

# ***“Climate change, reactive nitrogen, food security and sustainable agriculture”***

**15-16 April, 2019 Garmisch-Partenkirchen, Germany**



## **Conference programme**

### **Day 1 (15<sup>th</sup> April 2019):**

08:30: Welcome and introduction (Drs. Scheer and Pelster)

08:45 **Dr Vangimilla Reddy**, USDA ARS, USA *“The OECD Co-operative Research Programme”*

09:00 **Dr David Kanter**, USA, New York University. *“Nitrogen: A Climate Strategy for a Post-Trump World”*

09:20 **Dr Wilfried Winiwarter** IIASA, Laxenburg, Austria *“Global budgets of nitrous oxide under GCP/INI, the contribution of the global N<sub>2</sub>O intercomparison project, and refinements to regionally assess diverse drivers, fluxes, and impacts (RECCAP-2)”*

09:50 **Prof Klaus Butterbach-Bahl**, Institute of Meteorology and Climate Research, Germany. *“Climate change, reactive N, denitrification and N<sub>2</sub>O: identifying sustainable solutions for the globe.”*

10:10 Coffee

10:30 **Prof Stephen Ogle**, Colorado State University, USA. *“Importance of accurate activity data for national GHG inventory reporting”*

10:50 **Prof Peter Grace**, Queensland University of Technology, Australia. *“The Australian National Agricultural Nitrous Oxide Research Program.”*

11:10 **Dr Marta Alfaro**, INIA, Chile. *“Chilean national program for agricultural GHG mitigation”*

11:30 Discussions: *“Development of the Workshop Policy Brief”*

12:30 Lunch

13:30 **Prof Tim Clough**, New Zealand, Lincoln University. *"N<sub>2</sub>O emissions from grazing lands"*

13:50 **Dr Laura Cardenas**, Rothamsted Research, UK. *"Denitrification from manure deposited by grazing livestock"*

14:10 **Dr Søren O. Petersen**, Aarhus University, Denmark. *"Cover crop residues as driver for N<sub>2</sub>O emissions - mechanisms and mitigation"*

14:30 Coffee

15:00 **Prof Claudia Wagner-Riddle**, University of Guelph, Canada. *"N<sub>2</sub>O fluxes during freeze/thaw"*

15:20 **Prof Elizabeth Baggs**, University of Edinburgh, UK. *"Hotspots of N<sub>2</sub>O production"*

15:40 **Dr Guntur Venkata Subbarao**, International Research Center for Agricultural Sciences, Japan. *"The role of biological nitrification inhibitors in reducing N losses from agriculture"*

16:00 Discussion: *"Targeting of hotspots / hot moments and methods for mitigation"* (Chair: Klaus Butterbach-Bahl)

16:30 Discussion special issue in *"Current Opinion in Environmental Sustainability"*. (Potential contributions, working groups)

19:00 Dinner

**Day 2 (16<sup>th</sup> April 2019):**

08:30 Overview/summary of previous day

9:00 **Dr Ward Smith**, Agriculture and Agri-Food Canada. *"Modelling approach for identifying management practices that reduce GHG emissions from cropping systems in Canada"*

09:20 **Dr Stephen DelGrosso**, USDA ARS, USA. *"Modelling denitrification and N<sub>2</sub>O emissions from fertilised cropping systems using DayCent"*

09:40 **Dr Raia Massad**, INRA, France. *"Modeling and mapping N<sub>2</sub>O emissions at the landscape scale"*

10:00 Coffee

10:20 **Dr Iris Vogeler**, Aarhus University, Denmark. *"Comparison of APSIM and DNDC when predicting N<sub>2</sub>O emissions from urine patches"*

10:40 **Dr Chris Dorich**, Colorado State University, USA *"Improving Global N<sub>2</sub>O Emission Estimates Through the use of a Global N<sub>2</sub>O Database"*

11:00 **Dr Louise Barton**, University of Western Australia. *"Importance of sampling frequency in reducing uncertainty"*

11:20 **Prof Ute Skiba**, Centre for Ecology and Hydrology, UK. *"Upscaling N<sub>2</sub>O fluxes from plot to region"*

11:40 Discussion: “Standardization of methodologies (empirical studies to modeling and upscaling) to further reduce uncertainties and enhance model development.”

12:30 Lunch

13:30 **Prof Lars Bakken**, Norwegian University of Life Sciences. *“How can microbiologists help with N<sub>2</sub>O mitigation?”*

13:50 **Dr Sonja Leitner**, International Livestock Research, Kenya. *“N<sub>2</sub>O fluxes from smallholder, African farms”*

14:10 **Dr Johannes Friedl**, Queensland University of Technology, Australia. *“Measuring denitrification and N turnover from fertilised cropping systems using stable isotopes”*

14:30 Coffee

14:50 **Dr Chunsheng Hu**, Key Laboratory of Agricultural Water Resources, China. *“N<sub>2</sub> production via aerobic pathways”*

15:10 **Prof Pascal Boeckx**, University of Gent, Belgium. *“Nitrogen cycling and N<sub>2</sub>O fluxes from agroforestry”*

15:30 Wrap-up session: “Lessons learned at the conference for affecting/influencing policy.” Final drafting of policy brief (chairs: Scheer/Pelster)

17:00 Time to develop a first outline/draft for the special issue paper (small working groups)

19:00 Dinner

**Day 3 (17<sup>th</sup> April 2019): Excursion to the Schneefernerhaus (optional)**

08:30 Meet at Hotel

09:15 Cogwheel train to the Zugspitze

10:30 Arrive at Zugspitze

11:00 Visit to the Environmental Research Station Schneefernerhaus

12:45 Lunch at the Sonnalpin Glacier Restaurant

15:50 Arrive back at Garmisch-Partenkirchen (train station)