EO in Climate Modelling - World Café

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The aim was to discuss:

- What can we do to strengthen the link between EO and Climate Modelling in the next phase of CCI (*i.e.* from 2027 onwards).

Here are some rapidly collated initial highlights, but we will analyse all your feedback in detail to help shape the content of the next phase of the CCI programme.

Thanks to all participants and table hosts for contributing your ideas!

Question 1 - Highlights

Q1. How can CCI support policy-relevant climate modelling and science?

- Provide support to global south countries in reporting to UNFCCC (e.g. NDCs)
- Ensure CCI data is used by UNCCD, UNCBD, relevant SDGs, WMO assessments
- Consider also regional policies, especially for the EU, not just global/UN ones.
- Coordinate raising awareness of CCI data in policy-relevant forums, e.g. contribute to IPCC Atlas, State of the Climate reports, etc
- Fund community papers on important earth system changes and their impacts
- ECV projects to also produce tailored datasets for specific user needs, e.g. for research on extremes.
- Develop policy-relevant ECV indicators for public communication, also policy briefs.
- Develop policy-relevant products, e.g. national emissions are more relevant for policy than concentrations.
- Investigate whether coordinated inter-agency ECV projects, e.g. with JAXA, Korea, China might be possible.
- Need to better understand how to support the UNFCCC Global Stocktake.
- But don’t focus exclusively on supporting policies, must keep delivering science.

Question 2 - Highlights

Q2. What is needed to strengthen the link between CCI and the climate modelling user community?

- Better understanding of CORDEX needs
- Two-way feedback between observation providers and modellers is key and should be enhanced in projects, and dedicated projects involving both obs providers and modellers work well.
- Sustained long term collaboration is better than one-off webinars and workshops.
- The existing CRG within CCI projects is valuable, and should be strengthened
- CCI should support hackathons bringing obs and modeller communities together
- Guidance on why obs variables differ from model variables, and how this impacts their use.
- Need for centrally coordinated support for common issues, such as user needs collection, obs4MIPs, end user tools, etc
- Wider climate-relevant modelling community should be addressed, e.g. impacts modelling (biodiversity), lake models, reanalysis.
- Outreach to private sector users that are currently missing from CCI (e.g. reinsurance, agriculture)
- Outreach to more modeller communities, e.g. glacier, hydrology, impact modellers, ISIMIP, DAMIP, etc

Question 3 - Highlights

Q3. What technical activities should CCI support to help climate modellers make better use of CCI ECV data?

- Develop tools for users e.g. regridding, propagating uncertainties, gap filling, if possible?
- More visibility of CMUG and CRG studies
- Continue support for getting CCI data into ESMValTool and make it easier to contribute to obs4MIPs
- Improve outreach to modellers, forums for two-way communication, and co-design obs-model studies
- Improve information on CCI data availability and adopt standardised data format for modellers
- More guidance for users on a data set's validity, strengths and weaknesses, and how/when to use. Consider a standardised quick-start guide for each ECV product.
- Establish consistency between different ECVs
- Develop satellite simulators to compare obs with models
- Intercomparisons/benchmarking of observational products to establish credibility and consistency
- Need clear mechanisms for users to provide feedback to the ECV projects

Question 4 - Highlights

Q4. What is the best way to encourage interactions between different CCI projects on climate modelling topics?

- Cross-ECV studies driven by policy or science needs with well defined impacts
- Improve communications both between projects and externally
- Set up a Modelling User Group, not just climate, with focussed regional or domain-specific studies.
- Cluster projects working on similar topics, dedicated workshops/working groups on specific themes
- Hackathons
- Colocation too short – need more time for science, parallel sessions, and longer poster sessions.
- Funding for activities across projects
- Mechanism for CRGs in different projects and CMUG to interact
- Support for newbie projects to understand the CCI ecosystem, acronyms, history, relationship with C3S, CAMS, Eumetsat SAFs, etc.