

Webinar Report: International Webinar on Earth Observations for Agricultural Statistics (EO-STAT)

Prepared by

UN Big Data and Data Science Regional Hub for Africa

<https://ecastats.uneca.org/regionalhub>



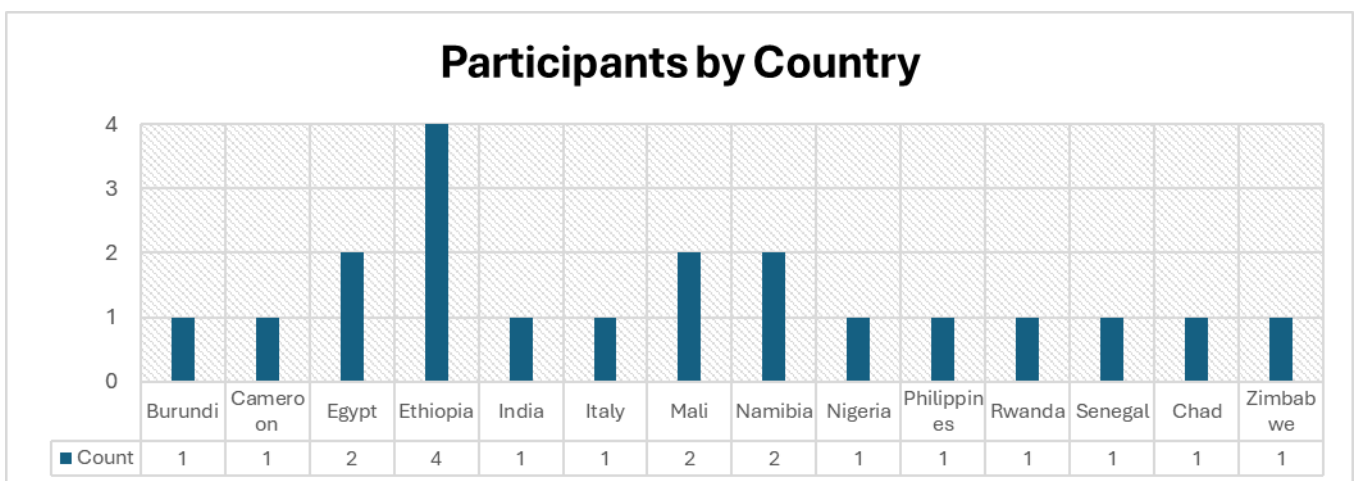
January 2024

Introduction

On Monday, December 18, 2023, the UN Big Data and Data Science Regional Hub for Africa conducted a webinar on Earth Observations for Agricultural Statistics (EO-STAT). The presentation was delivered by experts in collaboration with the United Nations Food and Agriculture Organization (UNFAO) and the UN Global Hub in China.

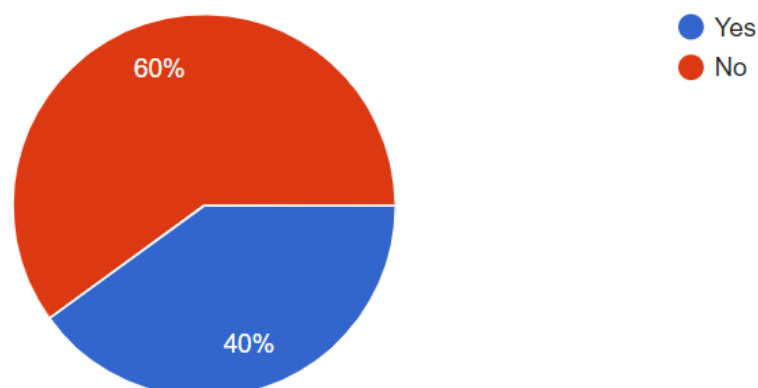
The webinar provided a comprehensive exploration of Earth Observation (EO) Big Data and Statistics, shedding light on the relevance and key aspects of this domain. Attendees delved into the effective use of EO Data Cubes and Time Series Analysis, gaining insights into their application for enhanced classification performance. The session included a case study showcasing the utilization of EO Data Cubes in Mexico for monitoring agricultural frontiers. Real-world applications were emphasized through a presentation on the integrated monitoring of agricultural resources and the assessment of impacts from disasters using EO data. The event concluded with a live demonstration of the EOSTAT Crop Mapper in Senegal, offering participants a practical understanding of how Earth Observation data can be applied for crop monitoring. The webinar successfully combined theoretical knowledge with hands-on applications in the dynamic field of Earth Observation.

A total of 20 responses were gathered from participants representing 14 countries, namely Burundi, Cameroon, Egypt, Ethiopia, India, Italy, Mali, Namibia, Nigeria, the Philippines, Rwanda, Senegal, Chad, and Zimbabwe.



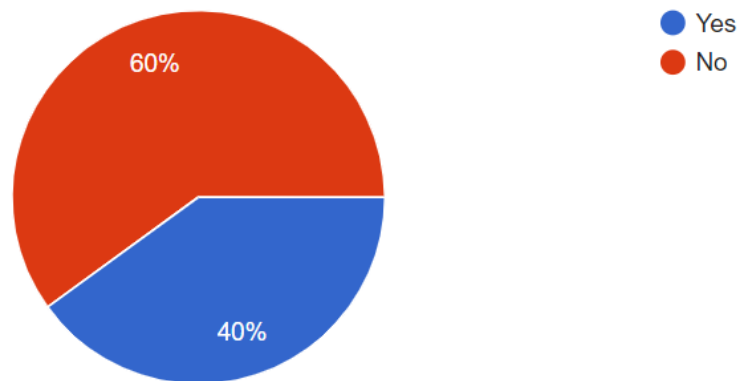
1) Are you currently using Earth Observations Big Data for Agricultural Statistics?

As per the survey findings, among the 20 respondents, 60% are presently utilizing Earth Observation (EO) big data for agricultural statistics, whereas the remaining 40% are not.



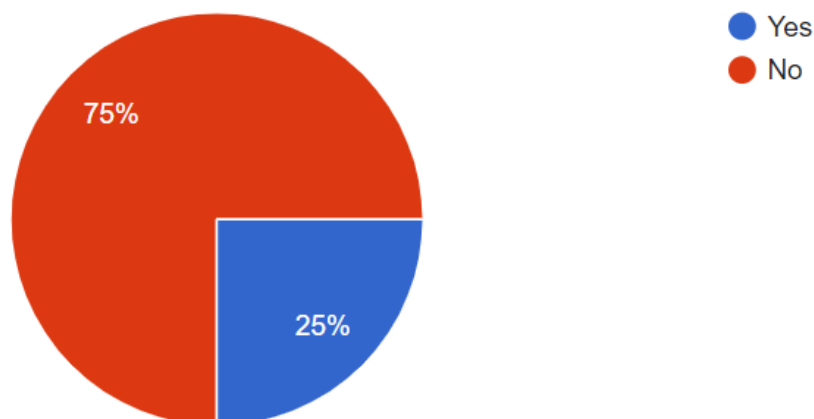
2) Are you currently using Earth Observations Big Data to monitor agricultural resources and impacts from disasters?

The response to the question regarding the current utilization of Earth Observation Big Data for monitoring agricultural resources and impacts from disasters indicates that 60% of respondents are actively employing it, while the remaining 40% are not utilizing it at present.



3) Are you currently using platforms like EOSTAT Crop Mapper that facilitate the operationalization of Earth Observations for agricultural monitoring?

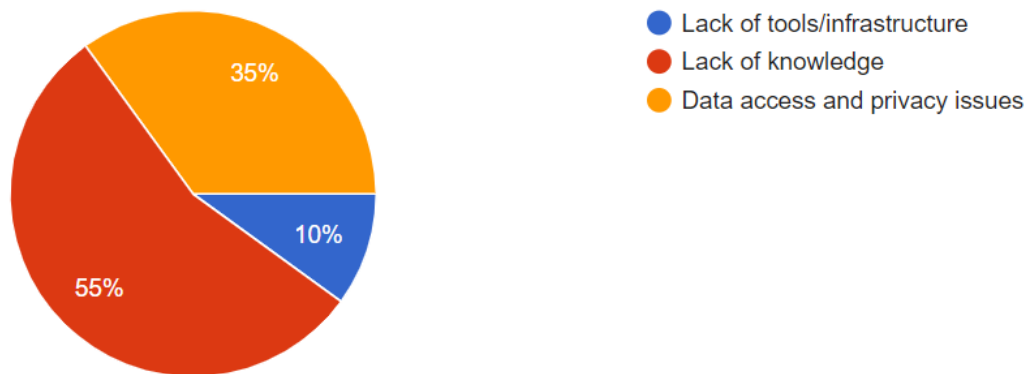
The response to the inquiry about the current use of platforms such as the EOSTAT Crop Mapper, which facilitates the operationalization of Earth Observations for agricultural monitoring, reveals that 75% of respondents answered affirmatively, while 25% indicated they are not currently using such platforms.



4) What are the challenges that you have in using *Earth Observations Big Data*? (Skills gaps)

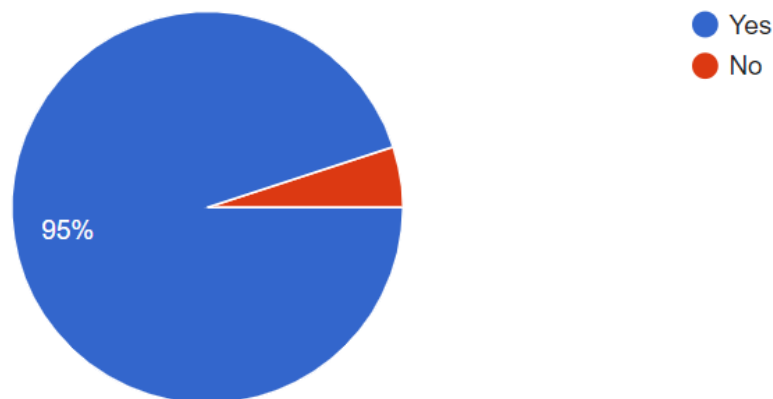
In response to question 4 regarding challenges encountered in utilizing Earth Observations Big Data, participants outlined several noteworthy concerns.

Initially, 10% of the survey participants highlighted the challenge of insufficient tools and infrastructure when utilizing Earth Observations Big Data. A more widespread concern emerged with 55% of respondents identifying a lack of knowledge as a major obstacle to effectively harnessing Earth Observations Big Data. Additionally, 35% of participants indicated that issues related to data access and privacy pose notable challenges in the practical application of Earth Observations data.



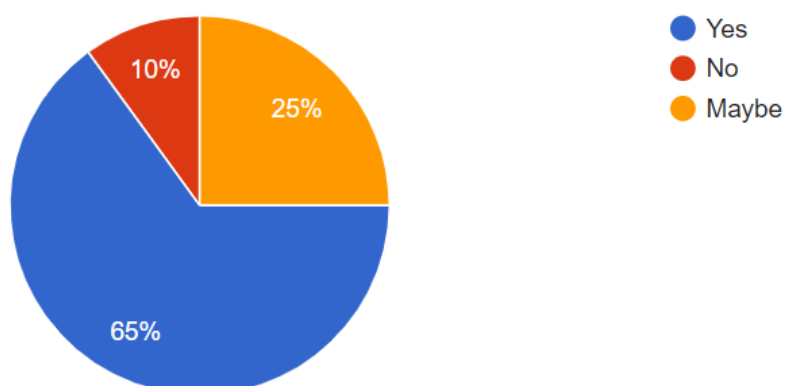
5) Do you see potential applications of the techniques proposed here in the work of your organization?

The survey results indicate a high level of optimism regarding the potential applications of the proposed techniques in the respondents' respective organizations, with 95% affirming a positive outlook. Only 5% expressed a more cautious stance, indicating a perceived lack of applicability.



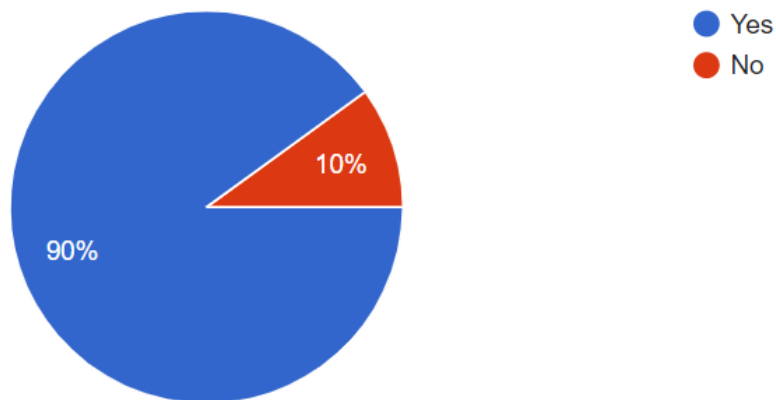
6) Do you have plans to use *Earth Observations Big Data* from next year as a data source?

The survey respondents displayed varied intentions regarding the utilization of Earth Observations Big Data as a data source for the upcoming year. A majority, constituting 65%, expressed affirmative plans to incorporate Earth Observations Big Data into their data sources. Conversely, 10% indicated no such plans, while 25% remained undecided or did not commit to a specific direction at this time.



7) Are you interested in the UN Regional Hub for Big Data Science in Africa supporting your organization in using Earth Observations Big Data for Agricultural Statistics?

The survey results reveal a strong interest among respondents in leveraging support from the UN Regional Hub for Big Data Science in Africa for the utilization of Earth Observations Big Data in Agricultural Statistics. An overwhelming 90% of respondents expressed a positive inclination towards this support, while a minority of 10% indicated no interest in such collaboration.



8) If yes, please provide your name, email, and the name of your organization/ institution.

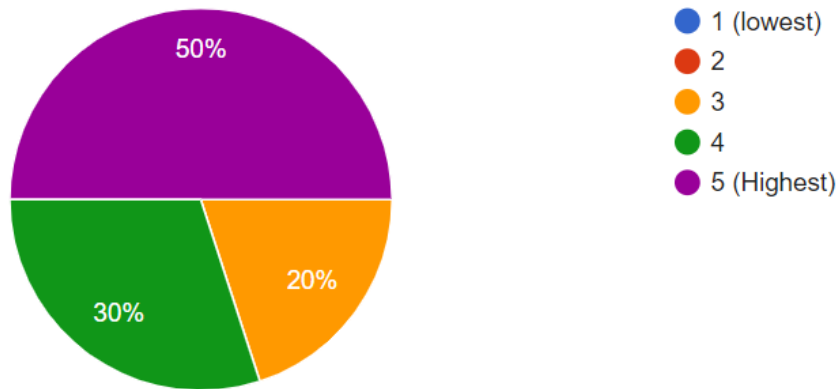
Countries expressing interest in receiving support from the UN Regional Hub for Big Data Science in Africa for their initiatives related to Earth Observations Big Data in the context of Agricultural Statistics encompassed Burundi, Cameroon, Egypt, Ethiopia, Mali, Namibia, Nigeria, Rwanda, Senegal, and Chad.

The following table provides the contact person's name, affiliated organization, country, and email address for countries expressing interest in Earth Observations initiatives.

No.	Name	Organization	Country	Email
1	KWIZERA Arsène	National Institute of Statistics of Burundi (INSBU)	Burundi	kwizersa5@gmail.com
2	Romain	National Institute of Statistics in Cameroon: INS-Cameroun	Cameroon	romaintchakoute@gmail.com
3	Radwa Khaled	Bayan International Group	Egypt	radwa@bayangroup.org
4	Wondimu Tolcha	Addis Ababa University	Ethiopia	wondimu.tolcha@aau.edu.et
5	Tesfasilassie Girma	Urban Beautification and Green Development Bureau	Ethiopia	tesfamugoro25@gmail.com
6	Zemedkun Alemu	Ethiopian Institute of Agricultural Research	Ethiopia	zlaemu56@gmail.com
7	Ali KONE	Planning and Statistics Unit of the Rural Development Sector/ Cellule de Planification et de Statistique du Secteur Développement Rural (CPS/SDR)	Mali	kneali@yahoo.fr
8	Alex Mudabeti	Namibia Statistics Agency	Namibia	AMudabeti@nsa.org.na
9	Minardo Thomas	Ministry of Environment, Forestry and Tourism, Namibia	Namibia	tuleni2018@gmail.com
10	NDONG ROSEMARY	Nigerian National Bureau of Statistics	Nigerian	NDONGROSEMARY@GMAIL.COM
11	Crispin KABEJA	Rwanda Institute for Conservation Agriculture (RICA)	Rwanda	ckabeja@rica.rw
12		Directorate of Analysis, Forecasting and Agricultural Statistics (DAPSA) and Université Numérique Cheikh Hamidou Kan	Senegal	mamadou1.ndiaye@unchk.edu.sn
13	Bichara Haroun	Ministère en Charge de l'Agriculture, Direction de la Production et des Statistiques Agricoles	Chad	songharoun@gmail.com

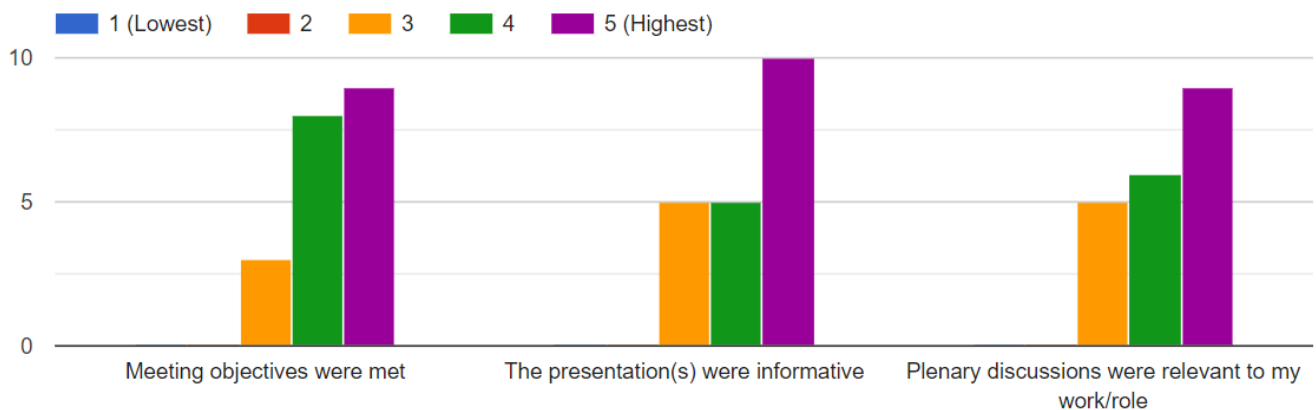
9) Please rate your overall satisfaction with the webinar.

Participants were asked to rate their overall satisfaction with the webinar using a scale ranging from 1 (lowest) to 5 (highest). A larger percentage, 50%, reported a higher level of satisfaction. A smaller portion, accounting for 30%, categorized their satisfaction as a high level. The remaining 20%, reported medium level of satisfaction levels.



10) Please rate the following statements on a scale of 1 (lowest) to 5 (highest)

Participants were tasked with evaluating the extent to which the meeting objectives were achieved, employing a scale ranging from 1 (lowest) to 5 (highest). Out of the respondents, 9 individuals gave the highest rating of 5, 8 participants rated it as 4, while 3 respondents provided a rating of 3. This diversified feedback provides a comprehensive understanding of the perceived success in meeting the established objectives. The informativeness of the presentations received highly positive feedback from participants, with all 10 respondents rating it as 5, indicating the highest level of satisfaction in terms of the presentations' richness and effectiveness in delivering valuable information. 5 participants rated it as 4, while the remaining 5 respondents provided a rating of 3. The plenary discussions received varied ratings from participants, with 9 individuals providing a rating of 5, 6 participants rating it as 4, and 5 respondents giving it a rating of 3. These diverse assessments reflect differing perspectives on the effectiveness and engagement levels during the plenary discussions. Overall, the feedback indicates a generally positive outlook and satisfaction among the participants.



11) Please provide any comments and suggestions you may have on how to improve future meetings and webinars on Earth Observations Big Data for Agricultural Statistics.

The main comments and suggestions provided by the respondents regarding how to improve future webinars on Earth Observations Big Data for Agricultural Statistics include:

- **Collaboration Readiness:** Namibia expressed readiness for collaboration and sought assistance from the Namibia Statistics Agency.
- **Enhanced Presentation Visibility:** A request was made to upload the presentation slides to facilitate a clearer understanding of different points during the presentation.
- **Extended Duration:** A suggestion was made to consider extending the meeting duration over two or three days for online sessions.
- **Increased Demonstrations/Exercises:** Participants indicated a desire for more demonstrations and exercises to enhance the learning experience.
- **Appreciation for the Opportunity:** Gratitude was expressed for the impressive webinar and the opportunity to attend.
- **Public Awareness for Land Use Observation:** A suggestion was made to raise public awareness, particularly in creating observations for land use, involving government bodies for land utility and purpose.
- **Information Application:** One participant mentioned the gained knowledge would be applied in future projects.
- **Acknowledgment of Organization:** The webinar was recognized as well-organized by one participant.