



## Speaker Abstracts and Biographies

### **Keynote Address: Latest on Climate Change: Overview of the IPCC's 6th Assessment Report**

Prof Jim Skea, Professor of Sustainable Energy, Imperial College London and IPCC Working Group III Co-Chair

**Abstract:** The end of IPCC's busiest, and arguably highest impact cycle, is a suitable time to take stock of what science is telling us, and how findings are playing into policymaking. Across IPCC's three Working Groups, the conclusions are clear: human activities are unambiguously the cause of climate change; we

can see its impacts already; we will soon pass thresholds such as 1.5°C warming without radical action; and without that action, impacts will be felt across all systems – natural and human. We can see the first signs of action and some reasons for optimism. We have made progress on the “easy” bits, e.g. renewables and electric vehicles. Action on buildings, infrastructure, transport behaviour, food systems will touch directly on people's lives and poses bigger policy challenges. IPCC's findings have attracted attention during the Paris Agreement's Global Stocktake. The talk will also highlight the questions that policymakers have been directing at scientists.



**Biography:** Jim Skea is Professor of Sustainable Energy at Imperial College London with research interests in energy, climate change and technological innovation. His current main role is as Co-Chair of IPCC Working Group III for the 6th assessment cycle. He was Research Director of the UK Energy Research Centre 2004-12 and Director of the Policy Studies Institute 1998-2004. He has operated at the interface between research, policy-making and business throughout his career. He was a member of the UK Committee on Climate Change from its inception in 2008 until 2018, and is currently the Chair of Scotland's Just Transition Commission. From 2015-17, he was President of the UK Energy Institute. He was awarded a CBE for services to sustainable energy in 2013 and an OBE for services to sustainable

transport in 2004.

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### **Climate Risks and Adaptation Planning**

Dr Swenja Surminski, Managing Director Climate and Sustainability at Marsh McLennan, Chair of the Munich Climate Insurance Initiative and a member of the UK's Committee on Climate Change - Adaptation Committee. She also holds a research post at the Grantham Research Institute on Climate Change and the Environment, part of the London School of Economics and Political Science (LSE).

**Abstract:** Swenja will reflect on the findings of the Third UK Climate Change Risk Assessment <https://www.ukclimaterisk.org/>, share thoughts on climate risk management and adaptation from a private sector angle, and showcase recent findings from an LSE study on future flood risk for new build homes in England and Wales <https://iopscience.iop.org/article/10.1088/1748-9326/abec04>



**Biography:** A political scientist and ecological economist by training, her work embraces environmental, social and economic perspectives, with a focus on climate risk management and adaptation. Swenja is a contributing author to the IPCC, and was lead author of the UK's Climate Change Risk Assessment 2 and 3. Her work focuses on capacity building, translation and knowledge transfer between science, policy and industry, building on her work in the insurance industry and as advisor to governments, private sector and civil society, including as Visiting Academic at the Bank of England. She appears regularly in print, TV and online media.

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### Net Zero Planning

Joanna Warner, Deputy Director – Net Zero Strategy Directorate, BEIS

**Abstract:** Not submitted at time of print



**Biography:** " Jo is a career civil servant, currently Deputy Director in the Net Zero Strategy Directorate of BEIS. Jo has worked in a variety of Government Departments in policy and strategy roles, on issues ranging from energy and environment, labour markets, telecoms and health policy. She works a job share with Helen Martin."

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### What Does Climate Change mean for the UK Food System?

Dr Pete Falloon, Climate Service Lead – Food, Farming & Natural Environment, Met Office

**Abstract:** Pete will discuss what climate change means for the UK agri-food system, from farm to fork, and both in terms of adapting to a changing climate and contributing to net zero. He will draw on the UK Climate Projections, the work of the Intergovernmental Panel on Climate Change (IPCC), recently published Third Climate Change Risk Assessment (CCRA3) and other sources.



**Biography:** Dr Pete Falloon leads the Met Office's Climate Service for Defra on Food, Farming and Natural Environment. Pete has over 25 years of experience in the impacts of climate and land use change on food systems and the environment. Pete has been at the Met Office Hadley Centre since 2004 and led the Climate Impacts Modelling team from 2009-2019. He is a Fellow of the Royal Society of Arts, and of the Royal Meteorological Society, a contributing author to the UK's Climate Change Risk Assessment (CCRA) and a member of the Global Food Security Programme's Programme Coordination Group board.

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## Transport - Adaptation and Mitigation

Prof Jillian Anable, Chair in Transport and Energy, University of Leeds

**Abstract:** Not submitted at time of print



**Biography:** Jillian Anable is Professor of Transport and Energy at the Institute for Transport Studies, University of Leeds. Her research addresses the potential for demand-side solutions to reduce carbon and energy from transport. Broadly, her current research direction investigates ‘the future of the car’ – bringing together socio-technical developments including electrification, new mobility services and the psychology of car owning and driving to explore the concept of ‘car usership’. She currently leads the Transport and Mobility Theme in the UKRI’s Centre for Research

on Energy Demand Solutions as well as co-leads the Energy for Mobility Theme of the UK Energy Research Centre. She has sat on a number of advisory boards and strategy panels for UK and Scottish Government Departments, the Climate Change Committee, US Dept. of Energy, House of Lords Science and Tech Committee, UK Research Councils and NGOs, currently acting as board member of Transport & Environment, the Scottish National Transport Strategy Review Board and the UK Government’s Electric Vehicle Energy Taskforce.

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## Climate Change and the Built Environment

Dr Alice Moncaster, Senior Lecturer in Sustainable Built Environment, Open University

**Abstract:** Buildings and construction are together responsible for almost half of our global energy-related carbon emissions. Regulations in Europe and elsewhere address the emissions from heating, lighting and cooling of new buildings, but this is a tiny fraction of the whole. We are missing regulations and action on two major causes of greenhouse gas emissions - the energy use in existing buildings, and the carbon emissions of construction. Meanwhile our built environment, and our populations, are suffering increased droughts, heatwaves and floods. Buildings designed for previous environments are no longer comfortable or healthy to live and work in. This talk considers what we can and must do to adapt our built environment for future climates while mitigating our impacts.



**Biography:** Alice Moncaster is an academic at the Open University and Visiting Fellow at the University of Cambridge. She holds a first degree in engineering from Cambridge, a masters in geotechnics from Bristol, and an interdisciplinary PhD from UEA.

For the first half of her career she worked for major construction and design companies, later specialising in building structures. Her first academic post was at the University of Cambridge where roles included Director of the ‘Interdisciplinary Design for the Built Environment’ (IDBE), Head of the research group ‘Cambridge University Built Environment Sustainability’ (CUBES), and Director of Studies and Fellow at Newnham College.



At the OU she is appointed the first University Lead for Sustainability for the Open Societal Challenges research programme, and leads the Built Environment research cluster. She continues to work with industry, academia, policy makers and communities towards the achievement of a sustainable, resilient and near-to-zero-carbon built environment.

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### Conference Chair - Morning

Prof Liz Bentley, Chief Executive, RMets



**Biography:** As Chief Executive of the Society, Liz works with the Council of Trustees to give vision, direction and leadership to its programmes of work. She first joined the Royal Meteorological Society in 2008 as Head of Communications and became Chief Executive in 2013. Liz has had a successful career in Meteorology working with the Met Office, BBC Weather Centre and the Ministry of Defence after studying a PhD in mathematics at the University of Manchester.

“I was born in Yorkshire and I’m sure my upbringing on top of the Pennines, where the weather can be a little more extreme, is one the main reasons why I became so fascinated by the weather. A career in meteorology was inevitable even before I had left school. After studying a PhD in mathematics at the University of Manchester, I applied for a job with the Met Office. First as a research scientist, and then training to be a weather forecaster at the Met Office College in Reading. After forecasting at RAF Brize Norton, I headed off to Shoeburyness to become Senior Met Officer at the Army range based on Foulness Island. The job including weather forecasting as well as acoustic prediction, something I had specialised in during my PhD.

“I then went to work at the Met Office College, first as a forecasting instructor becoming Chief Instructor in 1999. I project managed the move of the Met Office College from Reading down to Devon. In 2002, I jumped at the opportunity to manage the BBC Weather Centre at TV Centre in London, managing a team of over 30 Broadcast Meteorologists and the contract between the BBC and the Met Office. In 2006, I started work at the Ministry of Defence looking after their environmental research programme - covering everything from the seabed out into space.

“I joined the Royal Meteorological Society as Head of Communications in 2008 and in 2010 I took on a new role as Head of the Weather Club – which is the public outreach arm of the Royal Meteorological Society. In 2013, I became Chief Executive at the Society and in July 2014 was granted the title ‘Professor’ from the University of Reading.”

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## **Lesley Gray, President, Royal Meteorological Society**



**Biography:** President Professor Lesley Gray works as an atmospheric researcher at the National Centre of Atmospheric Science (NCAS) unit based in the University of Oxford Physics Department. She is a Professor of Climate Dynamics. Her expertise is in understanding and modelling dynamical processes in the stratosphere with an emphasis on natural variability and its impacts at the Earth's surface. She has many years of experience leading national and international research projects.

Lesley has been a long-standing member of the Royal Meteorological Society, a previous Council Member, co-Editor-in-Chief of the Society's Quarterly Journal and most recently, Vice-President. She is looking forward to being actively involved in learning more about the many different activities of the Society and getting to know the people involved. Her main aim is to maintain the Society's role in a fast-changing world so that it continues to reach out and meet the needs of its diverse membership, from primary school age to retirement and across the working spectrum from academic researchers through to commercial providers and interested members of the public.

## **Conference Chair – Afternoon**

David Warrilow OBE



**Biography:** For over 20 years David Warrilow was a senior government science advisor and international negotiator on climate change and environmental issues. He led the UK delegations to the Intergovernmental Panel on Climate Change (IPCC) and was the science lead for the UK and EU at the United Nations Framework Convention on Climate Change (UNFCCC). Prior to this he undertook research at the Met Office on observing systems, hydrometeorology, and climate modelling of land surface processes.

Since retiring he has worked closely with the Royal Meteorological Society and became its President between 2018 and 2020. David continues to write and speak about climate change issues.



## Breakout 1: A Vision for Food in 2050

**Chair: Stephen French, Scientific Policy Director, IFST**



Psychology, University of Leeds.

**Biography:** Dr Stephen French is Scientific Policy Director at the Institute of Food Science and Technology. Stephen worked in the food industry in a variety of research, and Scientific and Regulatory Affairs roles for approximately 20 years. His background is in Gastrointestinal Physiology and Nutrition, and has previously held research and teaching roles as a Lecturer at The University of Sheffield, and is currently Visiting Senior Research Fellow in the School of

**Barnaby Coupe, Land Use Policy Manager, The Wildlife Trusts**



**Biography:** Barnaby Coupe is Land Use Policy Manager at The Wildlife Trusts. Barnaby is responsible for developing The Wildlife Trusts' policy and advocacy on food systems, farming, and land use to enable these systems to contribute to delivering nature and climate targets, and to support the goals of The Wildlife Trusts' [Strategy 2030](#). Barnaby works closely with Government departments on the development of new agricultural policy, land management payment schemes, and the importance of nature in a long-term strategic view of agricultural resilience during a climate and nature crisis.

**Louise Manning, Professor of Sustainable Agri-food Systems, Lincoln Institute for Agri-food Technology (LIAT), University of Lincoln.**



**Biography:** Louise Manning is Professor of Sustainable Agri-food Systems at the Lincoln Institute for Agri-food Technology (LIAT) at the University of Lincoln. Louise has worked in the food and farming industry as well as academia over her career of over 35 years. She is a Fellow of the Institute of Food Science and Technology, a Nuffield Scholar, and has had over 100 peer reviewed papers published and has edited and written several books on sustainable food systems, food security and food safety.

**Dr Christian Reynolds, Senior Lecturer, University of London**



**Biography:** Dr Christian Reynolds is Senior Lecturer at the Centre for Food Policy, City University, London. Christian is recognised as a global expert on food loss and waste and sustainable diets. He has worked on these issues in Australia, New Zealand, Indonesia, the UK, US, and Europe. He is the lead editor of the Routledge Handbook of Food Waste (2019); he has also co-authored over 50 peer reviewed publications, as well as multiple reports and book chapters.



## Breakout 2: A Vision for Transport in 2050

**Chair: Siobhan Campbell, Head of Science, Innovation and Technology (SciTech) Division, Deputy Chief Scientific Adviser, Department for Transport**



**Biography:** Siobhan Campbell is Deputy Chief Scientific Adviser and Head of the Science, Innovation and Technology division in the Department for Transport (DfT). She oversees the central team whose aim is to enable timely and impactful science, innovation and technology in the form of solutions, advice and challenge in order support the successful delivery of DfT's Strategic Priorities. This involves overseeing and assuring DfT's R&D programme; building capability and skills; the better use of external expertise in DfT decision-making; and leading work on Futures, Horizon scanning, Emerging Technologies, and Innovation. Prior to this Siobhan was also

head of social and behavioural science and evaluation in DfT, and retains a strong interest in these areas. She is the deputy head of the UK government's Social Research profession (GSR), helping provide leadership and direction to its 1,800 GSR members. Prior to DfT, Siobhan worked in a number of government departments including the Department of Energy and Climate Change, HM Treasury, the Scottish Government and the Home Office on a wide range of policy and research areas. She has a Ph.D. in psychology from the University of Glasgow and is a Fellow of the Academy of Social Sciences.

**Saikat Barman, Technical Director and Net Zero Lead for Transport & Infrastructure Strategic Business Unit, WSP**



**Biography:** Saikat Barman is a Technical Director in WSP's Transport & Infrastructure Business Unit with 25 years of experience within the Highways sector in UK and internationally undertaking key leadership roles. In his current role as the Deputy Head of Profession for Highways Discipline in WSP, Saikat leads the Technical Leadership Group, WSP's Future Ready Innovation Program and the Net Zero initiative for Transport & Infrastructure. As a Thought Leader within the industry, Saikat has been part of CIHT's Climate Literacy Expert Focus Group in developing the CPD Knowledge Framework and has been a panellist in several

industry events on Net Zero. Saikat leads a focus group in formulating Net Zero Strategy for WSP's Transport & Infrastructure having undertaken wider collaboration exercise with Clients, Contractors, and other Consultant peer Groups.

**Rowland Potter, Managing Director, Executive Consultancy Services Ltd**



**Biography:** Portfolio / Project management professional with 16 years experience of developing and delivering complex high value project portfolios (value up to £5bn), stimulating economic growth.

Public and private sector experience up to executive level.

Expert in development of Delivery Pathways, strong advocate of decarbonisation in transport systems.

Natural empathy for collaboration and motivation of high performing complex teams across multiple organisations, for optimum delivery outcome.

Strategy, policy, process, with strong Delivery Pathway to transpose vision into business as usual.

Strong advocate of health and well being as a foundation of leadership. The healthier the mind the higher performing the team.



### **Matt Tompsett, Head of Environment & Sustainability, Kier Highways**



**Biography:** Matt is responsible for setting the companywide steer for environment and sustainability issues. Matt started his career working for an habitat conservation charity before moving into the highways sector about 15 years ago. He is a Chartered Environmentalist and an active member of several steering groups Inc. the CECA Carbon Group, IEMA Climate Change Group and he Chairs the Transport for London Environmental Working Group. Matt has been a regular judge on the CIRIA Biodiversity Challenge Awards and has worked with CIRIA on developing guidance on managing Green Infrastructure on linear Assets.

### **Prof James Woodcock, Professor of Transport and Health Modelling, MRC Epidemiology Unit, University of Cambridge**



**Biography:** Dr James Woodcock's research has focused on the development of holistic approaches for modelling the health impact of pathways zero carbon from urban land transport. He has led the development of the Integrated Transport and Health Impact Modelling tool (ITHIM), which has been used in research and policy. He led the Propensity to Cycle Tool project [www.pct.bike](http://www.pct.bike) for the UK Department for Transport.

He is a European Research Council Consolidator Grant holder, GLASST and he is joint PI (with Prof Billie Giles-Corti) on the UK/ Australian funded JIBE project.

His recent work has two foci. Firstly, reorientating high spatial and temporal resolution agent based travel behaviour models to incorporate built environment influences and health behaviours, exposures, and outcomes. Secondly,

microsimulation city level modelling of transport and health for cities across Latin America, Africa, and India.

### **Breakout 3: A Vision for Buildings in 2050**

**Chair: Dr Rachel Capon, UK Concrete, Sustainability Programme Coordinator, Mineral Products Association**





**Biography:** Dr Rachel Capon (CMet) started her career as a Met Office Research Scientist. She moved into the built environment sector 15 years ago, working on climate change impacts and adaptation both at Arup and as an independent consultant, notably as Built Environment Sector Champion on the first UK Climate Change Risk Assessment. She joined the Mineral Products Association in 2017, where she works on a wide range of regulatory, environmental and policy issues. Rachel advocates for sustainable construction across the supply chain, promoting the benefits of using concrete and mineral based products in designing sustainable and resilient buildings. She is responsible for collecting and analysing environmental data from cement and concrete manufacturers and reporting sector greenhouse gas emissions to the National Atmospheric Emissions Inventory. She led a BEIS-funded project to model the UK carbon emissions sink from recarbonation of concrete in buildings and infrastructure, to inform the UK's national Greenhouse Gas Inventory reporting to the UNFCCC.

#### **Dr Ronita Bardhan, Associate Professor of Sustainable Built Environment, University of Cambridge**



**Biography:** Dr. Ronita Bardhan is Associate Professor of Sustainable Built Environment at the Department of Architecture, University of Cambridge. Her research focuses on data-driven design for built environments that respond by reducing health and energy burdens in the warming climate. Bardhan combines architectural engineering, AI and machine learning with social sciences to develop built environment design solutions. She has conducted heat-health & energy research in diverse socio-economic settings in the United Kingdom, India, Ethiopia, Rwanda, South Africa, Indonesia etc. Bardhan established the research lab - Sustainable Design Group at the university. Her impactful work has received immense traction from policymakers. She currently advises government agencies on energy efficiency and heat health in affordable housing. Bardhan was awarded the Exceptional Woman of Excellence Awards by Women Economic Forum and has been felicitated by the Ministry of Health, Government of Maharashtra, India for her contribution in urban health, housing and climate change.

#### **Dr Victoria Tink, Building Environmental Scientist, Department for Levelling Up, Housing and Communities**



**Biography:** Victoria is the technical policy lead for the domestic Part L of the Building Regulations in the Department for Levelling Up, Housing and Communities. Her primary areas of work include energy efficiency, overheating and ventilation in new and existing buildings. Her recent work included the 2021 uplift to the energy efficiency and ventilation parts of the Building Regulations and the introduction of a new overheating standard. She is currently working on the development of the Future Homes Standard. Prior to this she was awarded her PhD from Loughborough University where she was doing research on the energy efficiency and overheating potential of buildings. She maintains her links with academia and is currently a visiting research fellow at Loughborough University.



**Fabrizio Varriale, Place and Space Analyst, RICS**



**Biography:** Fabrizio is an architect with research experience in low-carbon materials and design. He gained his PhD at the Welsh School of Architecture while also teaching in the environmental design masters. As Place and Space Analyst at RICS he leads the thought leadership programme on building sustainability and contribute to shaping RICS's position on related policy matters. He also coordinates the development of the Built Environment Carbon Database. He was a member of the Technical Expert Group that produced the draft EU Taxonomy for Sustainable Finance, and is currently a member of the Energy Efficient Mortgage Label

Committee.