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The GEIA Global Gridded Inventory of Anthropogenic VOCs

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Modeling assessments of the atmospheric chemistry, air quality and climatic conditions of the past, present and future require as input inventories of emissions of the appropriate chemical species constructed on appropriate spatial and temporal scales. The task of the Global Emissions Inventories Activity (GEIA) of the International Global Atmospheric Chemistry Project (IGAC) is the production of global inventories suitable for a range of research applications. Current GEIA programmes are generally based on addressing emissions by species; an international working group of interested participants cooperates in the work needed to compile each inventory. This paper addresses the work of the GEIA programme addressing the compilation of a global inventory of anthropogenic emissions of Volatile Organic Compounds (VOCs) gridded with 1° resolution. Past studies were used to identify anthropogenic activities according to their contribution to global VOC emissions; information on available activity rates, emission factors, and speciation profiles was gathered. Based on results of these initial studies, activity and species groupings for emissions reporting were selected. Links to investigators working on the compilation of VOC emissions on a regional level have been established. Current status of the work and initial estimated of emissions are presented.