

INTEGRATED ASSESSMENT MODELLING APPLIED TO EMISSION SCENARIOS DEVELOPMENT IN ITALY

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A number of emission scenarios, concerning transboundary air pollutants as SO_x, NO_x, VOC, NH₃, PM, which are covered both by the United Nations Convention on Long Range Transboundary Air Pollution and the European Commission Programmes, have been developed by the application of the Integrated Assessment Model Rains-Italy. The Rains-Italy Model has been developed within a Research Project jointly carried out by ENEA and IIASA (International Institute for Applied Systems Analysis, Laxenburg, Austria). The most updated Energy Scenario and the Current Legislation concerning the control measures, currently implemented or planned in the next years, are considered. The projections of the emissions at the year 2010 are compared with the National Emission Ceilings set by the EU Directives and the Gothenburg protocol targets. Also, the shares of total emissions, by source sector, are analysed. Through the integrated approach, the additional measures, where required to meet the targets, are listed according their increasing marginal cost as part of the integrated cost analysis, performed by the national cost curve, calculated by Rains-Italy. The additional features of Rains-Italy, concerning the possibility of developing deeper analyses of emission and deposition scenarios, at level of administrative regions, with a spatial resolution of 20x20 km, are described.