



EARSC Statement. Proposal for a legislative act to reduce methane emissions in the oil, gas and coal sectors

The European Association of Remote Sensing Companies ([EARSC](#)) is a trade association based in Brussels, representing the European downstream services sector. EARSC counts more than 135 members across 25 countries in Europe.

EARSC welcomes the proposal for a legislative act to reduce methane emissions in the oil, gas and coal sectors and fully supports the initiative of the European Commission which announces that the Commission has committed to submit legislation on Measurement, Reporting and Verification (MRV) and Leak Detection and Repair (LDAR), therefore increasing the understanding of where and how emissions occur in the energy sector.

In the context of the zero-pollution vision for 2050, the use of digital solutions is becoming increasingly important to meet the European Union's climate targets. Earth Observation information, such as data coming from the European flagship programme [Copernicus](#)[1], will be a key dataset for a strong MRV framework being the backbone of any program to mitigate methane emissions. Methane is a very potent GreenHouse Gas (GHG), and its emissions mitigation provides excellent support for succeeding in limiting global warming by 1.5 degrees Celsius[2].

"...we all know that only what gets measured gets done", said President of the European Commission Ursula von der Leyen at announcing the Global Methane Pledge at COP26 in Glasgow[3] and Earth Observation satellites are always watching our planet from space.

Earth Observation has the advantage of large spatial coverage and can provide repeat-coverage datasets and a global view of the Earth parameters without requiring any ground equipment installation. Measurement of the presence and concentration of methane is dependent on a methane sensitive sensor, its placement relative to the methane source (absolute point source concentration measured up close or atmospheric concentrations measured from space), mass and rate of methane emitted and the environmental conditions (windy or calm day). Measurements of methane concentration can be translated into estimated emissions amounts via techniques/models. It is possible to have a wide range of applications and services to rapidly detect methane emissions and leaks in a variety of gas extraction, processing, storage, transmission and distribution settings, covering large areas in a short time and therefore significantly reducing the cost of the emissions monitoring and leak detection. The advantages of satellites versus terrestrial measurement solutions are their geographical coverage, frequency of measurement, sensitivity and accuracy. But, there are differences in the way methane concentrations are measured and reported by satellites, versus how they are measured and reported by traditional terrestrial instruments. Satellites measure methane concentrations in the total atmospheric column in parts per billion whereas terrestrial instruments measure point source concentrations in parts per million or parts per million meter. If the energy sector is to be free to make use of satellite-based methane measurement technology this difference in units must be addressed.

High quality and verifiable methane emissions data is a key enabler for methane mitigation actions. A leak reduction policy should create space for new technologies such as earth observation which give asset owners the option of high resolution, sensitive, accurate, low pollution remote methane leak monitoring.

The European Commission wants to work on establishing a global methane monitoring tool based on satellite data through the EU's Copernicus programme and the data provided by the Member States with a view to contributing to an EU-coordinated capability for detecting and monitoring global super-emitters. Satellite observations reduce uncertainty in methane emission monitoring by providing data across a range of spatial, temporal and spectral resolutions or scales. The Earth Observation industry is indeed speedily bringing additional, affordable, high resolution, accurate and frequent emissions monitoring capabilities but regulation cannot quote threshold methane monitoring concentrations only in parts per million but should provide a framework in which assets owners and EO operators are free to translate this to parts per billion column concentrations reported by EO based and other monitoring technologies.

A strong MRV framework is the backbone of any program to mitigate methane emissions. It allows for the measurement of progress and the assurance of data while providing environmental and societal value to the whole policy. Given that the vast majority of fossil gas used in the EU is imported and that methane emissions occur along the full oil and gas value chain, proper methane management should be performed at all stages and across the supply chain, therefore best practices for detection and mitigation must be established from the operative energy field and corporate level to the level of national policies and regulations.

Earth Observation provides investors with independent verification of a company's footprint and facilitates engagement on a mitigation strategy in collaboration with the management team. Investors will also now be able to measure the methane intensity of energy producers and consumers for screening purposes. Overall EO data allows for better estimates of emissions and mitigation providing an enhanced understanding for monitoring methane emissions in any country/location across the globe.

Earth Observation data and added-value services provide capabilities for the measurement of progress and the assurance of data while providing a foundational tool to ensure the sustainable transition is data-driven and evidence-based. Therefore, EARSC believes that the proposal for a legislative act to reduce methane emissions in the oil, gas and coal sectors cannot quote threshold methane monitoring concentrations only in parts per million but should provide a framework in which assets owners and EO operators are free to translate this to parts per billion column concentrations reported by EO based monitoring technologies. EARSC remains at your disposal to work together on this objective.

[1] Copernicus programme: Copernicus is the 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. It aims at achieving a global, continuous, autonomous, high quality, wide range Earth observation capacity (www.earsc.eu)

[2] The 2015 Paris Agreement commits countries to limit the global average temperature rise to well below 2°C above pre-industrial levels, and to aim for 1.5°C.

[3] Speech by President von der Leyen on the launch of the Global Methane Pledge (02/11/2021)