One of the objectives of the Forum for Air Quality Modelling in Europe (FAIRMODE) is the definition of quality assurance standards and tools for air quality modelling activities involved in the implementation of the European Air Quality Directive (AQD, CAFE Directive). This objective is closely related to the quantification of model uncertainties and one of the main sources of uncertainty is related to the emission input used in air quality models (AQMs). High quality emission information is also necessary when future abatement options are to be evaluated. Consequently, emission information plays a vital role in the implementation and follow-up of air quality legislation. There exist different international fora that analyse the quality of emission data, but these are generally addressing emissions at a coarser level than what is required in the application of the AQD. Therefore, a FAIRMODE subgroup called “Urban Emission Inventories and Projections” was created to respond to the need of investigating the methodologies and best practices to deal with emission inputs focusing on the urban scale.

This paper presents a first analysis of the alternatives for identifying and minimizing errors and uncertainties involved in urban emissions and scenarios used in air quality models related to the AQD. The work of the subgroup aims at providing an overview of current standards and methodologies for local inventories/scenarios used for modelling and the analysis of the specific requirements on emissions and emission projections preparation for modelling (spatial and temporal allocation, chemical speciation, treatment of special sources, etc.). This contribution includes a preliminary analysis of the particular requirements of urban emission scenarios (contents, underlying hypotheses, methods to quantify/aggregate the effects of different abatement measures, etc.) in the context of the AQD, paying special attention to the issues related with the conciliation and consistent representation of policies and measures promoted at national, regional and local level. Examples on inconsistencies between regional/national inventories and urban scale inventories will be presented as well, in order to identify the needs for further work with the quality assessment of the urban emission inventories to be used under European legislation purposes.

The presentation will open for a discussion on the links and cooperation of this FAIRMODE activity with different air emission expert networks in Europe.