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Application of a Lagrangian particle model to the source apportionment form primary PM10 in Taranto area (South Italy).

A modelling system has been applied to estimate the annual contribution to the total concentrations of different pollutant sources in Taranto, one of the most industrialized areas in Italy. Industrial sources, traffic, domestic heating and harbour emissions have been taken into account. Modelling system includes 3-dimensional meteorological models SWIFT-SURFPRO with the Lagrangian particle dispersion model SPRAY. The air emissions inventory was partially established using measured data, local activity indicators and emission factors. The meteorology was reconstructed by the SWIFT model from the products supplied, for the year 2007, by the national MINNI project.

The annual simulation led to the identification of the main emitting sources for primary pollutants such as NO_x, SO₂, PM₁₀, PM_{2.5} and C₆H₆ at receptor sites. In addition, a more refined source apportionment was achieved for industrial primary PM₁₀, providing a useful preliminary identification about the main industrial sources emitting dangerous micropollutants, such as POP's and heavy metals. Finally, the contribution of the PM₁₀ fugitive emissions of primary materials stockyards was evaluated for the 2007 year and during the critical pollution events, named "wind days", favorable to the pollutants transport from the industrial site to the adjacent urban area.

Working group IAS (WG1, WG2, WG3) o sessione speciale (SPR)

WG1

Tipo di presentazione (orale o poster)

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