Institutions Working Group Theme Paper:
The Science/Policy Interface and
The Role of Participation in Assessment Processes

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The Global Environmental Assessment (GEA) project is a collaborative team study of global environmental assessment as a link between science and policy. The Team is based at Harvard University. The project has two principal objectives. The first is to develop a more realistic and synoptic model of the actual relationships among science, assessment, and management in social responses to global change, and to use that model to understand, critique, and improve current practice of assessment as a bridge between science and policy making. The second is to elucidate a strategy of adaptive assessment and policy for global environmental problems, along with the methods and institutions to implement such a strategy in the real world.

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Publication abstracts of the GEA Project can be found on the GEA Web Page at http://environment.harvard.edu/gea. Further information on the Global Environmental Assessment project can be obtained from the Project Associate Director, Nancy Dickson, Belfer Center for Science and International Affairs, Kennedy School of Government, Harvard University, 79 JFK Street, Cambridge, MA 02138, telephone (617) 496-9469, telefax (617) 495-8963, Email nancy_dickson@harvard.edu.

1 Comments made by Bill Clark and Ron Mitchell on an earlier draft are gratefully acknowledged.
Introduction

The Working Group will examine the experience with European and US assessment processes dealing with the long range transport of tropospheric pollutants and consider the possible implications for design of assessments on the issues of acid rain, tropospheric ozone and climate change in the U.S. In doing so, it will continue to address themes raised during the first half of the week: the characteristics of particular institutions and their role in influencing the assessment process and the outcomes of assessment; the extent of political control and influence in the assessment process; and the ways in which links between institutions, information and social/political actors influence the assessment process and its outcomes.

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<th>Session 1 – Boundaries</th>
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<td>How have the boundaries between science and politics been negotiated in the tropospheric pollution assessments? What have the consequences been for the credibility and effectiveness of those assessments?</td>
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<td>How does the political context shape the assessment process?</td>
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The first day will address the interactions between science and politics in the creation of useful assessments. The central question here is how an assessment process can be designed that avoids the twin pitfalls of scientific credibility but political irrelevance on the one hand, and political utility bought at the expense of scientific credibility on the other. This question arises because of the different aims of science and politics, which are being brought together in an assessment process. Two short pieces of background reading illustrate the underlying debate. The piece from Kai Lee (Compass and Gyroscope) illustrates the dilemma that "Science and politics serve different purposes. Politics aims at the responsible use of power; in a democracy, ‘responsible’ means accountable to voters. Science aims at finding truths - results that withstand the scrutiny of ones’ fellow scientists…” Between them are roles of ‘administrator’ and ‘professional analyst / modeler’. One person or institution can’t play multiple roles simultaneously without risking loss of legitimacy. The second piece of background reading (Sheila Jasanoff, The Fifth Branch) looks at how the challenge of producing politically relevant but scientifically credible advice has been resolved by “boundary negotiations” between scientists and policy-makers involved in the regulatory process. The Working Group will explore the relevance of this “boundary negotiation” concept to international environmental assessments.

How have participants in assessment processes dealt with the balancing between scientific credibility and political utility? The paper by Farrell and Keating concludes that one important feature of the LRTAP process has been that the assessors (i.e. technically trained individuals conducting research) exerted a substantial influence on the content and focus of international agreements through decisions on what to include and what to leave out in mathematical models and through their interpretation of results.

The interesting negotiation and renegotiation of boundaries between science and politics in the European acid rain case is also the focus of Patt's paper, which shows that as the LRTAP regime developed, the
actors involved chose to center analysis on ecosystem damage and not on human health impacts. This choice significantly influenced the assessment process and the design of policy solutions. The decision to base policy on critical loads for ecosystems rather than on emission reductions to improve human health appears to have been based on political considerations, since, according to the studies cited by Patt, the economic damages from health effects in Europe far exceed those from damages to materials or crops. Patt's conclusions also suggest that when future policy-makers and assessment teams attempt to base decisions on scientific understanding, they will again confront the pressure to omit impacts, and narrow the problem. As Europe moves towards a multiple-pollutants, multi-effects protocol there appear to be significant obstacles ahead. It is suggested that the Working Group discuss the selection of the critical loads approach in Europe both as an example of the boundary negotiation between science and politics and in terms of the challenges that lie ahead.

In what ways does the political context within which an assessment process is embedded affect that process? Answers to this question can be found by looking at the use of the same assessments in different political contexts. Within Europe, policies to deal with long-range transport of tropospheric pollutants are not only developed within the LRTAP regime, but also increasingly by the European Union. Farrell and Keating point out that the assessments of ozone control performed for the European Union are often exactly identical to those conducted under the LRTAP convention, but with the important difference that EU legislation is basically legally binding for all of the EU countries, while they can still choose whether to sign and ratify a LRTAP protocol. The EU legislation could push actual requirements at the national level past the point where purely domestic concerns would place them (Farrell and Keating). The EU Directives on air quality have forged a tighter link between assessment and policy (Farrell and Keating). In the US, according to Farrell and Keating, the assessments of the Ozone Transport Assessment Group (OTAG) played a similar role in decision-making as the LRTAP assessments.

**Session 2 – Participation**

| How does the decision of who participates in an assessment process influence the effectiveness of the assessment? How can participation be managed to maximize assessment legitimacy and impact? |
| How should one design a participatory process that doesn't lead to an undermining of technical quality? |
| How should one design an assessment process that is robust to the challenges of skeptics, who do not participate? |

The second session will consider participation, which is a topic covered from several points of view in a number of the fellows' papers. There are several important questions with regard to "participation in assessments" that have implications for the design of future assessments. Of particular interest is the question of the importance of participation as a determinant of the influence or effectiveness of an assessment. A second issue is whether there is a trade-off between assessment 'quality' and assessment participation.

The Farrell and Keating paper illustrates some of the different characteristics of participation in the European and US assessment activities. For example, while environmental NGOs rarely participate in LRTAP negotiations, NGO participation in EU activities partially reflects a recognition that EU Directives open up new avenues for pressuring national governments. The US Ozone Transport Assessment Group shows other different characteristics of participation.
Botcheva’s paper shows that while wide political participation might be a commendable quality of an assessment process, it is often difficult to achieve and the ability to design a sufficiently participatory process without undermining its technical quality depends on the institutional framework within which it is embedded. These are clearly points that can be discussed further with regard to their implications for the design of future assessment processes. The paper by Botcheva elaborates the mechanism through which the nature of participation is likely to affect the credibility of the information being communicated through an international assessment process. The study is based on information about the use and perceived credibility of different economic assessments in Poland and Bulgaria. The study shows that in Poland the inclusion of multiple political perspectives in a knowledge-building process enhances its credibility and communication power to multiple audiences. Building such a participatory assessment process involves complex interactions between relevant actors and technical experts and requires a considerable institutional capacity to facilitate such interactions without sacrificing academic quality. Domestic institutional and expert capacity played an important role in this participatory process.

The issue of participation is also the focus of the paper by vanDeveer, who looks at the level and nature of Eastern European transition countries’ participation in LRTAP. The research suggests that it would be valuable to pay closer attention to cross-national differences in participation in scientific and technical bodies and in the use of various assessment processes and outcomes. The participation of transition countries in LRTAP meetings is probably lower now than it was before economic transition began and this will presumably have an important influence on the outcome of ongoing negotiations.

The participation of non-state actors is the focus of the paper by Samson, who points out that while in principle all participants in an assessment could be considered equal, in practice some are clearly ‘more equal than others’. Therefore it is relevant to examine the kinds of participants in assessment in terms of their relative influence, how they become engaged in the process and the roles of assessment process and context in determining participation. On the other hand, Franz’s paper shows the importance of also considering actors not ostensibly included in the assessment process (non-participants), who become vocal critics of the outcome of the assessment process. In the climate debate, the skeptics disagreed with the views presented by statements that are labeled by many (including the skeptics) as consensus statements (or so-called consensus statements) on the science of climate change. The skeptics have also made serious attempts to undermine the legitimacy of the IPCC. How can we design assessment processes that are more robust to the challenges of skeptics?

### Session 3 -- Improving Assessment Processes

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<th>What have we learned about the science/politics interface and about participation in the assessment process that gives guidance for the design of future assessments?</th>
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<td>What are the pitfalls to be avoided in assessment practice?</td>
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Two main points will be addressed in this final session. The first is to summarize insights gained from looking at the European and US experience with respect to acid rain and tropospheric ozone, in particular with regard to the interplay between the science and policy realms and the role of participation, and consider their implications for the design of future assessments, building, where possible, also on the insights gained during the Bar Harbor Workshop in 1997. In particular, in 1997 the project identified a number of pitfalls for assessment processes that were largely based on experience with climate assessments. These should be
reexamined in the light of the European and US experience with assessments of the long-range transport of tropospheric pollutants. Secondly, the GEA project intends to extend the comparative elements of its research in 1998/99 by looking in more detail at the assessment processes in developing countries. This year's research has uncovered a number of elements of difference and similarity between assessment processes and outcomes in the US and Europe. These results surely have implications for the research design of next year's study and will be explored briefly at the end of the meeting.
REFERENCES


ENDNOTES

1 The major pitfalls identified were: ignoring the context (political, social, economic, scientific) in which the assessment process was embedded; ignoring the needs of potential users, ignoring past experience, inappropriate participation; creating a national/international science-policy mismatch; and follow-up failure.