Circular relations between climate knowledge and action
Hughes, Hannah

Published in:
Global Discourse

DOI:
10.1332/204378921X16836997741580
10.1332/204378921X16836997741580

Publication date:
2023

Citation for published version (APA):
The Circular Relationship Between Knowledge and Action in Climate Politics

Hannah Hughes (hah60@aber.ac.uk)
Senior Lecturer International Politics and Climate Change
International Politics Department, Aberystwyth University, SY23 3FE

Key words: IPCC, UNFCCC, Paris Agreement, Climate knowledge, Global Stocktake, LCIPP

Knowledge and how it informs and supports cooperation in policymaking is a central question within this issue. As Lazarus (2020: 1) quotes at the start of the introduction: *The major conclusion in the literature is that direct and sustained relationships between researchers and policymakers are the optimal method for promoting the use of research in policy-making.* (French, 2019: 163). Frey and Burgess (2022: 4) pick up on the centrality of knowledge in the context of climate negotiations, framing their response around the question of: what scientific evidence is pertinent to improving climate change negotiations and implementation?

The organisation of knowledge to inform a collective response has been central to climate politics from the outset. Even before the Intergovernmental Panel on Climate Change (IPCC) was established in 1988, international attempts to coordinate the assessment of existing scientific understanding of global warming and potential response options played a pivotal role in bringing the issue to the attention of policy audiences (Agrawala 1999; Hecht and Tirpak 1995). The IPCC established an intergovernmental process for achieving this (Agrawala 1998a; 1998b). The intergovernmental nature of this scientific assessment body has been criticised for enabling governments to gain control over the science and for impacting the credibility and legitimacy of science advice (Haas, 2004; Haas and Stevens, 2011). However, this organisational form has meant that from the first report, published in 1990, member governments approved key findings from the assessment on the scientific basis (Working Group I), impacts (Working Group II) and policy response options (Working Group III) to climate change. This government approved knowledge base informed negotiations that established the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and the regular IPCC assessments and special reports continue to underpin the process as unpacked below.

It is worth for a moment describing the role that IPCC member governments have in the assessment’s production to make clear how the ‘direct and sustained relationship’ between researchers and policymakers has been built in climate politics. As an organisation, the IPCC can be broken down into constituent parts: the panel, the bureau, the secretariat, the technical support units and the authors (Hughes 2023). The panel is composed of the IPCC’s member...
governments that meet once or twice a year in plenary session. These are delegates, often identified as the country focal point, that reside within the national meteorological service, environment department or a dedicated international office, such as the State Department in the United States (Hughes 2022). Membership to the panel is open to all member countries of the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP) and there are currently 195 member countries (IPCC, no date).

The IPCC produces assessment reports that are published every 5-7 years, special reports and methodological reports, which may be invited by the UNFCCC. The reports are authored by scientists and experts that either self-nominate or are nominated by a government or international organisation and are appointed by the relevant Working Group bureau. While member governments are not directly involved in authoring the scientific assessment reports, they input to the report’s scoping, approve the report outline, nominate authors, elect the bureau, review draft reports, and accept and approve the Summary for Policymakers (SPM) ‘line by line’ (Hughes, 2022). Financially, the IPCC is dependent on donations, and all IPCC expenditure is agreed by the panel, which gives governments the final decision over the organization’s continuation, its assessment activities and the expert meetings and workshops supporting these. This level of involvement ensures the relevancy of the reports to its main stakeholders: member governments and the UNFCCC. The line by line approval process also means that a shared knowledge base for the negotiation of climate action is endorsed by parties to the climate negotiations (de Pryck, 2022). However, this ‘direct and sustained’ role of governments in the assessment process has effects. As the stakes of climate action have become increasingly apparent, as parties have deepened their involvement in the IPCC and the UNFCCC, and as the impact of the knowledge on negotiations has become evident, negotiation dynamics have increasingly marked the approval process of an assessment’s key findings, as presented in the SPM.

As a researcher observing both the knowledge body (IPCC) and the negotiating process (UNFCCC), the resemblance in delegate participation and diplomatic practice between these two sites is apparent and has led scholars to conceptualise intergovernmental scientific bodies as sites of negotiation in global environmental agreement-making (Hughes and Vadrot, 2019; Hughes et al, 2021; Hughes and Vadrot, 2023). There are now numerous author accounts of how their contribution to the SPM was either extensively revised or removed altogether, and the shock and frustration over witnessing the political manoeuvring during the approval sessions to achieve this is palpable (Broome, 2014; Schneider, 2009; Stavins, 2014). This political struggle is most evident when a figure, concept or term has the potential to have a direct bearing on the negotiations, which may lead governments to attempt to remove it from the assessment by objecting to its inclusion during the approval of the report outline. For example, China objected to the inclusion of black carbon in the outline of Working Group I’s Fifth Assessment Report (AR5) (Carter, Schulz and Yamineva, 2009: 4). When other governments opposed China agreed to keep the bullet point unaltered, “stating that they appreciate the need for an assessment of black carbon but noted that many aerosols also play an important role” (ibid).
These attempts to shape the IPCC’s constructions of climate change have been present from the outset. During the finalisation of the first assessment report, the American delegation wanted the uncertainty of the science emphasized (Leggett 1999; Lunde 1991, 82), the former USSR wanted caveats added and possible benefits to agriculture highlighted (Hecht & Tirpak, 1995; Leggett, 1999: 15-6; Lunde, 1991: 96) and the Brazilian delegation arrived with a new study that contested the report’s depiction of the contribution of tropical deforestation (Lunde 1991: 97). One of the most significant actors in this regard is Saudi Arabia, who have historically focused on the confidence levels assigned to the scientific findings in the text, with preventing carbon dioxide (CO₂) being distinguished from other greenhouse gases (Leggett 1991: 17), and in the most recent assessment, adding “unabated” to references to fossil fuel or CO₂ emissions (Templeton et al. 2022). In the case of the Fourth Assessment Report (AR4) published in 2014, the Earth Negotiation Bulletin (ENB) report details four Saudi Arabian objections to the certainty language employed (Gutiérrez, Muñoz and Johnson 2007; Gutiérrez, Kulovesi and Muñoz 2007). In one case, China and Saudi Arabia proposed reducing or qualifying the probability that anthropogenic greenhouse gas increase has very likely caused most of the observed increase in global temperature by removing the adverb “very” or adding the term “increasingly” very likely (Gutiérrez, Muñoz and Johnson 2007: 5).

This level of government interest in IPCC knowledge can be explained by the legitimating role that the assessment practice has on knowledge to inform targets and policy options and the methodologies for operationalising these, a connection that is most readily observed in special reports invited by the UNFCCC. The Special Report on Land Use and Land Use Change and Forestry (LULUCF) (IPCC, 1997) was requested by the Subsidiary Body for Science and Technological Advice (SBSTA) of the UNFCCC in June 1998 to assess the state of scientific and technical understanding on carbon sequestration in response to controversial policies agreed in the Kyoto Protocol (IPCC, 2000; Fogel 2005). Through observational research of both the UNFCCC negotiations and the IPCC approval (Fogel, 2005: 193), Fogel’s study reveals how ultimately the final report provided the scientific basis and method for operationalising decisions and policy options created in the Kyoto Protocol that were primarily crafted and adopted ‘for political and economic reasons’ (Fogel, 2005: 206).

The IPCC was invited to provide a Special Report on the impacts of 1.5°C in the Paris Agreement. Scholarly accounts indicate that 1.5°C was not an object or target originating from the scientific literature (Tschakert, 2015; Livingston and Rummukainen, 2020; van Beek et al., 2022; Cointe and Guillemot, 2023). Instead, it emerged through the negotiating process towards a post-Kyoto agreement as small island states, such as the Caribbean, and non-party stakeholders, such as Desmond Tutu, protested that the 2°C long-term goal of the Copenhagen Accord threatened the existence of their communities (Tschakert, 2015: 2). The scientific interest in the 1.5°C target and research for this assessment was initiated by the invitation for the special report (Livingston and Rummukainen, 2020). Thus, what is clear from the studies conducted is that the origin of constituent objects of climate negotiations and agreement formation do not follow a linear pathway from the scientific community to the IPCC or from the IPCC to the negotiations or in reverse, from the UNFCCC to the IPCC and
wider climate science community. Instead, this relationship appears circular, with objects passing between these different bodies in and with the documents (publications, reports, decisions) and actors (delegates, bureau members and authors), which inform, participate and constitute their formation. In this respect, objects of science and negotiation – such as the temperature target – take shape through the processes of assessment, negotiation, approval and the agreement-making that these attempt to realise in the IPCC and the UNFCCC.

Why does this matter? I have described ‘a direct and sustained relationship’ between researchers and policymakers that has been created through the IPCC’s assessment practice and conscious attempts to link IPCC and UNFCCC activities. The Paris Agreement deepened and diversified the relationship between knowledge and action in global climate politics by establishing two new processes: the Local Communities and Indigenous Peoples Platform (LCIPP) and the Global Stocktake. Some of the greatest criticism of the IPCC has been around the geographical representation of authorship and the exclusion of Indigenous knowledge in its assessments of climate change (Hulme and Mahony, 2010; Ford, Vanderbilt, and Berrang-Ford, 2012; Ford et al., 2016; Corbera et al., 2016). The IPCC’s assessment practice is informed by and built upon scientific conventions, including scientific practices of peer review and scientific measures of authority, such as degree, institutional affiliation and publication record (Hughes and Paterson 2017). As a result, it has struggled to accommodate diversified forms of participation and knowledge systems in the way that the more recently formed Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has (Díaz-Reviriego; Turnout and Beck 2019). The establishment of the LCIPP creates a process for bringing together diverse ways of knowing for the design and implementation of climate policies (LCIPP no date). It aims to increase the capacity and engagement of Indigenous Peoples and local community actors in the UNFCCC by creating a site and mechanisms for exchanging knowledge and best practices to inform climate mitigation and adaptation actions nationally and internationally.

The Global Stocktake is another institutional formation of the Paris Agreement. It formalises practices that existed on a more ad hoc basis, such as structured expert dialogues and the Talanoa dialogues. These dialogues facilitate presentation and discussion of “the best available science” and bring IPCC authors, other experts, UNFCCC parties and non-party stakeholders in direct conversation and exchange, as in the structured expert dialogues on the long-term global goal (UNFCCC 2014; Tschakert, 2015; Livingston and Rummukainen, 2020). The Global Stocktake is designed to enable a collective stock take of the implementation of the Paris Agreement and assessment of progress towards achieving its long-term goals (UNFCCC 2015, Article 14). The outcome of this five-yearly stock-taking process, the first of which will conclude in 2023, will inform parties “in updating and enhancing” nationally determined contributions and collective efforts (ibid). In many respects, the global stocktake is the mechanism that enables and ensures that the scientific evidence that is pertinent to “improving climate change negotiations and implementation” (Frey and Burgess 2022: 4) is known, acted upon, measured against and where insufficient, used to lever greater collective ambition. Through bringing parties in direct contact with the knowledge and its producers, and by using this knowledge as a benchmark to assess
collective progress, the global stocktake has the potential to complete the circle between the IPCC (knowledge) and the UNFCCC (action). Although, as activists and scholars alike have made apparent, a diversified knowledge base is critical to an equitable response to climate change, which means that the LCIPP too will need to have a place in the flow and circular co-production between collective climate knowledge and action.

**Acknowledgement:** I acknowledge research funding from the Economic and Social Research Council (ESRC) for the project ‘The Politics of Science in International Climate Cooperation” (ES/W001373/1). For the purpose of Open Access, the author has applied a Creative Commons Attribution (CC BY) to any Author Accepted Manuscript (AAM) version arising from this submission.

**References**


IPCC (no date) About the IPCC, https://www.ipcc.ch/about/


LCIPP (no date) Functions of the LCIPP, https://lcipp.unfccc.int/about-lcipp/functions-lcipp.


