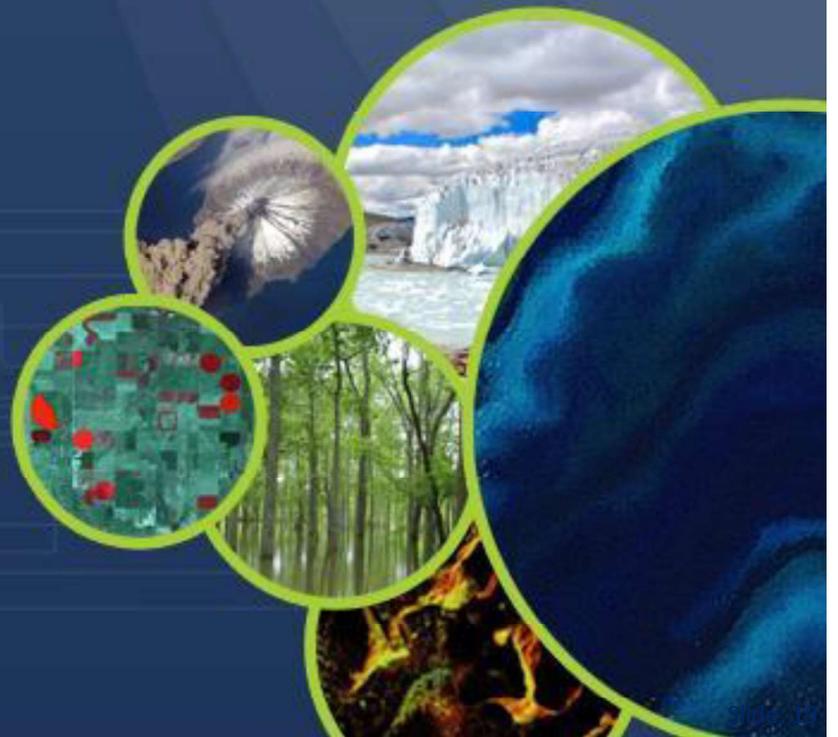


# Discussion



- GHG Roadmap implementation and support to 1<sup>st</sup> GST
- User engagement, where can we do more?
- CEOS/CGMS engagement with UNFCCC Sec adhoc group on Systematic Observation support to 1<sup>st</sup> GST
- AFOLU Whitepaper/Roadmap – resources to match ambition, synergies with GHG Roadmap, how to implement in CEOS
- Working with GCOS on introducing application specific requirements (study group, next IP)
- GHG one example but we need others
- Link to Case Studies, GFCS, GEO CC WG



## Requirements are changing – need to reflect this in GCOS IP

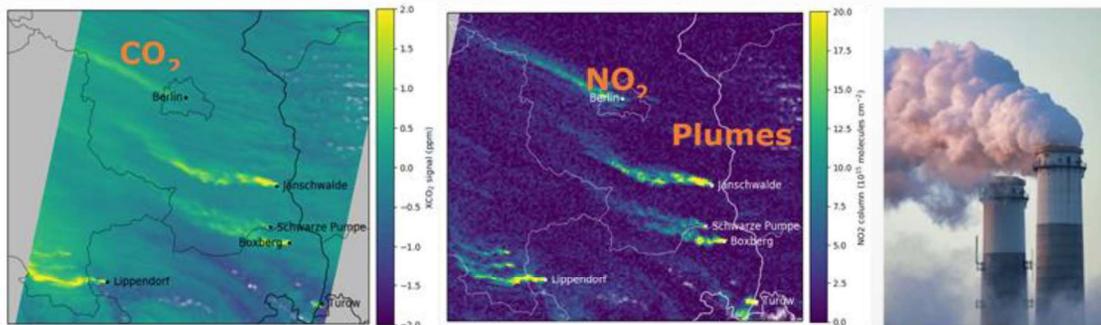


Figure: Simulated XCO<sub>2</sub> and NO<sub>2</sub> plumes originating from power plants and other emission sources in a larger area around Berlin. Simulated data come from the COSMO-GHG model as used in the SMARTCARB study simulating a swath width of 250 km. (credit: ESA SMARTCARB).

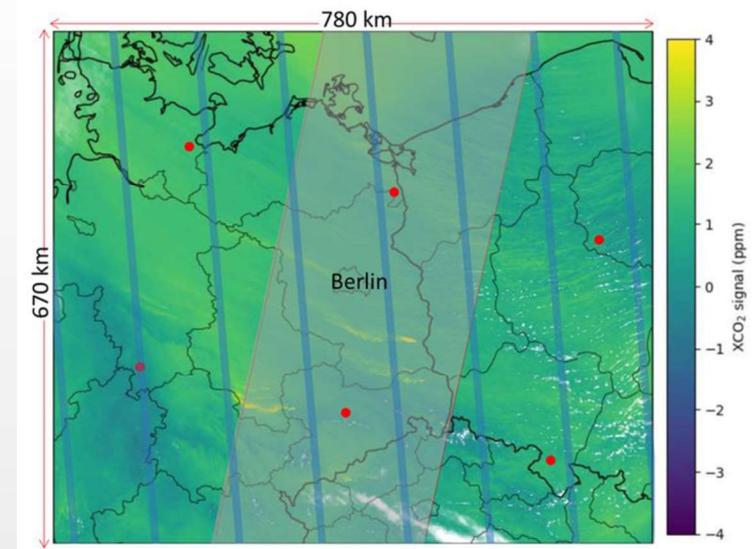


Figure: The XCO<sub>2</sub> distribution over 780 km by 670 km region centered over Berlin, Germany (adapted from Kuhlmann et al. 2018) is shown along with the spatial coverage and resolution for GOSAT (red dots), OCO-2 (blue tracks) and a proposed CO<sub>2</sub> Sentinel mission with a 250 km-wide swath (light grey region). Credit: ESA SMARTCARB.



## Broadening and Consolidating UNFCCC engagement (1/2)



- CEOS & CGMS has been very effective over last 8 years in establishing a **positive and proactive dialogue** with UNFCCC/SBSTA
- This is in large part due to the to the **symbiotic relationship we have established with the Global Climate Observing System** (GCOS) and the Climate Monitoring Architecture, which has been our guiding framework
- The creation of **the Joint WGClimate established an unambiguous entry point** for the discussion between SBSTA and the Space Agencies
- To date, this **engagement**, through the SBSTA Research and Systematic Observation (RSO) subgroup has largely **focused on our support on Climate Data Records for GCOS ECVs**
- **GHG Monitoring**
- In recent years, our **support has been visibly expanding**: CEOS Carbon Strategy, CEOS GFOI support and evolution to biomass, other AFOLU, Climate Services and support to Climate Adaptation etc. so...



- CEOS needs a long-term strategy accounting for the multitude of contributions it and its member Agencies can make to the Convention
  - Maintaining the effective focal point established through WGClimate
  - Increasing communication on contributions from other parts of CEOS (in statements, SBSTA Briefings etc.)
- Use, and re-enforce, CEOS Carbon Strategy as framework for carbon relevant aspects.
- Give greater visibility to GFOI/Biomass aspects as well as Agriculture, not only through REDD+ but also RSO
- In the short/mid term:
  - Build on priorities of SIT Chair (AUS) on Carbon and Biomass, as well as current visibility on GHG Monitoring
  - Initiate dialogue between GHG and AFOLU communities – Workshop hosted by EC June 2021
  - Dedicated discussion at SIT TW with all CEOS entities, GCOS and UNFCCC Secretariat

### Approach:

- 1. Ad-hoc coordination group on systematic observation and collective progress**  
to better enable support by the EO community for Parties and the GST  
(supported by the UNFCCC secretariat) – first meeting held Aug 2020
- 2. Possible activities**  
Support at global level to the GST AND at country-level
- 3. Synthesis report** – EO community provide a consolidated contribution to the GST  
Can be produced in 3 parts corresponding to themes and guiding questions for the 3 technical dialogues

### Preliminary scope of contribution:

1. Develop possible **guiding questions** (information collection, technical assessment, consideration of outputs; where are we? where we need to be? how to get there?)
- 2. Aggregate information and identify indicators of progress and baselines**  
focus on the outcomes in terms of mitigation and adaptation  
(e.g. outcomes of supporting Parties to reduce uncertainties in GHG inventories, identify mitigation opportunities, and using climate services to adapt to climate change)
1. Identify **information gaps and good practices** and lessons learned

**CEOS can contribute to the GST indirectly AND directly**



### **CEOS can support Party reporting - including for**

Methodological support

GHG inventories – emissions estimates

IPCC methodology

Review process / Refine data

Including as [reviewers](#)

Support developing countries

### **CEOS can support the Global Stocktake**

On Party-level to improve accuracy / detail

Provide advice to Constituted Bodies

Collaborate on synthesis report at global level (GST 2023 ...)

### **CEOS can support the needed integrated systems approach for MRV and GST**

CO<sub>2</sub> and CH<sub>4</sub>

Other atmospheric GHGs

AFOLU/ Biomass

...

**Systems approach to support at national and international level**