards the end of quarter-2 of 2018.

**Crop Conditions**

- **Drivers:**
  - Conditions
  - Drivers:
    - Cc
    - Ru
    - Bu
    - Nai
    - Eci
    - Kew
    - Ru
    - Trs
    - Ugg
    - Gl
    - Det
    - Pur

- **Overview Map**
  - Map showing crop conditions across Eastern Africa.
  - Colors indicate different crop conditions.

- **Analysis Sections**
  - Detailed analysis of crop conditions across different regions.
  - Maps and charts illustrating crop conditions.

- **Conclusion**
  - Summary of crop conditions and implications.

**Notes**

- IGAD Climate Prediction and Applications Centre (ICPAC) East Africa Crop Monitor
  - Launched in Djibouti May 2018
  - Published in The Greater Horn of Africa Climate Outlook Forum (GHACOF) Bulletin
  - 19 analysts trained and 11 national focal points
  - Strong regional support
National Crop Monitor for Vietnam

- National Crop Monitor for Vietnam coordinated with MARD and VNSC (in Vietnam & English lang. version)
- Bridging gap between earth observations, research, and policy communities nationally
  - Enhancing remote sensing capabilities within the Ministry to better inform national reporting
- Integration of products into a national monthly bulletin on crop condition (Vietnam & English lang.)
National Agricultural Monitoring: Inputs to Outputs

**RESEARCH**

- Satellite Based
- Meteo Based
- Field Based

**Decision support information system**

- Meteo Cond.
- Area
- Crop Growth
- Yield
- Food Security
- Ag Prod Trade

**OPERATIONS**

National Agriculture and Statistics Ministries

- Area outlook
- Agric. map
- Area estimate
- Monthly bulletin
- Early warning
- Yield forecast
- Prod estimate
- Vulnerab. report
- Int market report

Field Reports
GEOGLAM Lessons Learned in moving from Research to Operations

- Initial system Co-development/Partnership between Research and Agricultural Ministry

- Customize system for national situation (baseline data sets, cropland masks, cropping systems)

- Parallel Operation over several seasons to build confidence

- Eventual Operational Agency Ownership

- Continued System monitoring/improvement / enhancement by the Research partner (instrument calibration, new sensors, new techniques, additional data sets)
Adapting a global process to focus on national need

- Active participation by the Ministry and field staff
- Coordinated monthly telecon between the Ministry, Space Agency, and Field Representatives to discuss assessment and review discrepancies ➔ build national consensus crop conditions
- Publication of monthly bulletin integrating:
  - Crop condition, stage, area planted
  - Metrological information
  - Field data and extension information
  - Outlook and forecasting
- Moving from crop condition to more quantitative measurement of production
In Summary

- **GEOGLAM Crop Monitor** provides a public good: open, timely, science-driven, actionable information on crop conditions
- Proven effective & scalable mechanism for coordination of crop assessments
- First time the International and Early Warning communities have come together on a monthly basis
  - to produce joint assessments that reflect a consensus
- **End user driven** with strong community & high level support
  - Bridging the gap between the policy and EO communities
- Increasing communication and knowledge transfer amongst national, regional & international organizations
  - Thereby strengthening national monitoring systems
- Internationally recognized as a highly valuable source of information
  - Already informing decisions
Salamat!

www.cropmonitor.org

@GEOCropMonitor

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