Cynthia
Randles
United Nations Environment Program International Methane Emissions Observatory
Itziar Irakulis-Loitxate, UNEP IMEO and Université Politécnica de Valencia
Marc Watine-Guiu, UNEP IMEO and Harvard University
Claudio Cifarelli, UNEP IMEO
Meghan Demeter, UNEP IMEO
James France, Environmental Defense Fund and Royal Holloway, University of London
Luis Guanter, EDF and Université Politécnica de Valencia, Valencia, Spain
Pablo Poblaciones, UNEP IMEO
Tharwat Mokalled, UNEP IMEO
Anna Vaughan, UNEP IMEO and Cambridge University
Manfredi Caltagirone, UNEP IMEO
Steven Hamburg, Environmental Defense Fund
Oral
To fill gaps in knowledge and refine global understanding of the location and magnitude of methane emissions across sectors, integration, and use of data from a range of sources is needed. As countries and industry establish ambitious mitigation targets, accurate and measurement-based emission estimates are critical to accelerate emission reductions and assess progress by tracking changes in emissions over time.

The Methane Alert and Response System (MARS), designed by UNEP International Methane Emissions Observatory (IMEO), is the first global system connecting satellite methane detection to transparent notification processes that promotes on-the-ground emissions mitigation efforts. MARS harnesses state-of-the-art satellite data to identify major emissions events, activate its partners to notify relevant stakeholders, and support and track progress towards mitigation. Machine learning models, along with a human analyst inspection and validation process, enable MARS to integrate data from more than ten public satellites and space sensors on timescales relevant for emissions alerting. MARS entered a Pilot Phase for most of 2023 and went live during COP 28. MARS currently focuses on detecting and alerting for very large point sources from the energy sector. Here we will update the community on the status of MARS, including success stories and lessons learned along the way. We will share our vision of how MARS will evolve over the coming years, along with the rapidly expanding system of methane-detecting satellites. We will also discuss UNEP IMEO’s roles, as a provider of reliable, public, and policy-relevant methane emissions data as well as a sponsor of critically needed controlled-release studies for validation of point-source satellite emissions estimates.
Meeting homepage
IWGGMS-20 Workshop
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