

The WMO-GAW-VOC Network with Contributions of AGAGE

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The trace gas composition of the atmosphere is a major driver of climate change and air pollution events. Long-term observations with known quality are crucial for detecting trends of major air constituents. Networks with global coverage such as Global Atmosphere Watch (GAW) and Advanced Global Atmospheric Gases Experiment (AGAGE) work on this. This talk investigates the possibilities of how both networks may combine their activities in analyzing non-methane hydrocarbons (NMHCs) in air.

Recent GAW audits for NMHC analysis at GAW/AGAGE stations Mace Head and Jungfraujoch revealed that up to 80% of NMHCs GAW targets can be reported with data qualities matching data quality objectives of GAW for volatile organic compounds (VOC). Thus, by joining network activities the global coverage for VOC reporting stations could be increased and in consequence better data products developed (Figure 1).

Future challenges exist in developing a joint strategy to create synergies between the GAW-VOC and AGAGE networks. These challenges include: agreeing on a common protocol to establish at the stations, the WMO-GAW scale for selected GAW-VOC targets with appropriate QA/QC measures for maintaining and reporting high quality data, and how regular reporting of NMHCs data from stations can be achieved.

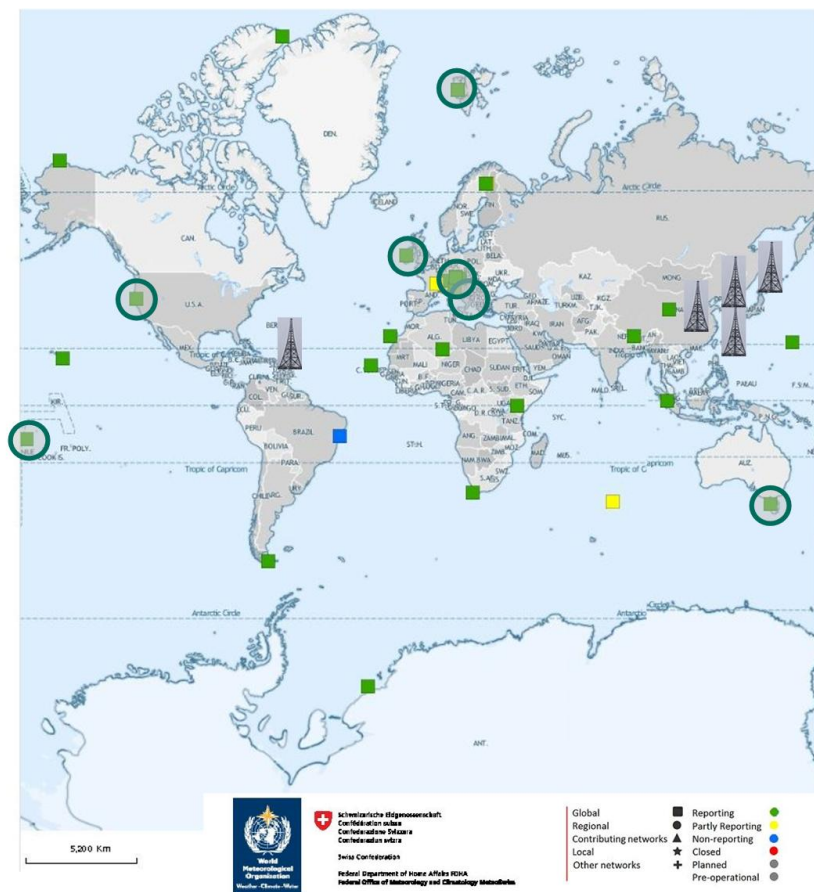


Figure 1. The Network of Global Atmosphere Watch for volatile organic compounds (GAW-VOC; green and yellow squares). The stations of the Advanced Global Atmospheric Gases Experiment (AGAGE) within GAW-VOC are circled. Towers mark further AGAGE and affiliated stations so far not part of the GAW-VOC network.