MANAGEMENT OF AIR QUALITY IN IRON-STEEL INDUSTRY REGION IN SOUTH-EASTERN TURKEY AND EMISSION INVENTORY OF SEVERAL POLLUTANTS

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The gulf of İskenderun is the region in southeast Turkey where steel industries are concentrated. It houses İSDEMİR; the 2nd largest integrated steel mill of Turkey and a number of foundries and re-rolling mills. As a result of concentrated industrial activities, the air pollution in this area has risen to high levels and affects a population of 415,000. This area is regarded as the "citrus depot of Turkey" and there are many other agricultural activities as well. In this study the emission inventory of air pollutants in this region has been prepared for the first time. There was not a study previously conducted in this region where the need is urgent because of the fertile agricultural lands located towards the north of the region. The types of sources included in this study were industrial, domestic heating and traffic on inter-city roads. Pollutants included were PM (TSP), SO2, NOX, CO, and VOC. Industrial emissions were measured at sources, while emissions from domestic heating and traffic sources were estimated using appropriate emission factors. The results of this study revealed that the annual emissions of PM, SO2, NOX, CO and VOC were found to be 19,824 ton/year, 40,833 ton/year, 7,769 ton/year, 80,877 ton/year and 535 ton/year, respectively. Industrial sector was found to be responsible for more than 95% of the emissions of all pollutants except VOC, 41% of which was due to industries. Different scenarios are developed for the municipalities in the region to make a better air quality management.