Barriers and incentives for sharing input data needed in carbon farming and MRV systems in Europe

And

Unlocking data for MRV: Data sharing for effective carbon farming

ICOS ERIC

ICOS ERIC (www.icos-ri.eu) welcomes the recommendations of the CREDIBLE project related to *“Barriers and incentives for sharing input-data needed in carbon farming and MRV systems in Europe”* and to *“Unlocking data for MRV: Data sharing for effective carbon farming”*. As a Research Infrastructure established since 2015 and currently gathering 16 European member countries, ICOS ERIC is ready to fully contribute to the establishment and development of the European CRCF-MRV.

ICOS provides high-quality, standardized and near-real-time data on ecosystem fluxes (exchanges of greenhouse gases between the atmosphere and the land) that are FAIR and openly available on the ICOS Carbon Portal. In its search for a variety of data, Credible and the future MRV system can benefit from ICOS data freely. It is important to remember that ICOS also covers the monitoring of GHG concentrations in the atmosphere and in the surface ocean. These data are also available and Copernicus/ECMWF already makes use of climate-related data provided by ICOS.

The long-term observations delivers data sets that can help define baselines in the context of the CRCF-MRV. These baselines could also be regularly updated thanks to ICOS data. ICOS uses standardized protocols for its labeled (i.e. quality-controlled) stations, which ensures reproducibility over time and all over the ICOS network. These protocols have been updated and published in the International Agrophysics, isssue 04/2018 (http://www.international-agrophysics.org/Issue-4-2018,7048).

The ICOS protocols for measuring ecosystem/atmosphere carbon fluxes using the eddy covariance method are currently implemented in approximately 10 agricultural monitoring sites of the ICOS network. We recommend that this data be used in the definition of CRCF-MRV baselines. Currently, ICOS is also developing “station-duos” where the same agricultural plot is divided into two areas with different management practices, each area hosting a monitoring system able to track changes in GHG fluxes. This innovation is showing promising results.

The operations of ICOS ERIC are funded by its member countries for the benefit of researchers but the independent data is also available for upgraded products that can serve the needs of a large variety of stakeholders. Businesses are also encouraged to use ICOS data. On the long

term, the operation of ICOS could benefit, in the future, from resources made accessible by the European Union, e.g. through Copernicus/ECMWF.

Finally, in the analysis of existing “international research projects and other initiatives”, it is essential for Credible to note that ICOS is NOT a project with a limited lifetime, but an intergovernmental organization with legal personality that has been established precisely to ensure the sustainable monitoring of GHGs in Europe. ICOS, however, participates in a large portfolio of EU-funded projects, including the Integrated Research Infrastructure Services for Climate Change Risks project (IRISCC) that would deserve the attention of the Credible team. IRISCC is namely developing a Soil Carbon Service Design Lab that could support the efforts towards a reliable CRCF-MRV.