

**Monday 20 May 2019**, Robing Room, O'Reilly Hall, UCD Campus

The WUN Global Challenge on Responding to Climate Change functions to inspire and enable multinational collaborations that will lead to positive environmental, economic, social, and political outcomes. As an academic network of over 2000 researchers, it has a substantial intellectual and infrastructure capacity. Several collaborative projects established through the RCC have involved more than five institutions across as many countries, and have been prolific in leading scientific and policy outcomes.

This workshop seeks to expand the platform of the RCC to encourage wider collaboration with industry leaders, in a way that may further improve the scale and impact of RCC research.

**The workshop will:**

- inform conference participants of the priorities and activities of industries that are actively investing in R&D related to climate change
- inspire more direct collaboration between WUN and industry bodies.

Desired outcomes of the workshop will include a brief strategy paper, which may apply to each of the WUN Global Challenges.

### WORKSHOP PROGRAMME

**9.00-9:15**

**INTRODUCTION OF THE CONTEXT, SCOPE AND SPEAKERS**

Dr Michael Considine - Chair, Responding to Climate Change  
Arturo Molina Gutiérrez - Co-Chair, Responding to Climate Change

### INDUSTRY PERSPECTIVES ON CLIMATE CHANGE RESEARCH

**9.15-10:15**

**KEYNOTE 1**

David Hone - Shell International  
Chief Climate Change Adviser in the Shell Scenarios Team  
*Research strategy of Shell*

**10:15-10:40**

**COFFEE/TEA BREAK**

**10:40-11:40**

**KEYNOTE 2**

Dr Henry King - Unilever. Director for Sustainability Science and Technology,  
Safety and Environment Assurance Centre  
*Research Activities and Systems across Unilever*

**11:40-12:30**

**DISCUSSION**

12:30-13:30

LUNCH

### RCC SHOWCASES

13:30-14:00

A/Prof Richard Peltier - University of Massachusetts  
*Air sensors everywhere: Engaging low cost air quality sensor users*

14:00-14:30

Prof Christine Foyer - University of Leeds, University of Birmingham  
*The role of legumes in sustainable agriculture and food security*

14:30-15:00

Jeroen Gruijskens, Maastricht University  
*Valorization against climate change*

15:00-15:30

JDr Samantha Martin-McAuliffe and Dr Alice Clancy - University College Dublin  
*Crossroads of change in the global south: architecture, environment and development in the Samburu, Kenya*

15:30-16:00

COFFEE/TEA BREAK

16:00-17:00

**DISCUSSION**, including:

- Strategies for academic-industry partnerships in climate change research
- Strategies for funding climate change research across borders

Dr Michael Considine - Chair, Responding to Climate Change

Arturo Molina Gutiérrez - Co-Chair, Chair, Responding to Climate Change

17:00

**END OF WORKSHOP**

### KEYNOTE SPEAKERS

#### David Hone - Shell International.

Chief Climate Change Adviser in the Shell Scenarios Team

David joined Shell in 1980 after graduating as a Chemical Engineer from the University of Adelaide in South Australia. He initially worked for Shell as a refinery engineer in Australia and The Netherlands, before becoming the supply economist at the Shell refinery in Sydney. In 1989 David transferred to London to work as an oil trader in Shell Trading and held a number of senior positions in that organisation until 2001. In that year David took up the role of Group Climate Change Adviser.

David was Chairman of the International Emissions Trading Association (IETA) from 2011-2013, a global business organisation of some 140 companies and remains a Board member. The Association focuses on the development of carbon markets. He is also on the Board of the Washington based Centre for Climate and Energy Solutions (C2ES) and the Board of the Global Carbon Capture and Storage Institute (GCCSI) in Melbourne, Australia.

David posts regular stories on his energy & climate change blog, which can be found at <http://blogs.shell.com/>. He also contributes to US based blog, The Energy Collective (<http://www.theenergycollective.com>). He is the author of a current book on climate change, 'Putting the Genie Back: Solving the Climate and Energy Dilemma'.

**Dr Henry King - Unilever.** Director for Sustainability Science and Technology, SEAC

Henry obtained a PhD in Biology and after post-doctoral studies in the USA joined Unilever's corporate Safety and Environmental Assurance Centre (SEAC) in 1991. He has over 25 years' experience in the area of life cycle management and sustainability with a particular emphasis on climate change issues, product assessment and sustainable design. He has participated in numerous international working groups and committees (UNEP, WRI, WBCSD) covering topics such as life cycle management, product footprinting, sustainable palm oil and the circular economy. His current work includes supporting delivery of Unilever's Sustainable Living Plan and leading sustainability science development and strategic research partnerships. Currently his team has research projects within the EU, USA and SE Asia.

He is a Visiting Professor at University of Surrey and on Advisory Boards at the universities of York (York Environmental Sustainability Institute) and Sheffield (Leverhulme Centre for Climate Mitigation).

## RCC SHOWCASES

**A/Prof Richard Peltier** - University of Massachusetts

*Air sensors everywhere: Engaging low cost air quality sensor users*

Air Sensors Everywhere is a multi-institutional collaborative project that seeks to develop, promote, and identify sensing technologies for assessing air quality. This is particularly timely because of the recent rise of low-cost, do-it-yourself approaches that are now prevalent across dozens of commercial distributors and thousands of home hobbyists. However, these sensors are not yet a panacea, nor are they always low cost. Here, we discuss the types of questions and topics of interest to low cost sensor users, including citizen scientists, academics, industry, and policy makers.

**Prof Christine Foyer** - University of Leeds, University of Birmingham

*The role of legumes in sustainable agriculture and food security*

The United Nations Sustainable Development Goals present an urgent and formidable challenge to scientists and society alike, highlighting the urgent requirement to transform agriculture and the food sector to achieve food and nutrition security, ecosystem sustainability, economic growth and social equity over the coming decades. The intensification of legume-based agriculture must form a central pillar in the international commitment towards, food security, health, economic development and poverty alleviation. However, legumes are currently underutilized in comparison to cereals. Grain legume production is static or declining in developing countries, despite increasing global demand. This talk will describe our studies seeking to understand the physiological and molecular basis for stress tolerance in soybean (*Glycine max*) and other legumes.

**Jeroen Gruiskens** - Maastricht University

*TBA*

After a short introduction about Jeroen and Maastricht University, Jeroen will talk about the use of smart services in climate change mitigation and some examples of projects ongoing in which Maastricht University plays a major role, explaining the role of Big Data and data science. Also, in the last part Jeroen will mention two projects ongoing in Maastricht University aimed at reducing emission rates of drivers of climate change such as CO<sub>2</sub> and PM<sub>2.5</sub>: namely Project EXHALE which introduces improved cook stoves to slum dwelling communities as well as a project started the environmental law department: Minimising the impact of aviation emissions: what way forward?

**Dr Samantha Martin-McAuliffe and Dr Alice Clancy** - University College Dublin.

*Crossroads of change in the global south: Architecture, environment and development in the Samburu, Kenya*

This is a pioneering project that will systematically document and record the architecture, environment and recent development of the Samburu, a region in north-central Kenya which is on the precipice of rapid change. This transdisciplinary project will respond to a number of Sustainable Development Goals and pressing global challenges, in particular climate change.

An innovative aspect of this project is an active learning initiative, a collaborative enterprise with members of local wildlife conservancies which considers the architecture, environment and culture of African nomadic-pastoralists. The key underlying question in the initiative is: What can a traditional Kenyan house teach us about climate change? This project is situated in a conservancy area of the Samburu where we are developing an onsite 'learning lab' which fully documents and records the entire process of planning and constructing a traditional Samburu dwelling. The aim is to understand ways of siting and building houses while also addressing cutting-edge, high-tech ways of examining the landscape and environment.