

**Topic 4 -** Clean Air – Ecosystem and Climate

Chaired by Dr. Martin Forsius, Dr. Jesper Bak, Dr. Isaura Rábago

**8:30 – 8:40 Opening of the session**

Each sub-topic will be introduced by the chair and an invited speaker followed by an open discussion

**8:40 – 10:00 Ozone effects and its links to food production and safety**

“Ozone Impacts of Terrestrial Vegetation”

Invited speaker: Dr. Håkan Pleijel, University of Gothenburg (Sweden)

“Ozone impacts in Mediterranean areas”

Invited speaker: Dr. Rocío Alonso, Research Center for Energy, Environment and Technology- CIEMAT (Spain)

**10:00 – 10:30 Coffee break**

**10:30 – 12:00 Links to forest production and forestry/climate interests**

Invited speaker: Professor Per Gundersen, University of Copenhagen (Denmark)

**12:00 – 13:00 Lunch**

**13:00 – 14:30 Biodiversity effects and the link to the CBD and EU Directives**

Introduction by Dr. Jesper Bak, University of Aarhus (Denmark)

**14:30 – 15:00 Coffee break**

**15:00 – 16:30 The future of effect monitoring, including reporting under EU NEC Directive**

Invited speaker: Dr. Anke Lūkewille, European Environment Agency

**16:30 – 17:30 Summary of the session and Conclusions**

**BACKGROUND DOCUMENTS**

Peatlands, climate change mitigation and biodiversity conservation: An issue brief on the importance of peatlands for carbon and biodiversity conservation and the role of drained peatlands as greenhouse gas emission hotspots

<http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A806688&dswid=-4162>

Ozone pollution and food security: <http://icpvegetation.ceh.ac.uk/publications/documents/ozoneandfoodsecurity-ICPVegetationreport%202011-published.pdf>

Flux-based critical:

<http://icpvegetation.ceh.ac.uk/publications/documents/Ozoneflux-basedcriticallevels2017brochure_Mid-res.pdf>

Impacts of ozone pollution on biodiversity: <http://icpvegetation.ceh.ac.uk/publications/documents/CEH_BIODIVERSITY_SINGLES_HIGH.pdf>

**TENTATIVE QUESTIONS FOR DISCUSSION**

Ozone effects and its links to food production and safety:

* Where are ozone impacts important, and where can combined effects of ozone and nitrogen be important
* Ozone impacts on biodiversity; ecosystem types and species affected
* Scales of assessment
* What are the possibilities to enhance assessment of economic damage?
* Monitoring ozone impacts under the NEC Directive.

Links to forest production and forestry/climate interests:

* Biodiversity value of different types of forest; the role of natural / untouched forest
* Atmospheric N pollution impacts on forest carbon balances and productivity
* Impacts of intensified forest management / production systems on soil nutrient balances and soil acidification

Biodiversity effects and the link to the CBD and EU Directives:

* The importance of air pollution as a pressure / threat to conservation status for habitats and species protected by the nature directives
* Regional differences and importance of local / regional / transboundary scales
* Interactions with management and nature restauration; recovery from earlier (higher) exceedance
* Importance of green infrastructure, corridors, larger connected areas
* Importance of climate change, succession and natural ecological processes

The future of effect monitoring, including reporting under the EU NEC Directive:

* Need for harmonization, Q.A. and easy access to data
* How to expand the coverage geographically, of ecosystem types, and parameters without jeopardizing the continuity of existing monitoring
* The role of intensive - and extensive monitoring, and of experiments
* How to take advantage of the synergies between EU and LRTAP Convention on ecosystem monitoring. Potential points of collaboration for ecosystem monitoring
* Organization of the cooperation between UNECE, EU, and the European Research Infrastructure framework (ESFRI)