

1. Workshop Agenda – Day 1

September 1st

12h-13:30h *Lunch*

13:30h *Welcome*
Prof. Dr. Mark Lawrence, Scientific Director, IASS

14h-16:00h **Session 1: Overview of European research efforts on unconventional gas**

- *Introduction*
Lorenzo Cremonese, IASS
- *What can Europe learn from the U.S. example?*
Roland Kupers, EDF
- *Overview of the Horizon 2020 Projects*

16:00h *Coffee break*

16:15h-18:00h **Session 2: European shale gas reserves and their likely development**

- *Introduction:* Lorenzo Cremonese, IASS
- *Discussion points:*
 - What is the size of European shale gas reserves?
 - How many wells will be drilled?
 - What infrastructure will be used (e.g. rig availability, pipelines)?
 - Hurdles for modeling

18:00h *Reception*

19:00h *Dinner*

Day 2

September 2nd

9:30h

Opening

10:00h-11:00h **Session 3: Regulatory regimes and their effects on emissions**

- *Regulatory requirements on gas exploitation activities in the UK*
Marieke Beckmann, NPL
- *U.S. efforts to reduce fugitive and process emissions from the oil and natural gas sector*
Briana Mordick, NRDC

11:00h

Coffee break

11:15h-12:30h **Session 4: Methods for estimating and monitoring emissions**

- *Anticipated emissions to air from UK shale gas operations*
Mark Broomfield, RICARDO-AEA
- *Modeling air pollution emissions from unconventional oil and gas sources*
Zac Adelman, UNC
- *U.S. natural gas systems: What recent top-down studies are telling us about associated methane and VOC emissions?*
Gabrielle Pétron, NOAA
- *Results from environmental monitoring of shale gas drilling in Poland*
Olga Lipińska, PGI
- *Oil and gas methane: An untapped opportunity for near-term greenhouse gas reductions*
Roland Kupers, EDF

12:30h-13:30h

Lunch

13:30h-15:30h **Continuation of Session 4**

15:30h

Coffee break

15:45h

Wrap up

17:00h

End of workshop

2. Participants

Zachariah Adelman, University of North Carolina

Nico Bauer, Potsdam Institute for Climate Impact Research

Marieke Beckmann, Centre for Carbon Measurements, National Physical Laboratory, UK

Alex Bree, Federal Ministry for Economic Affairs and Energy, Germany

Mark Broomfield, RICARDO-AEA, UK

Tim Butler, Institute for Advanced Sustainability Studies

Lorenzo Cremonese, Institute for Advanced Sustainability Studies

Michele Ferrari, Institute for Advanced Sustainability Studies

Marianne P. Flynn, Institute for Advanced Sustainability Studies

Hugo van der Gon, Netherland's Organisation for Applied Scientific Research (TNO)

Alexander Gusev, Institute for Advanced Sustainability Studies

Andreas Hübner, German Research Centre for Geosciences (GFZ)

Roland Kupers, Environmental Defense Fund, USA

Mark Lawrence, Scientific Director, Institute for Advanced Sustainability Studies

Olga Lipińska, Polish Geological Institute

Briana Mordick, Natural Resources Defense Council (NRDC), USA

Gabrielle Pétron, National Oceanic and Atmospheric Administration, USA

Elisabeth Staudt, Deutsche Umwelthilfe (DUH)

Stefan Stückrad, Institute for Advanced Sustainability Studies

Carla Tagliaferri, Institute for Advanced Sustainability Studies

Lindsey Weger, Institute for Advanced Sustainability Studies