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1850-2300 non-CO2 emissions for IPCC AR5

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We present here the recently created emission datasets for non-CO2 anthropogenic and biomass burning emissions that will be used for the chemistry simulations in the IPCC AR5. Among others, the dataset includes aircraft and shipping emissions, aerosols, aerosol precursors, ozone precursors and ozone-destroying agents. For 2000-2300, the emissions are based on 4 scenarios by integrated assessment models, selected for climate model runs for IPCC (called Representative Concentration Pathways).

In this contribution, we describe the process through which (1) historical emissions were created (using a variety of existing global datasets) and (2) future emissions were constructed to be in full agreement base year emissions and the underlying scenarios targeting specific radiative forcing targets. Considerable attention has been given on creating the most up-to-date database for 2000 emissions and for 1850-2000 (combination of a variety of inventories). For all gases, information has been generated for a range of sources and regions. The same information is also available at 0.5 x 0.5 degrees. We will present the various ways such datasets can be accessed by the community.