

Ecosystem exposure to air pollution

Workshop valuation of ecosystem benefits of air pollution abatement

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Outline

- Critical loads concept – advantages
- Critical loads concept – shortcomings
- Ecosystem exposure to air pollution – key questions



Critical loads concept - advantages

- Basis for an 'effects based' control of pollutants emissions for many years
- Gained wide acceptance at both the scientific and the political level
- Significant amounts of data on critical loads for specific ecosystems as well as time series of monitoring data for both deposition and effects on ecosystems
- Variability of ecosystem critical loads can be taken into account
- Both effects via direct and indirect mechanisms can be accounted for

Critical loads concept - shortcomings

- Indicator of ecosystem sensitivity – no direct link with degree of ecosystem damage
- Not directly useful for the monetary assessment of ecosystem benefits
- Does not take into account kinetics of chemical and biological processes

Ecosystem exposure to air pollution – key questions

- What are the most important shortcomings of the critical loads concept within the framework of valuation of ecosystem damage?
- What can be done to overcome these?
 - Extension of the concept
 - Introduction of additional concepts
 - Introduction of a totally new concept
- Is the dynamic approach the answer to all questions?