



**Centre for
Ecology & Hydrology**

NATURAL ENVIRONMENT RESEARCH COUNCIL

Convention on Long-range Transboundary Air Pollution

Working Group on Effects

**International Cooperative Programme on Effects
of Air Pollution on Natural Vegetation and Crops**

Programme

**22nd Task Force Meeting
of the ICP Vegetation**

**2nd – 5th February, 2009
Braunschweig, Germany**



**Johann Heinrich
von Thünen-Institut**

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**Working Group on Effects
of the
Convention on Long-range Transboundary Air Pollution**

Monday 2nd February, 2009

17:00 – 20:00 Registration in the City Hotel, Braunschweig

19:30 **Welcome reception in the City Hotel, Braunschweig.**

Tuesday 3rd February, 2009

8:00 **Bus departs from the City Hotel to vTI**

Note: participants staying in other hotels need to come to the City Hotel to take the bus to vTI.

Session 1: 09:00 – 10:45 **Plenary session**

Chair: Jürgen Bender

9:00 Welcome *Carsten Thoroe*, President of the Johann Heinrich von Thünen-Institute (vTI).

9:05 Welcome by *Christian Grugel*, Federal Ministry of Food, Agriculture and Consumer Protection.

9:20 *Matti Johansson* – News from the Convention Secretariat.

9:35 *Till Spranger* – Report from the ICP Modelling and Mapping.

9:45 *Marcus Schaub* et al. – Ozone concentration, exposures and visible injury on ICP Forests level II plots for 2000 – 2004.

9:55 *Harry Harmens* et al. – An overview of the achievements of the ICP Vegetation in 2008.

10:25 *Hans Weigel* et al. – Overview of research activities at the Institute of Biodiversity.

10:45 – 11:30 Coffee/tea and poster viewing

Session 2: 11:30 – 12:45 **Plenary session**

Chair: Håkan Pleijel

11:30 *Jürgen Franzaring* et al. – Establishing a European standard for biomonitoring - The grass culture method.

11:50 *Per Erik Karlsson* et al. – Ozone exposure and impacts on vegetation in the Nordic countries and Baltic States.

12:10 *Patrick Büker* et al. – Impact of air pollution on crops in South Asia and southern Africa.

12:30 Discussion on outreach activities.

12:45 – 14:00 Lunch

Session 3: 14:00 – 15:30 Two parallel sessions: Ozone and Heavy Metals/N

Session 3a: Ozone

Chair: Jürg Fuhrer

14:00 *Seraina Bassin* et al. – Effects of combined ozone and nitrogen deposition on yield, species composition, and the performance of individual plant species of a sub-alpine pasture.

14:20 *Sally Power* et al. – How does resource availability affect plant response to ozone?

14:40 *Kirsten Wyness* et al. – Ozone and nitrogen controls on carbon allocation within two semi-natural plant species.

15:00 *Ludger Grünhage* et al. – Ozone risk assessment for winter wheat at local scale: Evaluation of the UNECE flux approach.

15:20 Discussion

Session 3b: Heavy metals

Chair: Ludwig De Temmerman

14:00 *Harry Harmens* et al. – Spatial and temporal trends in heavy metal accumulation in mosses in Europe (1990-2005).

14:20 *Iliya Ilyin* et al. – Modelled EMEP heavy metal deposition vs. moss measurements: Evaluation of spatial patterns and long-term temporal trends.

14:40 *Marcel Holy* et al. – Europe-wide analysis of factors influencing the spatial variation of cadmium, lead and mercury concentrations in mosses

15:00 *Sébastien Leblond* et al. – Atmospheric deposition versus element concentration in mosses: case of nitrogen and other elements.

15:20 Discussion

15:30 – 16:00 Coffee/tea and poster viewing

Session 4: 16:00 – 17:45 Two parallel sessions: Ozone and Heavy Metals/N

Session 4a: Ozone

Chair: Ben Gimeno

16:00 *Jürg Fuhrer* et al. – Ozone flux in alpine grassland.

16:20 *Patrick Büker* et al. – Development and provisional application of a multi-layer grassland flux model.

16:40 *Felicity Hayes* et al. – A flux-effect relationship for above- and below-ground impacts of ozone on two semi-natural grassland species.

17:00 *Ignacio González Fernández* et al. – Modelling stomatal ozone flux of dehesa annual grasslands in central Spain.

17:20 General discussion on local parameterisations for flux models.

Session 4b: Heavy metals

Chair: Jesús Santamaría

16:00 *Harry Harmens* et al. – Spatial trends in nitrogen concentrations in mosses across Europe in 2005/2006.

16:20 *Harald Zechmeister* et al. – Total nitrogen content and $\delta^{15}\text{N}$ signatures in moss tissue: Indicative value for nitrogen deposition patterns and source allocation on a nation-wide scale.

16:40 *Karsten Mohr* – Biomonitoring of nitrogen pollution with bryophytes – possibilities and limitations.

17:00 *Willy Werner* et al. – Nitrogen concentrations and $\delta^{15}\text{N}$ -ratios in epiphytic lichen *Xanthoria parietina* in correlation to nitrogen deposition rates and $\delta^{15}\text{N}$ -ratios of colonised tree bark.

17:20 General discussion on biomonitoring of nitrogen pollution using mosses.

18:00 Bus departs to the City Hotel.

Evening Meeting Scientific Committee Ozone Workshop: ‘Quantification of ozone impacts on crops and (semi-)natural vegetation’, November 2009, Ispra, Italy.

Wednesday 4th February, 2009

8:15 – 10:00 Sightseeing tour Braunschweig

Note: participants not attending the sightseeing tour need to be at the Burgplatz at **10:00** to take the bus to vTI.

10:00 Bus departs to vTI

10:30 – 11:00 Coffee/tea and poster viewing

Session 5: 11:00 – 12:45 Two parallel sessions: [Ozone and Heavy Metals/N](#)

Session 5a: [Ozone](#)

Chair: [Gina Mills](#)

11:00 *Gina Mills* – Update on the next Ozone Critical Levels Workshop, 10 – 12 November 2009, Ispra, Italy.

11:20 *Gina Mills et al.* – Results of the bean experiment 2008 and preparations for the 2010 biomonitoring experiment, followed by discussion on the future ozone work programme.

Session 5b: [Heavy metals](#)

Chair: [Harry Harmens](#)

11:00 *Eiliv Steinnes* – Strong and weak points of the moss biomonitoring technique for metal deposition studies as illustrated from 30 years experience in Norway.

11:20 *Harry Harmens et al.* – Uncertainties in the European moss data and preparations for the 2010 moss survey, followed by discussions on the future heavy metals and nitrogen work programme.

12:45 – 14:00 Lunch

Session 6: 14:00 – 15:30 Two parallel sessions: [Ozone and Heavy Metals/N](#)

Session 6a: [Ozone](#)

Chair: [Patrick Büker](#)

14:00 *Håkan Pleijel et al.* – Growth dilution/concentration effects of ozone and carbon dioxide on the content of starch, nitrogen, zinc, manganese and cadmium in wheat grain.

14:20 *Karine Vandermeiren et al.* – Impact of tropospheric ozone on food and feed quality of Brassica species (OFFQ).

14:40 *Elmien Heyneke* et al. – Interaction between SO₂ fumigation and drought stress on growth, photosynthesis and symbiotic nitrogen fixation in soybean using an open-top chamber facility.

15:00 Discussion on ozone workshop, November 2009, Ispra, Italy.

Session 6b: Heavy metals

Chair: Winfried Schröder

14:00 *Marina Frontasyeva* et al. – Moss biomonitoring of long-lived radionuclides in Belarus: 20 years after Chernobyl.

14:20 *Zdravko Spiric* et al. – Moss biomonitoring of trace elements in Croatia.

14:40 *Lotti Thöni* et al. – Response of mosses to atmospheric deposition of eight metals in Bulgaria and Switzerland - surveys 1990-2005.

15:00 *Ivan Suchara* et al. – Landscape factors significantly controlling element content distribution in mosses in the Czech Republic.

15:20 Discussion

Coffee/tea: 15:30 – 16:00

Session 7: 16:00 – 18:00 Plenary session

Chair: Harry Harmens

- Reporting back from ozone and heavy metals sessions.
- ICP Vegetation work programme 2009 – 2011, including items common to all ICPs/Task Force on Health.
- Collaboration with other relevant bodies/organizations such as Task Force on Reactive Nitrogen, Malé Declaration, TFIAM.
- Conclusions and review of the 22nd Task Force Meeting.

18:15 Bus departs to the City hotel.

19:30 Bus departs from the City hotel to the restaurant for the conference dinner.

Thursday 5th February, 2009

Bus will take participants from the City Hotel to Hannover Airport. Departure time will depend on the departure of flights of the majority of participants.