
Balancing Scientific Credibility and Political Legitimacy: The IPCC's first assessment cycle, 1988-1990

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The Intergovernmental Panel on Climate Change (IPCC) was convened in June 1988 with a mandate to provide a comprehensive assessment of the science, impacts of climate change as well as the possible response strategies open to policymakers. This article will look to the first 18 months of the IPCC's existence and the assemblage of what Sir John Houghton, Chief Executive of the UK Met Office and Chairman of IPCC Working Group I, proudly described as "an authoritative statement of the views of the international scientific community."¹ The First Assessment cycle lasted eighteen months and culminated in the 1990 publication of three assessment reports on: the Science (Working Group I) of climate change, the Impacts (Working Group II) of climate change and the possible Response Strategies (Working Group III) to climate change. Crucially by 1990, the IPCC was able to present itself as both scientifically credible *and* politically legitimate. This article will explain how these two conflicting forces were balanced in the course of assembling the IPCC's First Assessment.

From 9 to 11 November 1988 in Geneva, the IPCC met for the first time. This meeting took place only three months after the final, and formal, decision had been taken by the World Meteorological Organization and the United Nations Environment Programme (UNEP) to establish the IPCC, which followed on from extensive negotiations undertaken between the WMO, UNEP and US officials. But in November 1988 much of the detail of how and who would actually perform the assessment was still undecided.

At the August 1990 Fourth Session of the IPCC in Sundsvall, Sweden, the final assessment report was adopted and approved by the IPCC delegates. Here the WMO Secretary-General Godwin O.P. Obasi thanked the one thousand or so specialists from seventy different countries to have participated in the production of the assessment. Obasi was positioning the IPCC to speak (on behalf of the entire global population) universal truths on climate change to policymakers. But, as I will show in the course of this article, while the IPCC did involve participation from 70 different countries, the overwhelming majority came from the developed world. The IPCC's assessment, therefore, opens up questions around the geopolitical implications of knowledge constructed as global in an unequal world; namely the grounds on which participation in an expert, *intergovernmental* assessment should be based. In this article I will examine the ways US officials sought to create a global politics of

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¹ John Houghton, "Foreword," in *Climate Change: The IPCC Science Assessment*, J. T. Houghton, G. J. Jenkins & J. J. Ephraums (eds.), (Cambridge University Press: Cambridge, 1990).

participation in the IPCC assessment in order to project authority onto a legitimised base of expertise. I will argue that during the assessment process, the IPCC flipped the scientific ‘view from nowhere’ into a ‘view from everywhere’, whilst actually only representing a minority of nations.

I will also consider the effects of a specifically intergovernmental assessment, particularly how the institutional arrangements of the IPCC structurally impacted upon the assemblage of the report, its reception and the dissemination of its findings. The opening address to the First Session of the IPCC by G.O.P. Obasi highlighted the intersection between governments, international organisations and scientists mandated by an intergovernmental assessment. I will show how this intersection was a fundamental driving force during the IPCC’s First Assessment; shaping the content, structure and organisation. I show that the lack of a set of formal procedural roles allowed both scientists and political representatives to exert an influence over the assemblage of the report, and the IPCC’s guiding principles. This meant that at all times the IPCC was guided by the two moderating constraints of scientific credibility and political legitimacy.

The focus of this article revolves around the personnel, the methods and the activities of Working Group I (WGI) within the IPCC. Although there were three WGs, it became apparent in the course of researching this assessment cycle that WGI was the most influential in the context of decisions taken over the shape and content of the assessment. Similarly, WGI was widely regarded as the most authoritative and successful of the three reports in reviews of the Panel’s activities. Stephen Schneider’s 1991 review of the three reports suggests that:

Ironically, the least scientifically original product of IPCC, the Working Group I report, has proved to be the most useful. Although it contains few fundamental ideas or results that were not already noted in previous assessments of global warming, the report is so comprehensive, rationally argued, and broadly representative –with both advocates and critics of scientific concern over global warming –that it is immensely credible and powerful.²

In addition to the perceived authoritative status of WGI, there was also an added emphasis on its findings, as WGI provided the basis for the other two reports on the possible impacts and necessary response strategies.

In this article, I will firstly chart the evolution of the processes and protocols developed in the production of the assessment report. This will show that it was scientists, and not government representatives, who initially came to the fore throughout the assessment phase. Secondly, I will show how the evolution of the structures, methods and protocols of the IPCC assessment contributed to an institutional design that enhanced the reputation of the final reports. I will then briefly detail examples of how the final assessment report was received in the US.

² Stephen H. Schneider, “Three Reports of the Intergovernmental Panel on Climate Change,” *Environment* 33 (1991), p. 26.

The IPCC First Session, November 1988

Following on from months of consultations involving the Deputy Secretary-General of the WMO James P. 'Jim' Bruce, the Executive Director of UNEP Mostafa Tolba and various agencies and representatives of the US government, the executive decision to establish the IPCC was taken in June 1988. At the 40th Session of the WMO Executive Council, the WMO Executive Council Resolution stated that the Panel should aim to:

- (i) Assess the scientific information that is related to the various components of the climate change issue [...] to enable the environmental and socio-economic consequences of climate change to be evaluated; and
- (ii) Formulate realistic response strategies for the management of the climate change issue.³

As a result, from the 9 to 11 November 1988 in Geneva, the IPCC met for the first time. This meeting was attended by 103 representatives consisting of 30 WMO and UNEP Member States, 21 representatives of 16 international organisations, 7 invited experts, 8 representatives of the WMO and UNEP Secretariats and the two-man joint secretariat. Three key decisions were taken at this meeting that shaped the first 18 months of the Panel's activities: (i) the Panel's timetable for completion, (ii) its scope and methods of producing the assessment, and (iii) the selection of key personnel in the Panel's hierarchy. These decisions were part of a conscious effort by the IPCC delegates to make the assessment politically expedient, legitimate and scientifically credible. The IPCC, and in turn the assessment, traded off the credibility of its scientific leaders whilst the science was becoming increasingly political. These initial structures positioned governments and country representatives, not necessarily scientists, at the nexus of orchestrating and writing the assessment.

IPCC Structures and Personnel

A US policy document drafted in anticipation of the IPCC First Session in November 1988 identified the establishment of a chairman and vice-chairman of the Panel as its first order of business.⁴ To this end, Jim Bruce and Obasi "cornered" Bert Bolin, Professor of Meteorology at Stockholm University, at the Toronto Conference for the Changing Atmosphere (June 27-30 1988) and set about persuading him to take on the IPCC chairmanship.⁵ Bruce and Obasi believed Bolin was the perfect fit for the job of IPCC chairman, as did the scientific research community, the WMO, UNEP, and national policymakers. These three groups had differing but complimentary aspirations for the chairman of the IPCC to appear to be politically neutral and scientifically literate. Bolin emphatically embodied these criteria as a citizen of a non-aligned country, an internationally respected scientist (in meteorology), and someone well versed in the field of international scientific co-operation.⁶ The decision to appoint Bolin, a seemingly apolitical scientifically credible chairman, is representative of a wider ambition to create a broadly inclusive, scientifically credible *and* politically legitimate Panel.

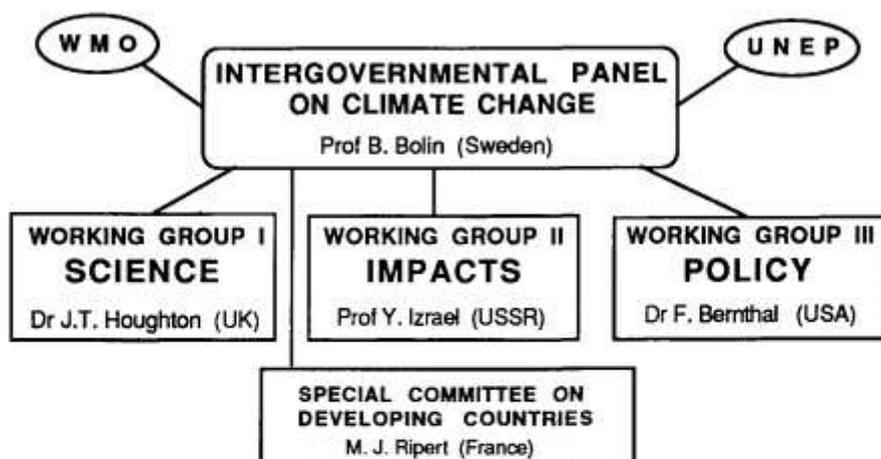
³ WMO, *Intergovernmental Panel on Climate Change*, Resolution 4 (EC-XL), (June, 1988).

⁴ Anonymous, "Scope of Activities, Issues, and Timetables for WMO/UNEP Intergovernmental Panel on Climate Change," (June 1988), Doc. F: Personal Paper of Eugene Bierly (Bierly Papers forthwith)

⁵ James P. Bruce, *Interview with David Hirst*, (1 February 2012) UK/Canada.

⁶ Bo Döös & Eugene Bierly, "Bierly – Döös paper. Items to be considered," (10th May 2009), Bierly Papers, p. 16.

Beyond selecting the chairman, and vice-chairman of the IPCC Bureau, delegates at the First Session also took considerable steps towards establishing IPCC methods in the production of the assessment. To this end, Bert Bolin initiated discussion of agenda item three of the First Session (work program of the panel) with a debate on the number of Working Groups (WGs) to be established.⁷ The agreed terms of reference for the WGs stressed that each WG had sole responsibility for the timely production of the assessment report. Significantly, discussions over the terms of reference produced an agreement that each WG would comprise about a dozen national representatives designated as “core members,” a Chairman, and a small number of Vice-Chairmen. It was further agreed that each WG “should strive to obtain the best possible expertise,” but that ultimately “core members would be responsible for the completion of the tasks of the Working Groups.”⁸ So, the IPCC’s terms of reference clearly gave core members – governmental representatives – much greater responsibility than the experts. In addition to their appointed roles coordinating the day-to-day activities, the Chairs and Vice-Chairs were also going to make up the Bureau (the Executive Group of the IPCC) alongside the IPCC Chair and Vice-Chairs. This arrangement offered the chair of each WG the potential for significant influence over the course of the WG, the hence proceedings and assemblage of the whole assessment report. Each WG Chairman was, therefore, in a position to be able to push the interests of his country.



IPCC:

Chairman:	Professor B. Bolin (Sweden)
Vice Chairman:	Dr A. Al Gain (Saudi Arabia)
Rapporteur:	Dr J.A. Adejokun (Nigeria)
Secretary:	Dr N. Sundararaman (WMO)

Fig. 7.1. IPCC Structure during 1988-1990 Assessment.

⁷ W.J. McG Tegart, “WMO-UNEP Intergovernmental Panel on Climate Change, First Session: Australian Delegation Report,” (16th November 1988), Zillman Papers.

⁸ IPCC, *Report of the First Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-1: TD –NO.267, (Geneva, 9-11 November, 1988).

With the responsibility of the Panel's assessment shifted to the WGs, the negotiations over the composition and governance structures of each WG took on great significance. Each delegation was invited to put forward their nominations and preferences for WG membership to a committee, chaired by Dr Greg Tegart (the Australian principal delegate) and comprised of representatives from the US, USSR, Mexico, Senegal and Malta. The IPCC plenary invited the selection committee to propose chairmanship, vice-chairmanship and core-membership of the three WGs, taking into account the need for equitable regional representation and for a balance of scientific and policy expertise.⁹ So, while the delegates were vying for key roles in order to gain political influence, this was tempered by the fact that the committee was tasked with achieving equitable regional representation. The drive for equitable regional representation was included as an appeal to political legitimacy. This requirement allowed the IPCC to project an image of an international assessment constructed by an international community on behalf of an international audience.

Following the nominations and discussions it was agreed that WG I would be chaired by the UK (John Houghton – the head of the UK Meteorological Office); WGII on impacts would be chaired by the USSR (Yuri Izrael – the head of the USSR Hydrometeorological Service), and; WGIII examining the possible response strategies would be chaired by the US (Fred Bernthal – Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs). Furthermore, Brazil and Senegal were appointed as Vice-Chair to WGI, Australia and Japan to WG II and Canada, China, Malta, the Netherlands and Zimbabwe to WG III (see Fig. 7.2). Effectively, the three WGs represented countries either side of the Cold War divide. Moreover, the Global South – in effect developing countries – was represented by Brazil and Senegal, displaying how the constraints of geographic representation were operating and guiding decisions within the Panel.

Before he took on the chairmanship of the IPCC, Bolin stressed that “right now, many countries, especially developing countries, simply don't trust assessments in which their scientists and policymakers have not participated.”¹⁰ The IPCC actively and directly addressed these issues of distrust through their selection of WG membership. However, in attempting to create a global environmental assessment that could be said to be matched by its truly global inclusivity, it could equally be argued that traditional scientific rigours went by the wayside. Core membership established on the basis of national representation meant participation was premised not on scientific merits but instead political criteria.

⁹ W.J. McG Tegart, “WMO-UNEP Intergovernmental Panel on Climate Change, First Session: Australian Delegation Report,” (16th November 1988), Zillman Papers.

¹⁰ Stephen H. Schneider, “Three Reports of the Intergovernmental Panel on Climate Change,” (1991), p. 25.

CORE MEMBERSHIP OF WORKING GROUPS

	WORKING GROUP I *	WORKING GROUP II *	WORKING GROUP III *
CHAIR	UK (Dr. Houghton)	USSR (Prof. Israel)	USA
V/CHAIR	BRAZIL SENEGAL	AUSTRALIA JAPAN	CANADA CHINA MALTA NETHERLANDS ZIMBABWE
MEMBERS	CHINA FRG ITALY JAPAN DENMARK SWITZERLAND TANZANIA USA USSR KENYA	ALGERIA CANADA FINLAND INDIA ISRAEL MEXICO NEW ZEALAND NIGERIA ¹ INDONESIA	AUSTRALIA BRAZIL GDR INDIA JAPAN SWEDEN UK USSR NORWAY FRANCE SAUDI ARABIA
EX OFFICIO	CHAIRMAN JSC ² REP IGBP ³	SAC ⁴	

ANNEX V

- 1) NIGERIA or another country from Africa
- 2) JSC - WMO/ICSU Joint Scientific Committee for the World Climate Research Programme
- 3) IGBP - ICSU International Geosphere-Biosphere Programme
- 4) SAC - Scientific Advisory Committee for the UNEP World Climate Impact Studies Programme

* The tasks assigned to Working Groups I, II and III are, respectively, assessment of available scientific information on climate change, assessment of environmental and socio-economic impacts of climate change and formulation of response strategies.

Fig. 7.2. Core Membership of Working Groups: IPCC.

The structure of the WGs encouraged delegations to target key roles so that they could exert influence over the actions and outcomes of the WGs. As outlined in its briefing document, a principal objective of the US delegation at the IPCC First session was to volunteer to chair one of the WGs. Prior to the meeting the US delegation was already seeking to play an integral role in the IPCC's assessment in the two areas deemed to be of greatest significance – the science and policy. Their strategy identified both WG I and WG III as key areas in which “to play a leadership role by offering experts to chair or co-chair

[sic].”¹¹ The US delegation was further instructed to ensure that the IPCC was the forum for “evaluating the desirability of a global convention.”¹² This document went on to assert that “the U.S. could consider a framework convention that does not call for the adoption of response strategies prior to completion of the assessments.”¹³ Aware that “calls for a global convention are likely to be made by several other countries” the US delegation was being advised on how to deflect that line of reasoning back towards the IPCC’s assessment.¹⁴ Because, if WG I found that there was no mandate for action, scientifically, there would be no reason for a global convention. Similarly, if WG III found alternative response strategies available to the international community they could avert the looming possibility of implementing a global convention.

Chairmanship of the working group on policy offered the US delegation a key role in shaping any negotiations of a global convention to follow. As such during the course of the meeting the US delegation, at the behest of Deputy Under-Secretary of State Bill Nitze, prioritised chairing WGIII on response strategies.¹⁵ This was part of a concerted effort on the part of the US to control movements towards any formal convention, and in further making any convention that did come to pass “as light a touch as possible in terms of mandatory emission reductions.”¹⁶ The US delegation was privileging debate over action.

The timetable of the Panel was also determined at the IPCC’s First Session. Before the national representatives arrived in Geneva, Tolba and Bruce set forth an eighteen month timetable for the production of the assessment which was approved at the meeting by the IPCC delegates. The work schedule was explicitly geared towards three meetings which externally generated key deadlines. Panel members considered these three meetings to be of international significance. First, the Panel identified the Second World Climate Conference, scheduled for 25 June-3 July 1990. Second, was the anticipated call for a report to the 45th Session of the UN GA in 1990 And third, it was pointed out that the report could be submitted to the 11th WMO Congress and UNEP Governing Council Meeting in 1991.¹⁷ The Panel members were all in agreement on the need for the assessment report to be made available as an input to international political meetings, not just scientific conferences. The timetable, and the specifically political nature of the meetings targeted, signifies the efforts to ensure the political relevance of the Panel’s report.

“An Authoritative Statement of the Views of the International Scientific Community”

The proposal to implement core membership gave national representatives a prominent role in the compilation of the assessment. However, a series of ad hoc, piecemeal decisions taken by the scientists working within the confines of this structure took the assessment out of the control of governments, this was exactly what the US negotiators had

¹¹ Anonymous, “Draft U.S. Strategy for Implementation of WMO-UNEP Intergovernmental Panel on Climate Change (IPCC),” (August 15th, 1988), Doc. G Bierly Papers.

¹² *ibid.*

¹³ *ibid.*

¹⁴ *ibid.*

¹⁵ William A. Nitze, *Interview with David Hirst*, (7 March 2012) UK/US.

¹⁶ *ibid.*

¹⁷ IPCC, *Report of the First Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-1: TD –NO.267, (Geneva, 9-11 November, 1988).

been trying to avoid in establishing the IPCC in the first instance.¹⁸ As these scientists rose to prominence in the production of the assessment, the politics of participation was disrupted, because the drive to enlist the best expertise tended to focus on incorporating Western scientists. So, as control of the assessment processes swung away from the government representatives, and towards the scientists, the priorities guiding the assessment changed. Subsequently, the US delegation was instrumental in clawing back much of the control governments had conceded as a result of the time constraints imposed in the production of the assessment. The US and other governments decided there needed to be a review process put in place to supervise actions of the scientists, resulting in the introduction of the concept of government review. At all times, the intergovernmental structure was a constraining influence – requiring the IPCC to appeal both to the ideals of scientific truth and credibility and to claims of interest and geographically equitable participation in order to appear politically legitimate.

At the end of the IPCC First Session, John Houghton returned to the UK and quickly established a small task force, housed in the UK Met Office, to take charge of the day-to-day activities of WGI. Geoff Jenkins, a meteorologist at the Met Office, headed up the task force, and was assisted by James Ephraums (science support), and Shelagh Varney (technical support). Speaking retrospectively, Houghton maintains that at the outset of WGI activities he wanted to see a thorough report with contributions from as many scientists as possible.¹⁹ In response, Jenkins, and the task force quickly agreed that WGI should emulate the Scientific Committee on the Problems of the Environment (SCOPE) 29 Report and utilise “lead authors” to write the report.²⁰ This proposal was considerably less inclusive than Houghton’s vision, but did meet the pragmatic needs of writing a comprehensive assessment of the physical science basis of climate change in a short 18 months.

For the SCOPE report, lead authors were asked to draw on their own expertise and the scientific community in order to draft each chapter, which then became part of a wider assessment. The Lead authors, teams of two or three experts, coordinated meetings and workshops with other researchers in that particular field in order to synthesise and report on the latest research. Speed and accuracy were of chief concern to Jenkins, Watson, and Albritton. They wanted the assessment done “correctly” which meant the scientists were the ones to do the work. Importantly, for Jenkins and the WGI task force, this meant work on each chapter could occur in parallel.

When the core members of WGI gathered together for their first plenary meeting at the end of January 1989,²¹ Jenkins presented this idea of lead authors as the most viable effective use of resources towards producing an assessment. Even though this marginalised their role, the core members of WGI agreed to the principal. This plenary meeting was important, insofar, as it allowed the WGI task force a mandate to petition a number of prominent climate scientists to become involved in the assessment process, as lead authors and expert contributors, who went on to write and review the assessment report. With an agreement in place that it would fall to the lead authors to draft the individual chapters of the

¹⁸ David G. Hirst, *Negotiating Climates: The Politics of Climate Change and the Formation of the Intergovernmental Panel on Climate Change (IPCC), 1979-1992*, Unpublished doctoral dissertation, (The University of Manchester: Manchester, UK: 2014).

¹⁹ John Houghton, *Interview with David Hirst*, (30 July 2012), UK.

²⁰ Geoff Jenkins, *Interview with David Hirst*, (14 March 2012), UK.

²¹ The core members of WGI were: China, Denmark, FRG (Federal Republic of Germany), Japan, Kenya, Switzerland, Tanzania, USA and the USSR.

assessment, discussions as to who these lead authors would be began. Guided by the ten different chapter topics and initial suggestions made by the WG core members the final decisions taken over who to approach in order to assemble the report ultimately fell to the WGI task force. The motivation of the WGI core members was to ensure the task force could petition a select few experts in order to ensure the scientific credibility.

Despite the overriding principle of equitable distribution, the drive to enlist the “best” scientists resulted in WGI approaching mainly Western scientists. Reporting on the activities of WGI to the IPCC Second Session, Geoff Jenkins pointed to the 29 lead authors from 13 countries selected by the WG task force, as well as a “total of some 200 scientists” involved in the writing of the report.²² Emphasising the global reach of the WG I’s expertise in this way, whilst not inaccurate, certainly presented a misleading picture. For whilst there were thirteen different countries represented and some two hundred scientists involved there was also a significant majority of British and American based scientists involved as lead authors. In fact British and American based scientists comprised twenty-two of the thirty-four lead authors,²³ with this figure closely replicated in the overall makeup of contributors to the report.

At first glance these figures might appear to reflect the social biases of the WGI task force, which, of course, to some extent they do. But significantly, they also reflect the geographic concentration of scientific research into climate change at the time. Pertinent to this observation, STS scholar, Aant Elzinga has noted that as science has become increasingly global in nature it has not decreased hierarchization. Despite increased connectivity, scope and wider participation across national borders, most scientific research remains concentrated in a few areas of the developed world. Elzinga maintains globalization of science and participation has led to a ‘de-globalization’ in the dispersion of science, concentrated in the OECD countries.²⁴ This is exemplified by Jenkins comments to the IPCC Second Session, as we see its architects seeking to reconcile this de-globalization of the dispersion of science with the Panel’s global accountability. By highlighting and arguably exaggerating the diversity of the WGI participants, Jenkins can be said to be responding to the pressure to ensure the political legitimacy of the assessment.

Between April 1989 and January 1990 the lead authors convened several meetings at which two-hundred scientists were invited to participate. These meetings ranged in length from one day to one week, during which decisions were taken over the scope and content of the various chapters. A multitude of seemingly insignificant ad hoc decisions over the inclusion/exclusion of minor details taken by the lead authors was as a whole contributing meaningfully to the overall content of the assessment. Thus, the assemblage of the report was occurring through a loose network of lead authors and experts held together with the WGI task force at the head.

Independently, the structures and methods introduced by WGI were emulated by the other WGs. So that by the time IPCC Panel members met for the IPCC’s Second Session at UNEP’s headquarters in Nairobi (28-30 June 1989), the three WGs had all taken similar steps

²² W.J. McG Tegart, “WMO-UNEP Intergovernmental Panel on Climate Change, Second Session: Australian Delegation Report,” (11th July 1989), Zillman Papers.

²³ The country of residence of the 34 Lead authors listed: Britain – 11, USA – 11, Switzerland – 2, Sweden – 1, West Germany (FRG) – 1, China – 1, Russia (USSR) – 2, Japan – 1, Netherlands – 1, Brazil – 1, India – 1 and Canada – 1.

²⁴ Aant Elzinga, “Science and Technology: Internationalisation” (2004) p. 13633-13638.

towards compiling their assessment reports. The core members operating in the three distinct WGs were all in the same position. Having entered into a process in which they anticipated being the central architects of the assessment, they now found themselves marginalised, their role being far smaller role than initially envisaged. Consequently, the marginalisation of core members led them to seek out a way of essentially being able to approve the assessment – providing their assurance on the quality and the content.²⁵

In pursuit of this mechanism of quality control, the concept of government review surfaced during discussions at the IPCC Second Session. WGI was certainly open to the idea of review, but that was for the “natural” process of scientific peer review, for which there was already an arrangement, not for government review. In John Houghton’s report to the delegates in Nairobi, he stressed that he had asked each of the lead authors to incorporate a scientific peer review before the chapters were presented to the WG plenary meeting. Houghton went on to highlight that following the final drafting of the assessment, it would be “sent to all IPCC countries with a request to arrange for a further scientific review.”²⁶ Operating under the constraints of normal academic practise, Houghton and the WGI task force prioritised academic peer review as the primary means of preserving “science’s autonomy from potentially tainting social interests... keeping non-scientists out of decisions about scientific content.”²⁷ The introduction of a government review subverted the public image of scientific peer review as a guarantor of good science and reflects the on-going political considerations driving many of the decisions taken in the course of the assessments assemblage.

The nature and centrality of the peer review process of the assessment was of particular importance to the US delegation. Indeed, at the first meeting of the Panel there were reports of considerable dissension among the delegates as to the source and nature of the peer review. The proposed scientific review appealed to the scientific delegates among the US delegation. But, the political representatives were concerned that this unreasonably constricted who could and should be able review the document before the government signed off on its content. These concerns became manifest half a year later at the IPCC’s Third Session when the Chairman of WGIII and the principal US delegate, Fred Bernthal, stressed that peer reviewers should not be limited to those directly involved with climate research.²⁸ Bernthal wanted to spread the net of potential reviewers wider than one just including scientists. Arguing against a singularly scientific peer review was the first step towards the introduction of a government review, as Bernthal responded to a pressing need for the US government to ensure that they retain a strong influence over the Panel.

With the Government review in place the peer review process was opened up to a wider, arguably more inclusive, group of actors, the IPCC also agreed to abandon the concept of core membership of its WGs.²⁹ Panel members had expressed concerns that the core/non-

²⁵ John Zillman, *Interview with David Hirst*, (26 March 2012), UK/Australia.

²⁶ John Houghton, “Report From Chairman WG1 (Scientific Assessment of Climate Change)” in W J McG Tegart, “WMO-UNEP Intergovernmental Panel on Climate Change, Second Session: Australian Delegation Report,” (11th July 1989), Zillman Papers, pp. 28-29.

²⁷ Mario Biagioli, “From Book Censorship to Peer Review” *Emergences: Journal for the Study of Media & Composite Cultures*, (2002) 12; 1, p. 13.

²⁸ IPCC, *Report of the Third Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-5, (Washington D.C., 5-7 February 1990).

²⁹ W.J. McG Tegart, “WMO-UNEP Intergovernmental Panel on Climate Change, Second Session: Australian Delegation Report,” (11th July 1989), Zillman Papers.

core distinction discriminated against those countries only recently to have joined the Panel. In making the process more open a wider array of participants would be able to contribute to the assessment and in turn they would have a greater sense of ownership of the report. By widening the access to the assessment, with participation driven by geopolitical imperatives, the final report could in this way be described as a universal, global statement on the science of climate change, its impacts and response strategies. Constrained by the demands of ensuring political credibility and legitimacy, IPCC members at this meeting saw it as essential that the assessment be viewed as open to participation by everyone.

On this same theme, the Second Session of the IPCC also saw strong support for the establishment of an IPCC Special Committee on the Participation of the Developing Countries.³⁰ After Tolba's opening statement on the issue, in which he noted with pleasure that more developing countries were present. He went on to point out that more financial and technical assistance, education and other concrete support mechanisms were needed immediately.³¹ In fact even with the heightened presence of developing countries at the plenary sessions of the IPCC, there was concern at their limited participation in the activities of WGs. Tolba invited further discussion of this issue following his warning that, "developing countries needed to be assured of full participation in all actions for limiting the emission of greenhouse gases and for preparing for global warming."³²

The subsequent discussions concerning the participation of developing countries in the activities of the Panel began by considering a report submitted by Saudi Arabia, Senegal, Brazil and Zimbabwe on the "Involvement of developing countries in the work of the IPCC." This report had been commissioned by the IPCC Bureau earlier in the year.³³ The ensuing discussion, according to the IPCC Report, "brought out clearly the enthusiasm on the part of the developing countries for the work of IPCC and their genuine concern about climate change."³⁴ As the IPCC was striving to take actions to create an inclusive and representative assessment, the inclusion of developing countries was specifically identified as being essential to this. Whether it was the developing countries, wanting an increased role, or the developed countries, wanting to portray the IPCC as universally accessible, issues around participation were at the fulcrum of the IPCC's political legitimacy.

While the pressures to speak to a wide audience, through the politics of participation, were widely broadcast, there remained an inherent bias towards Western scientists. And I suggest that the attempts to incorporate developing countries in the IPCC were largely tokenistic. Indeed the inclusion of developing countries in a process dominated by Western scientists (88% of all contributors to the First Assessment were from developed countries)³⁵ was more about gaining governmental assent than widening participation. The

³⁰ IPCC, *Report of the Second Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-3, (Nairobi, 28-30 June 1989)

³¹ *ibid.*, p. 2

³² *ibid.*

³³ IPCC Ad-hoc Sub-group, "Involvement of Developing Countries in the work of the Intergovernmental Panel on Climate Change" Annex III in IPCC, *Report of the Second Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-3, (Nairobi, 28-30 June 1989).

³⁴ IPCC, *Report of the Second Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-3, (Nairobi, 28-30 June 1989), p. 18.

³⁵ Claudia Ho-Lem, Hisham Zerriffi & Milind Kanlikar, "Who participates in the Intergovernmental Panel on Climate Change and why: A Quantitative assessment of the national representation of authors in the Intergovernmental Panel on Climate Change," *Global Environmental Change*, 21, (2011), pp. 1308-17.

intergovernmental aspect of the assessment allowed US policymakers to create a veneer of political legitimacy by suggesting the panel was, despite its overwhelmingly Western perspective, open to participation by everyone. Moreover, this also forcefully implied that the end-product could speak on behalf of the entire globe – East, West, North, South, developed and developing country alike.

Reception of the Report: Political Legitimacy and Scientific Credibility

The aim of the IPCC was to have the final assessment report available in the latter part of 1990. With this objective in mind, the IPCC's report from the Second Session in June 1989 charted a course for the following twelve months of activities. It was hoped that the report would be approved at its Fourth Session, due to be hosted by the Swedish government in August 1990. This would allow the report to feed into discussions at the SWCC, which had been deliberately delayed by two months to November 1990, especially for its last two days when several heads of state were expected to attend. The timetable of meetings would allow the Panel's findings to contribute directly to political discussions over the ways in which climate change could be limited, and/or adapted to, thus ensuring its saliency.

The interactions between the WGs, the IPCC Bureau (comprising the IPCC Chairman, Vice-Chairman and WG Chairs), and the delegates at the main plenary IPCC sessions in finalising the assessment report during these final stages was crucial to the subsequent reception of the report. The *dual legitimacy* – the appeals to both pillars of scientific and political legitimacy – was an important factor in ensuring the political relevance of the assessment in 1990, but it has subsequently opened the IPCC up to criticisms questioning the politicisation of the science used in the assessment. But I argue that it was the exceptional qualities of an intergovernmental assessment, namely the ability to speak authoritatively to scientific and political audiences, that meant the IPCC was able to cement itself as the central authoritative body providing information on climate related matters in the subsequent negotiations.

In order to ensure that the final report was received as scientifically credible the interim work of the WGs was thoroughly scrutinised. Following the Second IPCC Session in Nairobi and in the intervening 6 months leading up to the Third IPCC Session in February 1990 the lead authors of WGI organised “16 workshops [...] to prepare drafts of each of the sections.”³⁶ Each chapter lead author team was asked by Jenkins to include a round of peer review and the drafts were brought together for discussion at a meeting of the lead authors shortly after the Third IPCC Session later in February 1990.³⁷ Notifying the Panel of the WGs intention to hold this meeting, Jenkins indicated that it would ensure that the document was a “clear and concise statement of the current understanding of the climate change issue.”³⁸ This meeting was the last chance for the WGI task force to ensure some sort of coherence in the overall report. Thus, owing to the past experiences of Jenkins and Watson in the scientific and technical assessments of ozone depletion from the mid-1970s to the late-1980s, the WGI task force called upon the lead authors to contribute to an overarching ‘Summary for Policymakers’.

³⁶ IPCC, *Report of the Third Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-5, (Washington D.C., 5-7 February 1990), p. 18.

³⁷ Geoff Jenkins, *Interview with David Hirst*, (14 March 2012), UK.

³⁸ IPCC, *Report of the Third Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-5, (Washington D.C., 5-7 February 1990), p. 18.

At this meeting the final draft was scrutinised on a line-by-line basis. Notably, there was no governmental representation nor a formal process outlined. It was instead a conspicuous example of one of the ways in which a series of ad-hoc piecemeal decisions taken by the WGI task force on the working arrangements of the IPCC shaped the content of the assessment. Indeed, the fact that the meeting happened at all was at the insistence of the WGI task force. Driven by scientific considerations and a kind of crowd-sourced expert peer review, this meeting highlights the lengths the WGI task force went to in order to ensure the final report was perceived as scientifically credible.

The WGI authors were keen to ensure that summary, whilst politically motivated, maintained its scientific credibility. Drafted by Geoff Jenkins, John Mitchell, Chris Folland (UK Met Office), and Bob Watson the document was taken to the meeting of lead authors at the end of February to be scrutinised. During the course of the meeting, the draft was analysed, dissected and amended on the basis of clarity or scientific justifications. John Houghton, chairing the meeting, was quick to side-line anything he deemed to be a “policy-point,” because, as far as he was concerned, WGI dealt with the science, not the policy.³⁹ Clearly, Houghton, the lead authors and the WG task force were insistent upon scientific rigours, but issues around participation and the decision to mandate a policymaker’s summary was itself a political decision. Houghton’s assertion, therefore, ignores the very political nature of an *intergovernmental* as opposed to expert assessment. Through the involvement of governments in the selection, legitimation and endorsement of experts in the IPCC processes, the assessment, whilst clearly geared towards the production of a report with defensible scientific credentials, also had overtly political considerations shaping and guiding the IPCC’s processes.

In order to guarantee that the final report would be seen as a legitimate and globally representative; both the draft of the assessment and the policymaker’s summary were sent out to each government represented in the IPCC accompanied by a request to review the report and submit their concerns promptly. The responses that WGI received were mixed, with varying levels of engagement with the report. While some government reviews engaged the report superficially, often due to a significant dearth in appropriate expertise, others provided extensive comments and reviews. US contributions to the review process were the most extensive, closely followed by the Australian government’s responses. The Australian authorities, for example, convened a workshop under the auspices of the Australian Coordination Committee for the IPCC (ACCIPCC). At this workshop fifty five high level scientists and government officials from the Bureau of meteorology, university departments, the national science agency and several government departments met to review, assess and comment on the assessment.⁴⁰

While it was vitally important to the way the assessment was received that every country represented in the IPCC had the opportunity for their own input into the report. The American and Australian responses were in fact exceptional. The government responses from countries with a much less developed climate change program were much smaller scale, principally involving reviews from individual scientists from those countries.⁴¹ The Thai Government, for instance, had only one reviewer, P. Patvivatsiri, from the meteorological department in Bangkok. The WGI report was actually reviewed by only twenty-one of the thirty IPCC members States represented at the First Session of the IPCC in 1988. Therefore,

³⁹ John Houghton, *Interview with David Hirst*, (30 July 2012), UK.

⁴⁰ John Zillman, *Interview with David Hirst*, (26 March 2012), UK/Australia.

⁴¹ Geoff Jenkins, *Interview with David Hirst*, (14 March 2012), UK.

while there was significant attention paid to the pressures to present the assessment as being geographically, even globally, representative, the evidence to support these claims was lacking.

Despite these issues regarding geographic representation, the comments submitted by the governments were then used to prepare a second order draft. The WGI task force, headed up by Geoff Jenkins, weighed up the various review comments and attempted to formulate a balanced final draft. In May 1990, this draft was then taken to the final plenary meeting of WGI in Windsor, where it was discussed alongside the policymaker's summary. This final version of the report had therefore undergone at least two rounds of scientific peer reviewing, and had also been submitted to a round of government reviews. All of which contributed to the largely positive manner in which it was received by the scientific community, governments and the media.

At the final plenary meeting of WGI, the assessment report was unveiled to widespread media and political attention. However, it was not until later in 1990 that all three WGs of the IPCC finalised their drafts and compiled the reports for approval at the Fourth IPCC Session. So, in August 1990, the Fourth IPCC Session opened with the intention of approving the final assessment reports. In Obasi's opening address at the IPCC Fourth Session, he suggested that, "the importance of this meeting has been greatly enhanced by the reputation of which the IPCC has built up in the short two years of its existence, not only in scientific terms, but also in the political arena."⁴² Obasi went on to thank the "more than 1,000 specialists from 70 countries" for their work in contributing to "the most comprehensive international intergovernmental assessment ever undertaken of a serious environmental and scientific problem."⁴³

In addition to the size and scope of the First Assessment, praised so highly by Obasi, the Panel also agreed to arrive at its decisions by consensus.⁴⁴ This small, yet significant, caveat added to the report at the Fourth IPCC Session, essentially meant that the final assessment could justifiably be described as a product of all the governments, as each representative would have had to have signed up to the conclusions. Moreover, John Houghton's foreword to the published version of the IPCC's Scientific Assessment suggested that the peer review process "helped ensure a high degree of consensus amongst authors and reviewers regarding the results presented."⁴⁵ These two strands of consensus – political and scientific – were actively sought after and constructed throughout the assessment cycle.

The consensus agreement was essential to the IPCC defence when challenged by other agencies. The significance of this consensus agreement manifested itself as the report was disseminated after the IPCC approved the report in full. This is particularly evident in Bob Watson's experience in a meeting with, the White House Chief of Staff, John Sununu, and, Director of the Office of Management and Budget, Richard Darman two very influential voices during the first Bush presidency. Watson was called into this meeting by George H. W. Bush's presidential science advisor, Allan Bromley, to discuss the first draft of the policymaker's summary. In this meeting Sununu challenged Watson, in no uncertain terms,

⁴² IPCC, *Report of the Fourth Session of the WMO/UNEP Intergovernmental Panel on Climate Change*, IPCC-6, (Sundsvall, Sweden, 27-30 August 1990), p. 3.

⁴³ *ibid.*, p. 4.

⁴⁴ *ibid.*, p. 13.

⁴⁵ John Houghton, "Foreword," in IPCC, *Climate Change: The Scientific Assessment* (eds.) J. T. Houghton, G. J. Jenkins & J. J. Ephraums, (Cambridge University Press: Cambridge, 1990), p. v.

to explain why the WGI policymaker's summary was so "strong" and who had written it.⁴⁶ Watson explained that he, John Houghton, John Mitchell, and Geoff Jenkins had written it and that there was a process that was very straightforward – that it undergoes a peer review both by experts and by governments. Watson went on to stress that, "if there is indeed anything in there that can't be defended based on the evidence in working group one it will indeed be changed to be consistent."⁴⁷ Watson's defence of the assessment was based on the peer review mechanism, which meant that no one person or small group could be singled out. Neither Sununu nor Darman were particularly happy about the summary statements regarding dramatic emissions reductions. But the US willingly joined the rest of the IPCC in adopting the report at its Fourth Session. Sununu and Darman, ultimately, either felt they could not argue with the consensus, as they saw that it was based on, what Bob Watson had conveyed as, a solid scientific foundation. Or, they were at this stage unwilling to take a strong public stance opposing the WGI statement, believing that the WGIII report would have greater significance in the political negotiations anticipated to follow the report's publication.

Finally, the intergovernmental aspect of the assessment meant that there was a twin ownership of the outcomes. The involvement of leading scientists writing the reports gave the assessments scientific credibility. Meanwhile, the procedures established and ratified by the government representatives on the panel similarly gave the governments a sense of political ownership of the report. John Houghton felt that "it was absolutely key to the IPCC's progress that [it was] an intergovernmental body belonging to governments so that governments would take notice of us and that's been true ever since."⁴⁸ However, it is crucial that the IPCC assessment be understood as a report belonging to a select few governments and a selectively small scientific community. Hence, the ownership of the report by this group of influential governments, such as the US, prevented them from openly criticising it. The US administration had invested significant capital in legitimising the IPCC report in order to control the politics of climate change. Houghton's model of ownership is naively true, to a large extent, but substantially downplays the embedded political motivations behind the reports acceptance.

Conclusions

In this article I have focussed on the eighteen months of activities of IPCC WGI, culminating in the publication of the *Scientific Assessment of Climate Change* in 1990 and the accompanying *Summary for Policymakers*. I have shown how numerous ad hoc decisions – taken prior to the IPCC's first meeting, during the course of composing the assessments and at the plenary sessions of the IPCC – produced a report that was widely accepted as an authoritative assessment of the issue of climate change. To a large extent the authoritative status of the assessment was achieved through appeals to scientific credibility, political legitimacy and ultimately in the expeditious and salient publication of the report. But there was also significant political capital invested, most notably by the US administration, in legitimising the report in order to control the politics of climate change.

Throughout the assessment cycle, capitalising on the absence of a set of formal procedural guidelines, both the scientists and political representatives exerted an influence. Thus, it was through the actions and counter actions, of those involved in the IPCC plenary sessions and the minutiae of assessment writing, that the IPCC structures evolved. As a result

⁴⁶ Robert Watson, *Interview with David Hirst*, (13 February 2013), UK.

⁴⁷ Robert Watson, *Interview with David Hirst*, (13 February 2013), UK.

⁴⁸ John Houghton, *Interview with David Hirst*, (30 July 2012), UK.

the assessment's authoritative status was built on a *dual legitimacy*, specifically through its appeals to notions of both scientific credibility and political legitimacy.

The inauguration of the IPCC was accompanied by an initial exuberance of the scientists involved. Houghton, for instance looked to create a comprehensively science led technocratic review. The structures and checks introduced in the course of the reports assemblage, as a result of the WGI task force, drew heavily on practises deployed in previous assessments of climate change. In prioritising expert peer review and the “lead author” method of assembling the report, scientists were given (i) full authority to begin compiling the assessment, and (ii) full responsibility for checking and authorising its validity. Thus, the IPCC assessment, led by eminent scientists such as Bert Bolin and John Houghton, was able to project itself as scientifically credible.

In response, to the emergent control and power being wielded by scientists – shaping the assessment's priorities, activities, and report content – and because of the marginalisation of overt governmental representatives, the government representative sought to reassert their control over the IPCC. This was achieved, firstly, through the introduction of ‘core membership.’ This assured governments of their central role in the various WGs of the IPCC. Secondly, through the extension of the peer review process to include governments, and political representatives, Panel members were seeking to reassert their “ownership” of the report. This consequently transferred much of the control back from the scientists to the governments, and their representatives.

The unique, evolving nature of the IPCC allowed it to harness the often divergent forces of science and politics harmoniously. This was essential to the successful reception of the final report in November 1990. However, one underlying concern in November 1990 remained – that of true equitable geographical representation. While there were efforts made to involve as many countries as possible in the IPCC, the existing research and expertise remained firmly in the hands of Western, developed nations. The efforts to widen the inclusion of developing countries were at best tokenistic, and at worst, allowed US policymakers to include other countries in the assessment as a means to gain governmental assent to their policies. Ultimately, the authoritative status of the IPCC was achieved through a combination of its scientific credibility legitimised under the auspices of governments.