climate change initiative

LONG-LIVED GREENHOUSE GAS PRODUCTS PERFORMANCES

User Workshop

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lolipop cci

- Welcome to the Bologna research area of the National Research Council (CNR)
  - The area has been inaugurated in 1992 and is one of the first research areas built by the CNR
  - It has been designed by the architect Enzo Zacchiroli, author of many outstanding building in Bologna (Sala Borsa library in the center of town, the towers where the regional offices are located)

- Welcome to the LOLIPOP (Long Lived greenhouse gases PrOducts and Performances) User Workshop
- What is the LOLIPOP project?

LOLIPOP - Background

- For a complete understanding of the Earth's climate, it is desirable to have a complete picture of the atmospheric gases with large greenhouse effects, or with a strong impact on the ozone layer.
- Besides CO_2, methane, water vapor and ozone, that are thoroughly studied, other gases like N_2O, SF_6, the chloro(fluoro)carbons (CCl_4, CFCs, HCFCs etc.) have large greenhouse effects and affect the ozone chemistry
- These gases are known as "Other Long-Lived GreenHouse Gases" (OLLGHGs) and, as such, are recognized as GCOS ECVs.
- However, besides N_2O, these gases are sparsely measured by satellites and the user requirements for these gases have not been established so far.

LOLIPOP - Project goals

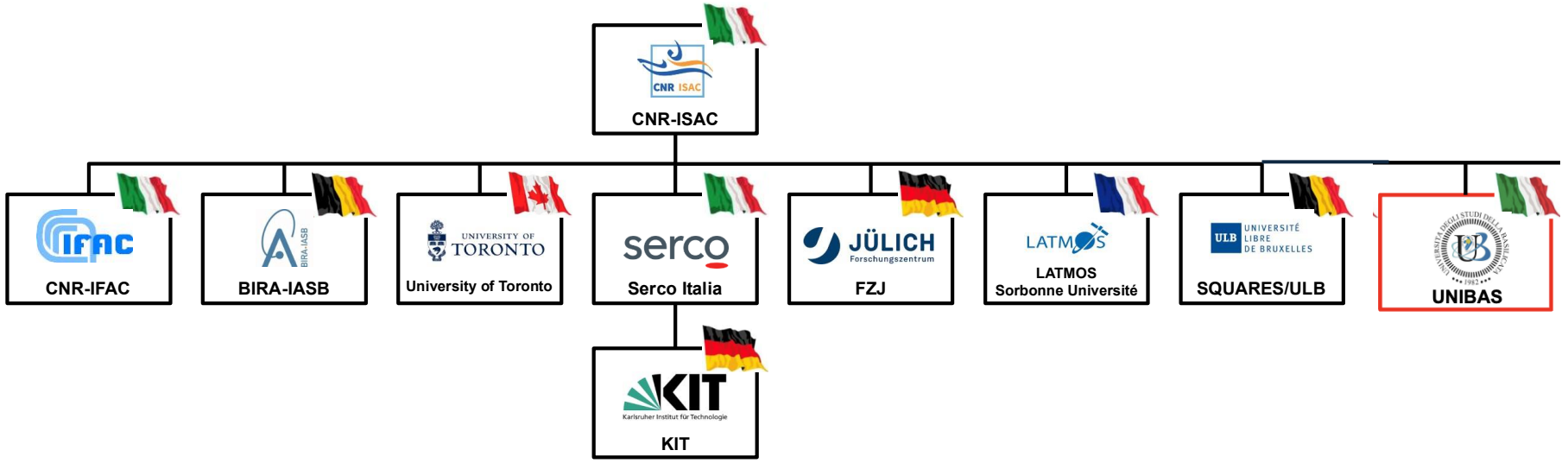
- assess the state-of-the-art of OLLGHGs satellite measurements
- establish a baseline of user requirements for all the OLLGHGs not already included in the GCOS list, and compare this baseline with the quality of the existing satellite observations
- investigate if the quality of the existing data is sufficient to be used for selected applications in climate and atmospheric chemistry models and services

The final goal of the project is to determine if the actual set of satellite measurements is good enough to be used in climate science and services so that the construction of a harmonized and consistent dataset of satellite measurements can go ahead.

If this is not the case, the final goal is to suggest actions to be taken to either improve the quality of satellite measurements of the OLLGHGs (through new retrieval techniques applied to existing satellite missions) or to develop dedicated satellite missions for their monitoring.

Consortium composition

- 11 groups/institutions from 6 Countries



- PI Elisa Castelli (CNR-ISAC) - Bianca Maria Dinelli (CNR-ISAC -retired 1/11/2024)

Role of this meeting

- The idea of this meeting is:

Gather the possible users of the OLLGHGs harmonized satellite datasets and show them both the status of the existing satellite measurements and the outcome of the various tests performed to assess the impact of these data on various applications

Get feedbacks from the users on the work performed so far

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