

DEVELOPMENT AND SENSITIVITY OF A SPATIALIZED EMISSION INVENTORY OF ATMOSPHERIC POLLUTANTS

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Critical realization of a spatialized emission inventory of atmospheric pollutants is an essential step when considering the management of air quality at a meso-scale. It is possible to optimise the performances of such an inventory by reconciling contextual environmental concerns with economic aspects. This could be achieved with various tests of sensitivity concerning several parameters as the resolution of the grid, the level of information of the source files or the diversity of the emissions considered. The results of modeling or simulations using a reactivity or transport model depends on the quality of the information contained in the inventory. The development of a spatialized emission inventory for the Nord - Pas de Calais county lends itself ideally to this kind of work owing to the density and the diversity of the activities it covers. The inventory concerns a large range of pollutants. Time scale is fixed to one hour considering future atmospheric pollution modeling objectives. The area of study includes all the Nord - Pas de Calais territory. Boundary conditions from Kent, Belgium and french county Picardie are taken into account. Basic parameters of the inventory are a four square kilometre grid with the higher level of database quality as possible. Various tests of sensibility are conducted in order to evaluate the impact on modeling results compared to economic investment.