

# REPORT on Launch of IPCC Special Report on 1.5°C

Imperial College, London Monday 15 October

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& Footsteps – Faiths for a Low Carbon Future

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## 1. Summary

This report is an account of my personal experience of the European Launch of the IPCC Special Report on 1.5° C global warming conference in London on Monday 15 October. The IPCC report brings together the scientific evidence for the consequences of the 1.5° C aspirational target agreed at the 2016 Paris climate summit, as compared to the previous 2° C target. The report also identifies different routes to limiting temperature rise to 1.5° C. By comparison, the world is currently on track for over 3° C warming by the end of the century.

The conclusions in the IPCC 1.5° C report are based on 6,000 peer reviewed scientific papers and the work of thousands of expert and government reviewers. The conference consisted senior IPCC officials, scientists and politicians, including the Claire Perry, the UK 'Climate Minister' speaking about their perspectives on the report and the process by which it was produced and agreed by Governments in Korea in October 2018. In the afternoon there were workshops on the social science of public engagement with climate change which is now an explicit part of the IPCC's work.

This report identifies key conclusions emerging from the science and how, in the words of the UK Chief Scientist, "Keeping global warming at 1.5°C gives a chance for vulnerable ecosystems, whether coral reefs or insects. It gives us a chance to limit sea-level rise to a manageable level. Because the individuals most at risk are the most deprived and marginalised, it also gives us a chance to avoid putting millions more into poverty". The links between acting on climate change and the UN Sustainability Goals are clearly identified.

This report concludes with five 'pointers' I took from the conference for our own work. These are: (1) When engaging with politicians, concentrate on the gaps and inconsistencies between Government commitments and realities in practice, (2) The need to encourage our faith leaders to provide 'climate leadership', (3) Use broad, linked messages, when communicating with the public, (4) Take the lead on the role of the personal behaviour changes needed and (5) Encourage a grass roots 'climate uprising'.

## 2. Introduction

The European launch event of the IPCC Special Report on 1.5° C was part of the Department of Business, Energy and Industrial Strategy (BEIS)'s GB Green Week: "a week of events and activity bringing together businesses, schools, colleges, universities, community groups, and charities to explore how clean growth will change our futures and others can contribute to action on climate change".

The event consisted of short speeches from the IPCC Chair and leading authors on the key findings of the report followed by discussion and networking. In the afternoon I attended two workshops on (1) Public Engagement and Climate Change: The science of climate communication, (2) Using Climate Science in Policy and Decision Making and (3) a Question Time: Climate Change session.

It was a very full day and I have structured my report around the presentations and perspectives of main speakers with links to key papers and resources. The report is an account of my personal experience and response to the conference. In the final section I have tried to identify my conclusions from the conference most directly relevant to the Central England Quaker Low Carbon Commitment forum, Footsteps - Faiths for a Low

Carbon Future and the Climate Action Network West Midlands (CANWM) as three West Midlands regional climate action initiatives.

### **3. Imperial College Welcome**

We were first welcomed to Imperial College and its [Grantham Institute - Climate Change and the Environment](#) who were hosting the conference as part of GB Green Week. The very large marquee that housed the event, it was explained, was where the Imperial College graduation ceremonies were going to be held in two days' time, not especially for the IPCC launch event as I initially thought. There was a fossil fuel student protest at the entrance to the marquee. My other first impression was that most of the people present were under 40 years of age, and it later emerged that most were working in the climate change field or represented interested groups.

The welcome emphasised the role that Imperial College and its Grantham Institute plays both in the UK and globally and the key contribution its graduates and scientists make. The importance of evidence based research and its effective communication to policy makers was stressed. Imperial's Vice-Provost (Research and Enterprise), Professor Nick Jennings, said: "We are proud to be creating funding and opportunities for start-ups and entrepreneurs to develop successful clean tech products and low-carbon businesses.

Imperial College's [account of the conference](#) is on its website.

### **4. Government Chief Scientific Adviser, Dr Patrick Vallance**

Patrick Vallance's main message was "Keeping global warming at 1.5°C gives a chance for vulnerable ecosystems, whether coral reefs or insects. It gives us a chance to limit sea-level rise to a manageable level. Because the individuals most at risk are the most deprived and marginalised, it also gives us a chance to avoid putting millions more into poverty."

Other key points that I noted were:

- Must do more - not currently on track to deliver 2.0° C in the Climate Act, let alone 1.5° C
- Scientists need to "speak truth to power" and to communities
- Must innovate
- Individuals must take responsibility for choices that they make.
- Our actions are set against a background of doubling the economy and urban populations over the next thirty years or so.

### **5. Minister of State for Energy and Clean Growth, Rt Hon Claire Perry MP,**

Minister of State for Energy & Clean Growth [Claire Perry](#), pointed to the ways the UK has made progress in reducing greenhouse gas emissions, such as enjoying its first days without coal power in over a hundred years, building record numbers of electric vehicles and opening the world's largest offshore wind farm.

She said: "Now it is time for us to act. Everyone has a part to play. We are facing an enormous challenge, and by acting now in the UK we can help the rest of the world make that transition."

She also said that as well as celebrating what we've done, we must challenge ourselves to do more, saying the government is investigating what it can do to achieve a zero-carbon economy. The Minister said she had just that day asked the [Committee on Climate Change](#) to address a 'Zero Carbon Britain'; what this means and who will pay for it.

Claire Perry framed her speech in terms of the lives of the Imperial College students who would be graduating in two days' time and the way in which those in the room, country and world had the power to make changes.

Other key points that Claire Perry made in her speech that I noted were:

- Without action the world is in line for a 3° C temperature rise
- There is a cross party consensus that something needs to be done to achieve clean growth, cut emissions and that this consensus needs to be extended to the devolved authorities.
- A 'road map' for advice is needed
- In media reports on IPCC special report during the previous week, nobody had questioned the science.
- The IPCC report was an urgent call to 'arms and action'; vital for the UK but life saving for many communities. Concerted global action is needed.

Claire Perry also summarised what she saw as the UK's climate action recent achievements:

- Passing the [Climate Change Act](#) ten years ago and setting up the [Committee on Climate Change](#)
- Last year's [Clean Growth Strategy](#) setting out proposals for decarbonising all sectors of the UK economy through the 2020s
- The way in which the UK economy is becoming less carbon intensive per unit of GDP and that the Price Waterhouse Cooper (PwC)'s [global carbon intensity index](#) shows the UK has achieved one of the highest decarbonisation rates
- The UK economy has been largely successful in getting off coal
- Electric vehicles in the transport industry

Claire Perry concluded by saying that it was now a time to act, politicians should be conserving what we already have and a green economy was good for business.

## 6. Ovais Sarmad – Deputy Executive Secretary UNFCC

[United Nations Framework Convention on Climate Change](#) (UNFCC) supports the work of the IPCC. Deputy Executive Secretary, [Ovais Sarmad](#), spoke about the global context of the IPCC report and its implications.

He began by referring to how the Paris climate agreement commits parties to co-operating, communicating and working together. [COP 24](#) is being held in Katowice, Poland 2 - 14 December 2018 and will involve the Parties agreeing the 'Rule Book' that is necessary for the 2015 Paris Agreement to work.

Sarmad then highlighted how climate change is now a reality and, for instance, the extreme temperatures in London this summer are here to stay.

Climate resilient development processes that provide sustainable growth and development recipes for C21 are needed. We know the science, we know the facts but all the knowledge in the world is useless unless we do something with it.

Other points that I noted included the need to re-embrace multi-lateralism, achieve the UN Development Goals and dramatically increase climate action. Also the way in which both adaptation and mitigation measures are needed and how climate change is a threat multiplier

The costs of doing nothing are enormous and we are at a critical point in history. The UN [Global Climate Action portal](#) contains examples of many climate initiatives being taken.

## 7. Hoesung Lee, IPCC Chair

The Inter-governmental Panel on Climate Change (IPCC) is the global body for assessing the science related to climate change. The IPCC Chair, [Hoesung Lee](#), was elected in 2015, succeeding Christina Figueres.

Hoesung Lee explained how the IPCC review process had involved [three working groups](#) (WG) coming together.

- WG1 assessed the physical scientific aspects of the climate system and climate change.
- WG II assessed the vulnerability of socio-economic and natural systems to climate change.
- WG III assessed options for mitigating climate change and is solutions orientated.

The [48th Session of the IPCC on 1 - 5 October 2018](#) held in Incheon, Republic of Korea finalised the overall summary of the IPCC Special 1.5° C report, the paths presented and the links with sustainable development and poverty reduction. The reports are policy relevant, not policy prescriptive.

The CCC [Carbon Briefing Staff: In-depth Q&A](#) contains an overview of IPCC processes and the conclusions of the IPCC Special 1.5 C report.

## 8. Scientist Speeches: Rachel Warren and Jim Skea

Hosung Lee's overview on the IPCC process was followed by presentations from two of the scientists who worked on different sections of the IPCC report followed.

[Rachel Warren's](#) research at the [Tyndall Centre](#) at University of East Anglia focuses on how climate change impacts that can be avoided by timely mitigation and the impacts of climate change on biodiversity. She contributed to IPCC process and sits on the UK Climate Impacts Program Steering Committee.

Points that I noted from Rachel Warren's presentation included:

- Scientists had not previously seriously looked at the implications of 1.5° C warming as attention had been focussed on 2.0° C
- IPCC report does highlight the evidence that the impacts and risks of 1.5° C warming are significantly lower in relation to the five reasons for being concerned (RFC's) in the IPCC 5<sup>th</sup> Assessment Report.

[Professor Jim Skea](#) from the Centre for Environmental Policy at Imperial College was Co-Chair of IPCC Working Group III which covers the mitigation of climate change, that is, methods for reducing emissions of greenhouse gases and enhancing atmospheric sinks

Points that I noted from Jim Skea's presentation included:

- World needs to get to net zero carbon dioxide emissions at some point between 2030 and 2050 to contain warming to 1.5° C
- In addition to carbon dioxide, there are other key climate change forcers, including black carbon and methane (ten in total). Reductions in these emissions also help achieve important health and other goals.
- A strengthening of the global response is needed to limit warming to 1.5' C, including:

- Far reaching and unprecedented changes in all systems
- Range of technological and behavioural changes
- Increased renewables
- Deep emission cuts in housing and transport.
- Carbon dioxide removal (CDR) will also be needed, not just technological but also
  - Re-forestation
  - Eco system restoration
- The need to link with UN Sustainability Goals (SDG)

## 9. IPCC 1.5 Report

The working group reports and final IPCC 1.5°C report are all extensive and highly technical documents. It is beyond the scope and purpose of this report on the European launch conference to attempt to summarise the IPCC report. The summaries and overviews I have found most helpful are, however, in increasing order of comprehensiveness:

- The IPCC report [press release](#)
- The Quaker United Nations Office (QUONO) [highlights](#) for FWCC and BYM
- CCC [Carbon Brief Q & A](#)
- IPCC [Summary of Full Report for Policy Makers](#)

In addition, Richard Tuckett (Cotteridge Quakers) located the five chapters of the full IPCC report listed below:

[Chapter 1](#): frames the context, knowledge-base and assessment approaches used to understand the impacts of 1.5° C global warming above pre-industrial levels

[Chapter 2](#): assesses mitigation pathways consistent with limiting warming to 1.5° C above preindustrial levels.

[Chapter 3](#): Impacts of 1.5° C global warming on natural and human systems

[Chapter 4](#): Strengthening and implementing the global response

[Chapter 5](#): Sustainable Development, Poverty Eradication and Reducing Inequalities

## 10. Baroness Brown (Julia King) – IPCC Report Implications

[Baroness Brown](#) (Julia King) is a British engineer, crossbench member of the House of Lords, Chair of the [Carbon Trust](#), vice chair (mitigation) of the Committee on Climate Change and was the Vice-Chancellor of Aston University from 2006 to 2016.

Julia King spoke about the implications of the IPCC report for the UK, businesses, and the international community. She said aiming for 1.5° C will reduce the need for adaptation measures. I noted the following messages she had for Government and policy makers:

- Consistent long term messages and signals are needed for markets and investors e.g. on off-shore wind
- Frequent changes and withdrawal of support create problems e.g. domestic solar PV
- Need to get back to the low cost options e.g. on-shore wind, home insulation
- Strong regulation that is strongly enforced is needed. Drivers feel they have been cheated on low emission diesel engines. Trust needs to be restored.
- Better building regulations required, especially for the 300k new homes being planned

- Energy saving in buildings is stalled
- Reducing transport emissions is stalling. The CCC has [written to the Department of Transport](#) about the way in which there has been little change in the level of transport emissions since 2008 and the inadequacies in its Road to Zero plan.
- Need to keep all the options open, ranging from domestic heat pumps and tree planting to carbon capture and storage.

## 11. Emily Farnworth, Head of Climate Initiatives, World Economic Forum

[Emily Farnworth](#) is Head of Climate Initiatives at the [World Economic Forum](#) (WEF), an independent not-for-profit international organisation for public-private cooperation based in Geneva. She spoke about the implications for business of the IPCC report and how businesses need to look at carbon emissions across their value chains, not just from their own activities. This would involve both suppliers and customers with the ‘price of carbon’ driving business decisions. She also spoke of the need for ‘nature based’ solutions.

([5 Ways To Fast-Track the Transition to a Carbon Neutral World](#) on the WEF website and dated 18 October contains Emily Farnsworth’s more comprehensive response to the IPCC report)

## 12. Dr Rodolfo Lacy, Director for the Environment OECD

[Dr Rodolfo Lacy](#) is the Director for the Environment at the [Organisation for Economic Co-operation and Development](#) (OECD).

The points that I noted from Rudolf Lacy’s presentation were:

- The IPCC report stresses the need for ‘urgent climate action’
- We are now dealing with twelve atmospheric chemicals as climate change enhancers, including black carbon.
- Climate and economic development go hand in hand
- ‘Climate finance’ solutions, including carbon pricing and taxation, are needed.

## 13. Question and Answer Session

The final morning session was a panel, including Baroness Brown and Emily Farnworth, answering questions taken from the floor.

As a representative from Quakers in Britain, I asked the question “Why had there been no mention in the whole of the morning of the need to move rapidly to meat free diets, especially as the Minister of State had been [quoted last week](#) as saying she had no intention of telling people not to eat meat”. The question was rather summarily answered by the IPCC person on the panel who said that it was not the job of the IPCC to tell people what to eat, but to provide policy relevant advice to Government. At least, though, my question got the name of Quakers in Britain heard at the conference and several people spoke to me afterwards as a result.

Several themes emerged in the questions and discussion, including:

- The need to empower regional and local authorities to be taking appropriate climate action
- The need for more collaboration and cooperation across Government departments, in particular, with the Departments of Housing and Transport as these covered two of the major emission areas. Baroness Brown mentioned the way in which the CCC

has [written to the Secretary of State for Transport](#) about the inadequacy of his Department's Road to Zero policy statement.

- Whether the upcoming budget would be 'brown' or 'green'? Would the fuel tax escalator remain frozen? Taxes on carbon? Reduce aviation emissions?

## 14. Lunch and networking

A lunch and networking followed the conference. Useful conversations and contacts I made included:

- I asked Baroness Brown what she felt was the best way to engage with the West Midlands Combined Authority. Her response was through Sustainability West Midlands (SWM) and [UK 100](#). Footsteps is already a member of Sustainability West Midlands. UK 100 is, according to its website, a "highly ambitious network of local government leaders, which seeks to devise and implement plans for the transition to clean energy that are ambitious, cost effective and take the public and business with them". Although UK 100 appears to be primarily a clean energy initiative, it does have [clean air](#) campaigns.
- I had a conversation with David Wasdell Director of the [Apollo-Gaia Project](#) and International Coordinator of the Meridian Programme. Both of these initiatives are part of the view that the IPCC report is highly conservative, the risks from positive feedback loops are ignored and the report is as much a political compromise as a summary of the science. The Meridian website contains a [detailed textual analysis](#) of the changes to the final report, claiming to show the governmental bias taking place. Although this may well be the case, the published IPCC report contains enormous challenges and there is little to be gained by claiming that there are even greater than stated in the report.
- Fionnula Conway, who worked for a time at the Northfield Ecocentre, was there and is now at BEIS.

## 15. Public Engagement and Climate Change: The science of climate communication

The afternoon workshops were held at the Natural Science Museum and part of Green GB week, not the IPCC launch event.

The Public Engagement and Climate Change workshop reflected the growing recognition of the central role played by social science in underpinning society's response to climate change. The human dimension of climate change is critical to all of this: the major structural changes and social transformations required hinge on public engagement and permission.

The preamble to the Paris Climate agreement contains a [short paragraph](#) "Affirming the importance of education, training, public awareness, public participation, public access to information and cooperation at all levels on the matters addressed in this Agreement". Addressing the human and communication dimensions of climate change in the IPCC special report represented a new dimension for the IPCC's work.

[Professor Linda Steg](#), University of Groningen, reflected in the workshop on her experience as lead-author on behaviour change for the 1.5° degrees report and [Professor Lorraine Whitmarsh](#), University of Cardiff, outlined the latest research in the field. [Asher Minns](#), a leading evidence-based climate communication practitioner at the [Tyndall Centre](#) for climate change research then reflected on what we had heard and, finally, we had a panel discussion chaired by [Adam Corner](#) from Climate Outreach.

Two reports produced by Climate Outreach provide comprehensive guidance for communicating on climate change. [Public engagement for a 1.5 °C world - Shifting gear and scaling up](#) has just been published and [Principles for effective communication and public engagement on climate change: A Handbook for IPCC authors](#) was commissioned by the IPCC. Both are firmly based on the work of Linda Steg, Lorraine Whitmarsh and other social scientists.

The points that I noted from Linda Steg's presentation included:

- In terms of communications, similar practices and processes apply to both changing mitigation and adaptation behaviours
- Motivating people to change behaviours includes:
  - Involving emotions
  - Social pressures
  - Solutions to environmental problems
  - Engaging with values
- Changing behaviours is associated with 'Eudaimonia' - a state of having a good indwelling spirit or being in a contented state of being healthy, happy and prosperous
- 'Soft' approaches are effective in encouraging climate action
- Need to influence policy acceptability

Lorraine Whitmarsh's presentation was directly relevant to our own communication challenges and I obtained a [copy of her PowerPoint presentation](#). Her presentation covered:

- Public awareness of climate change
- Barriers to behaviour change
- Targeting audience values and emphasising 'co-benefits'
- Radical behaviour change requires targeting interventions to 'moments of change'
- Citizen engagement

Andrew Minns explained that spends time talking to non-climate specialists. Points that I noted included:

- People hear what is said about climate through the lens of their values. What you think you are saying as a climate person is not the same as people in the audience are hearing.
- Need to enter climate conversations by engaging with peoples' values and gaining their trust. 'Walking the talk' helps build trust
- Useful to work through shared universal values, including fairness
- Doom and gloom narratives turn people off. The key is engaging with what makes people happy and research shows that is relationships and not material possessions (once a basic threshold has been reached)

## **16. Using Climate Science in Policy and Decision Making**

This was a joint [DEFRA](#) (Department for Environment Food & Rural Affairs) and [Environment Agency](#) session focusing on the use of climate information to support policy and decision-

making. The Environment Agency uses climate science to help inform and carry out its environmental protection and environmental risk management duties. Within Government, DEFRA has responsibility for climate change adaptation measures (and BEIS for mitigation). Their websites indicate that DEFRA and the Environment Agency have many responsibilities in addition to those related to climate change. A recent speech '[Climate change: too true to be good](#)' by Sir James Bevan, Chief Executive of the Environment Agency, however, recognises the urgency of the situation and highlights the role that NGO's and the public are playing.

The points that I noted from Glenn Watts, Deputy Director, Research at the Environment Agency presentation included:

- Five yearly environment risk assessments are carried out by the Climate Change Committee under the Climate Change Act.
- Climate science helps the Environment Agency plan. In the past the statistical probability of extreme events had been looking at historic weather patterns. Now the problem for the Environment Agency is that temperatures are on an upward path history does not provide a guide to the future.
- Information the Agency provides includes
  - [Report Cards](#) summarising the state of air quality, water resources and water quality in England
  - Reports on specific impacts, including assessment of river flow changes
- Specific decision making, mainly for large capital projects like the [Thames Estuary 2100 \(TE2100\)](#) plan published in 2011
- Brexit may result in a significant change in the Government funding, away from supporting agriculture under the Common Agricultural Policy (CAP) towards 'public funds' for 'public good'.

I was very disappointed by the Environmental Agency presentation, not the least because the case studies and examples were all quite dated. The Environment Agency research team was quite small and mainly commissioned research by others.

In the questions afterwards there were some very pointed questions asked about DEFRA's strength in the context of holding other Departments to account in relation to climate change.

I was, however, sitting next to some students from the Centre for Alternative Technology (CAT) and they suggested [Ruth Stevenson](#) as a contact on achieving community engagement.

## 17. Question Time: Climate Change session

The event, which was chaired by Emma Pinchbeck, Executive Director of Renewable UK, and the panel included Baroness Brown, Deputy Chair of the Committee of Climate Change, Dr Kirsten Dunlop, CEO of Climate-KIC, Bernadette Fischler, Head of Advocacy at WWF, Professor Stephen Belcher, Chief Scientist of the Met Office, and Mark Cornelius, Head of the Major Life Insurance Groups Division at the Bank of England.

Questions had been submitted in advance.

The questions and answers echoed much of what had been heard earlier in the day. Points that I had noted were, however:

- In a survey of about fifteen countries, people in Britain were found to be the **least motivated** to lead environmentally friendly lives.

- In terms of engaging with communities and the public on climate issues, need to create 'moments of discomfort' that make people think
- In terms of whether the media should do more to educate the public, it was said that experts need to explain that nobody will experience '1.5° C warming' but we will have more extreme weather events, loss of diversity etc.
- Need to avoid regulatory 'sand bagging'. Want regulation that encourages innovation, not act as a constraint. The Welsh wellbeing legislation used to test whether activities and projects are in the 'public good'. (Also my impression is that much of the Scottish climate legislation and initiatives are more progressive than those in England)
- The Bank of England has just issued a statement on the climate change impacts on financial services in terms of (i) physical threats and (ii) transition risk.

## **18. Pointers for CEQ Low Carbon Commitment forum / Footsteps / CAN WM**

The launch event contained numerous ideas about where we should be putting our efforts as regional environmental initiatives. The 'top five' pointers that I took from the launch event were, however:

1. When engaging with politicians, concentrate on the gaps and inconsistencies between commitments made by Government and the reality on the ground, especially in the area of transport and housing. Consider using Freedom of information requests to probe these gaps.
2. The need to encourage our faith leaders to speak out and provide 'climate leadership'. Leadership is not going to come from Government.
3. When communicating with congregations and the public, use broad messages that are not just about carbon dioxide emissions. Talk about atmospheric 'pollutants' and link with health and well-being concerns as well as global warming
4. Take the lead on the role of the personal behaviour changes needed, including moving away from meat based diets and changing to more sustainable transport habits. Challenge government to engage with behaviour change through public education and taxation changes
5. Encouraging a grass roots 'climate' uprising based on concerns about the loss of species diversity, increasing temperatures, pollution etc - things which people can see and are experiencing, but politicians are ignoring or only playing 'lip service' to. Perhaps the present uncertainties and widespread dissatisfaction with politicians' handling of Brexit present are creating a 'moment of discomfort' in which to draw people together around environmental issues that are affecting people both now and increasingly in the future.