

EO FOR SUSTAINABLE DEVELOPMENT IN THE CLIMATE RESILIENCE DOMAIN

DELIVERY

QUESTION & ANSWER SESSION

WEBINAR SERIES 1: WEBINAR SERIES ON HOW TO USE EARTH
OBSERVATION TO TACKLE CLIMATE CHANGE

MODULE 3: THE HOW, WHEN, AND WHY OF USING EO DATA IN CLIMATE
RESILIENCE DECISION-MAKING.

SHOWCASE 2: URBAN RESILIENCE & ENVIRONMENTAL & NATURAL RESOURCES

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Q&A

Q1: **Flavia:** How reliable is using past flood risk to model future risks? Won't the "natural" patterns we have seen historically change due to climate change?

A1: **Carlos Domenech:** Past floods events can be used to derive flood hazard maps from return periods (e.g.JRC's <https://data.jrc.ec.europa.eu/collection/id-0054>). But those are not taking into account neither climate change nor socioeconomic scenarios. There are efforts, however, to assess flood risks under both current baseline conditions and future projections. Check for instance WRI's Aqueduct project <https://www.wri.org/resources/data-sets/aqueduct-floods-hazard-maps>.

Concerning our activity, our cluster is currently collaborating with WBG's MIGA to analyse region-wise what accumulated precipitation drives floods.

Dora Perrou: Please also note that our next Webinar (Module 4) will be focused on "**Water world and How EO data is deepening our knowledge of flood risk and water resource management**". For more information please visit this link: <http://eo4sd-climate.gmv.com/content/webinar-series-1-module-4>

Q2: **Melkie Fenta:** how can I produce this product as a beginner ?

A2: **Carlos Domenech:** In many cases there is no need to produce new EO-based products as there are many on-going activities delivering free-of-charge information of great quality (e.g. Copernicus). Our webinar series include hands-on activities to learn how to play with the data.

Q3: **Girma Berhe Adane:** I saw the soil moisture data is available in copernicus global land service as it was presented firstly. Is the data available globally and applicable for any regional data without downscaling?

A3: **Carlos Domenech:** Highest spatial resolution (1km) is only available for Europe. Global data is however available at 0.1 deg in CGLS <https://land.copernicus.eu/global/products/swi> and at 0.25 from 1978 in C3S <https://cds.climate.copernicus.eu/portfolio/dataset/satellite-soil-moisture>

Q4: **Melkie Fenta:** How climate risk would be assessed at local level exaple at scheme level?

A4: **Carlos Domenech:** EO provides contextual information to assess risks. Assessment of climate risks at local level might need support from models and in-situ data. Hydrodynamic models for instance in case of flood analysis.

Q5: **Flavia:** Thank you for your previous response. How energy intensive is EO (i.e. using artificial intelligence consumes a lot of energy and resource like water)? I am wondering whether the benefits of predicting certain environmental impacts may be offset by the resource and energy consumed in order to make those predictions?

A5: **Carlos Domenech:** I'm afraid I don't have a clear answer to your question, however I can address you to the Copernicus Market Report where the benefits that Copernicus bring to the society are discussed [https://www.copernicus.eu/sites/default/files/2019-02/PwC Copernicus Market Report 2019 PDF version.pdf](https://www.copernicus.eu/sites/default/files/2019-02/PwC_Copernicus_Market_Report_2019_PDF_version.pdf)

Q6: **Generich Capuli:** Since there's available data for the sea-surface temps and sub-surface currents, are those up-to-date for utilization?

A6: **Carlos Domenech:** If you are interested in EO-based ocean products, please have a look at the Copernicus Marine Service <https://marine.copernicus.eu/>. These services include EO, model and in-situ globally available.

Q7: **Michael Scheibenreif:** excited to see drone imagery coming up ... would be interested to learn if there is a systematic approach to combine drone and satellite imagery to drive data driven programming? would love to integrate it into our UNICEF African Drone and Data Academy curriculum ...

A7: **Carlos Domenech:** Not sure about any systematic approach, but drop us an email and we can discuss how to combine them and see opportunities for collaboration
