

## 5.026 Evaluation of surface emissions using the ECCAD database.

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Abstract:

The evaluation of surface emissions and the quantification of their uncertainties is a difficult task, since most of the emission datasets currently available are generally not provided with information on the data used to generate the emissions, and no uncertainties on these quantities are available.

As part of the Global Emissions Initiative (GEIA/IGAC) project, the ECCAD (Emissions of atmospheric Compounds and Compilation of Ancillary Data) database has been developed. It provides an easy access to a large number of datasets of anthropogenic, biomass burning and natural global and regional emissions. The datasets available in ECCAD cover the 1750-2100 period, and different spatial and temporal resolutions are provided. Tools for displaying the emissions and for their analysis are available, together with download capabilities. The most recent developments of ECCAD will be discussed. Using the data available in ECCAD as well as other published data, a comparison of global and regional emissions for the 1990-2015 period has been performed, for different types of emissions and sectors. The results of this analysis, which also include the use of emissions optimized through inverse modeling, will be discussed.