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PARTICULATE MATTER REDUCTION THROUGH A NOVEL COST EFFICIENT POLICY TOOL

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E.C. is moving towards the implementation of a thematic strategy on air Pollution which requires lower limits for PM in air. As a result National Authorities will have to reevaluate the present environmental policies and develop new ones. Within this framework (ACEPT-AIR) has been developed. The work is targeting to unravel the relative contribution of multiple anthropogenic and other sources to the observed PM air concentrations. It will also document the relative contribution of secondary aerosol particles to those from primary emissions, by taking into account the atmospheric processes which contribute PM at any given site. The tool will create a historical record of control measures, changes in emissions and provide results in measured concentration reductions apportioned to changes in every accounted source. Three urban areas have been selected for study: Athens Metropolitan Area, Thessaloniki Metropolitan Area and Greater Volos Area, with historical data on PM10 and PM2.5 for a period of approximately two decades. Source apportionment results (identification of main PM sources and quantification of their relative contribution to the observed concentration levels) will be reviewed. At the same time data sets will be constructed by carrying out aerosol campaigns at the same sites of these cities. Source apportionment techniques such as PMF and CMB modeling will be employed for the determination of source contribution strength. Finally, a comprehensive emission inventory will be constructed for the three areas of interest. The deductions made from all these observations will be used as a predictive marker of for PM10 and PM2.5 pollution in urban areas.