RDA / EOSC Future Ambassador: Describing the application of the FAIR principles in the AR6 WGI IPCC context

What:

The [United Nations Intergovernmental Panel for Climate Change (IPCC)](#) is the leading international body for the assessment of climate change. It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change. The [Working Group I (WGI)](#) of the IPCC published the report Climate Change 2021: The Physical Science Basis on 9 August 2021. A total of 234 scientists from 66 countries contributed to this first of three working group reports. The report's authors assessed more than 14,000 scientific papers to produce the report. This was synthesised in the Summary for Policymakers (SPM) document that was approved line-by-line with governments in an IPCC approval session during the ten days.

The IPCC Task Group on Data Support for Climate Change Assessments (TG-Data) recommended the implementation of FAIR data principles and best practices for the documentation and curation of data that is assessed by the IPCC. The motivation to implement FAIR in the IPCC is to increase transparency, accessibility, and

reusability of the assessment, to support the implementation of the IPCC Error Protocol for data-related aspects of the reports, and the long-term curation of the assessed digital information. For the first time in the history of the IPCC, WGI has made openly available the data and code for nearly 200 figures coming from all report components (i.e., 12 chapters and Atlas, the Summary for Policymakers and Technical Summary), applying best practices in data sharing and data management.

I will take this opportunity to describe the application of the FAIR principles in the AR6 WGI IPCC context, the challenges faced during its implementation, and those that remain for the future, together with the opportunities to do more. This is a very inspiring example with evidence that good practices in data sharing are always possible to apply, despite the complexity of the resources or the number of people involved. A practical example could be a straightforward encouragement for raising awareness on Open Science and FAIR data both for early-career and established researchers. It will also be most relevant for RDA and EOSC future to prove once again that doing it is always possible, that scientists don't need to "reinvent the wheel" every time, and that there are already a great deal of tools which make their work easy while they simplify the road ahead.

Who:

Lina Sitz, External Contractor for the Technical Support Unit of the Working Group I (WGI TSU) in the Intergovernmental Panel for Climate Change (IPCC), the United Nations body for assessing the science related to climate change.

Biography:

Lina Sitz is an Argentinean scientist and assistant teacher living in Italy. She has a PhD in Physics and worked in the field of Earth System Physics for more than 10 years studying ocean's dynamics and its effects over the climate and the environment. During her experience working in the International Centre for Theoretical Physics (ICTP, Trieste, Italy), she has developed a project to share research data responsibly aimed to provide resources to scientists working under unfavourable conditions. Since 2021 she is an external contractor for the Technical Support Unit of the Working Group I (WGI TSU) in the Intergovernmental Panel for Climate Change (IPCC), the United Nations body for assessing the science related to climate change. She is bringing assistance with the long term archival and preservation of data and code for more than 200 figures from all the IPCC WGI Sixth Assessment Report components (i.e., 13 chapters, the Summary for the Policymakers and Technical Summary), applying the best recommendations for services in a FAIR Data ecosystem.

Scientific Domain:

Earth System Physics/Data management

Your Domain specific Engagement:

- Shared perspectives and joined conversations
- Discussions and communication of domain specific requirements between EOSC/RDA and the specific community

Your Promotion and Networking:

- Promotion of domain specific Open Science practices/EOSC/RDA at meetings and conferences, publications and presentations. For example: ORCID/LinkedIn profiles, project homepages, document repositories, etc.
- Lina and her activities are also [featured on the RDA website](#)

Your Connection to RDA WG/IG or CoP:

RDA COVID-19 Working Group: Attendance to the several virtual meetings to contribute in the writing the original draft, review and editing of the "RDA COVID-19 Recommendations and Guidelines on Data Sharing (1.0)" and "Fostering global data sharing: highlighting the recommendations of the Research Data Alliance COVID-19 working group" documents.

Pilot Data Stewardship strand of the CODATA-RDA Research Data Science schools: In collaboration with the entire group of students, writing original draft, review and editing "The CODATA-RDA Data Steward school." paper.

Attendance at the First Foundational Course CODATA-RDA School of Research Data Science (2016, Trieste) and the Pilot Data Stewardship strand of the CODATA-RDA Research Data Science schools (2019, Trieste).

Technical support to the CODATA-RDA School of Research Data Science Website.

Academic activities applying RDA recommendations:

- Project to share research data responsibly, to scientists working in LMICs countries. TEC calibrated service: making available to scientists around the world, global single station calibrated Ionospheric Total Electron Content data (ICTP, 2019).

- Data and code archival and documentation of the IPCC Sixth Assessment Report of Working Group I: The Physical Science Basis, adopting the best practices in data archival as established by the international FAIR framework (IPCC, 2021-2022).

Country:

Italy/Argentina