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## Application of a Comprehensive Integrated Assessment Tool for the Brussels Capital Region

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## Application of a Comprehensive Integrated Assessment Tool for the Brussels Capital Region

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**Abstract:** While in general air quality has improved in Europe over the past decades, there are still problems with exceedances of ambient air quality limit values in many urban areas. To design efficient Air Quality Plans to face these problems, methodologies and tools are required to assess the effects of possible abatement measures on local air quality. One such tool is RIAT+ (www.riatplus.eu). In this contribution to IEMSs, we'll present an application of the RIAT+ tool to the Brussels Capital Region (BCR). Specific challenges for this application are the limited area of the BCR and the constraint that only emission abatement measures that were deemed politically viable could be considered. The emission abatement measures available to the Brussels Environmental Agency will be presented and discussed. RIAT+ efficiently calculates air concentrations from emissions using an artificial neural network as a source/receptor model. Input for this source/receptor model was obtained from the results of a validated AURORA chemical transport model setup for the BCR. Once the receptor model was validated, RIAT+ was then used to calculate the effect of the different proposed abatement measures on air quality. We'll discuss both the results obtained using RIAT+ as well as the lessons learned from this particular case study.