

GLOBAL SURVEY ON THE USE OF SATELLITE DATA-2022: RA II AND RA V



Joint RA II - RA V Coordination Meeting
(18 November 2022)

Chang LIU, WMO Space Programme

WMO OMM

World Meteorological Organization

Organisation météorologique mondiale

Global Survey on Satellite Data Utilization – 2022

Overview

PERSONAL
INFORMATION



7 QUESTIONS

USE OF GEO DATA



9 QUESTIONS

DATA APPLICATIONS
AND TRAINING NEEDS



6 QUESTIONS

USE OF LEO DATA



7 QUESTIONS

Language

- ARABIC
- CHINESE
- ENGLISH
- FRENCH
- RUSSIAN
- SPANISH



Period

May 11th

July 31st

November 30th

Online Form – SurveyMonkey Tool



<https://www.surveymonkey.com/r/5TB9SDJ>

GLOBAL SURVEY ON SATELLITE DATA UTILIZATION - 2022

1. PERSONAL INFORMATION

* 1. Are you completing this survey as an individual, on behalf of your organization, or on behalf of the Permanent Representative of your country with WMO?

**OVERVIEW
PERSONAL INFORMATION**



7 QUESTIONS

USE OF GEO DATA



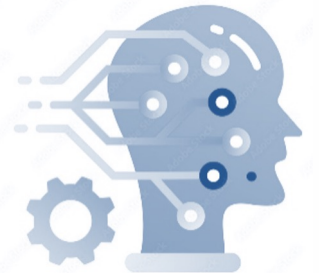
9 QUESTIONS

USE OF LEO DATA



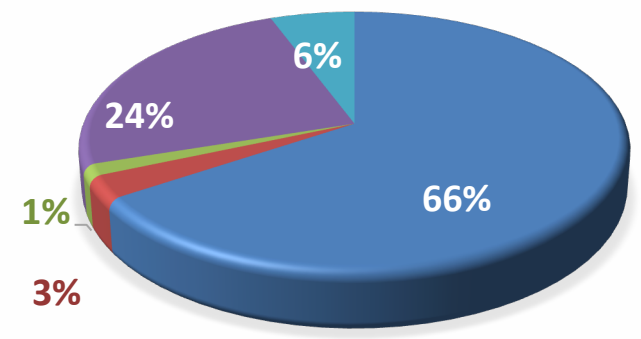
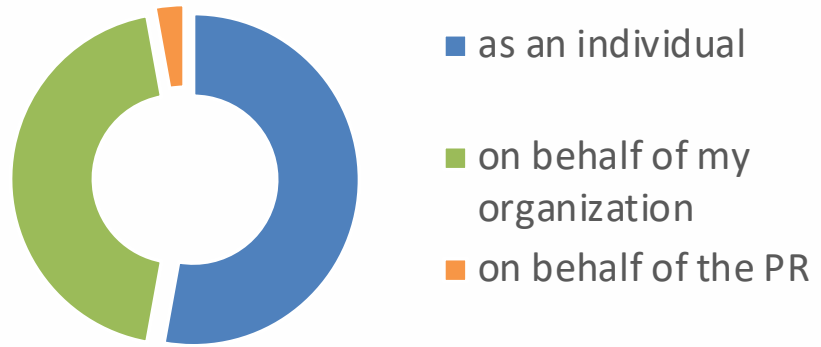
7 QUESTIONS

**DATA APPLICATIONS
AND TRAINING NEEDS**

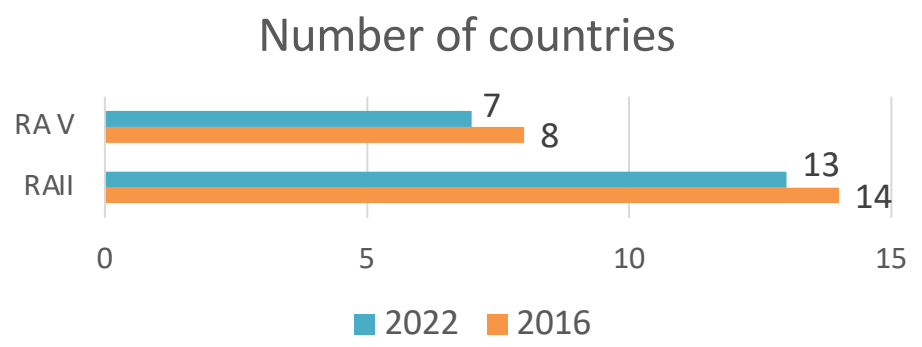
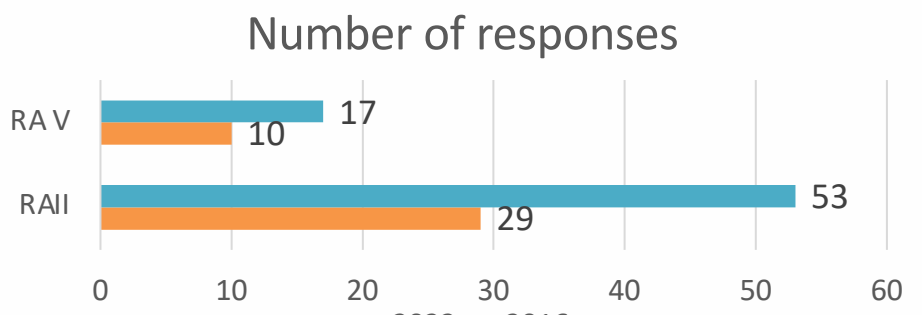


6 QUESTIONS

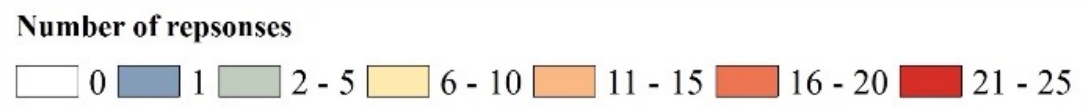
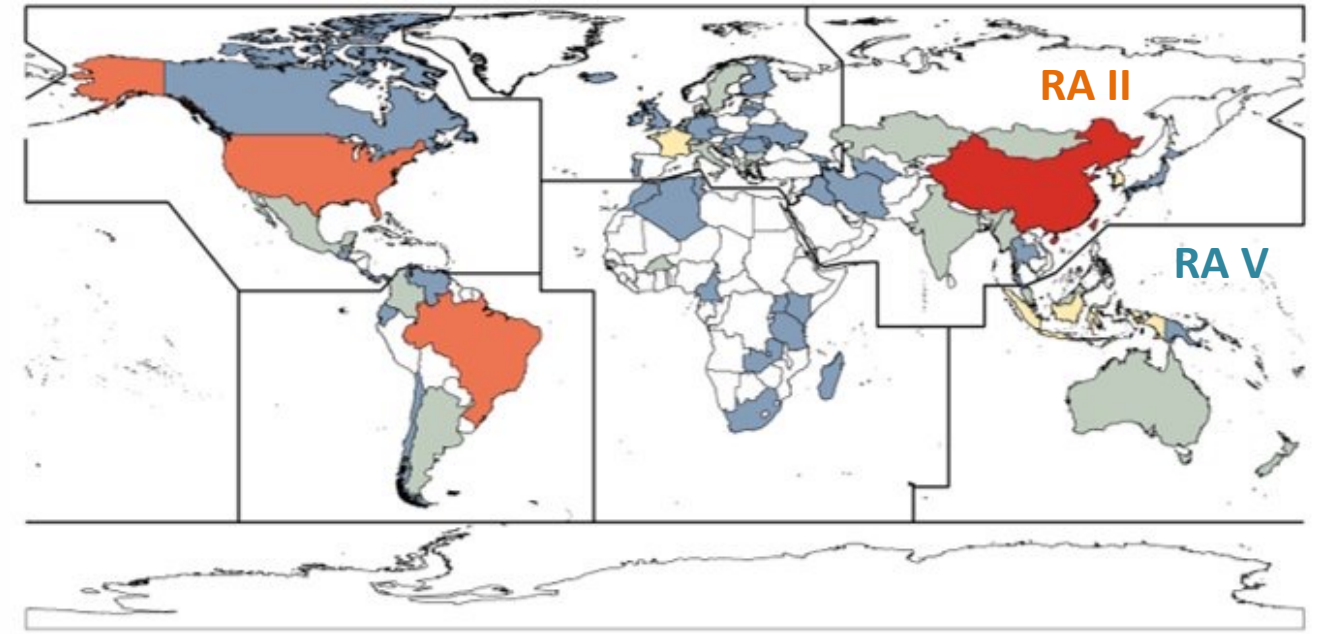
✓ PERSONAL INFORMATION



- Research / Academic institution
- Regional / International organization
- Other operational governmental agency
- National Meteorological / Hydrological Service
- Other (ex. private company)

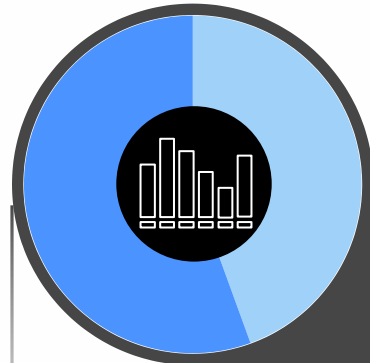


RA II-53 answers RA V-17 answers TOTAL: 180



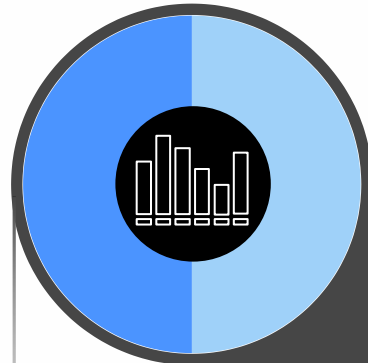
GLOBAL SURVEY: Regional SDR Groups

Q: Are you aware of the WMO Coordination Group on Satellite Data Requirements in your region?



44% Yes
RA II

- Answered 54
- Skipped 1



50% Yes
RA V

- Answered 14
- Skipped 1

Home > activity areas > wmo space programme wsp > wmo regional coordination groups satellite data requirements

View Edit Delete

Regional Activities

ACTIVITY AREAS (1)

■ WMO Space Programme (WSP)

WMO Regional Coordination Groups on Satellite Data Requirements

WMO has established Regional Coordination Groups on Satellite Data Requirements. Through these groups, WMO Members can express their requirements for specific satellite data and products and coordinate the planning and deployment of satellite data reception equipment and related training.

The groups have been established under different names for the coverage areas in the following Regional Associations (RA):

- RA I: RA I Dissemination Expert Group (RAIDEG)
- RA II: RA II WIGOS Project
- RA III and IV: RA III/IV Satellite Data Requirements Group
- RA V: RA V Task Team on Satellite Utilisation

The WMO Regional Coordination Groups on Satellite Data Requirements are supported by the operators of meteorological and environmental satellites that are active in the respective Regional Associations geographical areas.



More information on Regional SDR Groups:

[Regional Activities | World Meteorological Organization \(wmo.int\)](https://wmo.int/Regional-Activities)

OVERVIEW
PERSONAL INFORMATION



7 QUESTIONS

USE OF GEO DATA



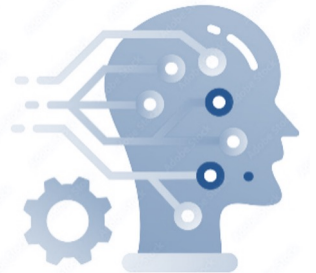
9 QUESTIONS

USE OF LEO DATA



7 QUESTIONS

DATA APPLICATIONS
AND TRAINING NEEDS



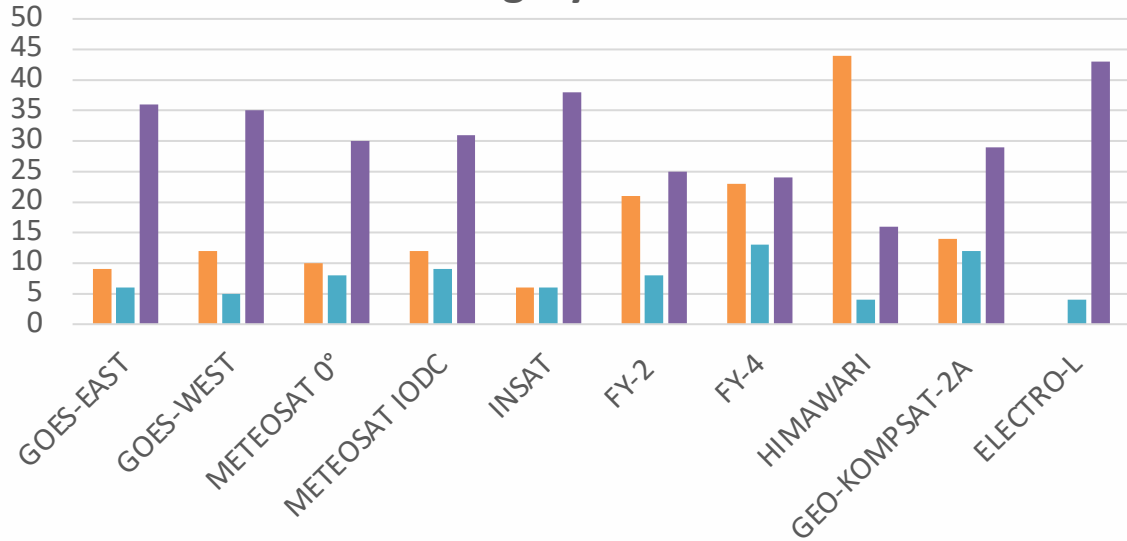
6 QUESTIONS

Answered	66
Skipped	4

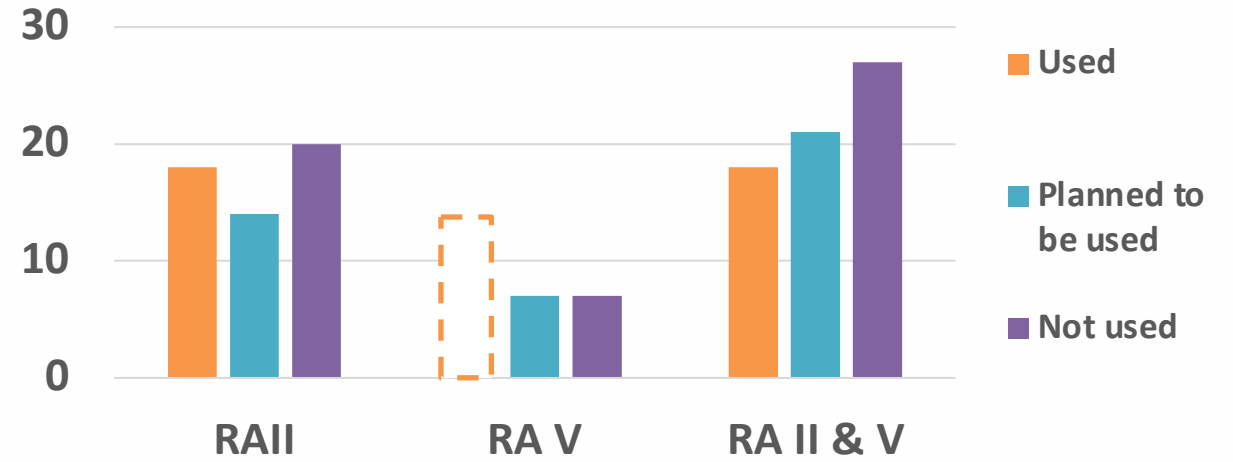
✓ Use of GEO Data

Q. Please indicate your use of the following GEO data

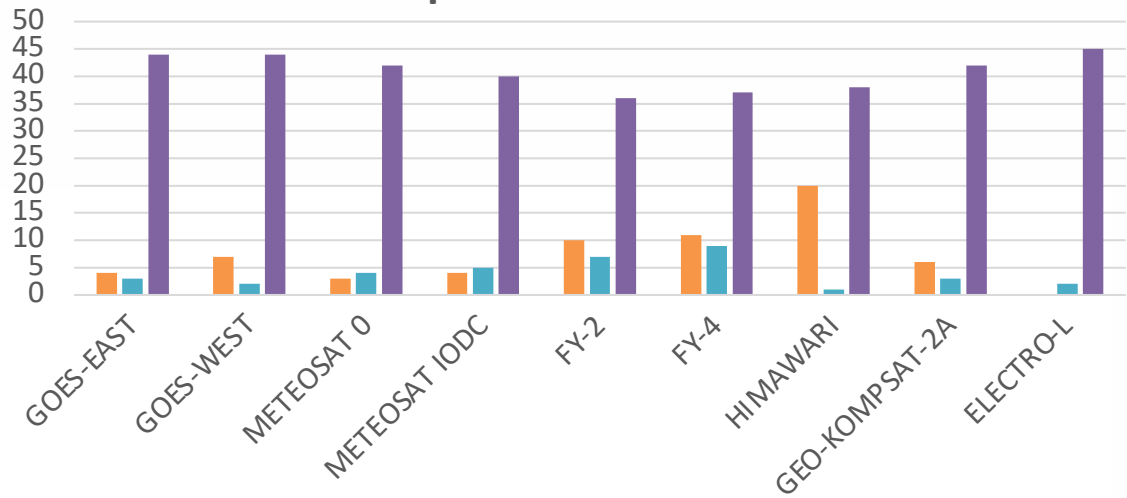
Imagery data



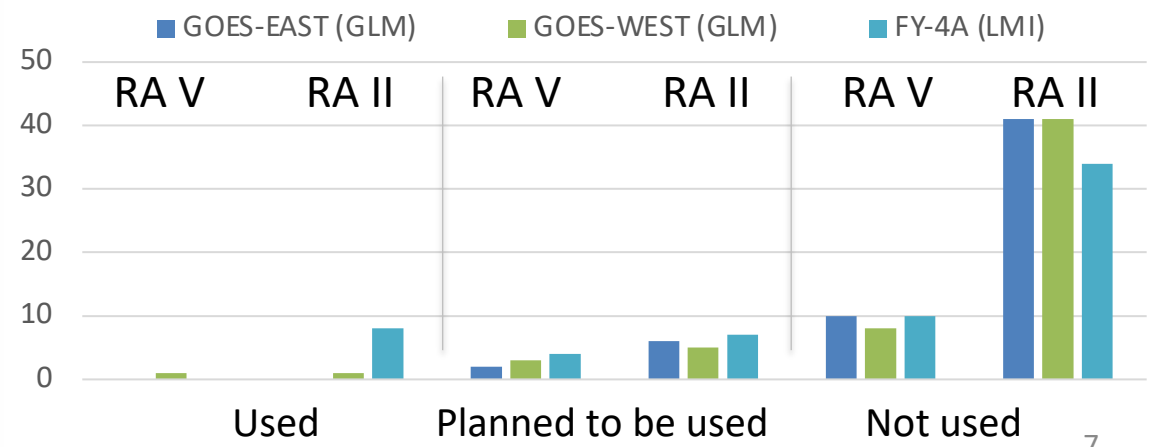
FY-4 sounding data



Space Weather data

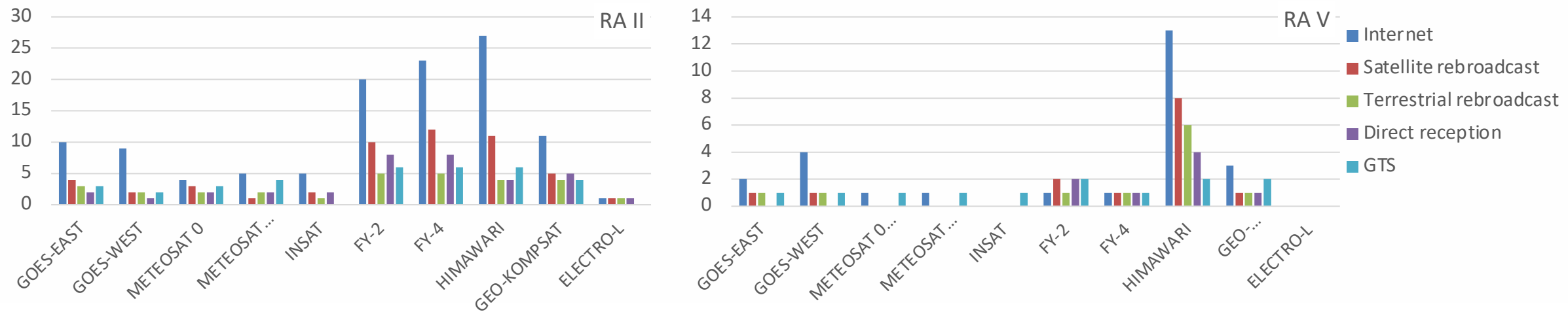


Lightning data

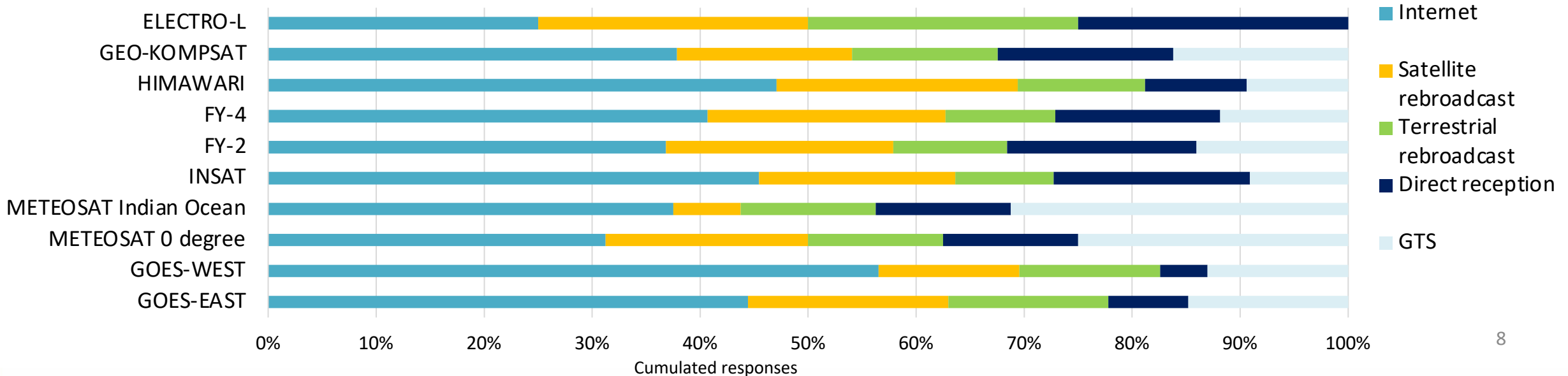


✓ GEO Data --- Access Mechanisms

Q. Please indicate the access mechanisms for GEO data and indicate how satisfied you are with these mechanisms
 If an option is not used or not applicable, please leave it blank



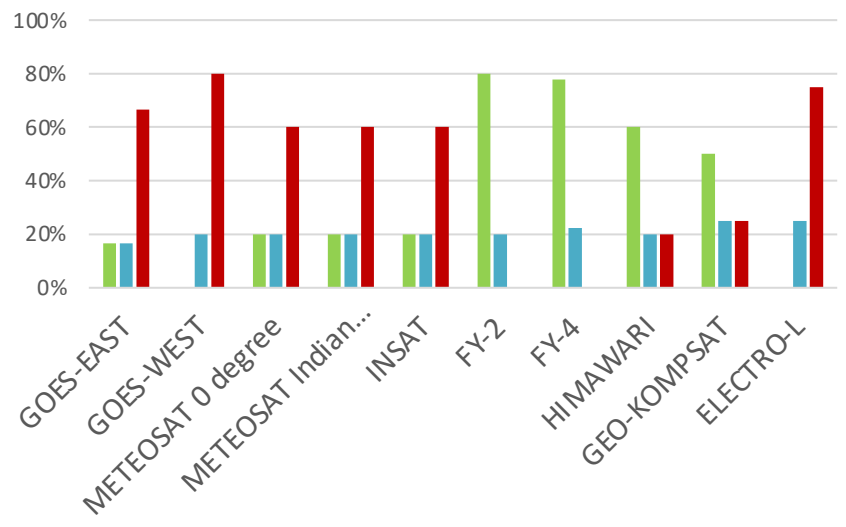
GEO data access mechanisms: good & fair access quality



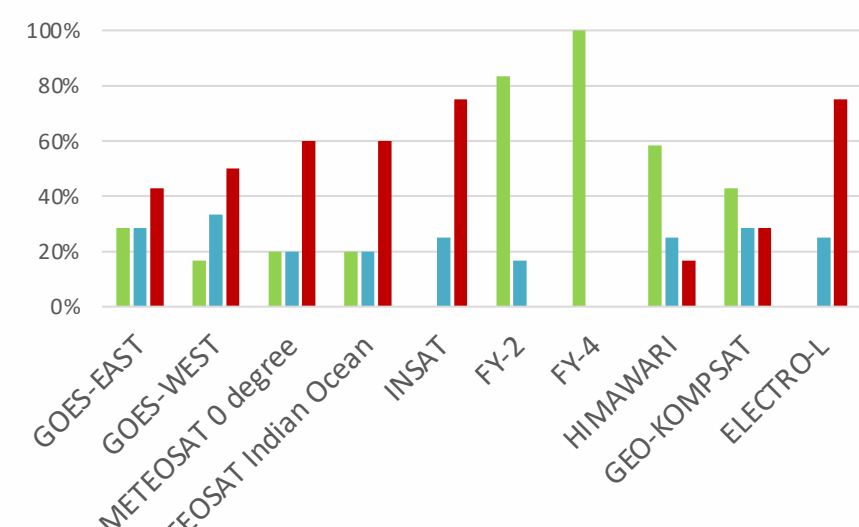
✓ GEO Data --- Access Mechanisms

Q. Please indicate the access mechanisms for GEO data and indicate how satisfied you are with these mechanisms

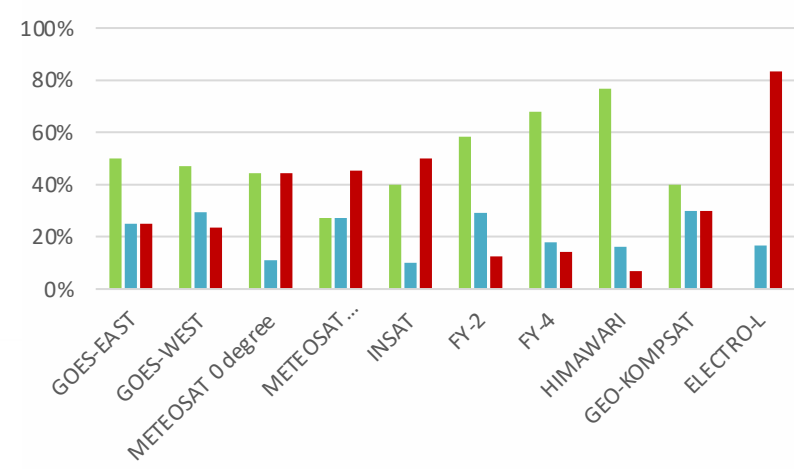
Direct reception



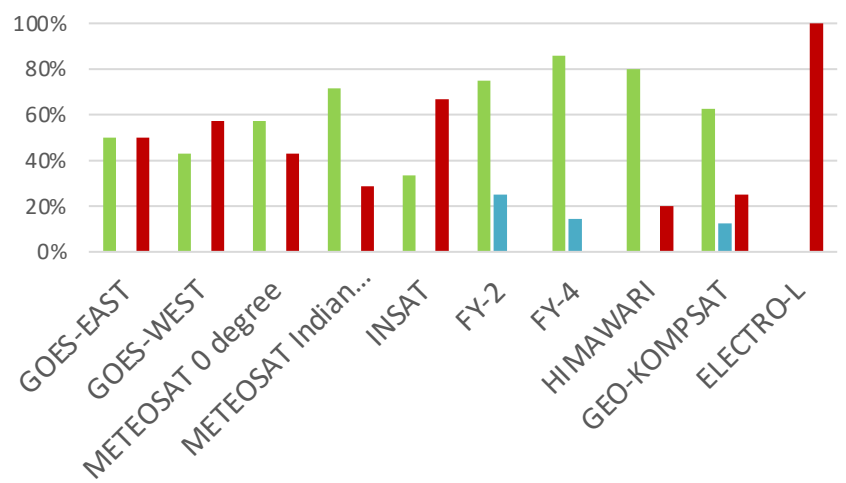
Terrestrial rebroadcast



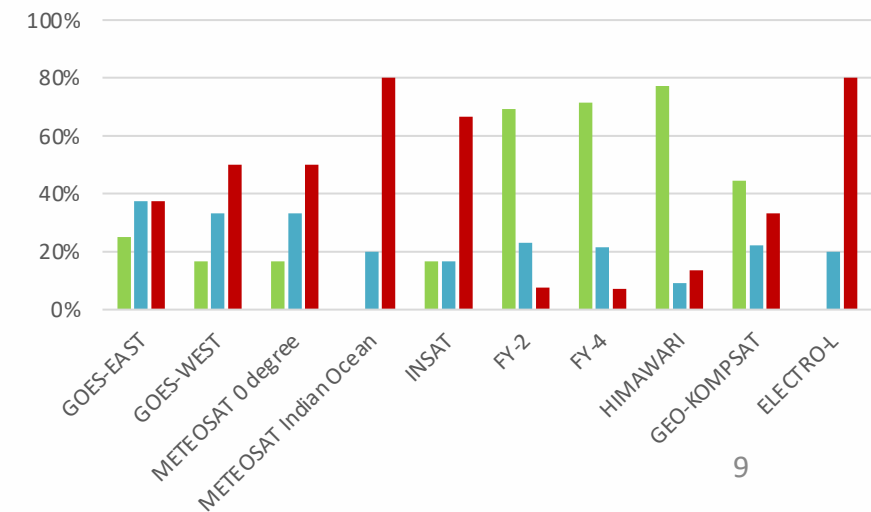
Internet



GTS



Satellite rebroadcast

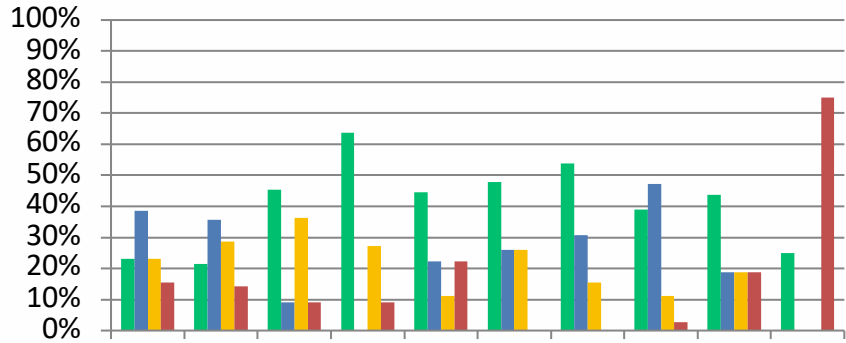


■ good access
■ fair access
■ poor access

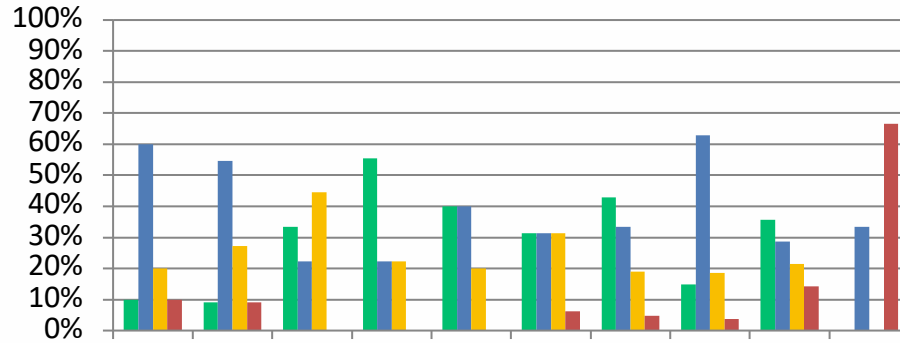
✓ GEO Data --- Challenges

Q. Please indicate the degree of challenges you experience with access, processing and visualizing GEOSTATIONARY data, the extent to which your training needs are met. If an option is not used or not applicable, please leave it blank

Challenges with access

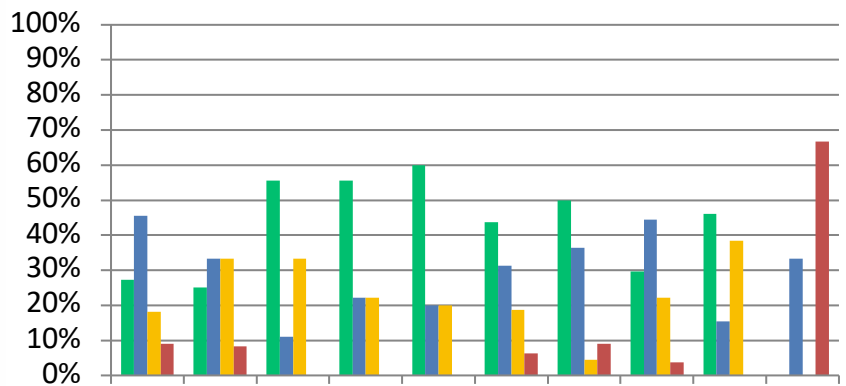


Challenges with processing

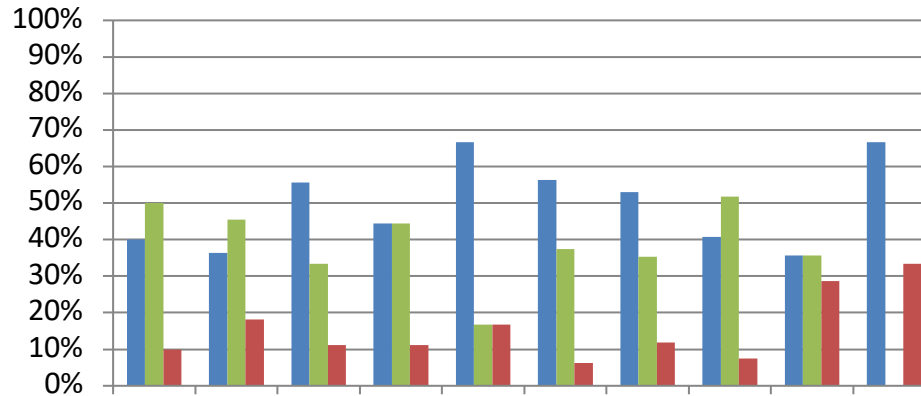


■ no challenges at all
■ low challenge
■ moderate challenge
■ high challenge

Challenges with visualization



My training needs are...



■ Met
■ Partially met
■ Not met

GOES-EAST
 GOES-WEST
 METEOSAT 0 degree
 METEOSAT Indian Ocean
 INSAT
 FY-2
 FY-4
 HIMAWARI
 GEO-KOMPSAT
 ELECTRO-L

GOES-EAST
 GOES-WEST
 METEOSAT 0 degree
 METEOSAT Indian Ocean
 INSAT
 FY-2
 FY-4
 HIMAWARI
 GEO-KOMPSAT
 ELECTRO-L

OVERVIEW
PERSONAL INFORMATION



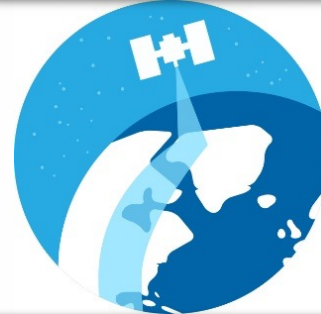
7 QUESTIONS

USE OF GEO DATA



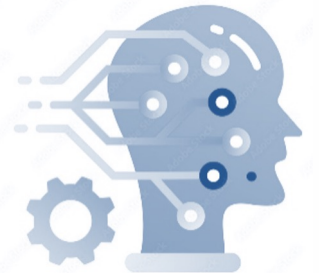
9 QUESTIONS

USE OF LEO DATA



7 QUESTIONS

DATA APPLICATIONS
AND TRAINING NEEDS



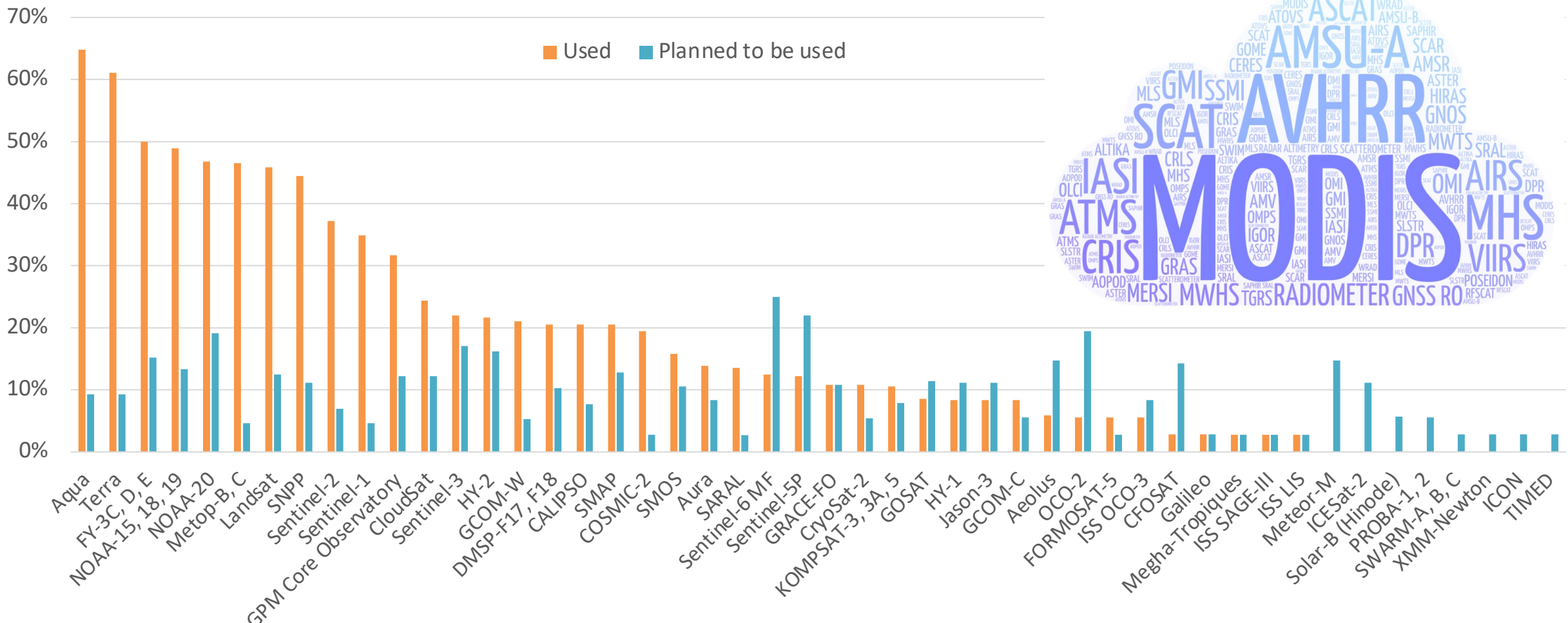
6 QUESTIONS

Answered	66	41
Skipped	4	29

✓ Use of LEO Data

Q. Please indicate the use of the following LEO satellite data (Sorted by used)

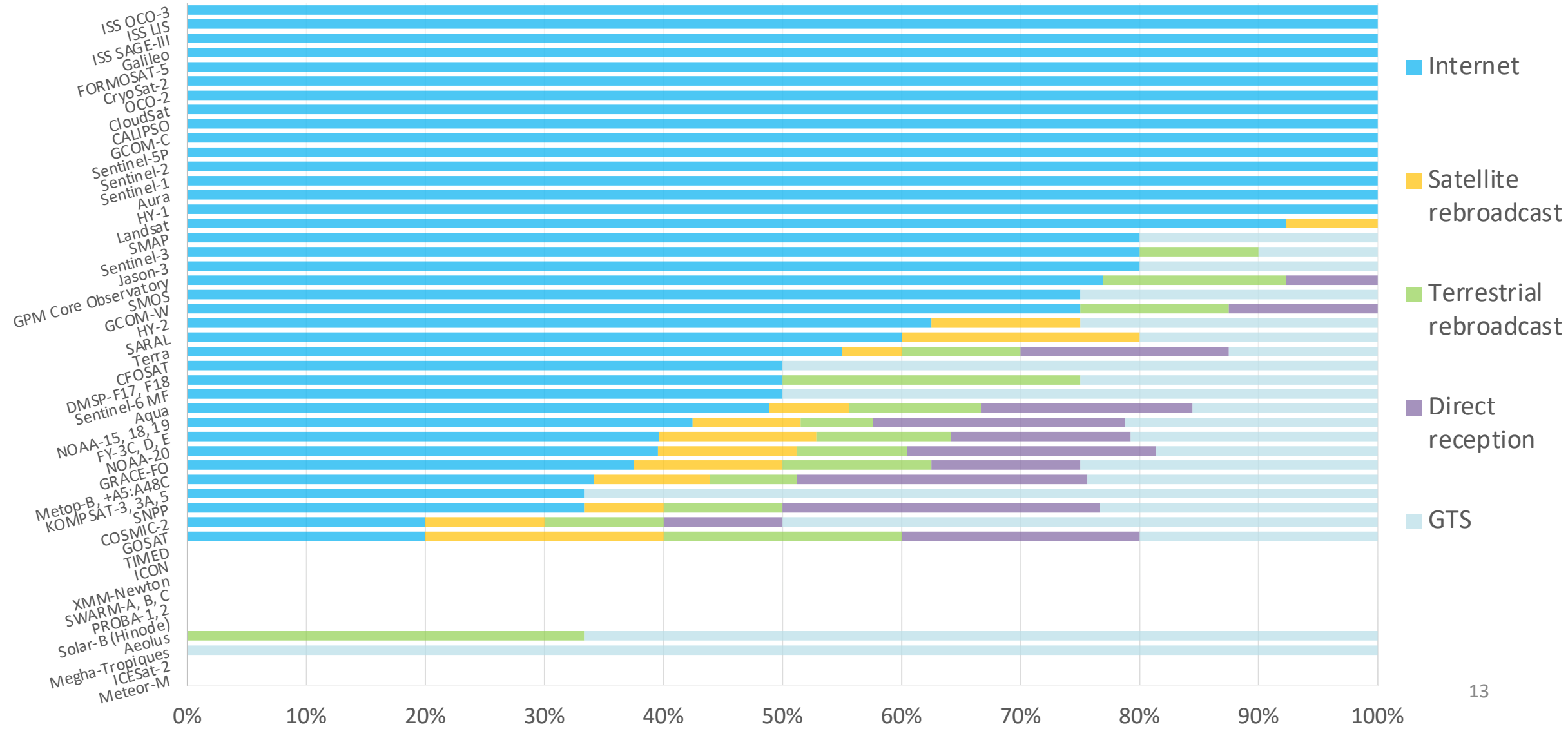
Q. Please specify the instruments you use from the following multi-purpose LEO satellites



The lists of instruments are available via the links to the dedicated pages of the WMO OSCAR database. If an option is not used or not applicable, please leave it blank.

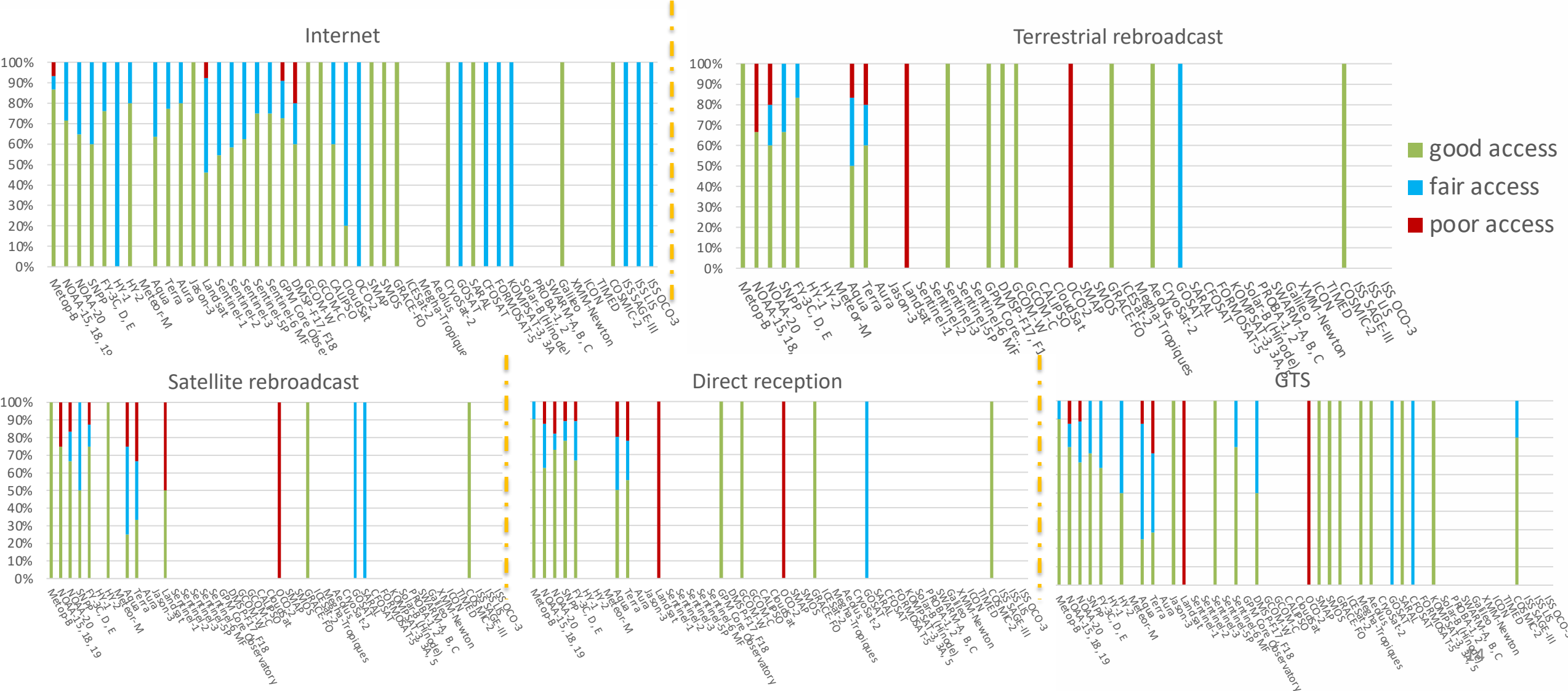
✓ LEO Data --- Access Mechanisms

Please indicate your data access mechanisms for LOW-EARTH ORBIT satellite data and indicate **how satisfied you are with these mechanisms**. If an option is not used or not applicable, please leave it blank

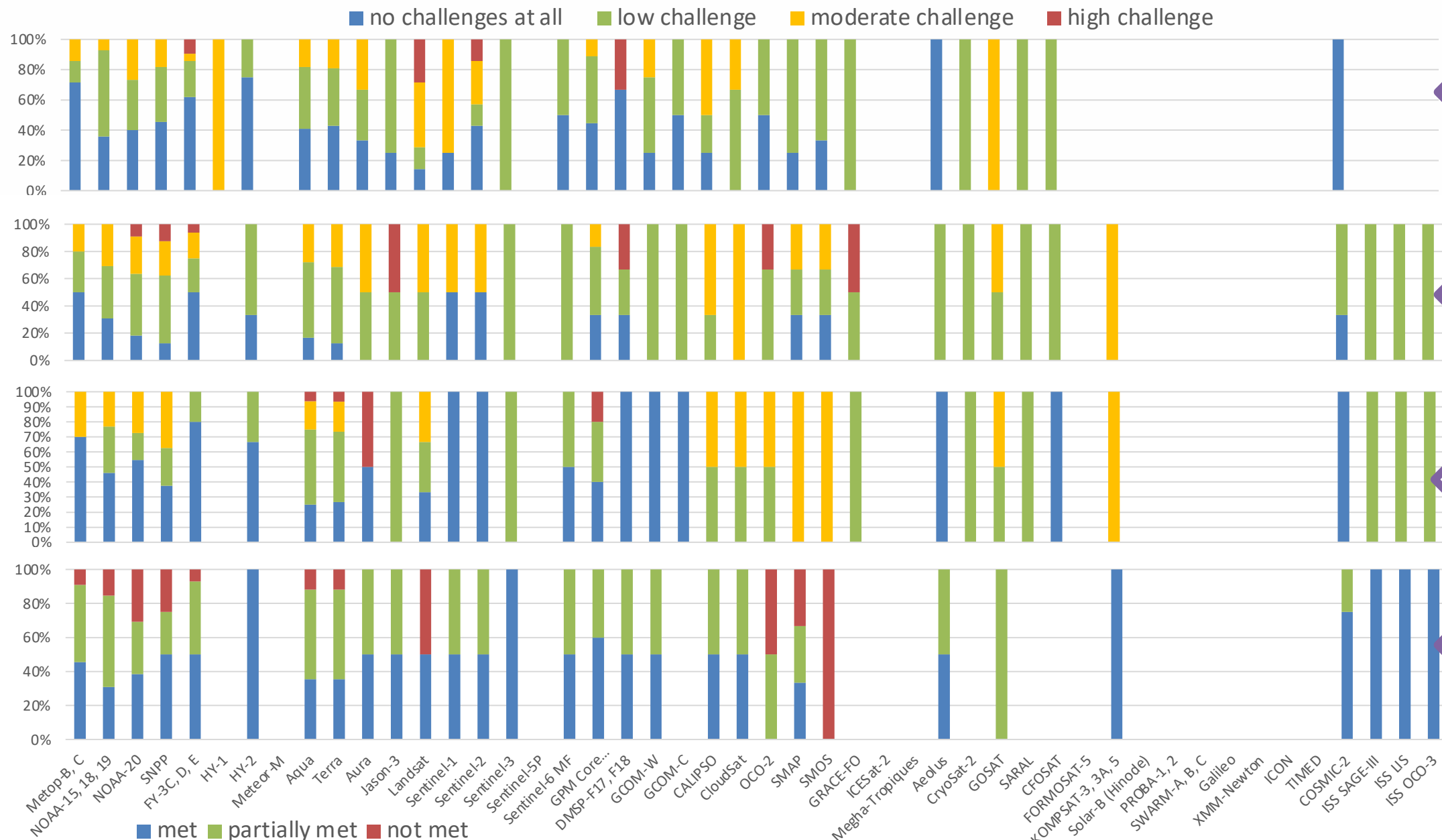


LEO Data --- Access Mechanisms

Q. Please indicate your data access mechanisms for LOW-EARTH ORBIT satellite data and indicate how satisfied you are with these mechanisms. If an option is not used or not applicable, please leave it blank



✓ LEO Data --- Challenges



Challenges with Access

Challenges with Processing

Challenges with Visualization

My training needs are...

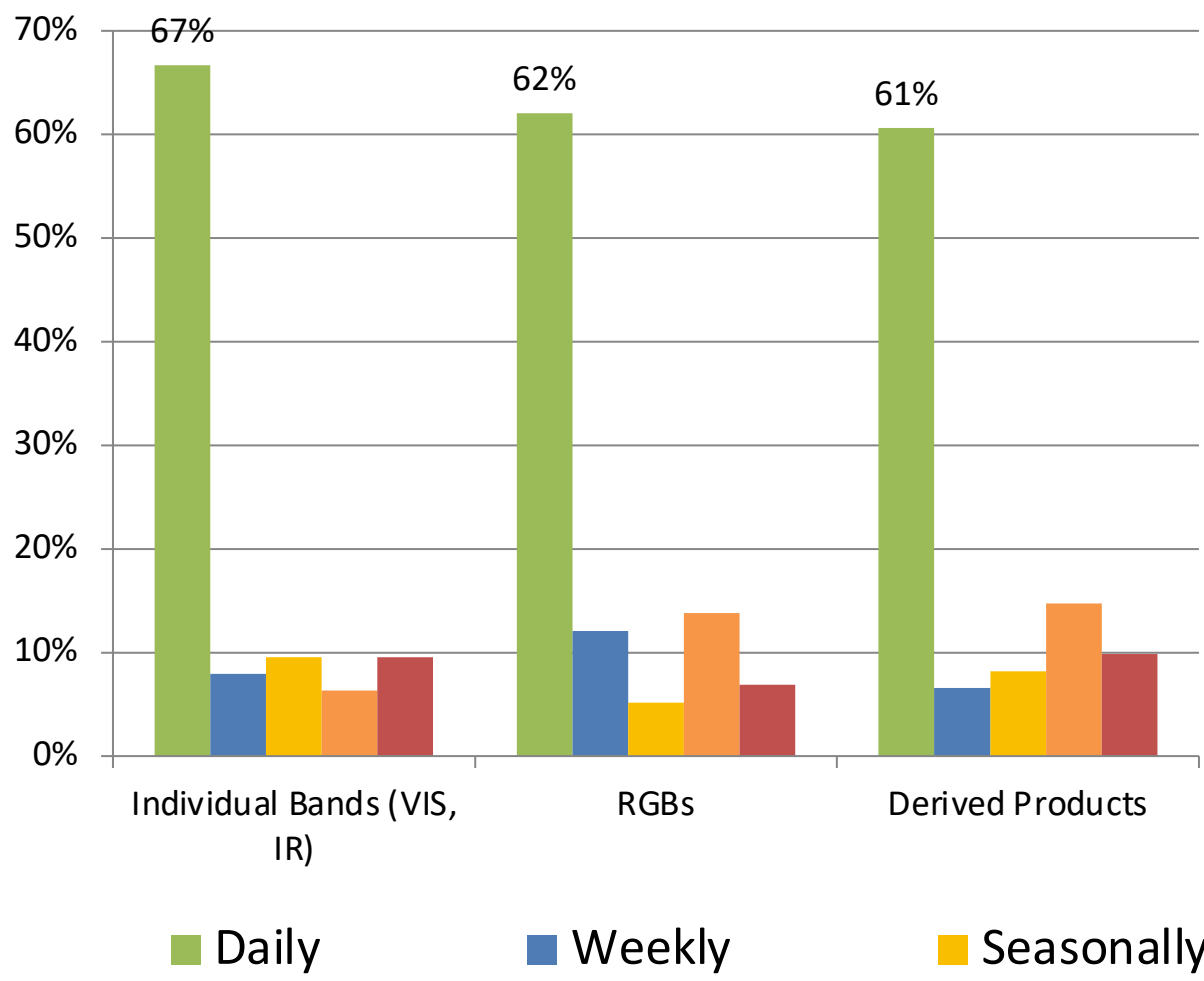
Answered	44
Skipped¹⁵	26

✓ Use of GEO & LEO Satellite Data

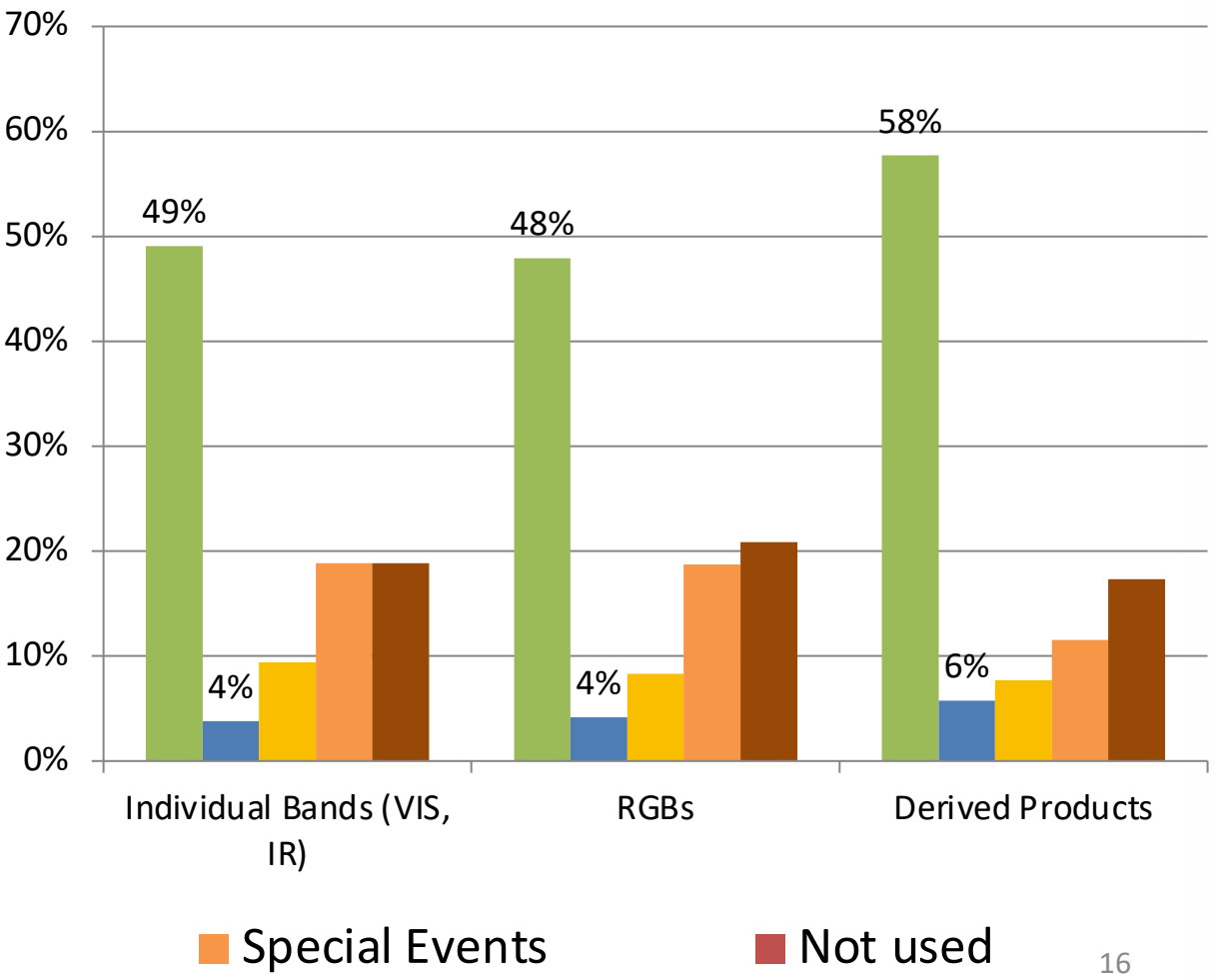
	GEO	LEO
Answered	68	60
Skipped	2	10

Q. Please indicate the frequency of utilization of the following GEO & LEO information

GEOSTATIONARY information

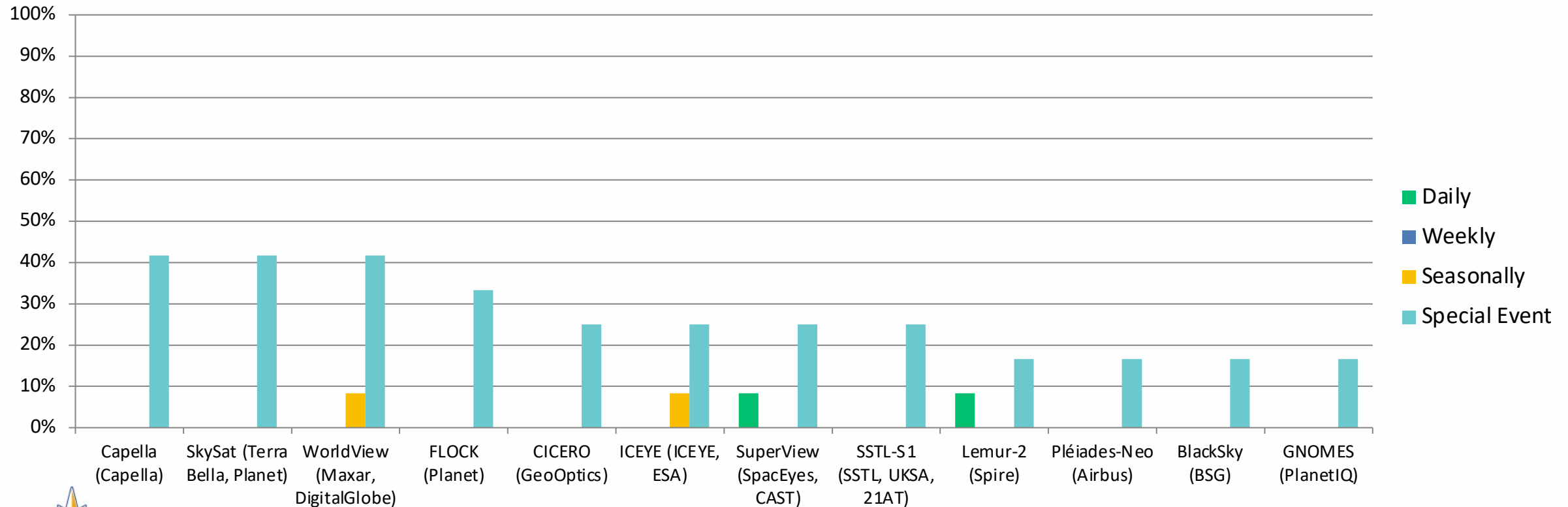


LOW-EARTH-ORBIT information



✓ Commercial meteorological and environmental satellites

Q. Do you use data from commercial meteorological and environmental satellites to address your needs? If an option is not used or not applicable, please leave it blank



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Answered 12

Skipped¹⁷ 58

**OVERVIEW
PERSONAL INFORMATION**



7 QUESTIONS

USE OF GEO DATA



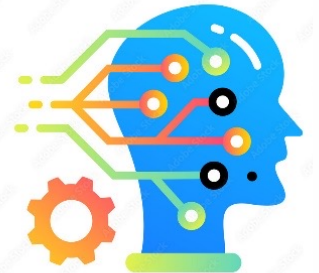
9 QUESTIONS

USE OF LEO DATA



7 QUESTIONS

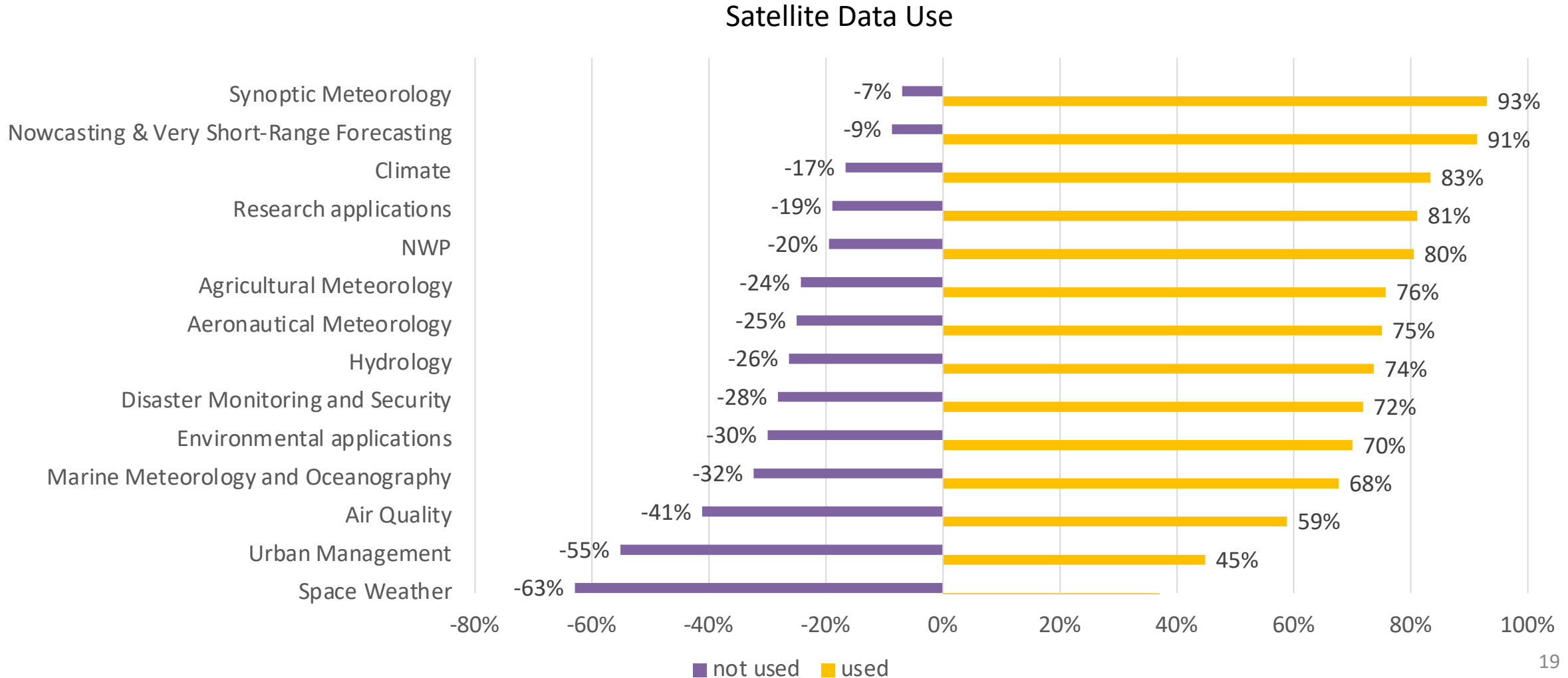
**DATA APPLICATIONS
AND TRAINING NEEDS**



6 QUESTIONS

✓ Use of data for various application areas

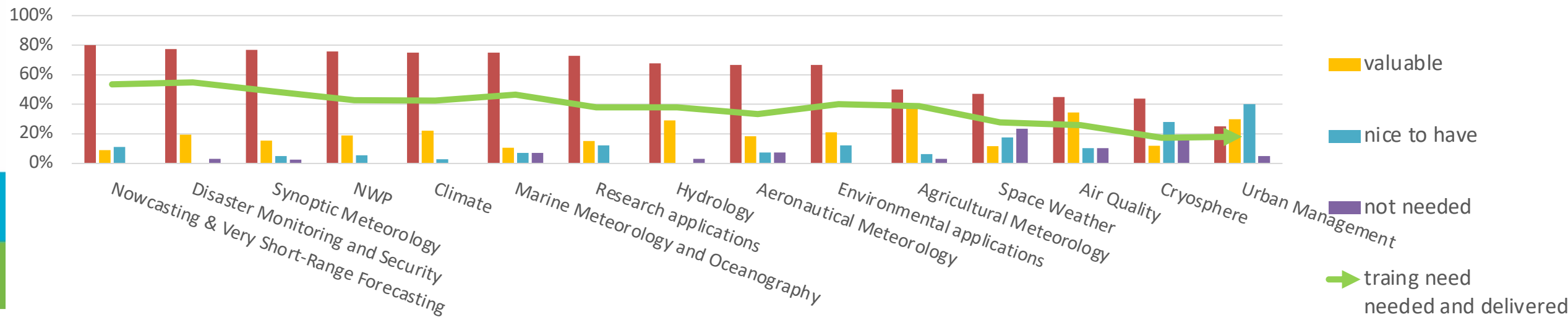
Q. Please state your use of satellite data for each application area in terms of whether it is used or not used and indicate if there is a need for people working in each application area to receive training in the use of satellite data



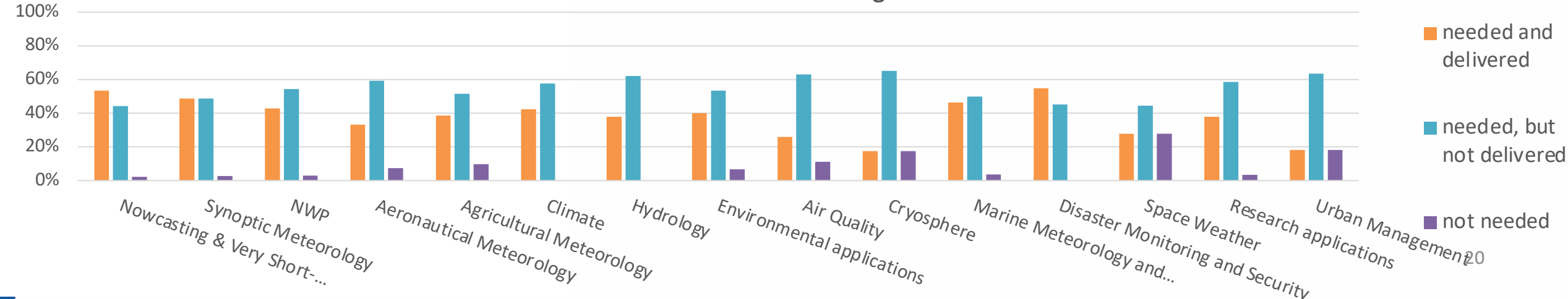
✓ Satellite Data Importance & Need for Training

Q. Please state your use of satellite data for each application area in terms of whether it is essential or not essential to your application, and indicate if there is a need for people working in each application area to receive training in the use of satellite data

Satellite Data Importance

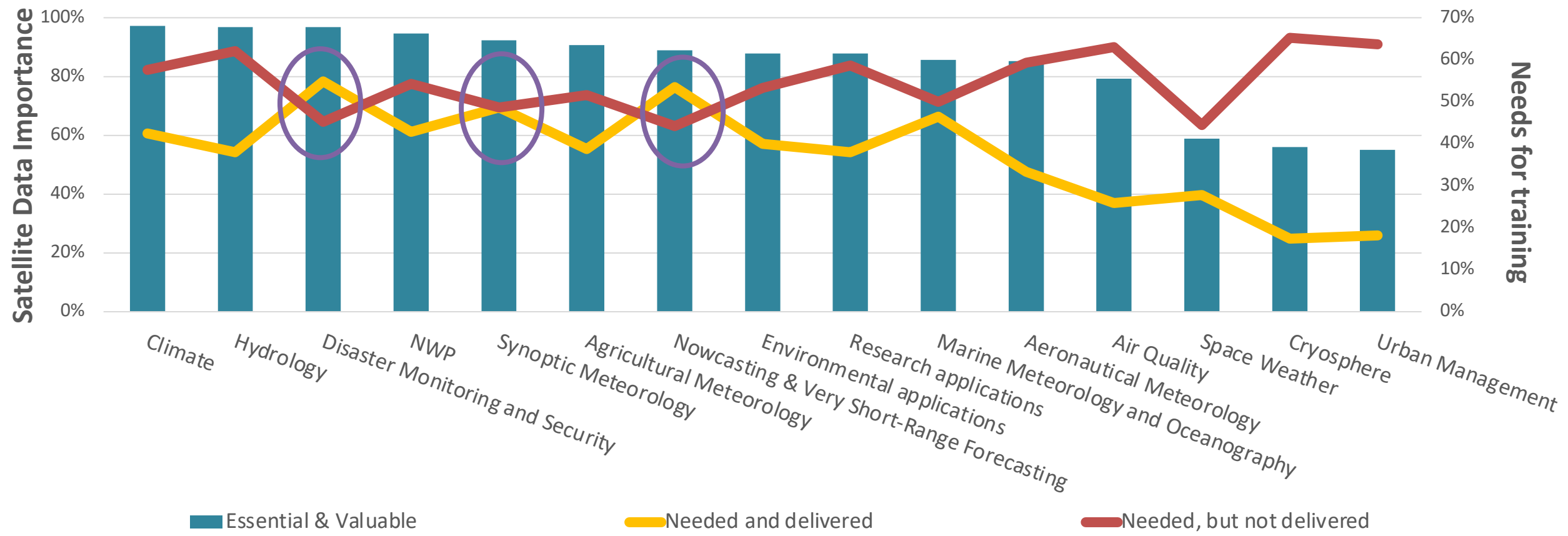


Need for Training



✓ Satellite Data Importance & Need for Training

Satellite Data Importance & Need for Training

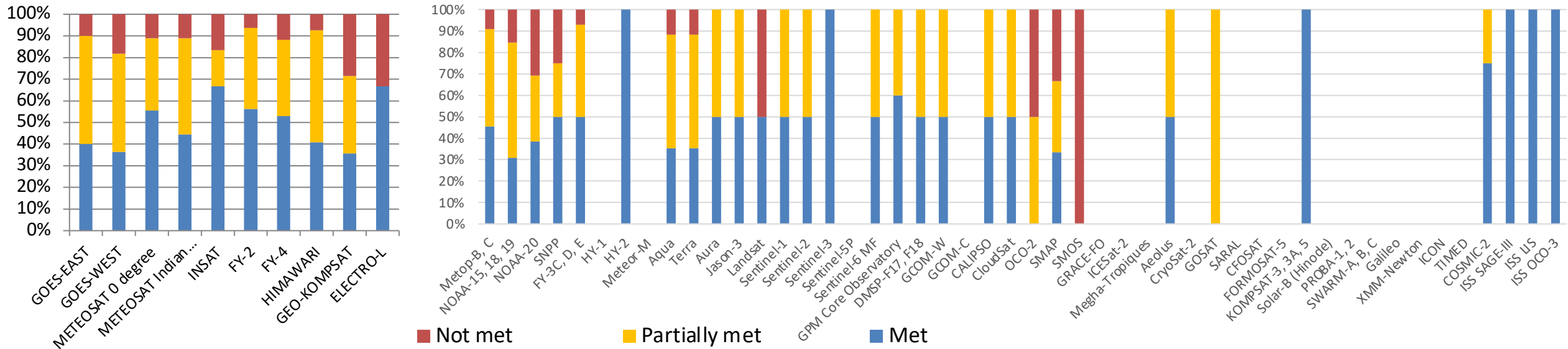


✓ Training needs

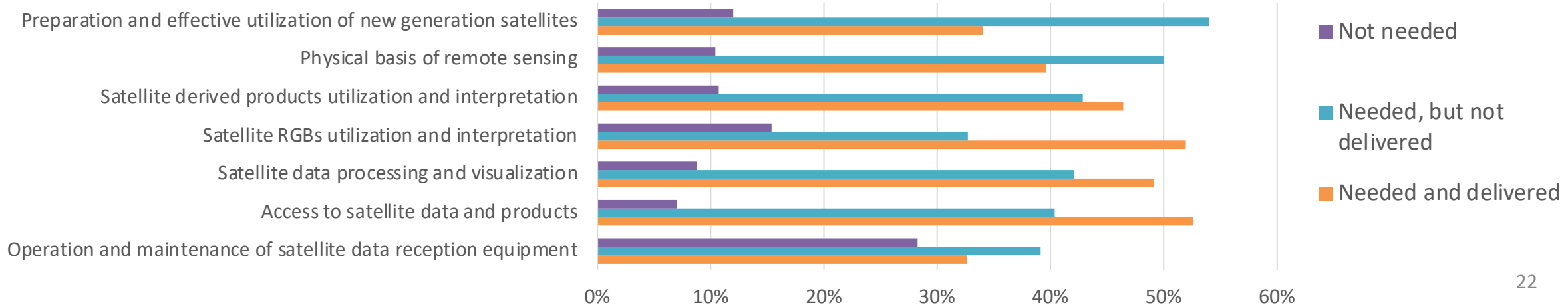
	GEO	LEO	Training need
Answered	55	44	60
Skipped	15	26	10

Q. Please indicate your training needs and your training status for the following areas

Training needs on GEO & LEO data access, processing and visualizing



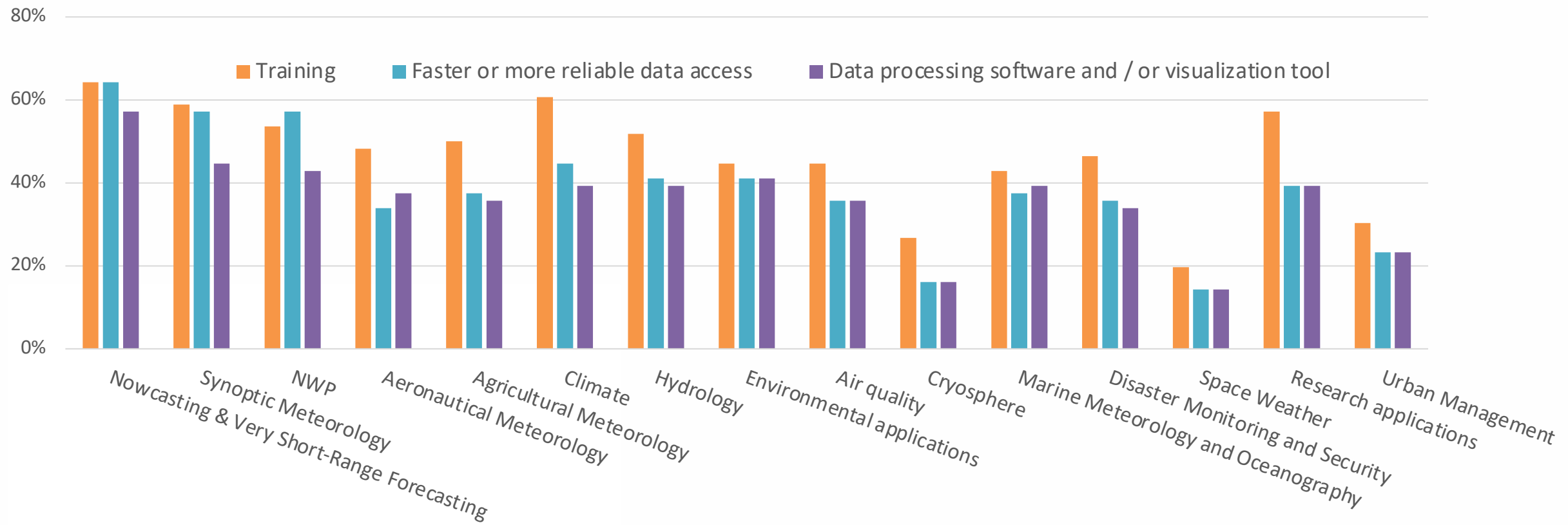
Training needs on various topics



✓ Improve the services

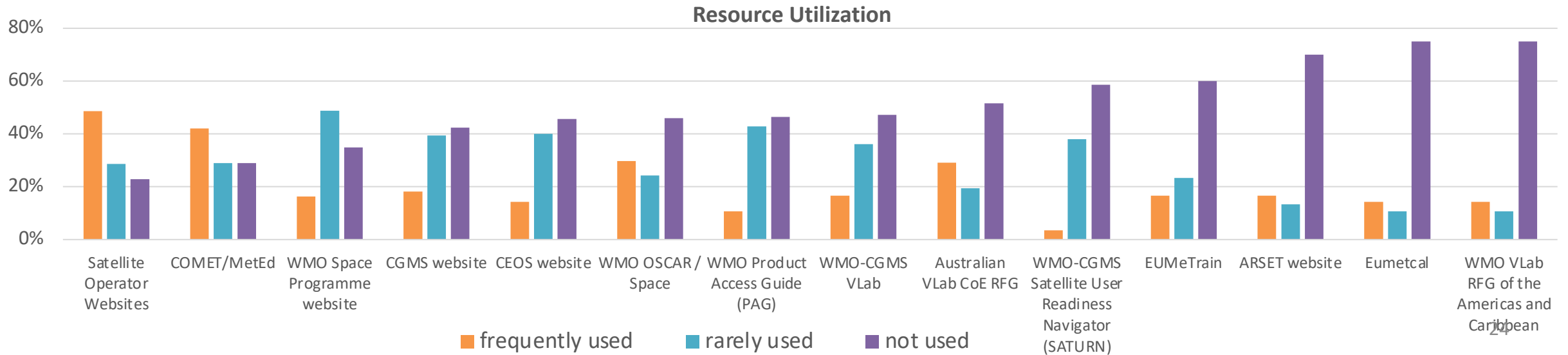
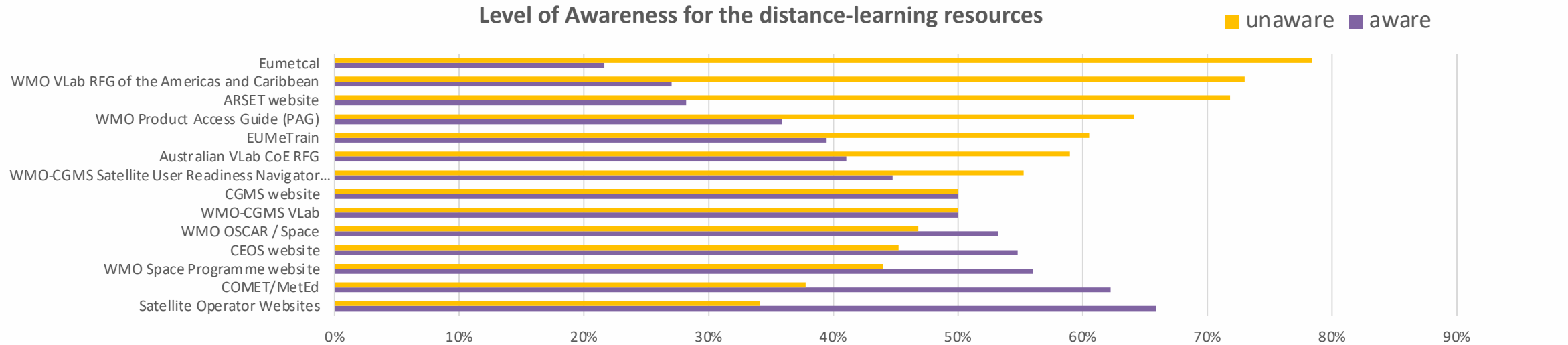
Q. Please specify what would help you improve your services for each application area with respect to utilization of satellite data and products. If an option is not used or not applicable, please leave it blank.

Improve the services for each application area



✓ Training Resources

Q. Please state your level of awareness of the following distance-learning resources and other information sources. State whether you use these resources for staying abreast of new developments in satellite systems and applications



✓ Comments

- 1. Disseminate widely information on the different sources of satellite data and the methods to access this data. Make available a website where we can access the data easily, and documentation.**
- 2. It is hoped that WMO will take the lead to set up international large-scale scientific projects, promote exchanges between different satellite providers or users, and explore faster cooperation and exchange modes in terms of easy data access and graphic visualization.**
- 3. To have dynamic, analyzed data for better decision making. The simplification of data is much easier for stakeholders in its usage and in dynamic decision making.**
- 4. To learn more about weather, air, water, soil, atmosphere, earth plate and volcano activities, and Nowcasting and satellite training**



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Global Survey on Satellite Data Utilization – 2022: RA II & V Summary

- ❖ GEO is more widely used than LEO (incl. judging by the number of skipped questions for LEO-related data). Himawari and FY satellite data are more widely used in the region. There is a lot of interest in using FY-4A sounding data (*slide 7*). Commercial data are not frequently used in the region. However, some users utilize this data for special events (*slide 17*).
- ❖ Most users access satellite data via the Internet for both GEO and LEO data (*slides 8 & 13*).
- ❖ About 20% of users reported that they do not use LEO satellite data at all (*slide 17*).
- ❖ Most of the priority application areas are well covered by corresponding training. Training is reported to be still needed for Climate, Hydrology, NWP (*slide 20*).
- ❖ Training is also required in Air quality, Cryosphere and Urban Management (*slide 21*).
- ❖ Preparation and effective utilization of new generation satellites is singled out as an area where further training is needed. Additionally, training in Physical basis of remote sensing, satellite derived products utilization and interpretation, satellite data processing and visualization is required by users (*slide 22*).
- ❖ Users are not aware of the learning resources available online for the Region (*slide 24*).

Action proposed: to raise awareness of users in RA II & V about the learning resources available online.

Thank you Merci



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