

SYNERGIES AND TRADE-OFFS BETWEEN AIR POLLUTION CONTROL AND GREENHOUSE GAS MITIGATION**M. Amann***International Institute of Applied Systems Analysis (IIASA), Laxenburg, Austria*

Many of the traditional air pollutants and greenhouse gases have common sources, their emissions interact in the atmosphere, and separately or jointly they cause a variety of environmental effects at the local, regional and global scales. Thus, emission control strategies that simultaneously address air pollutants and greenhouse gases could maximize benefits at all scales. The presentation illustrates some of these interactions using a recent extension of the RAINS model, which now includes emissions, control potentials and costs for controlling the six greenhouse gases of the Kyoto protocol. The model allows a fully consistent evaluation of emission control costs for greenhouse gases and traditional air pollutants. With the recent data used for the Clean Air for Europe programme of the European Commission, alternative strategies for reducing greenhouse emissions are explored for the enlarged EU. In properly designed emission control strategies, costs of greenhouse gas reductions can to a significant extent be compensated by avoided air pollution control costs. Further synergies can emerge from reduced health impacts resulting from lower population exposure to fine particulate matter. The results show that a multi-pollutant/multi-effect perspective that integrates air pollution control and greenhouse gas mitigation could yield significant economic and environmental synergies. Integration of both policy lines appears to be crucial for a cost-effective environmental policy.