

9:00

**PLENARY SESSION**  
**Thelma Krug, IPCC**  
**Paul de Krom, TNO**  
**Kees de Gooijer, TKI Agri&Food**

10:35

**UvA 2-3-4**

**AGRICULTURE & FORESTRY GHG Chair: Frank O'Mara**  
 Opening: Progress presentation of the running projects & Valorisation Workshop: (1) Welcome & presentation on FACCE ERA-GAS -- O'Mara, Frank (Teagasc); (2) Intro to the Project Roundtables -- Kuzniar-van der Zee, Brenda (Wageningen Uni / FACCE ERA-GAS)

Project Round Tables - session 1  
 - 3DForMod  
 - CEDERS  
 - GHG-Manage  
 - PEATWISE  
 - FORCLIMIT

After 20 minutes participants can choose to sit at a different project roundtable

Project Round Tables - session 2  
 - METHLAB  
 - MAGGE-pH  
 - INVENT  
 - RumenPredict  
 - ResidueGas

After 20 minutes participants can choose to sit at a different project roundtable

Lunch

**AGRICULTURE & FORESTRY GHG Chair: Frank O'Mara**  
 Providing independent scientific advice and support to EU policy -- Sikkema, Richard (Wageningen Uni & Research, prev. JRC)

Impact of Teagasc research results on policies on agricultural gas emissions -- Krol, Dominika (Teagasc)

Group discussion session 1

Group discussion session 2

The importance of the agriculture and land use sector in climate change -- Ngarize, Sekai (IPCC - TFI)

UvA 2-3-4

**AGRICULTURE & FORESTRY GHG Chair: Frank O'Mara**  
 Introduction to Strategic Research Agenda of the Joint Programming Initiative on Agriculture, Food Security and Climate (FACCE-JPI) -- Eivind Olesen, Jørgen (Aarhus Uni)  
 Introduction to interactive session -- Kelly, Raymond (Teagasc)

Interactive session

Interactive session

Interactive session

Keynote: Public agricultural research in an era of transformation: The challenge of agri-food system innovation -- Dijkman, Jeroen (NZAGRC)

Conclusions

SYNTHETIC GHG Chair: Martin Vollmer

Sorbonne

2019 IPCC GHG Guidelines Refinement: A Perspective for the Electronics Industry -- Czerniak, Mike (Edwards Ltd)

RIVERS Chair: Agnès Grossel

UvA 1

Land use, not stream order, controls N<sub>2</sub>O concentration and flux in the upper Mara River basin, Kenya -- Mwanake, Ricky (IHE Delft)

Riverine emissions of nitrous oxide in a cropland region in France -- Grossel, Agnès (INRA)

19:00 - ± 22:30

# IPCC Special Report on Global Warming of 1.5°C and emissions from non-CO<sub>2</sub>

## Challenges in government-science communication

### Mission driven innovation for AWF

**WEDNESDAY JUNE 12**

9:00

10:35

**Sorbonne****Sorbonne**

Climate impact of the Montreal Protocol -- Velders, Guus J.M. (RIVM, Utrecht Uni)

The estimated baseline and schedule for phase-down HFCs in China -- Li, Yixi (Beijing Uni)

Energy and air pollution co-benefits of a global phase-down of hydrofluorocarbons -- Purohit, Pallav (IIASA)

The implications of residential air conditioning refrigerant choice on future hydrofluorocarbon consumption in the United States -- Godwin, Dave (US EPA)

Lunch

SYNTHETIC GHG Chair: Martin Vollmer

New Guidance for Estimating Fluorinated GHG Emissions from Circuit Board Waterproofing -- Czerniak, Mike (Edwards Ltd)

Refrigerant Fluorocarbon Emissions Projections and Mitigation Costs in Asia by 2050 -- Hanaoka, Tatsuya (NIES)

Assessing air quality improvement and greenhouse gas abatement of energy efficient air conditioners in residential building sector of China -- Wang, Xu (Beihang Uni)

Lunch

POSTERS

POSTER PRESENTATIONS CAN BE FOUND

- in the lobby near the conference secretariat;
- in the hallway next to the UvA rooms; and
- in the lobby near the lunch buffet.

**UvA 1****ARCTIC Chair: Stephen Platt**

The influence of the atmospheric profile on Arctic column-averaged dry-air mole fractions of methane -- Backman, Leif (FMI)

Source identification of high CH<sub>4</sub> air masses observed on board R/V MIRAI in the northern high latitudes based on δ<sup>13</sup>C and δD measurements -- Fujita, Ryo (Imperial College London)

Observations of methane over the Arctic Ocean -- Platt, Stephen Matthew (NILU)

Direct methane and its stable isotope δ<sup>13</sup>CCH<sub>4</sub> measurements over the Russian Arctic seas during ship campaigns in 2015-2018 and their comparison with remote-sensing satellite data -- Skorokhod, Andrey (Inst of Atmospheric Physics RAS)

Lunch

SYNTHETIC GHG Chair: Stephen Platt

Methane emissions' feedbacks on climate in northern peatlands by modelling of peat soil carbon thawing and atmosphere interactions -- Salmon, Elodie (LSCE-IPSL, CNRS, CNES)

Methane emissions during soil freezing at northern latitudes -- Aalto, Tuula (FMI)

Temperature Dependency of Methanotrophs in Arctic Tundra Soils -- Richter, Lea (Uni Massachusetts Lowell)

Lunch

**Oxford****MITIGATION Chairs: Lena Höglund-Isaksson & Shaun Ragnauth**

Non-CO<sub>2</sub> Greenhouse Gas Mitigation Through 2050 -- Ragnauth, Shaun (US EPA)

Global agricultural non-CO<sub>2</sub> emission reduction potential in the context of the 1.5 °C target -- Frank, Stefan (IIASA)

Introducing Regional Heterogeneity to the United States Non-CO<sub>2</sub> Marginal Abatement Cost Curves -- Petrusa, Jeff (RTI Int'l)

A Multi-Model Assessment of Greenhouse Gas Mitigation Potential in the United States Agriculture and Forestry Sectors -- Baker, Justin S., presented by Jones, Jason (RTI Int'l)

Lunch

MITIGATION Chairs: Lena Höglund-Isaksson & Shaun Ragnauth

Non-CO<sub>2</sub> GHG Mitigation Potential: Comparing IIASA GAINS and EPA MAC Model Assessments -- Ragnauth, Shaun (US EPA)

Updated Global and Regional Marginal Abatement Cost Curves for Agricultural Greenhouse Gas Emissions -- Beach, Robert H. (RTI Int'l)

The global scope for reducing non-CO<sub>2</sub> greenhouse gases -- Höglund-Isaksson, Lena (IIASA)

Lunch

**Stellenbosch****METHANE EMISSIONS Chair: Hugo Denier van der Gon**

MEMO2 - MEthane goes MOBILE - MEasurements and MOdelling -- Walter, Sylvia (Utrecht Uni)

Quantifying localized methane source emissions from mobile sensors using an obstacle-resolving Lagrangian dispersion model -- Morales, Randolph Paulo (EMPA)

Mobile measurement of methane in Ile de France region – source mapping, isotopic composition & emission estimation -- Defratyka, Sara (LSCE-IPSL)

Using methane and ethane measurements to distinguish different sources -- Dinther, Danielle van (TNO)

Monitoring methane emission and 13CH<sub>4</sub> source signatures of anthropogenic sources in Southwest Germany -- Korben, Piotr (Heidelberg Uni)

Lunch

METHANE EMISSIONS Chair: Hugo Denier van der Gon

CH<sub>4</sub> lidar measurements during the CoMet 2018 airborne field campaign -- Fix, Andreas (DLR)

How uncertain are the estimates of methane release from Polish coal and gas excavations? First results of JSUN-CH<sub>4</sub> project -- Necki, Jarek (AGH Uni Kraków)

Direct measurements of CH<sub>4</sub> emissions from illegally managed waste landfills in Giugliano (Campania, Italy): a novel approach -- Famulari, Daniela (CNR-ISAFOM)

Lunch

**Erasmus**

Top-down estimates of European CH<sub>4</sub> emissions during 2005-2016 using two different inverse models -- Bergamaschi, Peter (EC-JRC)

Updating and Assessing Methane Emission Estimates with Component-Level Measurements and Observations -- Weitz, Melissa M. (US EPA)

Uncertainty calculations for emissions of CH<sub>4</sub>, N<sub>2</sub>O, NO<sub>x</sub>, and PM10 from agriculture in the Netherlands -- Vonk, Jan (RIVM)

Top-down Validation of non-CO<sub>2</sub> Greenhouse Gas Emissions in Support of Swiss National Inventory Reporting -- Henne, Stephan (EMPA)

Lunch

REGIONAL VERIFICATION Chair: Peter Bergamaschi

Long term CH<sub>4</sub> and N<sub>2</sub>O data at the Dutch Cabauw tower -- Frumau, Arnoud (TNO)

United Kingdom Deriving Emissions linked to Climate Change Network: greenhouse gas and ozone depleting substance measurements from a tall tower network -- Stanley, Kieran M. (Bristol Uni)

Atmospheric monitoring of methane emissions at the European scale -- Szenasi, Barbara (LSCE)

Lunch

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18:10

19:00

19:00 - ± 22:30

Optional: Conference dinner -- Optional: Conference dinner

Version 20190615

## UvA 2-3-4

## Sorbonne

## UvA 1

## Oxford

## Stellenbosch

## Erasmus

ANIMALS  
Chair: André Bannink  
CEDERS - Introduction -- Bannink, André (Wageningen Uni)SYNTHETIC GREENHOUSE GASES  
Chair: Martin Vollmer  
US Consumption and Supplies of Sulphur Hexafluoride Reported under the Greenhouse Gas Reporting Program: An Update -- Ottlinger, Deborah (US EPA)TROPICS  
Chair: Louis Verchot  
How does conversion from peat swamp forest to oil palm plantation affect emissions of nitrous oxide and methane from the soil? A case study in Jambi, Indonesia -- Hartill, Jodie (CIFOR / Aberdeen Uni), presented by Kristell Hergoualc'h (CIFOR)SHORT LIVED FORCERS  
Chair: Mathijs Harmsen  
EMF-30 Study on Short-Lived Climate Forcers and Air Quality -- Harmsen, Mathijs J.H.M. (PBL, Utrecht Uni)OIL & GAS  
Chair: Bill Hirst  
Mapping, Emission Quantification, and attribution of Methane Emissions across two European Cities; Utrecht, NL and Hamburg, DE -- Maazalahi, Hossein (TNO)GLOBAL VERIFICATION  
Chair: Sander Houweling  
Top-down estimates of N<sub>2</sub>O emissions over the past two decades -- Thompson, Rona L. (NILU)

Experimental and modelling work for greenhouse gas accounting, LCA and GHG inventory methodology -- Bannink, André (Wageningen Uni)

Per-Fluoro Compound (PFC) Emissions Reduction in Semiconductor Manufacturing -- Czerniak, Mike (Edwards Ltd)

Effects of palm swamp forest degradation in the Peruvian Amazon on soil CH<sub>4</sub> and N<sub>2</sub>O fluxes -- Lent, Jeffrey van (CIFOR / Wageningen Uni)

Taking some heat off the NDCs? The limited potential of additional short-lived climate forcers' mitigation -- Harmsen, Mathijs J.H.M. (PBL, Utrecht Uni)

Is Shale Gas a Major Driver of Recent Increase in Global Atmospheric Methane? -- Howarth, Robert W. (Cornell Uni)

Contribution of different methane sources to the global methane budget based on inversion modelling constrained by CH<sub>4</sub> and δ<sup>13</sup>C-CH<sub>4</sub> observations -- Kangasaho, Vilma (FMI)

Current approaches in on-farm accounting tools and national inventory models -- Klein, Cecile de (AgResearch)

Estimating regional emissions of the HFCs across NW Europe, Australia and East Asia from surface observations and comparison with national inventories -- Manning, Alistair (Met Office)

Mitigation Scenarios of Short-Lived Climate Pollutants and Air Pollutants in Asia by Considering Synergies and Tradeoffs of Decarbonization Measures toward 2 °C target -- Hanaoka, Tatsuya (NIES)

Biogeochemical controls of soil greenhouse gas fluxes in congolean forest landscapes: effects of land use change and agricultural intensification -- Verchot, Louis (CIAT)

Methane emission verification for the Upper Silesia coal basin in Poland using earth observation data -- Cain, Michelle (Uni Oxford)

Inverse modeling of anthropogenic methane emissions based on ground-based monitoring and GOSAT satellite retrievals -- Maksyutov, Shamil (NIES)

Establishing on-farm GHG emissions by an integrated modelling approach -- Krol, Dominika (Teagasc)

Update on Trends and Identities of Fluorinated GHGs Reported under the Greenhouse Gas Reporting Program -- Ottlinger, Deborah (US EPA)

How to represent short lived climate pollutants for net-zero targets with environmental integrity -- Cain, Michelle (Uni Oxford)

Emissions measurements downwind of offshore oil and gas platforms in the Gulf of Mexico -- Yacovitch, Tara I., presented by Herndon, Scott (Aerodyne)

Methane emission verification for the Upper Silesia coal basin in Poland using earth observation data -- Denier van der Gon, Hugo A.C. (TNO)

Investigation of the global methane budget based on improved measurement datasets and prior emission information -- Lan, Xin (Uni Colorado Boulder / NOAA)

An example of a National Inventory Model: The Danish model for cattle -- Gyldenkærne, Steen (Aarhus Uni)

European emissions of halogenated fumigants relevant for climate -- Maione, Michela (Ürbino Uni, CNR-ISAC)

The impact of diversifying understory vegetation in oil palm plantations on greenhouse gas emissions, ecosystem functioning and yield -- Dreher, Julia (Centre for Ecology &amp; Hydrology)

Airborne mapping of methane sources and their mass emission rates within the Barnett Shale -- Hirst, Bill (Shell)

Contributions of different regions to global methane budgets during the period 1988-2017 -- Chandra, Naveen (JAMSTEC)

Lunch &amp; Poster

ANIMALS  
Chair: Dominika Krol  
A new Tier 3 method to calculate methane emission inventory for ruminant models -- Eugène, Maguy (INRA, Uni Clermont Auvergne)SYNTHETIC GREENHOUSE GASES  
Chair: Michela Maione  
The HALOSEARCH project: search for unknown halocarbons in the atmosphere -- Guillevic, Myriam (EMPA)NATURAL SYSTEMS  
Chair: Louis Verchot  
How do termites contribute to soil nitrous oxide and methane emissions along a forest transition to rubber and oil palm plantation in Sumatra, Indonesia? -- Aini, Fitri Khisyu (CIFOR / Aberdeen Uni)IPCC GUIDELINES  
Chair: Kyoto Tanabe  
Opening and Introduction of IPCC TFI  
The 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories  
- Overview and cross-cutting issues -- Tanabe, KyotoINSTRUMENTS  
Chair: Lukas Emmenegger  
Recent Progress in TILDAS Laser Monitors for non-CO<sub>2</sub> Greenhouse Gases -- Nelson, David (Aerodyne)GLOBAL VERIFICATION  
Chair: Sander Houweling  
Contribution of different methane sources to the global methane budget based on inversion modelling constrained by CH<sub>4</sub> and δ<sup>13</sup>C-CH<sub>4</sub> observations -- Kangasaho, Vilma (FMI)

Planning tool for calculating the carbon footprint from dairy farming based on input data for feed intake, housing and manure system -- Mogensen, Lisbeth (Aarhus Uni)

Locating the source of increasing CFC-11 emissions using atmospheric observations -- Western, Luke (Bristol Uni)

Flooded fen grassland - a long term hot-spot for CH<sub>4</sub> emissions? -- Hoffmann, Mathias (Leibniz-ZALF)

Q&amp;A &amp; discussion

Airborne ultra-light spectrometer for greenhouse gases emission quantification -- Dejob, Antoine (Uni Reims)

Development of a new portable system for sampling CH<sub>4</sub> for radiocarbon analysis -- Zazzeri, Giulia (Imperial College London)

Initial analysis of international database on greenhouse gas emissions from manure management -- Weerden, Tony van der (AgResearch)

Long-term Measurements of Halocarbons at Taunus Observatory -- Schuck, Tanja (Frankfurt Uni)

Prediction of CH<sub>4</sub> emissions from potential natural wetlands on the Tibetan Plateau during the 21st century -- Li, Tingting (Chinese Academy of Sciences)Refinements in Volume 1 (General Guidance and Reporting) -- Pyrozenko, Yurii  
- Refinements in Volume 2 (Energy) -- Shermanau, Pavel  
- Refinements in Volume 3 (Industrial Processes and Product Use) -- Shermanau, Pavel  
- Refinements in Volume 4 (Agriculture, Forestry and Other Land Use) -- Ngarize, Sekai  
- Refinements in Volume 5 (Waste) -- Jamsranjav, BaasansurenA comparison of commercially-available quantum cascade laser spectrometers to measure N<sub>2</sub>O isotopocules (δ<sup>15</sup>N<sub>2</sub>, δ<sup>15</sup>N<sub>2</sub> & δ<sup>18</sup>O) at ambient concentrations -- Harris, Stephen (UNSW Sydney)

A high-precision mid-IR methane laser spectrometer for UAVs -- Emmenegger, Lukas (EMPA)

Assessment of losses from animal excreta on wet soils -- Krol, Dominika (Teagasc)

Atmospheric hydrofluoroolefins (HFOs) and hydrochlorofluoroolefins (HCFO) at the Jungfraujoch (Switzerland) observatory -- Vollmer, Martin K. (EMPA)

Measurements of Methane Fluxes over the Flow Country of Scotland -- Coyle, Mhairi (The James Hutton Inst)

Q&amp;A &amp; discussion

Development of a new portable system for sampling CH<sub>4</sub> for radiocarbon analysis -- Zazzeri, Giulia (Imperial College London)A comparison of commercially-available quantum cascade laser spectrometers to measure N<sub>2</sub>O isotopocules (δ<sup>15</sup>N<sub>2</sub>, δ<sup>15</sup>N<sub>2</sub> & δ<sup>18</sup>O) at ambient concentrations -- Harris, Stephen (UNSW Sydney)

Magnitude of difference in methane emissions between sheep bred for low or high methane yield is persistent across four seasons on pasture -- Jonker, Arjan (AgResearch)

HFC-23 from the production of HCFC-22 as seen at background sites in Europe -- Reimann, Stefan (EMPA)

Measurements of Methane Fluxes over the Flow Country of Scotland -- Coyle, Mhairi (The James Hutton Inst)

A high-precision mid-IR methane laser spectrometer for UAVs -- Emmenegger, Lukas (EMPA)

Stable carbon isotope analysis of airborne particulate matter using a carbon aerosol analyzer and a cavity ringdown spectrometer -- Hoffmann, Magdalena (Picarro)

Geological methane emissions and their isotopic signature: first global grid maps -- Etiope, Giuseppe (INGV)

UvA 2-3-4

Sorbonne

UvA 1

Oxford

Stellenbosch

Erasmus

RICE  
Chair: Arti Bhatia  
Nitrous oxide emissions, ammonia volatilization and N leaching losses in rice under Neem coated urea application -- Bhatia, Arti (ICAR)AGRICULTURE  
Chair: Kathrin Fuchs  
Ensemble modeling of nitrous oxide emissions from intensively managed grassland -- Fuchs, Kathrin (ETH Zürich)FORESTS  
Chair: Wim de Vries  
Impacts of human nitrogen fixation on global scale greenhouse gas emissions -- Vries, Wim de (Wageningen Uni)IPCC GUIDELINES  
Chair: Kyoto Tanabe  
National GHG inventories under the UNFCCC  
- Consideration on the past and the future -- Pulles, Tinus  
- Q&A & discussion

Stable carbon isotope analysis of airborne particulate matter using a carbon aerosol analyzer and a cavity ringdown spectrometer -- Hoffmann, Magdalena (Picarro)

Geological methane emissions and their isotopic signature: first global grid maps -- Etiope, Giuseppe (INGV)

Reduced gases (CH<sub>4</sub>, NH<sub>3</sub>, H<sub>2</sub>S) atmospheric concentration variability over rice paddies (Ebre River Delta ClimaDat station) -- Águeda, A. (Uni Politécnica de Catalunya), presented by Morgui, Josep-Anton (Autonomous Uni Barcelona)

Simulation and sensitivity analysis of nitrous oxide emissions from long-term grassland silage fields using the DNDC model -- Khalil, Ibrahim (Uni College Dublin)

Synthesis of results from experiments on the influence of forest management practices on soil GHG fluxes in Britain -- Yamulki, Sirwan (Forest Research)

Other TFI activities  
- Emission Factor Database -- Jamsranjav, Baasansuren  
- IPCC Inventory Software -- Ngarize, Sekai  
- Work on SLCF inventory methodology -- Tanabe, Kyoto

Time variations of the pollutants concentrations in the atmosphere over Moscow and estimation of their emissions -- Elansky, Nicolai F., presented by Rakitin, Vadim (Inst of Atmospheric Physics RAS)

The global methane budget 2000-2017: what have we learnt about the last 10 years of increasing methane? -- Saunois, Marielle (LSCE-CEA)

Methane and Nitrous Oxide Emission from Rice Field under the Adaptation-Mitigation Technologies -- Towprayoon, Sirintornthep (CEE, KMUTT)

Modelling nitrous oxide emission peaks -- Topp, Kirsty (Scotland's Rural College)

Response of Soil Nitrous Oxide Fluxes to Experimental Warming and Water Addition in a Temperate Sitka Spruce Forest Ecosystem -- Zou, Junliang, presented by Osborne, Bruce (Uni College Dublin)

Q&amp;A &amp; discussion

Anthropogenic methane plumes detection from punctual sources in the Paris megacity area and characterisation of their δ<sup>13</sup>C signature -- Xueret-Remy, Irène (LSCE / Aix Marseille Uni)Using joint satellite and isotopic CH<sub>4</sub> measurements to constrain uncertainty on the evolution of the global CH<sub>4</sub> budget -- Bloom, A. Anthony (California Inst of Tech), presented by Worden, John R. (California Inst of Tech / NASA)

Optional: Canal cruise -- Optional: Canal cruise

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## PLENARY SESSION

Rona Thompson, NILU

## Top-down approaches for reporting GHG emissions: current capabilities and future perspectives

10:30

## UvA 2-3-4

## Sorbonne

## UvA 1

## Oxford

## Stellenbosch

FRIDAY JUNE 14

10:30

11:00

## CROPS Chair: Gerard Velthof

What are the potential trade-offs of soil carbon sequestration strategies on N<sub>2</sub>O emissions? -- Velthof, Gerard L. (Wageningen Environmental Research)

Downscaling greenhouse gas emissions reductions and their interactions with nitrate leaching -- Mahmoud, Noha M. Hanafy (Aarhus Uni)

Nitrous oxide emissions and other reactive nitrogen losses from China's food system for the shared socioeconomic pathways -- Wang, Mengru (Wageningen Uni / CAS)

Reducing greenhouse gas emissions while maintaining yield in the croplands of Huang-Huai-Hai Plain, China -- Wang, Guocheng (Chinese Academy of Sciences)

## UPDATED &amp; NEW IPCC GUIDANCE ON F-GASES Chair: Deborah Ottinger

Updated Guidance for Estimating Fluorinated GHGs from Fluorochemical Production -- Schaffner, Karen S. (RTI Int), presented by Brian Mader (3M Company)

Updated Guidance for Estimating Perfluorocarbon Emissions from Aluminium Production and New Guidance for Estimating Perfluorocarbon Emissions from Rare Earths Production -- Nunez, Pernelle (International Aluminium Institute)

Updated Guidance for Estimating Fluorinated GHG and N<sub>2</sub>O Emissions from Electronics Manufacturing -- Beu, Laurie (Laurie Beu Consulting), presented by Deborah Ottinger (US EPA)

Basis for Developing a Methodology to Estimate Fluorinated GHG Emissions from the Fluorinated Treatment of Textile, Carpet, Leather, and Paper -- Zille, Andrea (Uni Minho)

Updated Guidance for Estimating Hydrofluorocarbon Emissions from Refrigeration and Air-Conditioning -- Bjørnness, Kathrine Loe (NEA), presented by Malone, Michela (Urbino Uni, CNR-ISAC)

## AFRICA Chairs: Klaus Butterbach-Bahl &amp; Lutz Merbold

Mazingira Centre: State-of-the-Art Environmental and Educational Facility in East Africa -- Merbold, Lutz (ILRI)

An optimized observation system for climate forcing in Africa -- Wilson, Sally (Global Change Inst)

High fire derived N deposition and indirect N<sub>2</sub>O emission in Congo basin forests -- Bauters, Marjin (Uni Gent: ISOFYS / CAVElab), presented by Boeckx, Pascal (Uni Gent)Tropical forests of the Congo Basin are a weak source of N<sub>2</sub>O and a strong sink for CH<sub>4</sub> -- Barthel, Matti (ETH Zurich)

## METHANE EMISSIONS FROM LIVESTOCK Chair: Karin Groenestein

Introduction NL Climate Research Agriculture -- Groenestein, Karin (Wageningen Livestock Research)

Farm monitoring emissions and demonstration -- Ogink, Nico (Wageningen Livestock Research)

Techniques to reduce emissions from manure -- Aarnink, Andre (Wageningen Livestock Research)

Techniques to reduce enteric CH<sub>4</sub> emissions -- Şebek, Léon (Wageningen Livestock Research)

Closing session

## REACTIVE SPECIES Chairs: Helen Worden &amp; Benjamin Gaubert

Dynamics in methane, carbon monoxide and AOD trends for different regions of Eurasia -- Rakitin, Vadim S. (Inst of Atmospheric Physics RAS)

Statistical analysis of factors driving surface ozone variability over continental South Africa -- Laban, Tracy Leah, presented by Zyl, Pieter van (North-West Uni)

Constraints on OH in a global 3-D model inversion of MCF -- Naus, Stijn (Wageningen Uni)

Improvement of Black Carbon emissions and modelled concentrations in Germany -- Manders, Astrid (TNO)

Inter-model comparison of global hydroxyl radical fields and influences on methane simulations -- Zhao, Yuanhong (LSCE)

## SATELLITE OBSERVATION Chair: Ilse Aben

Quantification of methane emissions from satellite measurements moving from global to local scales -- Houweling, Sander (VU Amsterdam)

The Monitoring Nitrous Oxide Sources (MIN-OS) satellite project -- Ricaud, Philippe (CNRM; Météo-France)

Upper tropospheric and stratospheric trends of greenhouse gases as derived from MIPAS observations -- Stiller, Gabrielle P. (KIT)

Evaluation and analysis of the seasonal cycle and trend of methane from the Greenhouse Gases Observing Satellite (GOSAT) -- Kivimäki, Ella (FMI)

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Lunch &amp; Poster

13:30

## CROPS Chair: Nicholas Cowan

Gap filling and quantifying uncertainties of nitrous oxide flux measurements at the field scale -- Cowan, Nicholas (Centre for Ecology &amp; Hydrology)

Re-evaluation of nitrous oxide emission factors for arable and grassland ecosystems -- O'Neill, Macdara (Teagasc / Uni College Dublin), presented by Osborne, Bruce (Uni College Dublin)

Nitrous oxide emissions from oilseed rape in response to varying nitrogen applications -- Rees, Robert M. (Scotland's Rural College)

Dryland Nitrous Oxide Emissions with Crop Rotation and Nitrogen Fertilization -- Sainju, Upendra M. (USDA-ARS)

The impact of tillage on the land-atmosphere exchange of GHG from a Mediterranean rotation cropland -- Gasbarra, Danièle, presented by Famulari, Daniela (CNR-ISAFORM)

## SYNTHETIC GHG Chair: Deborah Ottinger

How the Refinements Address the PFC Gap -- Ottinger, Deborah (US EPA)

Calculating HFC-emissions from cooling equipment -- Honig, Erik (RIVM)

Destruction HFC refrigerant from wasted motor vehicles and electrical equipment -- Lu Ju-Hsiu Cheng, Joey Ching-Hui (ITRI)

## AFRICA Chairs: Klaus Butterbach-Bahl &amp; Lutz Merbold

Bomas and grals: overseen hotspots of N<sub>2</sub>O emissions from African livestock systems -- Butterbach Bahl, Klaus (KIT)

Towards improved emission factors for ruminant methane emissions in Africa -- Goopy, J.P. (ILRI, Uni Melbourne)

Effect of dung quantity and quality on greenhouse gas fluxes from tropical pastures in Kenya -- Zhu, Yuhao (KIT)

Greenhouse gas measurements in East-African rangelands: Kapiti Research Station as a benchmark site for sustainable wildlife livestock keeping -- Merbold, Lutz (ILRI)

Appropriate approaches for enhancing carbon and greenhouse gas research in developing countries - current status and suggestion for further development -- Kim, Dong-Gill (Hawassa Uni)

## AGRICULTURE &amp; FORESTRY GHG Summer School Chair: Frank OMara

Joint Workshop FACCE ERA-GAS and MEMO2: Proposal writing -- Walter, Sylvia (Utrecht Uni)

Closure of the FACCE ERA-GAS Summer School -- Vashev, Boris (FNR)

## REACTIVE SPECIES Chairs: Helen Worden &amp; Ben Gaubert

Global trends in carbon monoxide concentrations and emissions -- Worden, Helen (NCAR)

Trends in Carbon Monoxide Abundance as Inferred from an Ensemble of Chemical Reanalyses and their Implications to Air Quality/Greenhouse Gas Emissions Monitoring -- Arellano, Avelino (Uni Arizona), presented by Gaubert, Benjamin (NCAR)

4-D optimization of CO and OH, can we disentangle errors from chemistry and emissions? -- Gaubert, Benjamin (NCAR)

## AIRPLANE OBSERVATION Chair: Ilse Aben

Using airborne observations to quantify N<sub>2</sub>O emissions from fertilizer plants and croplands in the Mississippi River Valley -- Kort, Eric A. (Michigan Uni)

Long-term global-Scale Monitoring of Trace Gases and Aerosols on the IAGOS-CARIBIC passenger aircraft: A leverage for improving the process representation of climate models -- Bönisch, Harald (KIT), presented by Zahn, Andreas (KIT)

Transport pathways of high CH<sub>4</sub> events observed over the western North Pacific -- Niwa, Yousuke (NIES, MRI)

Airborne monitoring of seasonal dynamics of carbon dioxide exchange in the Netherlands. -- Hutes, Ronald (Wageningen Uni)

## PLENARY SESSION

Closure

15:15

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