

European Commission

Horizon 2020 European Union funding for Research & Innovation

> Workshop Frontier Research and Climate Change

Brussels 31 March 2017



**European Research Council** Established by the European Commission

## About the ERC

Set up in 2007 by the European Union, the European Research Council (ERC) is the first pan-European funding body designed to support investigator-driven frontier research and to stimulate scientific excellence across Europe.

Through long-term grants, it supports the best and most creative scientists of any nationality and age to identify and explore new directions in any field of research - Physical Sciences and Engineering, Life Sciences, Social Sciences and Humanities. There are no thematic priorities and the only evaluation criterion is excellence. In the last ten years, the ERC has awarded around 7 500 grants to individual top researchers carrying out their research projects across Europe.

The ERC is led by an independent governing body, the Scientific Council, and the ERC President is Professor Jean-Pierre Bourguignon. The ERC has a budget of over €13 billion for the years 2014 to 2020 and is part of the EU Research and Innovation programme, Horizon 2020, for which European Commissioner for Research, Innovation and Science Carlos Moedas is responsible.

## Venue

 $( \mathbf{\Phi} )$ 

ERC Executive Agency, Covent Garden building (Auditorium 25th floor) Place Rogier 16, 1210 Brussels

# Aim of the Workshop

The Workshop is intended to showcase relevant research on Climate Change and Climate Action supported by the ERC under Horizon 2020 and FP7, to provide a forum of networking between Principal Investigators leading ERC-funded projects, and to position ERC as a contributor to 'climate action' through its 'bottom up' approach.

More specifically, it aims at:

- Highlighting examples of frontier research across the three domains of "Physical Sciences and Engineering", "Life Sciences", and "Social Sciences and Humanities" that contribute to the understanding of climate change, its drivers, its impacts on the natural world and society, and how to mitigate these impacts, or to adapt to them.
- Illustrating how ERC funded research can inform the research agenda in other parts of the Horizon 2020 Framework Programme, in particular research into Societal Challenge 5 "Climate action, environment, resource efficiency and raw materials".
- Bringing together ERC-funded researchers working in the broad field of climate change and climate action from all disciplines of science and scholarship.

## Background

Climate change has been identified as one of the major challenges facing humanity on a global scale and on time scales spanning years, decades, and centuries to come. In its fifth and most recent Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) states that "Recent climate changes have had widespread impacts on human and natural systems" and that "since the 1950s, many of the observed changes are unprecedented over decades to millennia" <sup>1</sup>.

The need to "take urgent action to combat climate change and its impacts" is one of the 17 Sustainable Development Goals identified by the United Nations<sup>2</sup>, and in order to achieve this goal at the intergovernmental level, 195 countries adopted the Paris Agreement at the Paris Climate Conference (COP21) in December 2015<sup>3</sup>. The Paris Agreement entered into force on 4 November 2016, after at least 55 Parties to the Convention, accounting for at least 55% of the total global greenhouse gas emissions, have ratified it. As of 1 December 2016, 115 parties have ratified the Agreement, and the UN climate conference 2016 held in Marrakech (COP22) has underlined that implementation of the Paris Agreement is underway.

At the research level, the Paris Agreement asks the signing parties to "[strengthen] scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision-making" and that adaptation action "(...) should be based on and guided by the best available science (...)".

Climate action is a key Horizon 2020 objective and cross-cutting priority, and projects from across the programme are expected to contribute to it. The European Commission aims for at least 35% of Horizon 2020's total budget to address climate action.

Within Horizon 2020, climate action is clearly embedded in Pillar III, i.e. in Societal Challenge 5 "Climate action, environment, resource efficiency and raw materials", Societal Challenge 2 "Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy", Societal Challenge 3 "Secure, Clean and Efficient Energy" and Societal Challenge 4 "Smart, Green and Integrated Transport". Pillars I and II contribute to climate action with bottom-up, researcher-led actions as well as in thematic areas such as "Leadership in Enabling and Industrial Technologies: Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology".

)

<sup>1</sup> IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzer-land, 151 pp. https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5\_SYR\_FINAL\_SPM.pdf

<sup>2</sup> Sustainable Development Goals: 17 Goals to Transform our World. http://www.un.org/sustainabledevelopment/

<sup>3</sup> The Paris Agreement. United Nations Framework Convention on Climate Change. https://unfccc.int/files/meetings/paris\_ nov\_2015/application/pdf/paris\_agreement\_english\_.pdf

While the ERC, with its curiosity-driven, bottom-up approach, is not being led in its funding decisions by any predefined priority areas, ERC-funded Principal Investigators in their frontier research projects frequently address pressing global societal challenges, both in terms of generating fundamental knowledge as well as in developing solutions for these challenges.

The present workshop is therefore designed to showcase examples of ERC-funded frontier research projects, which contribute to our understanding of climate change phenomena, and which study their impacts and possible actions with regard to climate change mitigation and adaptation.

## Structure

The workshop is organised as a one-day event in 4 thematic sessions, each of them covering research that spans all three ERC domains. The thematic sessions are structured in three presentations, of 20 min each, followed by a Question & Answer section at the end of the session.

#### Session 1: Understanding the drivers of climate change

Ample evidence already exists for anthropogenic climate change but, as Earth's climate system depends on non-linear feedbacks between its various components, more light needs to be shed onto how greenhouse gases impact atmospheric chemistry and enhance global warming, how climate parameters correlate with changes in natural and anthropogenic pressures at various scales and, ultimately, how long have human activities been affecting the climate system. This session presents ERC-funded projects that contribute to our better understanding of such non-linearities, allow reconstructions of climate change in the past, and help to predict future changes.

#### Session 2: Natural responses to climate change

Climate change and its consequences are already affecting natural systems in many different ways. Around the globe, ecosystems are facing pressures due to climate change, pollution, and biological invasions, among others. As a result their structure, functions and distribution are rapidly changing, and this has the potential to significantly disrupt the many goods and services ecosystems provide. Having a better understanding of the capacity of ecosystems and species to withstand change (resistance) and to recover from it (resilience) is vital in the face of the increasing impacts on the natural world. In this session, three ERC grantees will shed light on the impacts of climate change on ecosystems and their responses under different global scenarios.

#### Sessions 3 and 4: Climate action for mitigation and adaptation

There is a clear need to take decisive action to mitigate the causes of climate change and to adopt strategies to adapt to climate change, in order to minimise its adverse effects on natural and human systems, and to reduce the vulnerability of society. Mitigation and adaptation go hand in hand and are necessarily tied into wider societal goals (such as the United Nations Sustainable Development Goals).

The two final sessions will highlight ERC-funded projects, which contribute to fighting climate change and its adverse impacts on a multitude of levels, from improving sustainable energy technologies and developing potential mitigation approaches, discussing the role of social influences on the adoption of disruptive low-carbon innovations, to considering legal and governmental aspects to identify the best policy options to reduce emissions. The speakers will discuss adaptation to changes in ecosystem services and cutting-edge research on the consequences of future climate change on human wellbeing and the adaptive capacity of societies.

2

# **Speakers**

12 ERC Grantees will be presenting their ERC-funded research in the area of climate change. Their presentations will showcase their projects in a manner accessible to an informed broad audience.

# Target audience / participants

- Members of the relevant Horizon 2020 Programme Committee on Societal Challenge 5.
- Colleagues from the European Commission, Directorate General for Research & Innovation, Directorate I "Climate Action and Resource Efficiency", and from other interested Directorates General.
- Interested staff in the ERC Executive Agency and in other EU institutions.

The initiative is being jointly developed by the European Research Council and DG Research & Innovation, Directorate I "Climate Action and Resource Efficiency".

# Agenda

08.30 - 09.00 | Registration

09.00 – 09.30 Welcome Address Klaus Bock, Vice-President of the European Research Council (ERC) Jack Metthey, Director, Directorate I: Climate Action and Resource Efficiency, Directorate-General for Research & Innovation

•

## Session 1: Understanding the drivers of climate change

09.30	<b>Carlo Barbante</b> , University Ca'Foscari Venice, IT, ERC Advanced grantee How long have human activities been affecting the climate system?
09.55	<b>Anna Nele Meckler</b> , University of Bergen, NO, ERC Starting grantee <i>A new way to reconstruct old climate</i>
10.20	<b>Christiane Werner</b> , University of Freiburg, DE, ERC Consolidator grantee Biochemical link between plant volatile organic compound (VOC) emissions and CO <sub>2</sub> metabolism - from sub-molecular to ecosystem scales
10.45	Q&A
11.00	COFFEE BREAK

### Session 2: Natural responses to climate change

11.30	Katharine Hendry, University of Bristol, UK, ERC Starting grantee Isotope cycling in the Labrador Sea
11.55	<b>Fernando Maestre Gil</b> , Rey Juan Carlos University, ES, ERC Consolidator grantee Ecological impacts of climate change in global drylands
12.20	Jordi Bascompte, University of Zurich, CH, ERC Advanced grantee Robustness of the web of life in the face of global change
12.45	Q&A
13.00	LUNCH BREAK

۲

# Session 3: Technological and management aspects for climate change mitigation and adaptation

•

14.00	<b>Eleni Chatzi</b> , ETH Zurich, CH, ERC Starting grantee Smart monitoring, inspection and life-cycle assessment of wind turbines
14.25	<b>Boran Kartal</b> , Max Planck Institute for Marine Microbiology, DE, ERC Starting grantee <i>Greenhouse gas mitigation through advanced nitrogen removal technology</i>
14.50	<b>Elena Ojea</b> , University of Vigo, ES, ERC Starting grantee <i>Climate adaptation to shifting stocks</i>
15.15	Q&A
15.30	COFFEE BREAK

# Session 4: Societal and legal aspects of climate change mitigation and adaptation

16.00	<b>Wolfgang Lutz</b> , International Institute for Applied Systems Analysis, AT, ERC Advanced grantee Forecasting societies adaptive capacities to climate change
16.25	<b>Kati Kulovesi</b> , University of Eastern Finland, FI, ERC Starting grantee Slowing down climate change: combining climate law and climate science to identify the best options to reduce emissions of short-lived climate forcers in developing countries
16.50	<b>Charlie Wilson</b> , University of East Anglia, UK, ERC Starting grantee Social influence and disruptive low carbon innovations
17.15	Q&A
17.30	Concluding remarks
18.00	END OF WORKSHOP

(



# **Session 1** Understanding the drivers of climate change

#### **Carlo BARBANTE**

Professor, Institute for the Dynamics of Environmental Processes - CNR, University Ca'Foscari Venice, Italy

Principal Investigator, ERC Advanced grant 2010: EARLYhumanIMPACT: How long have human activities been affecting the climate system?

Carlo Barbante is Director of the Italian National Research Council's Institute for the Dynamics of Environmental Processes, and Full Professor at the University of Venice - Ca' Foscari. His principal research interest is the development of analytical methods, based on inductively coupled plasma mass spectrometry and organic mass spectrometry, for the ultra-

trace determination and speciation of elements in environmental, biological matrices and advanced materials. His work focuses on archives of atmospheric trace element deposition and environmental and climatic changes. The investigation of various trace elements in Greenland, Antarctic and Alpine snow and ice has provided a wealth of fascinating information on recent and past changes in the atmospheric cycles of several trace elements at different time scales. Prof. Barbante is the Italian National Delegate to the European Union for Climate Action, Resource Efficiency and Raw Materials (Horizon 2020 Advisory Board).

> http://venus.unive.it/barbante/Carlos\_Site/Home.html > http://www.earlyhumanimpact.eu/people/current/carlo

#### Anna Nele MECKLER

Researcher, University of Bergen, Norway Principal Investigator, ERC Starting grant 2014: C4T: Climate change across Cenozoic cooling steps reconstructed with clumped isotope thermometry

Following studies in geo-ecology at the University of Bayreuth, Anna Nele Meckler, continued her scientific career with a doctorate in paleooceanography obtained from ETH Zurich in 2006. This was followed by a postdoctorate at California Institute of Technology (Caltech). Returning to Zurich, she published her results in prestigious scientific journals and her works resonated highly in the scientific community. At the end of her Marie

Heim-Vögtlin (MHV) grant, she obtained a fellowship from the Bergen Research Foundation and a prestigious ERC Starting Grant to launch her research group at the University of Bergen in Norway. There she continues her work on the reconstruction of the climate in periods with high greenhouse gas concentrations in order to better predict future climate change.

> http://www.uib.no/en/persons/Anna.Nele.Meckler

#### **Christiane WERNER**

Full Professor of Ecosystem Physiology, University Freiburg, Germany Principal Investigator, Consolidator grant 2014: VOCO: Biochemical link between plant volatile organic compound (VOC) emissions and CO2 metabolism - from sub-molecular to ecosystem scales

Already during her studies (University of Cologne) and PhD (University of Bielefeld), Christiane Werner worked internationally in and outside Europe (USA and Portugal). Following a postdoctoral position in an EU network on stable isotope ecology (NETCARB), she joined an assistant post at the

University of Bielefeld, which was later transformed into a junior professorship for plant ecophysiology. In July 2012 she was offered a professorship for agricultural ecosystem research at the University of Bayreuth, from where she moved on to a professorship for ecosystem physiology in June 2015.

> https://www.cep.uni-freiburg.de/mitarbeiter/christiane-werner/cwerner\_cv







# Session 2 Natural responses to climate change

#### Katharine HENDRY

Royal Society Research Fellow, University of Bristol, UK Principal Investigator, ERC Starting grant 2015: *ICY-LAB: Isotope CYcling in the LABrador Sea* 

Katharine Hendry obtained her undergraduate degree in natural sciences at Cambridge University (2004), before completing a doctorate in Antarctic biogeochemistry at Oxford University (2008). She was awarded a postdoctoral scholarship at Woods Hole Oceanographic Institution, working on ocean chemistry and paleoclimate (2009-2011). She then moved back to the UK, initially as a Research Lecturer at Cardiff University (2012-

2013), then as a Royal Society University Research Fellow at the University of Bristol (2013-today). She has published over 30 well-cited, peer reviewed papers, with over 400 citations, and has been invited to give talks at several international conferences. She is a director of Antarctic Science Ltd, and sits on the UK National Committee of Antarctic Research. She was awarded the European Association of Geochemistry Hautermans Award for early career geochemistry (2016), a European Research Council starter grant (2016), and was selected for the Young Academy of Europe (2017).

> http://www.bristol.ac.uk/earthsciences/people/kate-r-hendry/index.html

#### Fernando MAESTRE GIL

Assistant Professor, Universidad Rey Juan Carlos, Spain Principal Investigator, ERC Consolidator grant 2014: *BIODESERT: Biological feedbacks and ecosystem resilience under global change: a new perspective on dryland desertification* 

Fernando T. Maestre received his BsC. and PhD. in Biology from the University of Alicante, Spain, in 1998 and 2002, respectively, with the maximum qualification in both cases. After his PhD. he moved for a post-doc at Duke University (USA) as a Fulbright fellow (2003-2005). In 2005 he

returned to Rey Juan Carlos University, Madrid, Spain, in 2005, first as a "Ramón y Cajal" researcher and since 2009 as an Associate Professor. Albeit not narrowed to a particular topic, his scientific career has been mostly devoted to understanding how dryland ecosystems work, and how they are responding to ongoing global environmental change. His research uses a wide variety of tools (field observations and experiments, laboratory work and modeling) and biotic communities (vascular plants, biological soil crusts and soil microorganisms) and is being carried out at multiple scales, from single-site studies in semiarid ecosystems of Spain to large-scale field studies with sites located all over the world.

Dr. F.T. Maestre is very successful in performing high quality research. He is author of 185 articles published in international peer-reviewed scientific journals, including multiple articles in top multidisciplinary journals. He is the main author and co-author of nine articles recognized as "highly cited" by ISI. He has also published many book chapters and articles in Spanish scientific and popular journals. He has authored or co-authored five books, and edited two more.

> http://maestrelab.com/en/

> https://erc.europa.eu/projects-figures/stories/minimizing-effects-climate-change-drylands





#### Jordi BASCOMPTE

Professor of Ecology, University of Zurich, Switzerland Principal Investigator, ERC Advanced grant 2010: WEBOFLIFE: Robustness of The Web of Life in the Face of Global Change

Jordi Bascompte is Professor of Ecology at the University of Zurich and Director of its Specialized Master on Environmental Sciences. He has been ranked by Thompson Reuters as one of the most highly cited ecologists in the decade 2002-2012. Among his distinctions are the European Young Investigator Award (2004), the Ecological Society of America's George Mercer Award (2007), the Spanish National Research Award (2011), and the



British Ecological Society's Marsh Book of the Year Award (2016). Recipient of an ERC's Advanced Grant, Prof. Bascompte has served in the Board of Reviewing Editors of Science and has been the Ideas and Perspectives Editor at Ecology Letters. His research has been featured in some of the top journals including Nature, Science, and PNAS. Among his books are Self-Organization in Complex Ecosystems (with R.V. Solé) and Mutualistic Networks (with P. Jordano), both published by Princeton University Press.

Prof. Bascompte obtained a PhD in Biology by the University of Barcelona (1994), supervised by Ricard V. Solé. This was followed by a postdoctoral position in Stephen Frank's laboratory at the University of California, Irvine (1996 and 1997). Later on, he was awarded an independent postdoctoral fellowship by the USA National Science Foundation at the National Center for Ecological Analysis and Synthesis (NCEAS) (1998 and 1999). In 2000, he became Associate Professor (Professor from 2008) at the Estación Biológica de Doñana, a center of the Spanish Research Council in Sevilla, where he stayed until moving to Zurich in 2015.

> http://www.bascompte.net/

# Session 3 Technological and management aspects for climate change mitigation and adaptation

#### Eleni CHATZI

Assistant Professor, ETH Zurich, Switzerland Principal Investigator, ERC Starting grant 2015: WINDMIL: Smart Monitoring, Inspection and Life-Cycle Assessment of Wind Turbines

Eleni Chatzi is currently an Assistant Professor at the Chair of Structural Mechanics at the Institute of Structural Engineering, of the Department of Civil, Environmental and Geomatic Engineering, ETH Zürich. She has obtained her diploma (2004) and MSc (2006) in civil engineering, with honors, from the Department of Civil Engineering at the National Technical University of Athens (NTUA). She then obtained her PhD Degree with



distinction from the Department of Civil Engineering & Engineering Mechanics at Columbia University in 2010. Her research interests include the fields of structural health monitoring, damage detection and nonlinear dynamics.

> http://www.chatzi.ibk.ethz.ch/people/prof-dr-eleni-chatzi.html

#### **Boran KARTAL**

 $( \mathbf{\Phi} )$ 

Group Leader, Max Planck Institute for Marine Microbiology, Germany Principal Investigator, ERC Starting grant 2014: *GREENT: Greenhouse Gas Mitigation through Advanced Nitrogen Removal Technology* 

Boran Kartal carried out his Ph.D. at the Radboud University Nijmegen, focusing on the ecology and physiology of anaerobic ammonium-oxidizing (anammox) bacteria. Since 2010, he held a position as an Assistant Professor in Nijmegen. From June 1, 2016, he is the head of a new research group dedicated to the field of microbial physiology at the Max Planck Institute for Marine Microbiology.

Dr. Kartal is interested in the microorganisms that mediate the nitrogen and carbon cycles. He wants to investigate and understand the ecology, physiology and biochemistry of anaerobic microorganisms, and eventually fathom possible applications of these results. Further, he has the ultimate aim to discover new processes that are thermodynamically feasible, yet unknown.

#### > http://www.mpi-bremen.de/en/Boran\_Kartal.html

#### **Elena OJEA**

Researcher, University of Vigo, Spain Principal Investigator, ERC Starting grant 2015: CLOCK: Climate Adaptation to Shifting Stocks

Studying environmental sciences gave Elena Ojea the opportunity to understand how complex global problems are cross-discipline and can affect different systems around the world. She has always been motivated by policy relevant questions that need to address natural and social systems complexity to provide useful responses.







۲

10

in socioeconomic systems, while posing some new questions about wealth distribution, access to resources and user rights. Her experience as a post-doc researcher at University of Santiago de Compostela and at the Basque Centre for Climate Change (BC3) introduced her to climate change and the challenges for natural and social systems to adapt. As a visiting researcher at the Bren School for Environmental Science and Policy (USA), she was able to join a group of fishery experts at UCSB and learned about the solutions to sustainable fishery management in many systems that are implemented around the world. From this experience, Dr. Ojea was highly motivated by the problems affecting the oceans, where important gaps for climate adaptation decision-making exist. She decided then that she wanted to focus on marine resources and livelihoods as a way to understand how society could and should respond to climate change.

She has recently joined the University of Vigo, where she expects to further develop her scientific career and launch a new research team called Future Oceans Lab.

11

> https://elenaojea.org/

# Session 4 Societal and legal aspects of climate change mitigation and adaptation

#### Wolfgang LUTZ

Program Director, International Institute for Applied Systems Analysis, Austria Principal Investigator, ERC Advanced grant 2008: *FutureSoc: Forecasting* 

Societies Adaptive Capacities to Climate Change

Wolfgang Lutz is Founding Director of the Wittgenstein Centre for Demography and Global Human Capital (a collaboration between IIASA, the Austrian Academy of Sciences and the WU-Vienna University of Economics and Business). He joined IIASA in October 1985, where he is Program Director of the World Population (POP) Program. Since 2002, he has also



been Director of the Vienna Institute of Demography (VID) of the Austrian Academy of Sciences and since 2008, Professor of Applied Statistics (part time) at the WU. He is also Professorial Research Fellow at the Oxford Martin School and Honorary Professor of Shanghai University.

Prof. Lutz has worked on family demography, fertility analysis, population projection, and the interaction between population and environment. He is the author of the series of world population projections produced by IIASA and has developed approaches for projecting education and human capital. Lutz is author and editor of 36 books and more than 240 refereed articles, including eight in "Science" and "Nature". In 2008 he received an ERC Advanced Grant, in 2009 the Mattei Dogan Award of the IUSSP, and in 2010 the Wittgenstein Prize, the highest Austrian science award. He is elected full member of the Austrian Academy of Sciences, the German National Academy Leopoldina, The World Academy of Sciences (TWAS), the Finnish Society of Sciences and Letters and the US National Academy of Sciences.

> http://www.iiasa.ac.at/web/home/research/researchPrograms/WorldPopulation/Staff/ Wolfgang-Lutz.en.html

#### Kati KULOVESI

(

Professor of International Law (especially International Environmental Law) and Co-Director, Centre for Climate, Energy and Environmental Law, Law School, University of Eastern Finland, Finland

Principal Investigator, ERC Starting grant 2015: *CLIMASLOW: Slowing Down Climate Change: Combining Climate Law and Climate Science to Identify the Best Options to Reduce Emissions of Short-Lived Climate Forcers in Developing Countries.* 

Kati Kulovesi specializes in climate change law, sustainable energy law and WTO law, with a PhD in international trade and environmental law from the



London School of Economics and Political Science. She is Professor of International Law at the Law School of the University of Eastern Finland where she also co-directs the Centre for Climate, Energy and Environmental Law. She currently focuses on managing her research group with three post-doctoral researchers and five PhD students. Prof. Kulovesi's areas of teaching include public international law, climate change law and policy, WTO law and international environmental law. Prof. Kulovesi has followed climate policy and UN climate negotiations since 2001 and worked as consultant and legal adviser, inter alia, for the Finnish Government, the World Bank, UN Food and Agriculture Organization, European Commission, Nordic Council of Ministers, IUCN, International Trade Centre and the Nordic Environment Finance Corporation. She also promotes transparency of international environmental negotiations by reporting from climate and other negotiations in the Earth Negotiations Bulletin published by the International Institute for Sustainable Development. In academia, she has previously worked at the London School of Economics and Political Science and University of Helsinki, and been a visiting researcher at the European University Institute.

> http://www.helsinki.fi/eci/Staff/Kulovesi.html

#### **Charlie WILSON**

Reader in Energy & Climate Change, University of East Anglia, UK Principal Investigator, ERC Starting grant 2015: *SILCI: Social Influence and Disruptive Low Carbon Innovations* 

As a Reader in the School of Environmental Sciences at UEA, Charlie Wilson organises and teaches a postgraduate module on energy and climate change, and he contributes to various undergraduate modules on social science research methods, energy and people, and environmental field skills. As a researcher, he is part of the Tyndall Centre for Climate Change Research, and a coordinator of its Energy & Emissions research theme.



His research interests lie at the intersection between innovation, behaviour and policy in the field of energy and climate change mitigation. He works at both a systems level, looking at long-run historical and future transitions, and at a micro level, looking at technology adoption and pro-environmental behaviour. He joined the Tyndall Centre and UEA in September 2010 from the London School of Economics where he was a teaching fellow. He has a PhD from the University of British Columbia in Canada on the social and behavioural determinants of energy use. Prior to his PhD, he worked for a number of years in the private sector in both renewable energy finance and climate change policy.

> https://www.uea.ac.uk/environmental-sciences/people/profile/charlie-wilson
> http://www.tyndall.ac.uk/people/charlie-wilson

Notes		
	14	



 $( \blacklozenge$ 





•

"The European Research Council has, in a short time, achieved world-class status as a funding body for excellent curiosity-driven frontier research. With its special emphasis on allowing top young talent to thrive, the ERC Scientific Council is committed to keeping to this course. The ERC will continue to help make Europe a power house for science and a place where innovation is fuelled by a new generation."

۲

Jean-Pierre Bourguignon ERC President and Chair of its Scientific Council



European Research Council Established by the European Commission



More ERC stories http://erc.europa.eu/erc-stories

> Contact ERC-info@ec.europa.eu



The European Research Council Executive Agency may not be held responsible for the use to which this information may be put, or for any possible errors. For possible Research Council Executive Agency. 2016 • Reproduction of the last is larmitted provided the source is acknowledged. Teproduction of the photographics is prohibited. Concert and reproduction by OIB.

۲