

Minutes of GEOGLAM ExCom, 26 September 2024, Hangzhou China

Welcome Remarks

Sven Gilliams welcomed the ExCom members to the meeting

Wu Bingfang offered opening remarks and welcomed the ExCom to China

Agenda Item 1: Review of Agenda and GEOGLAM overview

a. Overview of the Agenda

Sven Gilliams went through the day's agenda and the general expectations for each session.

He further set the main meeting objectives for discussion as follows;

- Governance and funding/resources
- Updates from working groups and major activities
- New initiatives and projects

b. Governance

Sven Gilliams presented updates and suggestions for a new structure of governance as follows;

- New definition and composition/structure of ExCom – suggestion to make it lean for easy decision making
- Need to have ToR for Co-Chairs, WP co-leads and regional coordinators
- Increasing regional engagement especially from Africa for a more distributed and inclusive GEOGLAM network

c. Funding

With respect to funding, only one of three direct donors is confirmed for the next year: UK DEFRA, Potential funding opportunities currently being explored:

- GEO High Level Working Group (GEO HLWG): Proposal developed and submitted to this group, through the GEO Secretariat.

***The HLWG is a political leadership taskforce of GEO Principals or designated senior officials, with a primary mandate is to leverage their political influence to catalyze*

high-level action, aiming to garner political support and resource commitments for the implementation of the GEO Post-2025 Strategy, by activating networks to lay the groundwork for substantial pledges to be announced by Ministers and high-level representatives at the GEO Global Forum, scheduled for 5-9 May 2025 in Rome, Italy.

- UK DEFRA post-2025 – new draft proposal developed and shared with UK DEFRA representative.
- National Adaptation Plans/Global Environment Facility – specifically the LDCF (Least Developed Countries Fund) funding stream, designed for projects and programs in climate change adaptation sector. More info pg13/agenda item 3: b (ii).
- GEO Post 2025 opportunities for resource mobilization
 - GEO LDN – GEOGLAM joint proposal
 - JRC Human Settlement Layers - GEOGLAM, impact of agricultural management (pesticides) on humans, study done by JRC

Discussion

ExCom suggested having large community projects with GEOGLAM ‘branding’/or using the GEOGLAM name contribute financially to the Secretariat. It also suggested to recontact previous donors like Canada and Germany and contact potential new donors like China.

d. Website Updates

A new website is under development owing to changes in current hosting and maintenance arrangements.

The current GEOGLAM website was designed and hosted by the GEO Secretariat, linked to the main GEO website. In 2023, a new GEO website was developed and launched under a different hosting arrangement. As a result, the current hosting and maintenance resources are no longer available/tenable.

With the new arrangement, the development, administration and maintenance lie fully with GEOGLAM. Ms. Makabe presented the development site, showcasing the overall structure and skeleton content, primarily pulled from the current website.

Under the new proposed structure, activity/WG leads will have access to relevant pages or sections of the website for content management and other regular updates.

The ExCom commended the secretariat for the update and effort, and offered the following suggestions:

- Partners page - To group/rank the partners according to contributions

- Projects contributing to GEOGLAM to be responsible for relevant content and information updates.
- To add a page on Emerging Technologies – with page responsibility assigned to ExCom... (who??)
- Contact Us page strategically placed on the top of the website.
- To add regional social media handles/contacts; re: WeChat (Hongwei to manage)
- To add language multiple language options (at least for the primary menu/pages) - No specific languages were recommended
- To share 'beta' version to ExCom for review – 2-3 months

e. GEO Branding

Alexandre Brecher from the GEO communications team presented the new GEO branding handbook and guidelines to be used across the GEO community. He presented the proposed GEOGLAM logo, among others (see below screenshot), and opened the floor for discussion.



- ExCom appreciated the endeavor and considered the recommendations thus put forward.
- Noting that the proposed design lacked any elements reflective of the GEOGLAM brand, the ExCom advised exploring a design that reflects/combines current GEOGLAM logo look and feel.
- Further, it was recommended that all partners using the GEOGLAM logo use the correct blue/white hi-res logos in proper form dimensions (no pulling/stretching). High-res logo to be provided. Link: [Logos](#)

Agenda Item 2: Updates from Working Groups

a. Essential Agriculture Variables WG – Alyssa Whitcraft

New/Updated EAVs

- Cropland (most updated)
- Crop condition
- Crop type (coming up)

Currently proposing to do a gap analysis and evaluation of the barriers to sufficient EAVs coverage. To accomplish this, there is a need for cross-community alignment – with other thematic areas e.g. ECVs, EBVs etc. - and with CEOS.

Current/active ask to CEOS for agencies to identify relevant/skilled Points of Contact (PoCs) to contribute to the GEOGLAM subgroup within LSI-VC

There will be a side meeting at next the CEOS plenary – October Montreal to:

- Agree on GEOGLAM ToR
- Appoint PoCs
- Prepare a Workshop for EAV gap analysis
- Identify and prioritize 2-3 EAVs

Report on good practices for cropland and crop type mapping validation workshop to be out soon

ET Workshop in the planning – emerging also in the CEOS working group

Call for more community involvement

ExCom Recommendations:

- Try to see what EAVs can be investigated or covered within current JECAM projects/sites for further R&D – just a few manageable ones for a start
- Distinguish – if necessary – our ET variable from the ET in other themes e.g water, climate, etc
- Also consider borrowing resources from other themes where the variables overlap e.g EAVs and ECVs, etc.
- GEOGLAM to include specific spectral requirements requests to CEOS for future missions/where we have gaps/needs
- ESA ESRIN (in cooperation with DG RTD) has new projects/roadmaps - opportunities to highlight within them where EAVs can play a role. **Andy to provide more info to Alyssa/All**

Open Questions/Discussion:

Do we need to wait till we have all the requirements to move forward, or do we go ahead without all the needs covered, but keeping in mind the gap/limitations that would result out of this approach- the “traffic light” (i.e. mature (green), contingent (yellow), major limitations (red)) approach?

- How can GEOGLAM drive competition among ‘NewSpace’ companies to encourage better /quality product development?? e.g. PlanetLABS.... How does CEOS do it?
 - Agriculture value proposition is not yet important enough to inspire commercial investment, for instance, compared to defense
- GEOGLAM can play a role in developing use cases for new missions - JECAM to explore
- Call for GEOGLAM to increase the effort to get involved in developing this

Do EAVs align with SDG2 targets?? -

- De-emphasized over the years, but it is important to circle back to the SDGs whenever necessary
- Review this paper from 2019 (“No pixel left behind: Toward integrating Earth Observations for agriculture into the United Nations Sustainable Development Goals framework”) which could be revisited if enough is different: <https://www.sciencedirect.com/science/article/pii/S0034425719304894>

b. Capacity Development WG – Andy Nelson

Translations for the Guidance document done – Spanish, Chinese, French (upcoming)

6 Webinars conducted this year: Global Crop Monitors, CropWatch, ASAP, GLAM, CapDev, Proposal Writing (with Mark Noort).

Naivasha Learning Exchange was conducted in March 2024, participation from 14 countries and 11 GEOGLAM partners/facilitators - huge success. Follow-ups?

Zambia crop monitor - led by NASA Harvest, Alliance Bioversity & CIAT, ICPAC

Senegal Cropland mapping – by NASA Harvest

WB projects on cropland and rangeland mapping – Mozambique and Somalia

- ITC & GEOGLAM - Mozambique and Somalia
- CropWatch – Mozambique, Ethiopia, Madagascar

- Still to discuss how coordinate better

Discussion & Recommendations

Increase collaboration with other CapDev communities e.g. CEOS

Hongwei Zheng commended NASA Harvest for their work in Senegal and urged the GEOGLAM Secretariat to coordinate the common CapDev among GEOGLAM partners to avoid duplication and stepping on each other's toes.

How do we inspire communication and collaboration?

- Have organizations participating in GEOGLAM CapDev activities in the CapDev WG
- Having the information (min. package) of who is working where and for what and with whom, does not seem to work, what more can we do?

Long term Cap Dev strategy & Investment – who to fund?

- The 5-year strategy to be developed as part of the WB project to be used as a pilot
- Copernicus4GEOGLAM in Mozambique to be engaged to ensure continuity for crop type mapping
- Other?

c. In-situ Data Coordination WG – Hendrik Boogaard

Rationale and general updates

Still a young WG; the structure and engagement strategy are yet to/will be developed

Plans to review and update the data life cycle in reference to the report/workplan from the November 2022 workshop.

Ongoing/active contribution from WordlCereal – on harmonized global reference data for crop mapping (crop type area estimation)

Contribution to the GEOSS Platform Plus

- GPP MAPS4GPP use case – for harmonized agronomy in-situ data
- Call for increased participation of members in the GEO Data & Knowledge wg to promote and enhance alignment and coordination of efforts
- Field Campaign Tracking tool – survey launched but not many entries received. Dashboard developed but not published yet, due to low number of entries.

ExCom recommendations:

- To put the survey link on the website
- To send periodic reminders to community

Updates on the Data Life Cycle workplan (since Nov 2022)

1. User Needs

Actions completed:

- Identify policies and EAV needs for crop type mapping – UNFCCC
- EAVs Gaps Analysis

Actions pending:

- Rangelands EAV steward identification – volunteers?

2. Data Acquisition

Actions completed

- In-situ registry – field campaigns tracking tool

Actions pending:

- Data acquisition best practices
- In-situ sharing best practices
- Prioritization of data collections with funding agencies??
- Making the case for open data incentives
- Unlocking data from private sector and governments

3. Data Usability

Actions completed:

- Sustain worldCereal reference data repository (also available on GEOSS)

Pending:

- Business model for harmonization hubs. WorldCereal?? AGROSTAC??
- Protocols for harmonization, curation, annotation, review of open published data
- Publish landcover and crop type data using FAIR principles

** FAO keenly interested in hosting WorldCereal data post-project

4. Data Structure, Infrastructure & Maintenance

Actions completed

- None

Actions pending:

- Inventory and assess level of openness at country level
- Implement a demo distributed infrastructure - open source CKAN with common API
- Help develop national CKAN repositories – link to GEOGLAM

Organization of WG and scope (to be discussed/developed at a later stage – Leads to update)

- Composition
- Overlap with JECAM, CapDev, other WGs
- Community engagement strategy e.g.
 - Meeting every 3 months
 - Updates/opportunities/publications
 - Predetermined/emerging topics
 - Webinars
- Sync with GEO & CEOS in-situ WGs/communities

Actions:

- Promote and launch field campaign tracking tool - <https://arcg.is/0uGq1m>
- Page on website
- Publish data guidelines in GKH/GEOSS
- Check and participate in future tenders
- Contribute to GEO In-situ activities

Other suggested actions from the ExCom

- Partners to identify and explore participation and contribution to in-situ wg
 - Hongwei to lead on coordinating Chinese partners

d. JECAM Network – Pierre Defourny & Miao Zhang

General Updates

JECAM welcomed a new lead from Canada (replacing Andy)- Catherine Champagne from Agriculture and Agri-Food Canada

Received commitment to update and maintain the JECAM website from Agriculture and Agri-Food Canada

A survey was conducted to help clean up/reconfirm participation in JECAM – 30 sites confirmed in 25 countries, 6 continents

New site request in Netherlands received

There will be an annual JECAM meeting at LPS 2025 – Austria.

- Abstract for JECAM side-session event LPS accepted and merged with another session. No further details yet

Other updates

Ongoing large joint experiment – encompassing 10 sites - on hyperspectral data exploitation for crop type mapping.

EnMAP mission used JECAM sites for mission priority – 11 sites

- Protocols for EAVs to be defined

Agriculture Virtual Lab – ongoing test site

- Providing access to JECAM sites hyperspectral data

Legal Agreement with partners for the large joint experiment with EnMAP

Existing Collaborations:

- Chinese-Europe sites corn monitoring
- ESA – Africa (Mozambique)
- Poland- South Africa
- ESA-Belgium – SAR bi-static dataset for soil and vegetation monitoring
- Pyramid Vision Transformer deep learning model developed – parcel delineation across China and Belgium

Perspectives

Forthcoming mission with JECAM interests:

- EARTH Daily
- NISAR – cal/val
- PlanetLab
- New Space

Challenges

- Single sites funded well rather than the whole network
- Network wide funding not easy to identify and mobilize

ExCom recommendations:

- JECAM to consider emerging topics of research e.g. crop varieties instead of crop type mapping... or even start looking at biophysical variables
- JECAM to consider learning from the BAU network?
- Call for GEOGLAM projects with huge funding to consider collaborating with JECAM, especially on innovative/emerging topics
- Mount cameras /simple infrastructure at sites...
- Possibility to merge gaps/efforts e.g. in-situ data infrastructure and the JECAM cameras - for resource mobilization.

Future opportunities

- Leadership for new calls/ opportunities - JRC-EC4GEO, Horizon 600?
 - ☐ Small regular grants for annual meetings from several sponsors

Discussion/AOB

FAO wants to increase its role and participation in GEOGLAM and;

- Will plan to coordinate better internally for their GEOGLAM contribution
- Are interested to host WorldCereal data

DLR interested to be more involved

- JECAM
- Resource mobilization – GIZ – SASCAL/WASCAL

**** Call to ExCom to increase resource mobilization efforts for activities and coordination****

Agenda Item 3: Discussion on potential new Initiatives, future directions, and actions in the next one year

a. New Working Groups

i. *Global Yield Gap*

Proposer: Hongwei Zeng

Mr. Zeng presented research on yield studies and comparing current and attainable yield (under current conditions).

Reducing the attainable yield gap is one of 4 approaches to increase production without increasing production area – area should also match crop type for maximization.

What are the solutions to reduce this gap?

GEOGLAM should make efforts in this regard, and not only in Africa/LDCs but globally.

How to attract new involvement in WGs

Clarify definitions, define scope and explore what other communities have on specific theme/topic - e.g.

- Global Yield Gap Atlas
- FAO
- IFPRI
- JRC
- CGIAR
- Ag Economists??

Recommendation: GEOGLAM could organize a thematic workshop to flash out current state and assess gap – organize community of practice – and eventually a working group (Hongwei to take lead)

Since GEOGLAM is EO driven, we should consider exploring the RS/EO contribution to the topic and then the develop/identify entry/contribution avenues

ii. *Agricultural Disasters WG*

Proposer: Dr. Huang, China Agricultural University

Proposed members: Current members of Agricultural Disasters wg –China

- Bingfang Wu
- Yelu Zeng – MIT
- Nana Yan – Aerospace Innovation ...
- Hongwei Zeng - AIRCAS

Areas of interest

- Extreme weather
- Pests and Diseases

Recommend scoping it out in the community to build on whatever other activities ongoing in the community

Next steps Actions:

- Flash out interest in community at next ExCom
- GEOGLAM governance needs to come up with a framework for setting up new Working Group

b. National Adaptation Plans

i. Guest speaker from UNFCCC – Motsomi Maletjane

What can EO science help the climate change/NAP community?

- Transformational adaptation solutions – best practices...
- No business-as-usual solutions e.g. develop a GPT for risk/vulnerability analysis to help digest the science and provide best readily available out-of-the-box solutions
- Advise on best available solutions
- Analysis ready products at national level co-developed with countries
- API-based solutions for systems that can be easily integrated into national systems e.g. CropWatch

Crop Monitors are complicated for LDCs – they need financial and technical investment that can easily be sustained

UNFCCC to lobby at high level in-country for national/public investment

ii. GEF Proposal

Talks to mobilize resources from the Global Environment Facility (GEF) to support LDCs enhance national capacities for agriculture monitoring started in 2023, with support from the UNFCCC and the GEF. A proposal was to be developed and submitted. However, only those entities accredited by the GEF can submit such proposals and GEOGLAM isn't one unfortunately (neither is GEO/WMO). The secretariat has since been actively searching for

one. The Development Bank of South Africa (DBSA) recently agreed to come on board and talks are currently underway.

Suggested approaches;

- Small to Medium size proposal – up to usd 5m
- Large size proposal – approx. usd 20m

Both approaches would cover at least 3 countries or more, taking a regional project approach.

ExCom recommends not to aim too low on budget and end-up spreading ourselves too thin, but also, not to aim too high exceeding the current national (and GEOGLAM internal capacity to deliver)

Agenda item 4: Opportunities for exchanges and meetings

- a. GEO Global Forum (formerly GEO Week), 5-9 May 2025, Rome.
 - GEOGLAM ExCom 2025 to be organized the week before or after the GEO Global Forum
 - Offers to host from JRC (ESRIN) & FAO (Rome); Secretariat to have a call with both partners to discuss.
- b. ESA LPS, 23-27 June 2025, Austria
 - Abstracts submitted for 2 sessions –JECAM (merged with another external session) and an overall GEOGLAM session.
- c. Regional Meetings – to be discussed at the next ExCom
- d. G20 Agriculture Minister and Leaders Meetings, tbc 2025 – South Africa
 - Need to provide 2-3 pager of GEOGLAM impacts and initiatives in Africa (All, Makabe)
 - To provide draft declaration language to S. Africa (Chris, Makabe)
 - Find out G20 chief scientist at European Commission relevant for lobbying (Raphael, Sven)

Table1: List of Actions

	Action	Responsible	Due Date
	General /Program		
1	Update governance document	Secretariat	December 2024

2	Share 'beta' version of new website for ExCom review	Secretariat	January 2025
3	Share hi-res GEOGLAM logos	Secretariat	Immediate
4	Share ppts	Secretariat	Immediate
	EAVs		
5	Identify EAVs overlapping with current JECAM sites for further R&D	EAVs Leads	To be decided by WG Leads
6	Provide details on new ESA /DGRTD projects for potential collaboration/ EAV research	Andy	Immediate
	CapDev		
7	Streamline the 2 WB projects in Mozambique & Somalia	Secretariat, ITC & CropWatch	Immediate
8	5-year strategy (for the WB project) to be piloted for GEOGLAM long-term CapDev investment	CapDev Leads, All	To be decided by WG Leads
9	Explore potential collaboration with other CapDev communities e.g. CEOS	CapDev Leads	To be decided by WG Leads
10	Increase communication & coordination among partners	Secretariat, All	Continuous
11	Develop min. Package of who is doing what where (3Ws)	Secretariat, CapDev WG	To be decided by WG Leads
	In-situ		
12	Develop structure and engagement strategy of the WG	In-situ Leads	To be decided by WG Leads
13	Review & update data life cycle (ref. In-situ workplan 2022)	In-situ WG	To be decided by WG Leads
14	Share in-situ field campaign link to website and send periodic reminders to the community	Secretariat, In-situ Leads	Immediate, periodic

15	Publish data guidelines in GKH/GEOSS	In-situ WG	To be decided by WG Leads
16	Sync and contribute to other in-situ communities e.g. GEO, CEOS	In-situ WG	To be decided by WG Leads
17	Increase engagement/contribution to in-situ WG	All	To be decided by WG Leads
18	Coordinate Chinese engagement into the WG	Hongwei	To be decided by WG Leads
JECAM			
19	Organize session at LPS	JECAM leads	June 2025
20	Explore potential collaboration with in-situ efforts to benefit from relevant joint resource mobilization e.g. EU research infrastructure grants	JECAM, In-situ WG	To be decided by WG Leads
21	Establish leadership for new calls	JECAM Leads	To be decided by WG Leads
22	Identify and explore small regular grants/several sponsors, for annual meetings	JECAM Leads	To be decided by WG Leads
New Working Groups			
23	Global Yield Gap - Clarify definitions, scope and explore what other communities have done so far	Hongwei	May 2025
24	Organize thematic workshop to establish current state, gap and [potential] community of practice/WG	Hongwei, Secretariat	To be decided by Leads
25	Agriculture Disasters – Scope out to identify and build on existing community activities	Bingfang	May 2025
26	Develop framework for establishing new working groups	Secretariat	December 2024
27	Flash out interest at next ExCom	Bingfang	
NAPs/GEF Proposal			
28	Explore both medium and large size proposals	Secretariat	Immediate, ongoing
Future Exchanges/Meetings			

29	Call with JRC & FAO on hosting GEOGLAM 2025 ExCom; location tbc in Italy	Secretariat	December 2024
30	Develop G20 endorsement brief for South Africa	Secretariat	November 2024
31	Partners to share impact slides from Africa	All	October 2024
32	Enlist support of the European Commission's G20 Chief Scientist	Raphael, Sven	December 2024
	Other Actions		
33	FAO to increase & internally coordinate participation in GEOGLAM	FAO, Jippe	Immediate
34	DLR to explore more involvement in GEOGLAM	DLR, Ursula	Immediate
35	Increase resource mobilization for coordination/common activities	All	Immediate