

**OZONE IMPACTS ON CROPS AND NATURAL VEGETATION IN EUROPE****M. Ashmore***Department of Geography and Environmental Science, University of Bradford, Bradford, UK*

The impacts of ozone in causing visible injury and reducing crop yield in Europe are well documented, and critical levels of ozone for these effects based on accumulated exposure over a threshold of 40ppb (AOT40) have been established and used in the development of emission control policies. However, major questions remain about our ability to evaluate the current and future impacts of ozone across the continent, three of which will be discussed in this presentation. Firstly, how will the trends of increasing global background ozone concentrations and decreasing peak ozone concentrations in Europe alter its impacts? Secondly, how will the pan-European impacts of ozone be influenced by long-term changes in climate? Thirdly, how well do we understand the long-term impacts of ozone on the species composition and function of plant communities? The use of a risk assessment for ozone based on the flux of ozone through the stomata has recently been accepted in Europe as an alternative to external exposure (AOT40), and the extent to which the use of flux-based approaches will provide a more mechanistic basis to address some of these important questions will be considered.