

The UNECE Task Force Emissions and Projections (TFEIP)

Other Sources and Sinks SNAP 11



Contribution to the TFEIP Expert Panel
“Agriculture and Nature”

emep

Forschungszentrum Karlsruhe
in der Helmholtz-Gemeinschaft

Institut für Meteorologie und Klimaforschung
Atmosphärische Umweltforschung

Rainer Steinbrecher
Co-chair



GEIA/ACCENT-Emissions Steering Committee Meeting
Paris, November 28, 2006



The UNCEC Task Force on Emission Inventory and Prediction (TFEIP)

- Emissions and Emission Inventories
- International Requirements for Emission Inventories
- Atmospheric Emission Inventory Methodology
- Multi-media Integrated Inventories
- The European Environment Agency



Who forms the Task Force?

The core of the TFEIP are the Expert Panels:

- Combustion and Industry Panel
- Transport
- Agriculture and Nature
- Projections and Verification



Key Tasks of the Expert Panels

- Collect/review available information on activities and inventory methodology
- Consider the significance of each of these activities
- Consider the scope for simplifying the methodologies to be recommended
- Prepare text, tables, figures etc., iterate with experts and panel leaders



The EMEP/CORINAIR Emission Inventory Guidebook - 3rd edition



- <http://tfeip-secretariat.org>
- Detailed description how to compile emission inventories and to perform predictions of various sources

Source Categories

- Group 1 Combustion in energy and transformation industries
- Group 2 Non-industrial combustion plants
- Group 3 Combustion in manufacturing industry
- Group 4 Production processes
- Group 5 Extraction & distribution of fossil fuels and geothermal energy
- Group 6 Solvent and other product use
- Group 7 Road transport
- Group 8 Other mobile sources and machinery
- Group 9 Waste treatment and disposal
- Group 10 Agriculture
- **Group 11 Other sources and sinks**



The NatAir Project



Improving and applying
methods for the
calculation of natural and
biogenic
emissions and assessment
of impacts to the air
quality

Co-ordinators:

- Rainer Friedrich: rf@ier.uni-stuttgart.de
- Jochen Theloke: jt@ier.uni-stuttgart.de
- <http://natair.ier.uni-stuttgart.de>

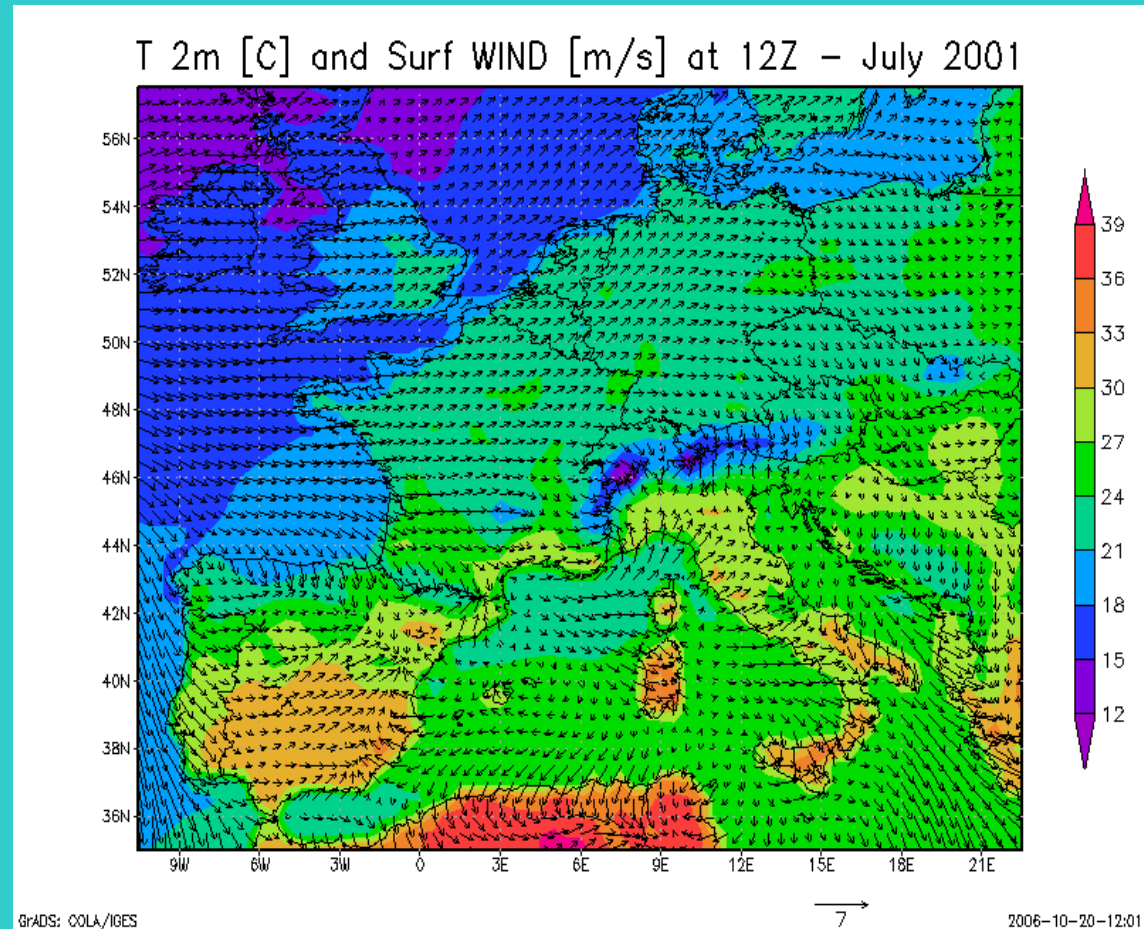




The NatAir Project

Target Area:

- European Union Plus surrounding countries
- Geographical GEMS domain [35°N-70°N; 15°E-35°W]
- Horizontal resolution 101x71 cells ; 0.5°x0.5°



Gabriele Curci, Mathias Beekamn, LISA - CHIMERE Simulations



Participating Institutions

IER



GEIA/ACCENT-Emissions Steering Committee Meeting
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Sources and Pollutants

No.	Source Category	PIs
1	Update chapter B1101 (Vegetation, esp. Forests)	Gerhard Smiatek, Rainer Steinbrecher
2	Update chapter B110117 (NO from soils)	Klaus Butterbach-Bahl et al.
3	Update chapter B1103 (Biomass burning and forest fires)	Guenther Seufert et al.
4	Update chapter B1104 (Natural grassland, other vegetation)	Rainer Steinbrecher et al.
5	Update chapter B1105 (Wetlands)	Sanna Sarino et al.
6	Update chapter B1106 (Water)	Chris Dore et al.
7	Update chapter B1107 (Animals)	Ernst Gebetsreuther et al.
8	Update chapter B1108 (Volcanoes)	Domenico. Gaudioso et al.
9	Update chapter B1109 (Gas seeps)	Guiseppe. Etiope et al.
10	Update chapter B1110 (Lightning)	Jochen Theloke et al.
11	New chapter B1113 (Primary biological particles)	Wilfried Winiwarter et al.
12	New chapter B1114 (Wind blown dust)	Marek Korcz et al.



Sources and Pollutants

Sources	Pollutants
Vegetation, esp. Forests	NMVOC
Biomass burning and forest fires	NO _x , PM, CO, CO ₂ , CH ₄ , OC, EC, VOC
NO from soils	NO
Pollen (New)	PM
Wild animals	CH ₄ , NH ₃
Anoxic soil processes (wetlands)	CH ₄
Natural seepage of gas storage	CH ₄ , NMVOC
Wind blown dust (incl. Saharan) (new)	PM
Volcanoes	SO _x , NO _x , PM, HF, HCl, HNO ₃
Lightning	NO _x
Sea, Coastal zones (New)	PM, DMS



Contributions of NatAir

- Improved methodologies
- Improved emission factors
- New source categories
- New data bases



Gridded output using GIS platforms



GEIA and UNECE Task Forces

- Knowledge available could assist GEIA community in setting up harmonised inventories
- Feedback of GEIA will be communicated directly through the Task Forces to national and international policy levels



Thanks‘

**Let’s look forward to new exiting
collaborations!**

