

GEO Work Programme Activities Data Practices and Needs Analysis Report

PB-25: 7-8 Feb 2023
Geneva, Switzerland

Data Working Group, GEOSS
Platform Team, GEO Secretariat

Florian Franziskakis

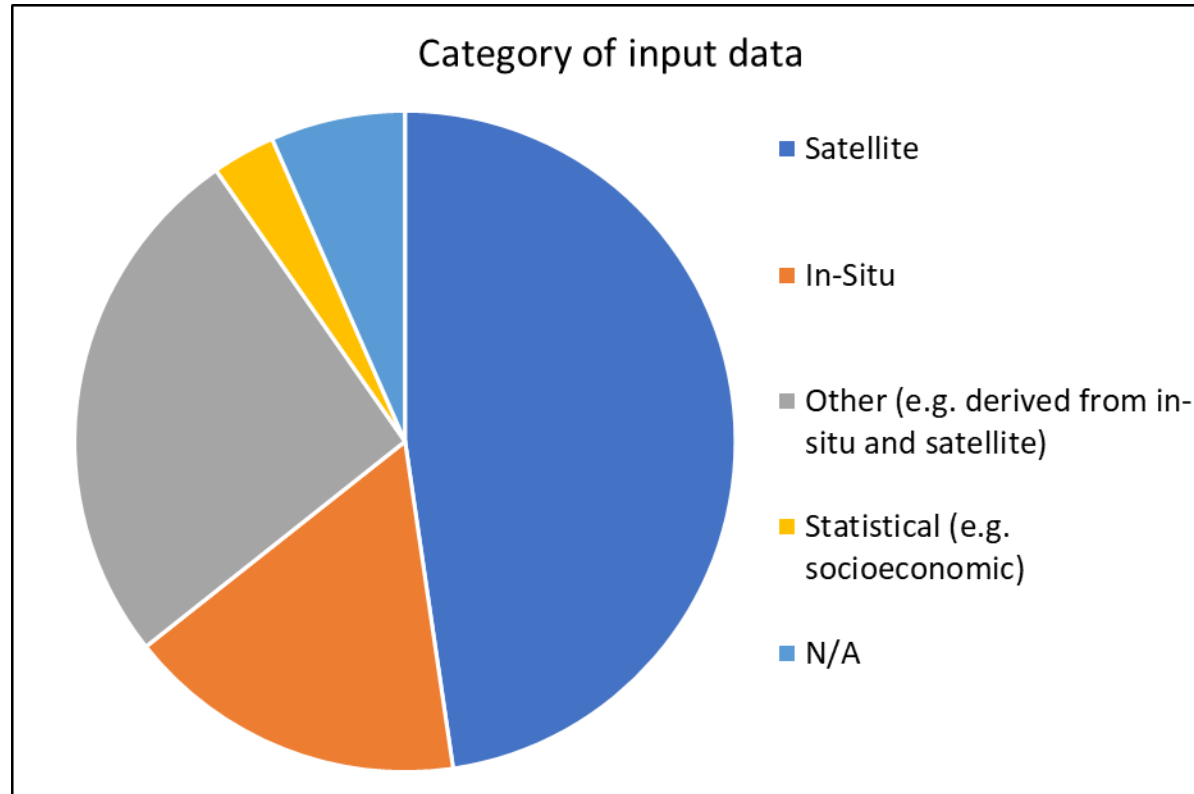
Background

- **Data Working Group, GEOSS Platform Team and GEO Secretariat** joint efforts to understand the practices and needs of the GWP activities, focusing on technical aspects (data, outputs, services).
- Survey (launched at the end of 2021) + individual calls (throughout 2022) allowed to consult 28 distinct GWP activities.
- Focus on in situ data, GEO Data Sharing and Data Management principles, law & policy, GEOSS Platform and GEO Knowledge Hub.

Consulted GWP activities

1. ARCTIC-GEOSS
2. DE-AFRICA
3. DE-PACIFIC
4. EO4HEALTH
5. ATLANTIC-EO
6. AFRICULTURES
7. GEO-TREES
8. GEOGLOWS
9. GEO-LDN
10. GEO-VENER
11. AGRI-DROUGHT
12. CROP-PET
13. GDIS
14. GEOARC
15. GEO-MOUNTAINS
16. GOS4M
17. GWIS
18. IN-SITU-ESC
19. NIGHT-LIGHT
20. SPACE-SECURITY
21. TIGGE
22. UHCO
23. GEOGLAM
24. AQUAWATCH
25. BLUE-PLANET
26. GOS4POPS
27. GFOI
28. GSNL

Input data

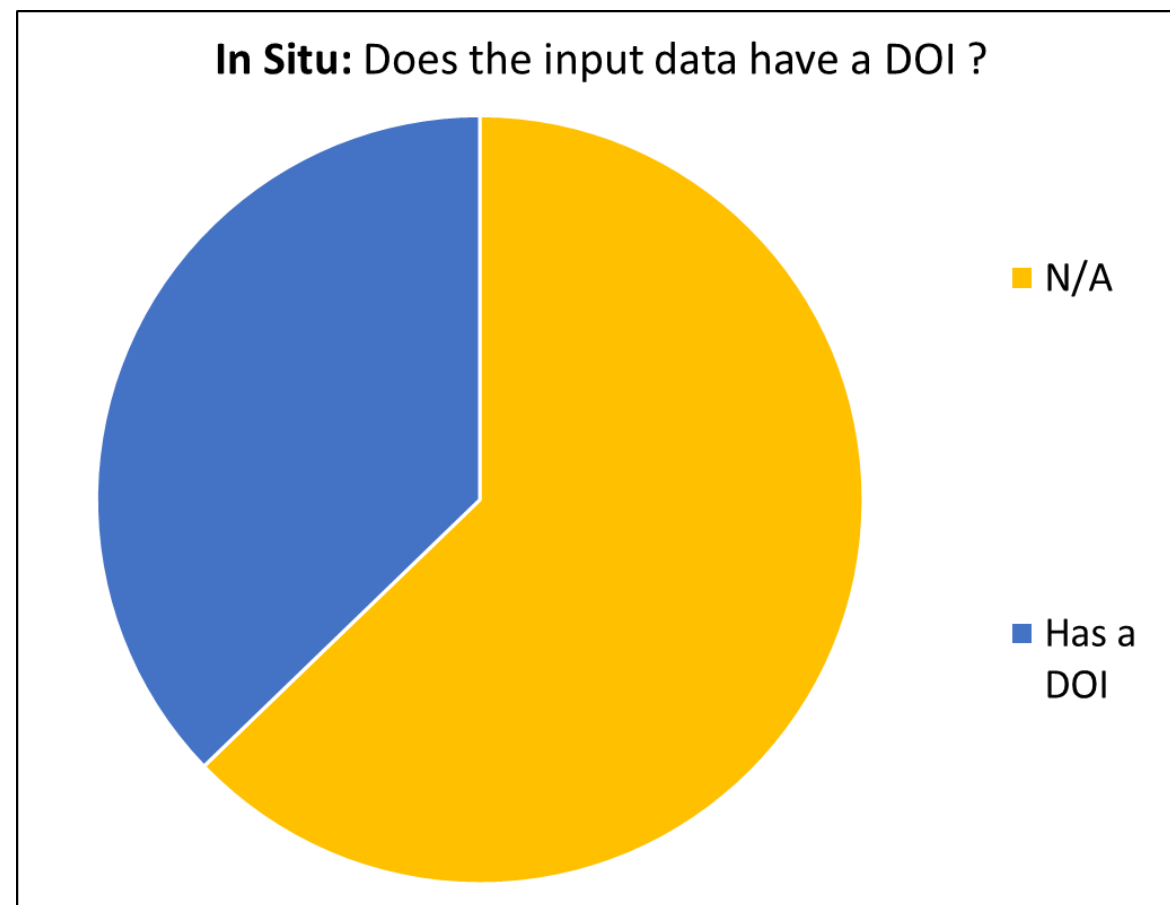
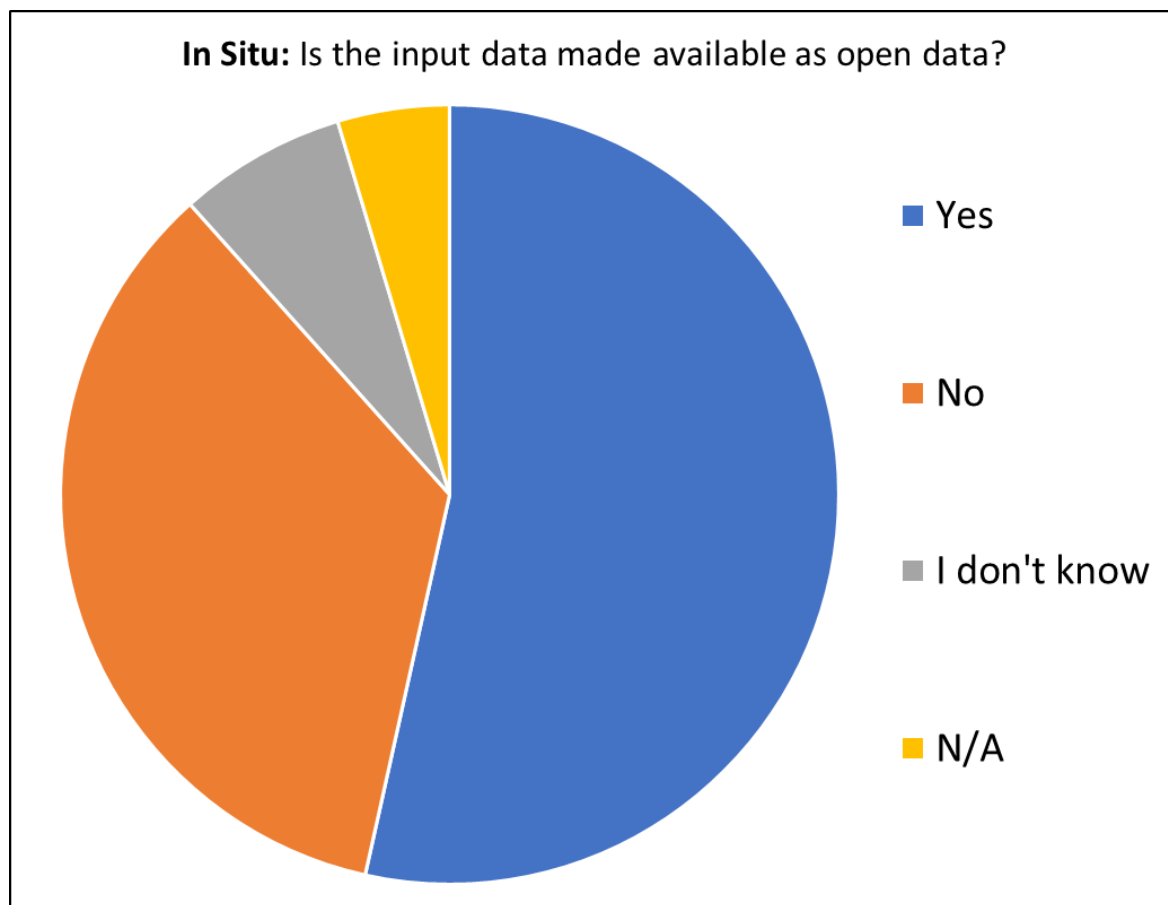


Most cited providers: Copernicus & NASA (widely used by all GWP activities)

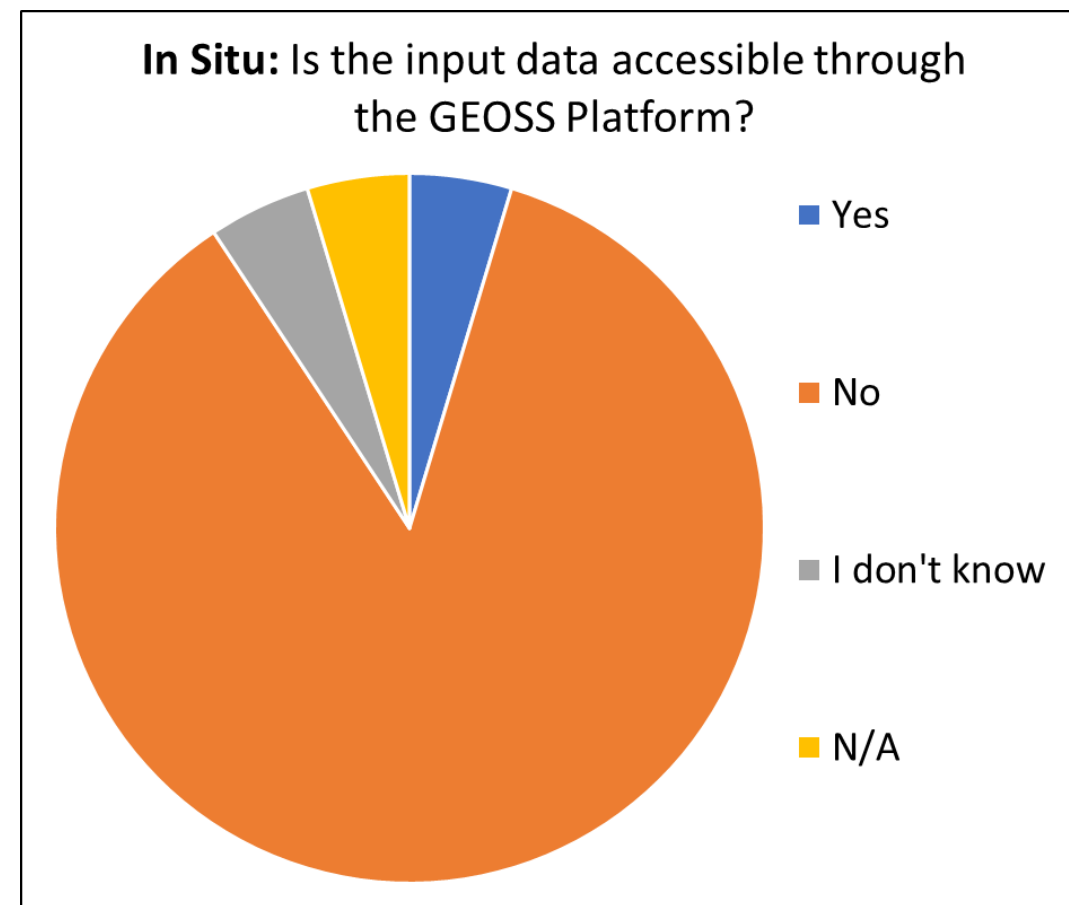
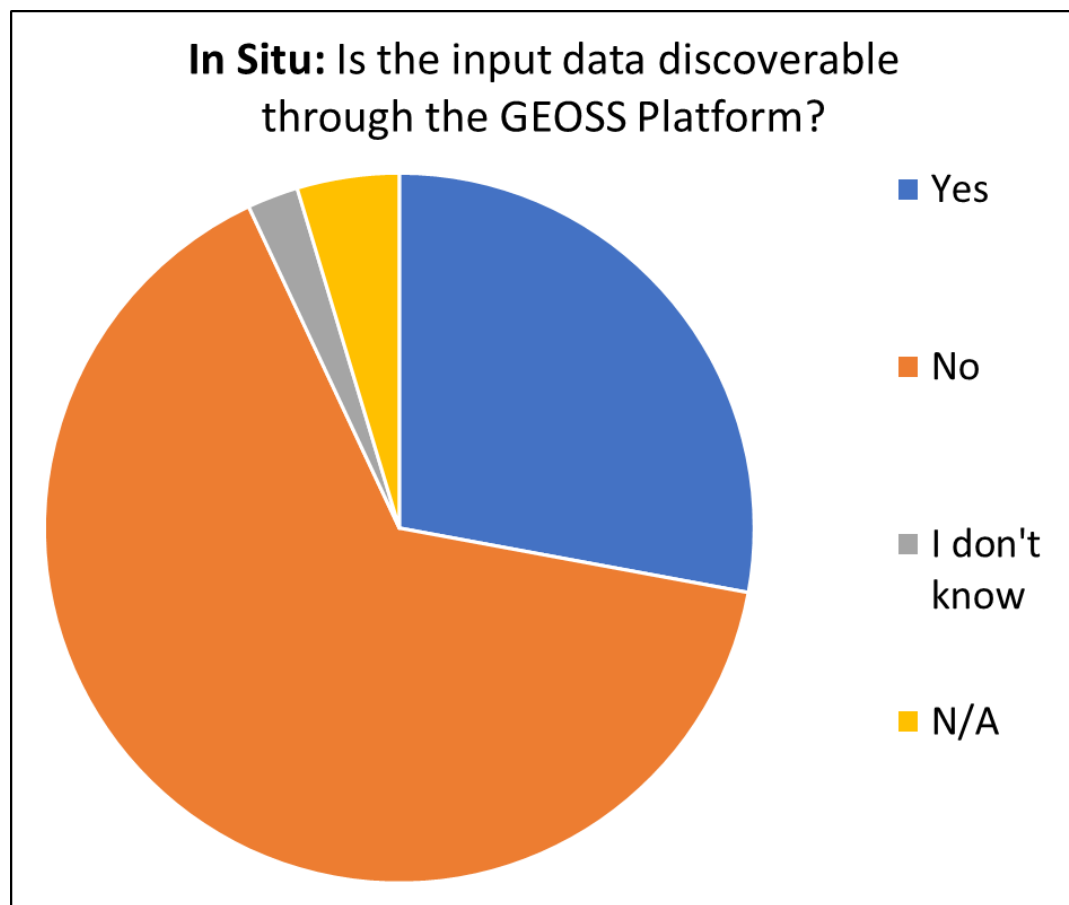
Critical thematic areas where in situ data is still missing:

1. Meteorological data (atmospheric, temperature, precipitation, hydrology)
2. Biodiversity data from field observations
3. Terrestrial observations (land use/land cover, agriculture, biomass, forestry)

Input in situ data:

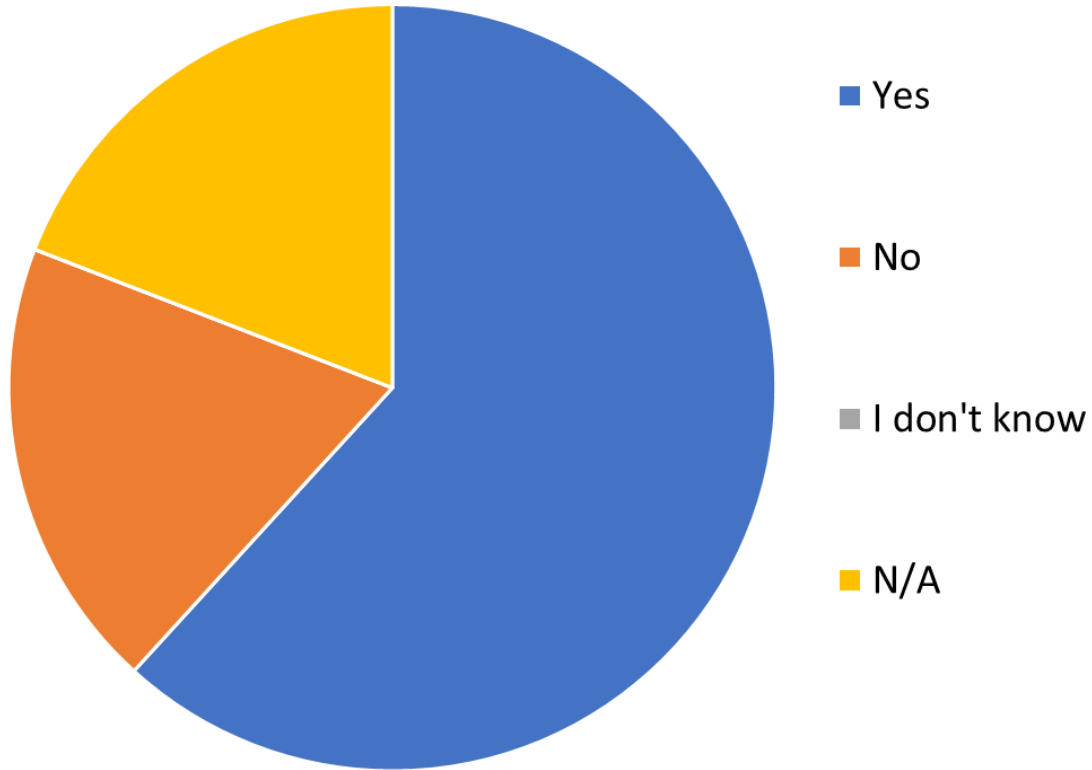


Input in situ data:

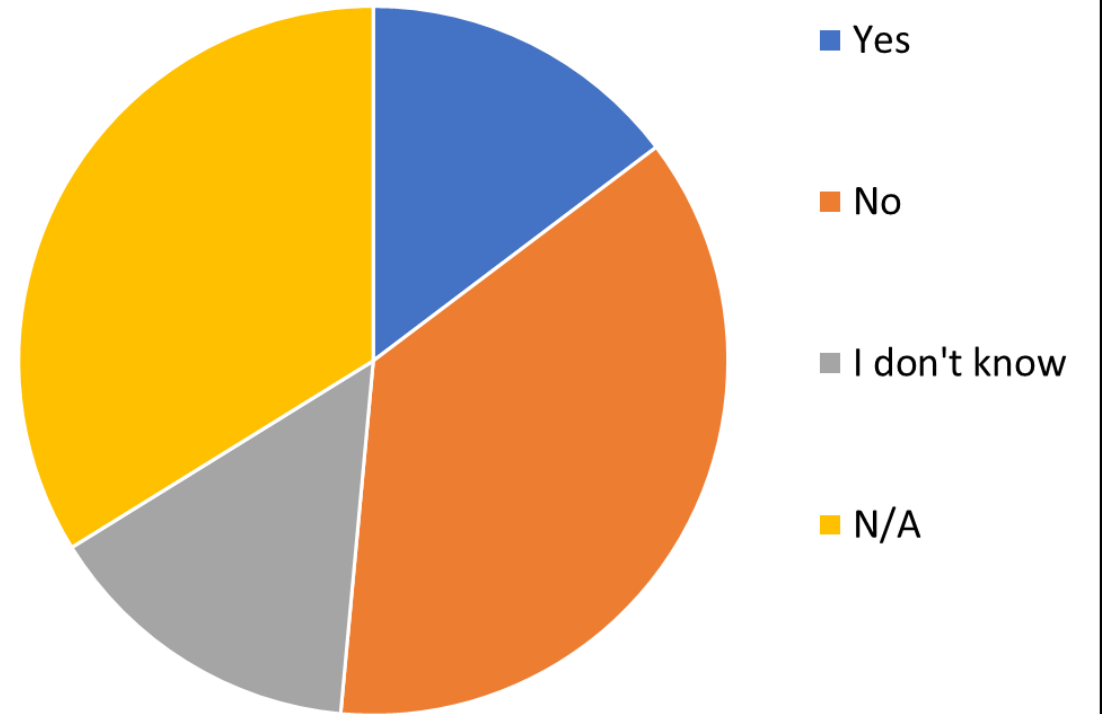


Output data

Is the output data made available as open data?

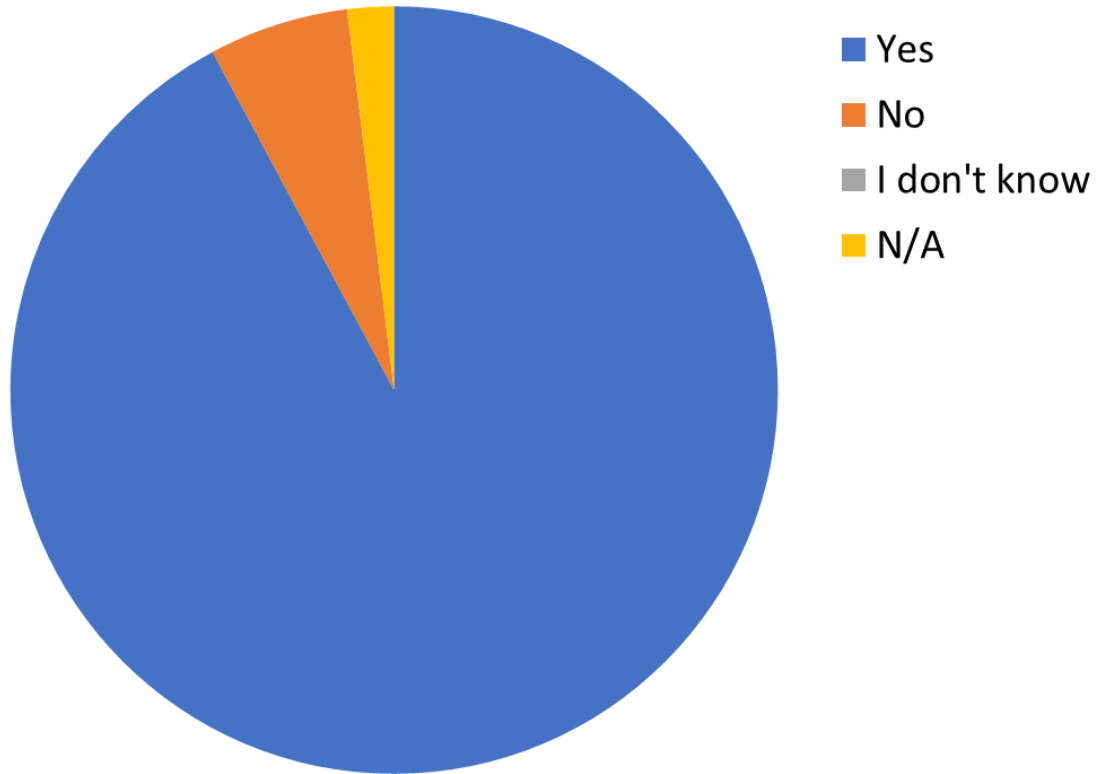


Is the output data accessible through the GEOSS Platform?

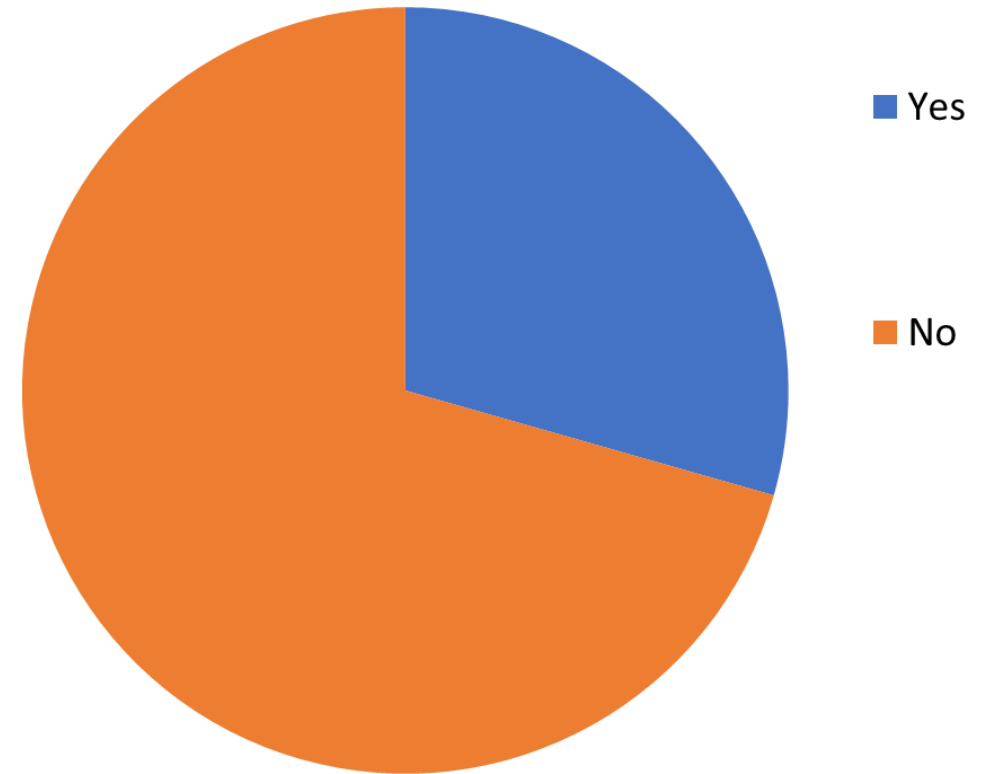


Output services

Is the output service discoverable?



Is the output service freely accessible?

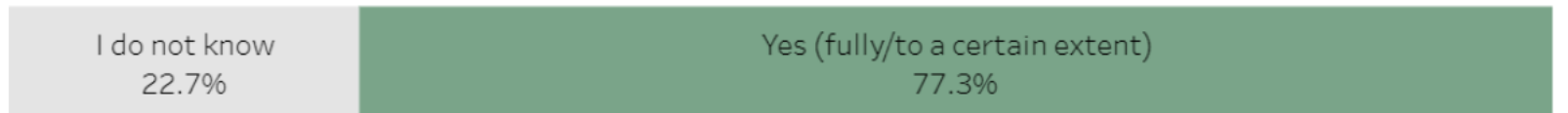


GEO Data Sharing and Management Principles

How familiar are you with the GEO DS & DMP ?



Are the output datasets aligned with the GEO DSP ?



Have you ever conducted an assessment of compliance with the principles (GEO, FAIR, CARE, TRUST) ?



Does your activity need support to implement/improve adoption of the GEO DSP & DMP ?

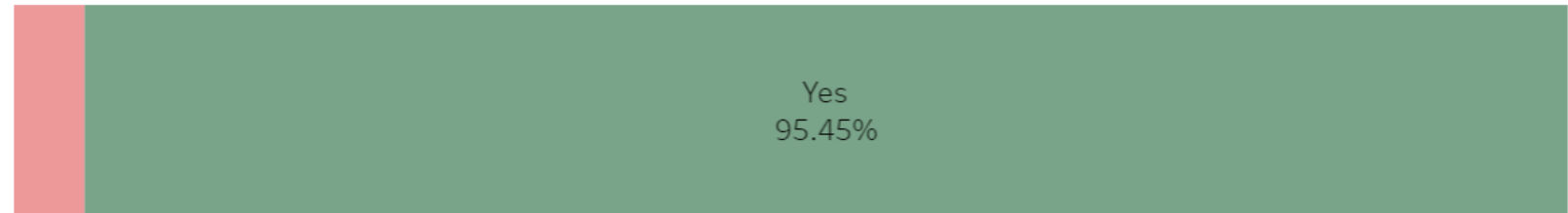


Infrastructure

GEOSS Platform: Would your activity benefit from a community portal ?



Are you interested in contributing to the GEO Knowledge Hub?



+ Need technical support for sharing products, storage of in situ data & funding to support heavy harmonization processes.

→ Example of good practice: [“Data sharing of in-situ measurements following GEO and FAIR principles in the solar energy sector” \(EuroGEO Workshop 2022\)](#)

Feedback from GWP activities

- “Our products and services would strongly benefit from denser coverage of ground stations”
- “Active and sustainably funded ground networks is essential to validate/calibrate remote sensing data, and costs only a tiny fraction compared to what satellite missions cost.”
- “Implication of the in situ community in design of satellite mission for ground requirements and funding could be a great achievement.”
- “We need support to disseminate our results for them to be aligned with the GEO Data Sharing and Data Management Principles”

Recommendations

A. Account for high-level advocacy on open data implementation

B. Strengthen national coordination

- GEO needs commitment from its Member States on opening datasets that are useful for the GWP activities. In particular, meteorological, biodiversity, land use/land cover observations are seen as critical.
- More participation of underrepresented regions is essential.

→ Open up discussion to highlight contributions from the PB & ExCom members on new datasets being shared.

→ Organize sessions at Regional GEO's events where putting the GEO DSP&DMP in practice could be addressed.

Recommendations

C. Reinforce technical support to GWP

D. Increase technical knowledge sharing for the benefit of GWP activities

- Both on the infrastructure side and for available tools, knowledge sharing between GWP activities and members of the community needs to be strengthened.

→ Promote tools available to help GWP activities manage data and knowledge. Develop new ones where necessary.

→ Drive future developments of GEOSS to respond to the GWP needs.

Recommendations

E. Connect GWP activities with data providers

F. Events around Open Data and Open Knowledge

- Dialogue must be reinforced between activities working on separate projects and networks providing useful data. Discussions about interoperability, sustainability of observations, ways of accessing data are critical.
- The Open Data and Open Knowledge (ODOK) workshop (15th and 16th June 2023) will gather the technical community for the first time since 2019.
- Topics covered include space and in situ-based data, open applications, open knowledge, infrastructure, hands-on sessions. (concept for ODOK presented at PB-25)

Support material & tools

- GEO DSP & DMP Knowledge Package (in the GKH) includes:
 - Dialogue series recordings (presented at PB-25)
 - Data management self assessment tool
 - Revised GEO Data Sharing and Data Management Principles
 - GEO Data Management Principles Implementation Guidelines
- Data Licensing Guidance (presented at PB-25)
- G-reqs: Geospatial in-situ requirements (InCASE project funded by EEA, under development)

Thank you !

- Thanks to all **GWP activities** who contributed to the survey and participated in the individual calls.
- Thanks to the **DWG members and GEOSS Platform team** who were involved in all steps.
- Special thanks to the **EEA** for the technical support with EUSurvey and the results dashboard.