

EO4SD WEBINAR SUMMARY

The how, when, and why of using EO data in climate resilience decision-making: Agricultural livelihoods and Water

This document presents a short summary of and key lessons from the European Space Agency's Earth Observation for Sustainable Development (EO4SD) Climate Resilience Cluster's recent webinar "**The how, when, and why of using EO data in climate resilience decision-making - Showcase 1: Agricultural livelihoods and Water**". The webinar, the second in a series of seven held by the EO4SD Climate Resilience Cluster in June and July 2020, provided an introduction to identifying when to use Earth Observations (EO) for climate resilience at different stages throughout a project, and outlined the different types of data available for decision-making.



CARLOS DOMÉNECH

Project Manager at GMV

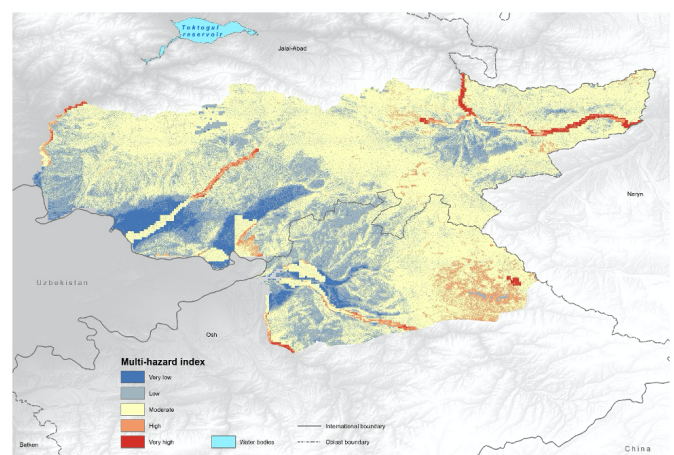
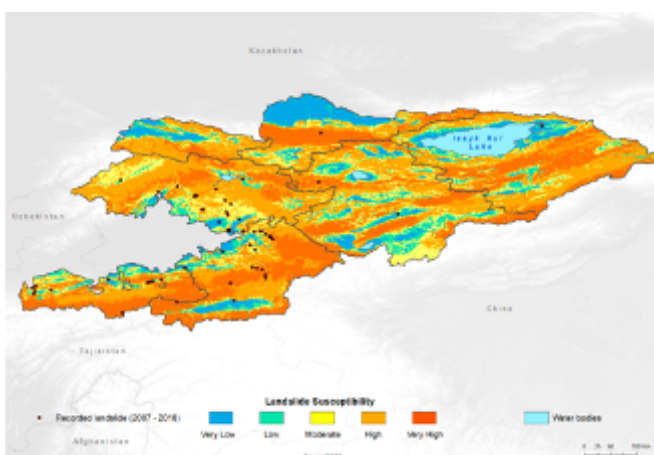
Carlos presented on behalf of Anna Burzhykowska, Technical Officer at ESA, showcasing the way in which ESA supports the Copernicus programme, and how ESA initiatives are geared toward supporting the agriculture sector, including **mapping crop productivity, soil moisture, and evapotranspiration**. He also talked about the **Land Surface Temperature Monitoring Satellite** which will be one of the next generations of Sentinel Missions providing 30-50m resolution measurements of land temperature, and the ability to detect crop thermal stress with a 3-day revisit time.

Anestis provided more information on the **satellite derived agro-climatic indicators** and how they can support the agriculture sector. The Copernicus Climate Change Service (C3S) climate indicators can help to ensure food security by **simulating crop-growth and crop yields**. These indicators can be developed to build a picture of changing agro-climatic conditions and inform, for example, how and where to crop, and **where to target possible resilience interventions**. There are a range of agriculture- and water-related indicators currently hosted by the EO4SD platform, including those developed for the **World Bank Climate Change Knowledge Portal**.



ANESTIS TRYPITSIDIS

Research Associate at NOA



Map of the landslide risk (left), and Multi-hazard risk map (right) combining landslide, vegetation damage, flood and soil erosion hazards in the Ferghana Valley, Kyrgyzstan. Prepared by EO4SD Cluster as part of the Climate Data Fiche for IFAD's RRPCP.



LYDIA MESSLING

*Communications
Consultant
at Acclimatise*

Lydia then outlined how climate-related data can be used in decision making. To do this successfully, we need to identify data, leverage it for specific decisions, ensure we have the skills to take advantage of it, and provide feedback to inform those that produce the data about how they improve it. **Satellite data is unrivalled in generating consistent and comparable climate data.** The key questions to consider when using EO data help to identify what sort of EO data will be useful, and when in the project cycle it would be most beneficial to consult and integrate EO data. She then provided different examples of how EO data had used and outlined how the cluster had identified specific points in projects where EO data could add the most value in enhancing decision-making. In particular, EO data can be useful for **providing the evidence needed to secure adaptation funding.** One of these examples was IFAD's Regional Resilient Pastoral Communities Project (RRPCP) in Kyrgyzstan where the cluster provided range of products to support decision-making.

Oliver Mundy described how the goal of the RRPCP is to contribute to **rural poverty alleviation through increased resilience**, incomes and enhanced economic growth in rural farming communities via improved livestock and pasture health and productivity and enhanced climate resilience of pastoral communities. The project will facilitate the process of joint planning and requires data to help **inform the dialogue between the pastoralists to help co-create the pasture management plans.** IFAD requested provision of EO products for the management plans, to identify areas of poor-quality lands which are suitable for afforestation, infrastructure, restoration of riverine vegetation, and measures to prevent soil erosion, mudslides and floods, and water management measures. By working together IFAD and EO4SD can **help validate the products on the ground** and provide useful feedback for the EO data providers.



OLIVER MUNDY

*Technical Specialist
at IFAD*

RESOURCES

Further Reading:

- **EO4SD CR Capacity Building Material** [here.](#)
- **Using climate-related EO data in decision-making** [here.](#)

Full webinar recording available [here.](#)

Key Takeaways

- Earth Observation data can be integrated throughout the different stages of an IFI's project lifecycle.
- Different climate variables can be combined to form climate indicators which can build a picture of climatic conditions and support decision making.
- Using EO data well for decision-making is reliant upon identifying the right data, leveraging it for specific decisions, having the skills to take advantage of it, and providing feedback to data providers so that they can improve it for future use.

"We've been working with EO4SD as we wanted to have an in-depth analysis of climate vulnerability in order to make a strong case that the adaptation fund should co-finance our project".

- Oliver Mundy, IFAD