



Sixth International Symposium on  
**Non-CO<sub>2</sub> Greenhouse Gases**  
 (NCGG-6)  
**Science, Policy and Integration**

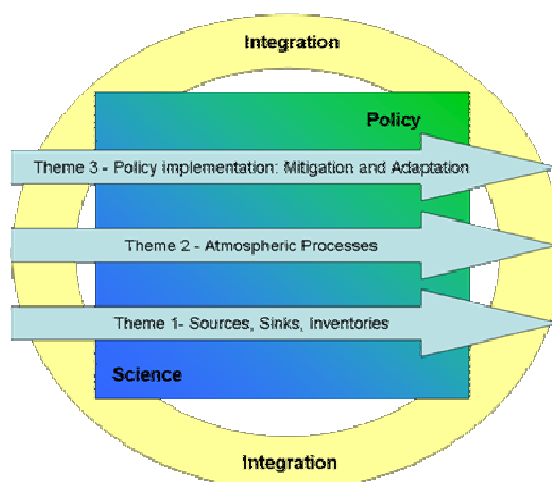
Amsterdam, the Netherlands  
 November 2-4, 2011

## Successful NCGG6 symposium in Amsterdam concludes: Reduction of non-CO<sub>2</sub> greenhouse gases works faster and is more cost effective than reduction of CO<sub>2</sub>

NCGG6, the 6th non-CO<sub>2</sub> Greenhouse Gases Symposium: Science, Policy and Integration was held in Amsterdam from November 2 to 4, 2011. Over 200 scientists, policy makers and representatives of industry from many countries in the world gathered to discuss the ins and outs of non-CO<sub>2</sub> greenhouse gases at the interface between scientific understanding and the applications in policy and decision making. Over 140 podium presentations and about 40 posters described new developments in the three main themes of the conference (see graphic):

1. Sources, sinks and inventories
2. Atmospheric processes
3. Policy implementation: mitigation and adaptation

Non-CO<sub>2</sub> greenhouse gases radiative forcing. These include under the UNFCCC and the N<sub>2</sub>O and the so-called F-gases also those regulated under the protection of the ozone layer particulates.



inventories

mitigation and

contribute significantly to not only the gases regulated Kyoto Protocol, CH<sub>4</sub> and (HFCs, PFCs and SF<sub>6</sub>), but Montreal Protocol on the (CFCs) and various types of

### ○ Sources, sinks and inventories

Several presentations within this theme investigated sources of CH<sub>4</sub> and N<sub>2</sub>O in agriculture. Emissions from animal husbandry received special attention in several dedicated sessions, organised in cooperation with the *Global Research Alliance (GRA) on Agricultural Greenhouse Gases* ([www.globalresearchalliance.org](http://www.globalresearchalliance.org)), an alliance of 32 countries aiming at coordinating research that can contribute to grow more food without growing greenhouse gas emissions.

### ○ Atmospheric processes

Within theme 2 a number of new ground-based and satellite measurements of concentrations of specific F-gases were presented and interpreted. Using reversed modelling, authors were able to estimate the emissions that would have caused the observed concentrations. For a number of gases, the emissions, derived from the measurements fairly agree with those reported by the countries to the UNFCCC. For some they don't and sources still seem to be missed in the inventories.

A number of participants joined a "plume hunt" where they in real time were tracking down and measuring a few CH<sub>4</sub> plumes near Amsterdam, using advanced measuring equipment, installed in a van with a radio link to a bus.

### ○ Policy implementation: mitigation and adaptation

Theme 3 discussed policy options to reduce non-CO<sub>2</sub> greenhouse gas emissions, concentrating on real examples in various countries. Factors that determine success or failure of these policies were discussed in depth, including the costs of such measures.

The three plenary sessions and three special interactive debate sessions aimed at integrating the understanding within each theme, with a view to indeed have an intensive and lively interaction between the different actors in the science and policy application interface. The plenary sessions provided global



background and overviews of the climate issue and the role of non-CO<sub>2</sub> greenhouse gases in the solution of the climate problem.

*Chairperson Carolien Kroeze (front/middle) during one of the discussions*

One of the debates, a “Young Scientists Session” was organised by Dutch PhD students, discussing the science and approaches needed to really have solved the climate problem 50 years from now. A second debate discussed the complicated role of agriculture in the climate issue. The final debate

closed the conference by discussing freely and openly on a number of provocative statements to scrutinize moiré or less fixed ideas on the sometimes troublesome boundary between scientific curiosity and the practical and pragmatic approaches needed in policy making.

One of the main conclusions of NCGG6 was that reduction of non-CO<sub>2</sub> greenhouse gases is an important first step in mitigating climate change. Since most of these gases are short lived climate forcers, reductions will relatively quickly be reflected in the heat balance of the atmosphere. In many cases these abatement options are also quite cost effective, sometimes even having negative total costs. Reducing the emissions of these non-CO<sub>2</sub> greenhouse gases would also allow for the longer time period, needed before CO<sub>2</sub> reductions will show effects on the earth’s atmosphere.

Selected papers presented at NCGG6 will be available from:

1. A special issue of **Current Opinion in Environmental Sustainability** ([COSUST](#)) on Carbon and Nitrogen cycles, Volume 3, Issue 5 (2011)
2. A special issue of the **Journal of Integrative Environmental Sciences** ([IES](#)), expected in spring 2012
3. **Greenhouse Gas Measurement and Management** ([GHGMM](#)),

Carolien Kroeze and Tinus Pulles  
NCGG6 Organising Committee

