

THE TREATMENT OF CLIMATE CHANGE ISSUES

Evidence Submitted to the Stern Review

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1 *A dual opportunity*

We very much welcome both the setting up of the Stern Review and the chance to submit evidence to it. The Review could open up a new phase in the treatment by British governments of issues relating to climate change, and we hope that it will do so.

There is a dual opportunity here. *First*, the Review can serve a valuable purpose by contributing to public enlightenment and a better informed debate. *Second*, and more controversially, it could put to the test the widely accepted view that established official procedures and policies in this area, both within the UK and internationally, are soundly based and well judged. Here we make some observations under both these headings, focussing chiefly on the second.

To pursue the second line of inquiry would take the Review outside the realm of existing policy. The Whitehall announcement of the Review's establishment states that it 'takes place within the context of existing national and international climate change policy'. This emphasis on continuity is understandable. British policies here are well established, and they have kept their character under successive governments of both parties. Further, they are in line with, and influenced by, both formal international agreements and the reports of the Intergovernmental Panel on Climate Change (IPCC). In relation to these issues, there is a broad international consensus to which the UK is a party.

We believe, nevertheless, that this domestic and international consensus should not be taken as beyond question. Reasons for querying it have recently been put forward in a notable report from the House of Lords Select Committee on Economic Affairs.² This report has made a major contribution to public debate. It has voiced serious concerns about 'national and international climate change policy', concerns which in our opinion have not been met by the government's recently-published official response to it (hereafter referred to as the Response), which has been issued by the responsible

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² The report was published in July 2005 in two volumes (London, The Stationery Office Limited). Volume I contains the report itself, and Volume II the evidence given to the Committee. Byatt, Henderson and Robinson, acting separately, all submitted evidence.

ministry which is the Department of the Environment, Food and Rural Affairs (DEFRA).³ In the light of the report, and for reasons that are outlined in Section 3 below, we hope that Sir Nicholas Stern and his team, in designing and drafting the Review, will be prepared, first, to subject consensus claims, procedures and policies, both British and international, to critical examination, and second, to suggest ways in which the treatment of climate change issues by governments generally could be improved. A similar hope has been voiced by the Chairman of the House of Lords Select Committee, Lord Wakeham.

For the Review team to take this path would mean treating as still open a range of issues which the government, most recently through the Response, apparently views as long since closed. However, setting a broad agenda for the Review would be consistent with another statement made in the Whitehall announcement, that the Review team 'will conduct a comprehensive review of the evidence with a focus on implications for policy'. We think that to realise its full potential for good the Review should indeed be comprehensive, and we therefore hope that the team will not be unduly constrained in defining and carrying out its task.

2 *Informing the economic debate*

General aspects

The Review's terms of reference provide for a wide-ranging analysis of the economics of climate change, and Sir Nicholas Stern himself has stressed the 'need to have a deep understanding of the economics of this complex problem'. This is all to the good. Within the array of topics and issues thus opened up, we would mention six in particular.

- A matter needing more attention is the costs to people in Britain, current and prospective, of measures already decided on which are designed for the purpose of reducing emissions of CO₂. These costs should be identified and documented more fully than has as yet been done, and provision should be made for keeping the figures up to date.
- More broadly, there is a wide range of estimates of the prospective costs of emissions abatement, and, in particular, of putting into effect the Kyoto Agreement. These differences could be reviewed and commented on.
- A general issue, raised by all three of us who gave evidence to the House of Lords Select Committee, is the extent to which it is necessary or prudent to base policies so heavily on the results of quantitative modelling exercises which extend into the distant future. In this connection, special attention should be given to the long-term scenarios that were commissioned by the IPCC and published in 2000 in the *Special Report on Emissions Scenarios* (SRES). More on this below.
- The treatment of uncertainty is a pervasive issue. One instance where it arises is to be seen in two contrasting arguments that were put in evidence to the Select Committee. On the one hand, there is the view which we incline to, that the kinds

³ The Response was published as an appendix to the Select Committee report at the end of November 2005. One of us (Henderson) has commented on some aspects of it in a note to be published in *Energy and Environment*. Meanwhile, the note has been posted on Benny Peiser's CCNet website.

of far-reaching commitments to emissions reductions that countries including Britain have taken represent, in the present highly uncertain state of knowledge, an over-reaction. We take the extent of uncertainty as a reason for not pursuing such radical measures right now. By contrast, Professor Dennis Anderson argued in his evidence that economists have tended to underestimate the prospective benefits of abating the possible damage from climate change, and that ‘when uncertainties are large, and when the effects of not investing would be irreversible, the best policy is to develop options... for responding to climate change’. Since options cannot be developed without investment, he supports policies to encourage R&D and innovation in carbon-neutral technologies and practices.

- The Review could usefully examine the extent to which responses by economic actors to changing market signals could provide a way of adapting to the possible or likely consequences, especially deleterious consequences, of changing climatic conditions. It would be helpful for the Review to comment on the extent to which economic instruments have been used to curb CO₂ emissions, and the lessons which emerge from this experience; to compare the use of these instruments with the alternative approach of government-sponsored investment programmes; and to assess the merits of different proposals that have been made for market-based internationally agreed action.
- The Review could also usefully document and comment on the disagreements that are now to be seen among economists in relation to these issues.⁴ These typically arise from divergent linked perceptions. On the one hand, those who stress the possibly high costs of programmes to reduce emissions substantially are often wary of what they suspect may be exaggerated or even alarmist visions of the likely extent of global warming and the damage that may result from it. By contrast, those who believe that the threats of warming and consequential damage must be taken seriously are typically inclined to believe that the costs of bringing down emissions would not be heavy: a recent instance is the 25 American economists who issued a statement on 5 December.

The specific relevance of AR4

Under these and other headings, the Review team will no doubt survey what has been written on the various aspects of the economic dimension. Prominent among these writings, since they count as up-to-date and wide-ranging sources, are the draft reports of the IPCC’s Working Groups II and III, which have now been circulated for comment to those participating in the prescribed review process. In final form, together with the counterpart report from Working Group I, these two documents will make up the Panel’s Fourth Assessment Report (AR4). The drafts are now being subjected, in accordance with IPCC procedure, to a first-stage expert review. Each chapter in the reports aims to take full account of what has recently been written on its subject-matter.

In the Whitehall announcement it is said that ‘The findings of the Review will contribute to the ongoing international assessments and discussion of climate change policy, including ... the forthcoming IPCC Fourth Assessment Report’. Taken literally, this is a questionable statement. By the time the Review is completed, in the autumn of 2006, it may be too late for the final text to be taken into account in what

⁴ Other professional groups have divergences and disagreements of their own.

will then be the last stages of AR4. However, the Review process could usefully take account of the AR4 process *from now on*, in a number of ways.

First, and as noted, the Review team can gain access to WGII and WGIII drafts (which are not public documents), and use them as a source of information and ideas.

Second, it should be possible for the team to contribute to the second-stage 'Expert and Government' review of these drafts, with comments and suggestions of their own. In this connection, the SRES emissions scenarios constitute one of the leading topics for review. The scenarios formed the point of departure for the IPCC's Third Assessment Report, and they are being re-used in AR4. The House of Lords Select Committee said that 'a reappraisal of the scenarios exercise is urgently needed', but in the Response it is argued that 'the current IPCC scenarios are still fit for informing the climate change debate'. We think that the Select Committee was right. Even leaving aside the serious criticisms that have been made of the SRES exercise, which are not answered in the misleading observations which the Response makes on the subject, there is the question of obsolescence. These scenarios are already dated, and will be more so by the time that AR4 is published in 2007.

Third, one of the tasks of the Review team, in our view, should be to judge how far the treatment of economic issues by the IPCC is adequate, and to what extent the various criticisms that have been made of it, which are by no means restricted to the scenarios, deserve to be taken seriously. They should scrutinise the draft texts for evidence that bears on the strengths, weaknesses and claims of the IPCC process.

This brings us to the central issue of the role and status of the IPCC and the reasons why this should be explicitly considered in the Review.

3 The role and status of the IPCC

As can be seen from the Response, the British government is a strong supporter of the IPCC and its procedures, and its confidence in the Panel is shared by other member governments. Since its establishment in 1988, the Panel has come a long way. It has completed and published three massive and agreed reports, covering the whole range of issues relating to climate change. In producing these reports, it has brought together teams comprising over 2,000 specialists across the world and put in place ordered procedures for directing their work: it has thus created both an effectively-functioning *process* and an extensive professional *milieu*. It has secured for its reports and their conclusions the endorsement of its many and diverse member governments; and in consequence, it has informed the thinking of those governments and prompted decisions by them. Its many participants and outside supporters argue that it has created a world-wide scientific consensus, based on an informed and objective professional assessment, which provides a sound basis for policy.

Last, and especially to be noted, the IPCC has established itself, in the eyes of its member governments, as *their sole authoritative source* of information, evidence, analysis, interpretation and advice on the whole range of issues relating to climate change. It has acquired a monopoly position.

There are good reasons to query the claims to authority and representative status that are made by and on behalf of the IPCC, and hence to be concerned about the monopoly that it now holds.

To begin with, the principle of creating a single would-be authoritative fount of wisdom is itself open to doubt. Even if the IPCC process were indisputably and consistently rigorous, objective and professionally watertight, it is imprudent for governments to place exclusive reliance, in matters of great complexity where huge uncertainties prevail, on a single source of analysis and advice and a single process of inquiry. Viewed in this light, the very notion of setting consensus as an aim appears as questionable if not ill-judged.

In any case, the ideal conditions have not been realised. The IPCC process is far from being a model of rigour, inclusiveness and objectivity. In particular:

- Its treatment of economic issues is flawed. Writings that feature in the Panel's Third Assessment Report contain what many economists and economic statisticians would regard as basic errors, showing a lack of awareness of relevant published sources; and the same is true of more recent IPCC-related writings, as also of material published by the United Nations Environment Programme which is one of the Panel's two parent agencies. In this area, the IPCC milieu is neither fully competent nor adequately representative.⁵
- The built-in process of peer review, which the IPCC (and the British government with it) view as a guarantee of quality, does not adequately serve this purpose, for two reasons. First, providing for peer review is no safeguard against dubious assumptions, arguments and conclusions if the peers are largely drawn from the same restricted professional milieu. Second, the peer review process *as such*, here as elsewhere, may be insufficiently searching. As Ross McKittrick has pointed out, its main purpose is to elicit expert advice on whether a paper is worth publishing in a particular journal. Because it does not normally go beyond this, '...peer review does not typically guarantee that data and methods are open to scrutiny or that results are reproducible.'⁶
- In response to criticisms that have been made of published and peer-reviewed work that the IPCC has drawn on, the authors concerned have failed to make full and voluntary disclosure of data and sources. A leading instance of this, referred to in Ross McKittrick's evidence to the Select Committee, is the much-publicised 'hockey-stick' study which featured in the IPCC's Third Assessment Report. The issue has been raised, with reference also to another case, in evidence which David Holland has submitted to the Review. In evidence to the Select Committee, Holland pointed to the need 'to elevate auditing or replication above peer review and reputation'.
- The response of the Panel's directing circle and milieu to informed criticism has typically been inadequate or dismissive, a fact that was noted by the Select

⁵ One of us (Henderson) and a former Head of the Australian Bureau of Statistics, Ian Castles, have jointly advanced over the past three years a critique of the IPCC's economic work, while authors involved in that work have contested these criticisms. The whole debate is reviewed and carried further in a recent article by Henderson entitled 'SRES, IPCC, and the Treatment of Economic Issues: What Has Emerged?' (*Energy and Environment*, Volume 16 No. 3 & 4, 2005).

⁶ 'Science and Environmental Policy-Making: Bias-Proofing the Assessment Process', *Canadian Journal of Agricultural Economics*, Vol 53, 2005, p. 289.

Committee and is well illustrated by the hockey-stick affair.⁷ The Response itself provides an up-to-date and conspicuous example: it does not so much address the arguments made by the House of Lords Select Committee as restate, reflex-like, the Whitehall and IPCC party line

For all these reasons, we hope that the Review will look closely at the claims to objectivity and authoritative status of IPCC reports, and the claims to inclusiveness of its procedures.

4 Lines of action

Besides throwing new analytical and quantitative light on the economic issues that are raised by climate change, the Review should spell out some desirable directions of change. Several of these are already apparent: they do not depend on new arguments or evidence.

The economic dimension

The treatment of economic issues within the IPCC process can be made more professionally representative and watertight only if new participants are brought into it. This can be achieved only if and in so far as member governments act to make it happen: the IPCC milieu appears impervious to outside criticism.

For the UK, this implies, first and foremost, that the Treasury in particular should become and remain seriously involved; and this should be made one of the main outcomes of the Review. The Response states (p. 4) that ‘the Treasury has since the outset played an integral role in the development of UK climate change policy’, but such reassuring language is not consistent with the continued failure on the Treasury’s part even to notice, still less to act on, the questionable treatment of economic issues within the IPCC process

In the handling of some leading statistical questions, the National Statistics Office should also be brought in. We would urge the Review team to consult the NSO accordingly.

At the international level, similar involvement is needed on the part of central economic departments of state in other countries; and fortunately, there is a procedure at hand by which a group of these, from the 30 member countries of the Organisation for Economic Cooperation and Development (OECD), can become involved collectively, to good effect and without delay.

The mechanism for this is the OECD itself. A distinctive feature of the Organisation is that *it is the only international agency in which ministers and officials from these central departments and agencies are able, if they so wish, to review systematically issues across the whole spectrum of microeconomic and 'structural' policies.* They

⁷ In the case of the Castles-Henderson critique, the IPCC itself, through its Chairman, has formally classed both authors among purveyors of ‘disinformation’ and described them, mysteriously, as ‘so-called “two independent commentators”’.

can do so, with Secretariat back-up from the OECD's Economics Department, in and through the Organisation's Economic Policy Committee (EPC) which is *their* committee. The EPC delegates should place IPCC-related economic issues on the Committee's agenda: at their next meeting, they should instruct the Secretariat to prepare for them a short paper on the subject in the context of AR4. The paper would be placed on the agenda for the EPC's subsequent meeting, in six months' time: it should be a concise review, not a research-based study with a long gestation period. While it would be prepared in the OECD's Economics Department, the authors would be able – and indeed, required – to work closely with Secretariat colleagues in the Environment and Statistics Directorates of the Organisation. It is a unique advantage of the OECD that such exchanges can readily take place within it, so that cross-departmental issues and differences of view can be fully aired and debated within the Secretariat and across committees of officials.

We hope that the Review will lend support to this idea, and that meanwhile it will be taken up in the New Year by the British government.

It is not just at the official level that the IPCC process and milieu should be broadened. Besides wider agency participation, a broader spectrum of academics should be brought in: in particular, attempts should be made to involve historically minded economists and economic historians. Given the IPCC's non-responsiveness to outsiders, only firm action by governments can ensure that such a broadening is achieved.

Wider aspects: audit and scrutiny

It is not only in relation to economic aspects that a need arises to make the IPCC process more professionally watertight; as noted above, one reform that needs to be introduced, across the board, is provision for full disclosure. We suggest that the Review team should note, and recommend for general adoption within IPCC procedures, the practice that has now been adopted by the editors of the *American Economic Review*. They now require of articles submitted, as a precondition for publication, that data and computer code, in sufficient detail to permit replication by others, should be archived on the journal's website.

In this connection, Ross McKittrick has proposed the establishment of a formal audit procedure within the IPCC process. There would be an Audit Panel, appointed by member governments, and comprising experts not connected with climate science, which would ensure that, in relation to studies that the IPCC draws on, full disclosure conditions are met. Alternatively, individual governments, or groupings of governments – for example in the OECD or the European Commission - could act to establish audit rules and mechanisms of their own. Even now, in the context of AR4, there could be action on specific key studies to ensure full disclosure.

Wider aspects: challenging the IPCC's monopoly

The two proposals just outlined, for a broadening of IPCC participants and an audit procedure, would improve the now firmly established IPCC process. But they would leave the process, and the Panel's status, unchanged in two fundamental respects. First, the aim of the process would still be to produce a single consensus view, with

reservations and dissent blocked out or played down. Second, the IPCC would retain its monopoly position.

We believe that the time has come to question both these working assumptions. Where there are pervasive uncertainties and wide differences of opinion, a striving after consensus is not appropriate, while it is unwise to place exclusive reliance on a single authorised source. This consideration would hold good even if the record of the IPCC were above question, which it is not. As in other spheres of action, provision should be made, in this case by governments, for establishing ‘balance, disclosure and due diligence’ in the conduct of the debate on climate change.⁸

In order to achieve this result, governments may need to go further down the road of full scrutiny, by arranging for the preparation and publication of alternative and rival studies and assessments to those of the IPCC. They could make formal provision for tapping a wider range of opinions, sources and expertise. So far from playing down differences of view in the interests of arriving at consensus, contrasting informed assessments would be commissioned, funded and published.

We hope that radical ideas of this kind will not be ruled out by the Review team. An argument can be made that a group which is charged with the task of reviewing the economics of climate change should steer clear of commenting on the IPCC process as a whole. As against this, however, it is worth noting that the same could have been said of the House of Lords Select Committee: their chosen subject was precisely the same, yet they found themselves drawn into reviewing, and querying, the IPCC’s role and conduct. It is a striking fact that a group of eminent, experienced and responsible persons, drawn from a national legislative body and spanning the political spectrum, with the help of an internationally recognised expert adviser and after taking and weighing expert evidence, has published a carefully considered and unanimous report on ‘economic aspects of climate change’ in which, among other things, the work and role of the Panel are put in serious question. We consider that the Stern Review should explicitly treat the issues that the Select Committee thus raised, and do so in a more objective, thoroughgoing and informed way than the government’s Response. By taking this course, the Review could mark a new departure in the thinking not only of the British government but of others too.

⁸ These terms are taken from the title of a perceptive paper by McKittrick: ‘Bringing Balance, Disclosure and Due Diligence into Science-Based Policymaking’. In Porter, Jene (ed.) *Public Science in Liberal Democracy: The Challenge to Science and Democracy*, University of Toronto Press, forthcoming.