EARSC
European Association of Remote Sensing Companies

EARSC Statement
"CountEmissions EU initiative"

The European Association of Remote Sensing Companies (EARSC) is a trade association based in Brussels, Belgium that represents the European Downstream services sector creating added-value services and products based on Earth Observation satellite data. EARSC has more than 130 members across 25 European countries.

EARSC welcomes the CountEmissions[1] initiative aiming at setting out a common framework to calculate and report transport-related greenhouse gas (GHG) emissions. In the context of the Green Deal, the information monitoring those emissions is crucial to support national and international climate policymaking, so that service providers can choose the most sustainable option collecting and maintaining accurate and relevant GHG emission datasets on all scales to unlock climate action.

EARSC would like to take this opportunity to highlight the importance of satellite observations, such as the data coming from the Copernicus Programme[2], to support the monitoring of greenhouse gas emissions for the transport sector.

Under the Climate Monitoring Mechanism, the Commission is required to produce an annual report on progress to the EU targets, covering actual (historic) emissions and projected future emissions for every country. To enable sound GHG emission reduction, we need a more comprehensive understanding of current national and global GHG emissions contributing to global warming and the overall impact of mitigation efforts. Remote sensing has proven to be successfully used in a wide range of climate change fields at it provides a synoptic monitoring and reporting on Earth's changing climate over time.

[1] Count your transport emissions – CountEmissions initiative
[2] European Union's Earth observation programme coordinated and managed by the European Commission in partnership with the European Space Agency, the EU Member States and EU agencies

EO data allows to accurately describe the atmospheric composition in air quality forecast models and contributes to understand the exchange processes between the Earth's surface and its atmosphere where a multitude of trace components are present. Satellite observations reduce uncertainty in GHG emission monitoring by providing data across a range of spatial, temporal and spectral resolutions or scales[3]. In particular, the Copernicus Atmosphere Monitoring Service[4] provides consistent data sets for use in air quality and climate models. A Monitoring and Verification Support[5] (MVS) capacity is provided by satellites in orbit today, which have the capability to measure atmospheric pollutants. MVS intends to support enhancing the quality of national greenhouse gas emission inventories and complement the data available under the UNFCCC measurement, reporting and verification framework.

Additionally, as part of the Copernicus programme, the CO_2 monitoring mission[6] (anthropogenic carbon dioxide) will be implemented with a constellation of satellites to monitor fossil-fuel emissions of CO_2. Detailed measurements made by dedicated satellites and in-situ networks will be used to have consistent, complete, verifiable, and reliable quantitative assessment on anthropogenic CO_2 emissions and fluxes.

In the context of the European 2050 climate targets[7], such a capacity will provide the European Union with a unique and independent source of information, which can be used to monitor transport-related greenhouse gas emissions, track progress towards decarbonising Europe and contribute to European and national emission reduction targets.

EARSC believes that the regulation should specify that Earth Observation data and added-value services are operational solutions which shall be used to calculate and report transport-related greenhouse gas emissions in the context of the "CountEmissions EU initiative". EARSC remains at your disposal to work together on this objective.

[3] GHG monitoring from Space, https://earthobservations.org/documents/articles_ext/GHG%20Monitoring%20from%20Space_report%20final_Nov2021.pdf
[4] service implemented by the European Centre for Medium-Range Weather Forecasts, launched in November 11, 2014, that provides continuous data and information on atmospheric composition
[5] technical capacity to provide support to the policy makers and the scientific community.
[6] one of Europe's new high-priority satellite missions and will be the first to measure how much carbon dioxide is released into the atmosphere specifically through human activity (https://www.esa.int/ESA_Multimedia/Images/2021/02/CO2M)
[7] https://ec.europa.eu/clima/eu-action/climate-strategies-targets/2050-long-term-strategy_en