

CLIMATE CHANGE

Pathways to a better energy system



Photo: Kiara Worth/
IISD Reporting

Dr Hoesung Lee, Chair, Intergovernmental Panel of Climate Change (IPCC), will be speaking about the IPCC's contribution to the Paris Agreement on Climate Change and its implementation during day three of IP Week, on 21–23 February 2017.

In your opinion, is the COP21 goal of 1.5°C achievable and will the IPCC's special report on the issue provide the roadmap to get there? Will negative emission technologies be required to do so?

That is exactly what the Special Report on 1.5°C will set out to determine, and I don't want to prejudge its findings! The report is explicitly intended to examine the mitigation and development pathways that would result in warming of 1.5°C, and compare them with pathways for 2°C or more. As the published outline of the report shows, questions of overshoot and negative emissions will be considered as part of that.

Do you think that what was agreed at COP21 in terms of nationally determined pledges and a ratcheting framework to bump up

ambition is an appropriate response to the problem of climate change?

Without getting into whether the Paris framework is appropriate or not, I would just note that the bottom-up approach with NDCs [nationally determined contributions] and a stocktake pursued in Paris found consensus and was ratified extremely quickly, while earlier attempts at a top-down approach have been less successful.

That said, the Special Report on 1.5°C will consider the institutional opportunities and challenges related to 1.5°C pathways and more broadly how policy and institutions fit into the global response to the threat of climate change. I'm sure that the Sixth Assessment Report (AR6)* will clarify our understanding of decision-making and policy-making building on the work we did in AR5. Our scientific assessment will help to overcome barriers to actions.

You have a background in economics and climate. Is the continuing cost-reduction and growing favourable economics of renewable energy negating the need to address issues around discounting the long-term future?

Selection of a social discount rate is fundamentally a question of values related to intergenerational equity. As such, 'how best to choose a discount rate is, and will likely remain, an unresolved question in economics' as pointed out by the IPCC Second Assessment Report. Improvements in renewable energy performance reduce abatement costs and would stimulate further abatement of greenhouse gases, resulting in increases in avoided damages regardless of a level of discount rate.

Uncertainty is inherent when looking at future climate change. Do you have any views on what the climate sensitivity is likely to be and how the world will respond to greenhouse gas forcing?

Again, this is something that will be explored in AR6 and I wouldn't want to second-guess that. There's a lot on it already in AR5, but the main finding was that equilibrium climate sensitivity is likely to be in the range 1.5–4.5°C.

Letter from Marrakech

Conferences of the Parties to the UN Climate Change Convention (COPs) come in all forms. There are good COPs (Paris 2015), bad COPs (Copenhagen 2009) and COPs that just get on with the business. COP22 in Marrakech in November 2016 fell into the latter category, writes *Professor Jim Skea* CBE FEI, Co-chair of IPPCC Working Group III and President, Energy Institute.

All I learned while there came from casual conversations with negotiators. The real work was mostly done by the end of the first week. In week two, the politicians made their speeches and signed off on the Marrakech Action Proclamation for Our Climate and Sustainable Development, a 600-word call to arms. In truth, there was nothing new in this proclamation (see also p9).

What was interesting about Marrakech was the context and the side-business. The US election was contextual talking point number 1 – but no one knows where US climate policy will go. Point 2 was the coming into force of the Paris agreement on 4 November, less than a year after it was negotiated. This extraordinarily fast ratification process underlines the political will behind the Paris agreement. However, there remains a huge gap between aspirations and the promises of individual countries. This is where the side business comes in. NGOs, national and city-level politicians and business leaders were out in force to discuss and prepare their strategies in the light of promised climate action. The oil and gas sector was well represented, with the new Oil and Gas Climate Initiative (OGCI) having been launched earlier in the month with the promise of \$1bn of additional climate-related R&D expenditure (see p8).

COP24 in December 2018, when countries next add up their commitments and IPCC reports on pathways towards 1.5°C, will be the next major milestone. Given the pace of change globally during 2016, and major unresolved uncertainties, the outcome is far from clear. ●

*AR6 is to be finalised in 2022 in time for the first UNFCCC (United Nations Framework Convention on Climate Change) global stocktake when countries will review progress towards their goal of keeping global warming to well below 2°C while pursuing efforts to limit it to 1.5°C. Three IPCC Working Group contributions to AR6 will be finalised in 2021.