



Agriculture Working Group: Stocktaking of G-20 Initiatives

GEO Global Agricultural Monitoring Initiative (GEOGLAM) Stocktaking Report 2023-India

January 27, 2023

Aim

To coordinate and strengthen the international community's capacity to generate, and utilize sustained Earth observations to enable timely and effective food security decision making

Objective

To increase market transparency and improve food security by producing and disseminating relevant, timely, and actionable information on agricultural conditions at national, regional, and global scales, to support markets and inform early warning for proactive response to emerging food emergencies

Progress Since 2021:

- Monthly production of the Crop Monitor for AMIS reports for major producing nations covering over 80% of global commodity crop production (Maize, Rice, Wheat, and Soybean). The reports were incorporated into the AMIS Market Monitor
- Monthly production of the Crop Monitor for Early Warning covering food crop production in food insecure regions of the world. The reports are produced in cooperation with international and national food security organizations
- Produced special reports on La Nina impacts and East African drought

New Activities 2021-23:

Enhanced Monitoring

- Produced seasonal climate forecasts for the crop monitors, including 2 -week rainfall anomaly, 30-day sub-seasonal rainfall anomaly forecasts, 3-month seasonal rainfall anomaly forecast, and detailed regional forecasts in regions of emerging concern due to climate conditions. The reports have enhanced and improved the GEOGLAM crop monitors.
- Produced new monthly synthesis maps that integrate the Crop Monitor for AMIS with the Crop Monitor for Early Warning to provide a snap-shot overview of global

conditions. Provides a better understanding of major production and food insecure region dynamics.

- Created a Ukraine Rapid Response Working Group to generate and vet EO based information products on crop area, crop production forecasts and harvest progress for occupied and unoccupied areas of the country. The information is provided to the Ukrainian Ministry of Agriculture to support logistics, programs, and policy development.

Capacity Development

- GEOGLAM has been working with the UNFCCC to support National Adaptation Planning in less developed countries.
 - Developed A National Adaptation Planning (NAP) Supplemental Guidance Document, launched at COP 27:
https://earthobservations.org/documents/cc_wg/GEO_NAP_Supplement_final.pdf
 - Hired a Capacity Development Coordinator with support from the United Kingdom (DEFRA-ODA)
 - Developed an internal Capacity Development Guidance document, which was launched during GEO Week 2022 in Ghana:
https://earthobservations.org/documents/geoglam/GEOGLAM_Capacity_Development_Guidance_v1.pdf
 - New requests for support were received from several countries after the 2022 NAP Expo in Botswana and COP 27. GEOGLAM is working on a strategy to scale up capacity development support

Essential Agricultural Variables

- Essential Agriculture Variables (EAVs) are a minimum set of variables required to characterize state and change in agricultural systems. The EAV approach reduces complexity, supports integrated analysis, and allows GEOGLAM information to serve multiple policy needs, including climate change, disaster risk reduction, and SDG's. Progress includes:
 - Completed the definition phase of the EAV development
 - Launched the EAV website (AgVariables.org)
 - EAV gaps assessment stage will launch in 2023 with an initial focus on UNFCCC requirements for the Global Stocktake and Nationally Determined Contributions

In Situ Data Coordination

- As most technical challenges have been addressed, the major constraint to high quality global agricultural monitoring is access to high quality in situ data to train and validate EO analytics. In response, GEOGLAM has launched the GEOGLAM in situ data working group to improve standards, best practices, and access to open in situ data. Progress includes:
 - Published the GEOGLAM In Situ Data Curation Strategy, Workplan and Guidelines
 - Conducted an international GEOGLAM Agriculture In Situ Data Workshop, November 21-22 in Geneva



GEOGLAM Stocktaking Reflections January 31, 2023

The following represents GEOGLAM reflections on questions provided by the India G20 Presidency

1. What are the emerging priorities, opportunities, and challenges for the global initiatives, going forward?

Priorities:

- Improved knowledge of the state and changes of agricultural production through better monitoring at the global to farm scale. This includes sustained systematic monitoring and improved forecasting.
- Support for a rapid response capacity to produce timely information in support of programs and policies that respond to emerging issues associated with market conditions and climate extremes.
- Building institutional and technical capacity in less-developed countries for better decision-making.

Opportunities:

- Increased attention from governments on national food security in the context of extreme climate events, conflict, and disruptions to global trade.
- Enabling less developed nations to utilize existing open science resources, including access to data, computing, and analytics, for example the GEOGLAM National Adaptation Plan Guidance document, and associated training activities. Thus, creating the institutional and technical foundation to inform and drive forward more financially resilient, smallholder farming systems, and ultimately open the door to the implementation of climate smart agriculture practices.
- Developing an integrated AMIS/GEOGLAM Rapid Response capacity. This initiative is being developed in response to the increasing need for rapid agricultural assessments in the face of extreme weather, conflict, and supply chain disruptions. The goal is to provide rapid, actionable agricultural assessments both pre-emptively in response to emerging concerns and triggered at the request of various ministries of agriculture from around the world; the G20 AMIS Secretariat member organizations; international humanitarian organizations; and other relevant organizations. Through this initiative we can provide timely, spatially explicit, quantifiable data on threats to global food security that can help inform decisions and policies that save lives and better manage our resources across the globe.

Challenges:



- A long-range collective vision leading to sustained actions. Support of key policy drivers like SDG's, climate mitigation and adaptation require ongoing sustained systematic monitoring and processes that can rigorously measure change over time.
- Stable funding for initiatives. As an example, direct support for the GEOGLAM Secretariat has only been provided by three G20 nations. There is a need to spread the support across more stakeholders to ensure stability and share the burden.
- Better integration of information across initiatives, breaking down silos, and fostering a common and shared vision. A good example of this is the incorporation of GEOGLAM Crop Monitor into the AMIS market monitor, with the two G20 initiatives working together. We should explore other opportunities for information sharing.
- The demands for capacity development in the less developed world exceed our collective ability to respond. We need more efficient, integrated solutions to scaling-up support, where "the whole is greater than the sum of the parts".

2. How can the milestones and implementation of the initiatives, achieve scale through coordination and partnerships among G20 member nations and stakeholders?

- The annual stocktaking exercise is applied unevenly from year to year and is insufficient to foster enhanced coordination and cooperation across initiatives. This could be improved by:
 - Providing an integrated vision through the development of a G20 framework for global food security (as planned). The G20 has previously articulated a coherent vision for each initiative, we would all benefit from a better understanding of the collective vision for the entire body of activity.
 - Identifying opportunities for incremental cooperation across G20 initiatives and identify the gaps remaining to support the "G20 framework".
 - Development of a funded activity to bring G20 initiatives together to meet and develop shared deliverables in support of the framework.

3. What is an appropriate framework to capture the learning and exchange of ideas between the initiatives for successful outcomes?

- Ten-minute presentations with a few minutes of follow-up discussion are not adequate to foster effective exchange of ideas and identification of opportunities. The G20 could use its convening power to conduct a more focused interaction between countries, initiatives, and international organizations.

4. How can capacities of G20 member countries be strengthened for a result-driven delivery of global initiatives?

- As already described, while the G20 mandate has been clear and sustained, material support for the initiatives is uneven. In GEOGLAM's case we have only



ever received direct funding from 3 countries, and funding is often year to year. This approach lacks stability and is detrimental to long range planning.

5. What are the critical variables for an appropriate Monitoring, Evaluation and Learning (MEL) to support the global initiatives?

- A clear articulation of G20 vision for the initiatives, including objectives and key results (deliverables) to drive collective actions;
- More effective and sustained engagement across G20 initiatives and stakeholders to develop measurable actions with defined timeframes; and,
- Development of a stocktaking approach that is focused on our collective key results, not just individual initiative performance.

6. How can the outputs of global initiatives be better aligned with the national priorities of G20 member nations and AWG agenda?

- Better engagement from the G20 Agriculture Ministries. In GEOGLAM's case, many G20 Agriculture Ministries are not involved, and there may be loss of opportunity. We are an open community, and much is to be gained through the sharing of data and science around EO-based agriculture monitoring. We would welcome the opportunity to work with any Ministry to improve communications with science, technology, and policy branches.

7. Can the initiatives be outcome oriented to work towards a common goal in 2030 to align with SDGs?

- Within GEOGLAM we are focussed on several high-level policy drivers, including the SDG's, climate mitigation, adaptation, and disaster risk reduction. To address such a broad swath of priorities we have adopted an Essential Agricultural Variable (EAV) approach (Agvariables.org). EAV's are a finite set of variables that are critical for understanding agricultural systems. Any given variable can therefore support any number of policy priorities, thereby reducing complexity and building efficiency. Beyond GEOGLAM, different initiatives share the needs for some of the EAV's and this may provide an avenue for the integration and sharing of information towards common goals around the SDG's. In summary, GEOGLAM would be interested in contributing to any effort to work towards a common goal to align with the SDG's.

