Public Participation in Sustainability Science.

A Handbook

Edited by

Bernd Kasemir, Jill Jäger, Carlo C. Jaeger, and Matthew T. Gardner

CHAPTER EIGHT

COOL: exploring options for carbon dioxide reduction in a participatory mode

Willemijn Tuinstra, Marleen van de Kerkhof, Matthijs Hisscheméller, and Arthur Mol

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Public participation in sustainability science.

This book discusses how citizens can participate more effectively in sustainability science and environmental policy debates. It discusses designs for participatory procedures, and experiences of their application to issues of global change. While the focus is on citizen participation, the involvement of specific stakeholders – including water managers and venture capitalists – is also addressed. The book describes how focus group methods were combined with the interactive use of computer models into new forms of participation, tested with six hundred citizens. The results are discussed in relation to important sustainability topics, including greenhouse gas and water management. By combining this with an examination of issues of interactive governance and developing country participation, the book provides state-of-the-art, practical insights for students, researchers and policy-makers alike.

BERND KASEMIR is a research fellow at the John F. Kennedy School of Government at Harvard University. He is also a Director of SustainServ Consulting, Zurich, and of the Sustainable Mobility Intelligence Group, Boston.

JILL JÄGER is the former Executive Director of the International Human Dimensions Programme on Global Environmental Change (IHDP), Bonn.

CARLO JAEGER is Head of the Social Systems Department at the Potsdam Institute for Climate Impact Research (PIK), and Professor of Modelling Social Systems at the University of Potsdam.

MATTHEW GARDNER is Program Administrator of the Earth System Initiative at the Massachusetts Institute of Technology (MIT). He is also a Director of the Sustainable Mobility Intelligence Group, Boston.

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Introduction

The ULYSSES study has been an interesting exercise, unique in its variety of research groups spread all over Europe with different research backgrounds and different foci, yet all embarking on a shared voyage. What does this experience teach us for other initiatives of participatory projects? What news do the voyagers bring to the ones ashore and what do they tell about new coasts and the adventures on their way?

We address this question from the point of view of researchers taking up a similar endeavor, though with a different starting point and looking from a different angle. The authors are involved in the Climate OptiOns for the Long term Project (COOL). The Dutch COOL project focuses on long-term (up to 2050) options to realize far-reaching carbon dioxide emission reductions.[1] Stakeholder dialogues are central to this project. As in the study discussed in the first parts of this volume, the use of knowledge and know-how of experts other than scientific experts is an important element in COOL.

In this chapter we discuss experiences from the ULYSSES project that are especially relevant for other Participatory Integrated Assessment projects like COOL. We will start with a short introduction to the COOL project in order to make clear why the ULYSSES experiences are relevant for COOL. This includes some reflection on differences and similarities between the two research efforts. Then we turn to specific experiences gained from ULYSSES, which focus on the process, the outcomes, and the multilayered purpose of the project. Within the scope of this chapter this cannot be a thorough analysis. Rather we give snap-shots of outcomes

[1] The COOL project is financed by the Dutch Research programme on Global Air pollution and climate change. By the time of publishing this chapter, the project has already been concluded. See for more information and final reports: http://www.nop.nl/cool

and experiences from the ULYSSES project relevant to other projects, especially the Dutch COOL project. We conclude with a short comment on the need for gaining experience with this kind of process.

Climate OptiOns for the Long term

General

Central to the COOL project is a series of so-called dialogue meetings in which stakeholders from industry and business, environmental and consumer NGOs, and unions, as well as stakeholders at different levels of government, elaborate long-term strategies for realizing 50–80 per cent carbon dioxide emission reductions by 2050 (compared to 1990 levels). It is important to note that the COOL project, unlike ULYSSES, does not involve "citizens" as such, but stakeholders giving input from their professional background. The Dialogues in the COOL project run simultaneously at three different levels: the national (Dutch) level, the European level, and the global level.

The National Dialogue includes four different sector groups: Industry and Energy, Agriculture, Traffic and Transport, and Housing. Each sector group consists of a balanced selection of stakeholders.[2] On the European level two sector groups meet: Transport and Industry/Energy. The participants have similar backgrounds to those of the participants in the National Dialogue, with the difference that they are operating on a European level. The composition of the Global Dialogue Group is somewhat different: this is one group, which includes representatives of the countries in the United Nations Framework Convention on Climate Change (UN-FCCC) process and of only a limited number of environmental and business NGOs.

The groups meet several times over a period of 14 months; the groups in the National Dialogue seven times, and the groups in the European and Global Dialogues four times. In this chapter we focus mainly on the National and European Dialogues.

Scientific input

Scientific input in the COOL dialogues is organized in various ways. Unlike in IA Focus Groups, in the COOL National and European Dialogues

[2] The sector Industry and Energy in the National Dialogue, for example, includes participants from, among others, the National Investment Bank, Greenpeace, Akzo Nobel, the Ministry of Economic Affairs, the Ministry of Environment, CORUS B.V., Shell International, the Centre for Church and World, and the Dutch Centre for clean technology.

computer simulations and models are not directly used during the discussions themselves. Only in the COOL Global Dialogue do the participants interactively use a computer model. In the other Dialogues a special scientific team prepares background documents and fact sheets. During each meeting, participants can formulate questions, which, if possible, are answered in the next session, taking into account different sources and pointing out the uncertainties. Also it is possible to invite special guests to the sessions to give their views on subjects on which neither the scientific team nor the participants feel that they have enough expertise. Another task of the scientific team is to do background calculations for the various steps toward the strategic visions as constructed by the participants. As in the ULYSSES research, the roles of the scientific team and the project team guiding the process are separated.

Though the processing of scientific information for stakeholders is central in all three of the COOL Dialogues, the purpose of this is not to make stakeholders familiar with climate science as such; rather, the dialogue groups generate ideas that are substantiated by scientific evidence and arguments, and they conduct a kind of extended peer review. The dialogue groups react to and evaluate the knowledge offered in terms of relevance for participants' visions and their specific information needs.

Participatory approach

In its approach to Integrated Environmental Assessment (IEA) the COOL project intends to apply and to blend both analytical methods and participatory methods (for an overview of relevant methods, see Rotmans 1998). With the need for a participatory approach some important observations can be made. First, climate change constitutes a so-called unstructured problem for public policy. Unstructured problems involve major uncertainties about what knowledge is relevant for understanding and addressing the issue, and uncertainties and conflicts about the values at stake (Hisschemöller 1993). Second, many stakeholders perceive the issue as remote in time, space, and personal experience, and hence not really as an issue of direct concern, whereas for others, the stakes can be very high, especially for those actors who are directly affected by the climate change policy. The third observation relates to differences in scale and levels of abstractness. The conceptualization of the climate problem and solutions from a global perspective do not easily match the priority given to problems and solutions at the local level. The dialogue should be designed in such a way that the participants have sufficient freedom to address their own policy questions and information needs, but at the same time should produce strategic visions

that concentrate on reducing carbon dioxide emissions. In the IA Focus Groups discussed in previous chapters, the concept of urban lifestyles is used to bring the climate change problem more in line with the context of the daily life of the citizen. In the same way, in the COOL project participants are asked to connect climate policy to strategic visions for one particular sector.

In the design of the COOL Dialogues several aspects of participation play a role. Following Mayer (1997), and Mayer and Geurts (1998), we mention here a few of these aspects: mediation (What do participants know about mutual values? What level of consensus can they reach?). Coordination (What interdisciplinary knowledge should participants generate?). Coproduction (What is the relation with other policy issues or sectors? What shared responsibility can participants achieve?). And learning (Are core knowledge and attitudes changing? Are new styles and approaches to policy-making explored?). These aspects can also be found in the research discussed in the first two parts of this volume.

Differences between COOL and ULYSSES

It should be noted that there are some major differences between the ULYSSES and COOL projects, which limit the extent to which comparisons can be made and lessons drawn. One important difference has already been mentioned: ULYSSES explicitly focuses on ordinary citizens, while COOL focuses on specific stakeholder groups in certain sectors of society. Another difference is that COOL has a clear focus on the long term (2050) and a clear radical environmental goal (−80 per cent carbon dioxide emissions) determined by the project team in advance, and explored by the participants in terms of feasibility at the end of the dialogue. In ULYSSES, setting the final goal was part of the dialogue process.

Thus, ULYSSES and COOL have quite different starting points. However, the experiences from ULYSSES can be of great relevance for COOL, both in terms of process and of substance.

Learning from experiences

Process

The rationale of the ULYSSES study is described in Chapter 1 of this volume. Within the research field of Integrated Assessment (IA) there is a need to develop participatory procedures for the involvement of stakeholders, ranging from ordinary citizens to business people. Within the context of the climate change debate, the background for this need is that

if an effective climate policy is to emerge, actions taking place at the level of national and international environmental policy must be combined with actions involving various kinds of stakeholders. Without integrating the points of view of citizens and other stakeholders, environmental policy runs the risk of getting stalled in the early implementation phase.

However, what is important here is not simply getting policy advice from stakeholders or consensus statements from citizens resulting from a negotiation process. Not just words count, but webs of argumentation and stakeholders' underlying assumptions (Mason and Mitroff 1981). This was a starting point for the research in ULYSSES, and it is an important point to keep in mind for research groups undertaking similar processes.

The lines of argumentation are as important as the statements or conclusions. Revealing lines of argumentation facilitates the learning of the participants from each other during the process. It also helps to clarify the context of statements and conclusions. Stakeholders need to understand each other's assumptions (Mason and Mitroff 1981). In the discussions in the different stakeholder groups in the COOL project much attention is given to working modes that help to reveal the different lines of argumentation. Final strategic visions are a clear end product of the COOL Dialogues, but they will be more relevant if they clearly show the different lines of argumentation and the mutual learning processes that have led to their formulation. Stakeholder dialogue is a form of problem structuring, that is, the identification, confrontation, and – where possible – integration of the most divergent views with respect to a given problem situation (Hisschemöller 1993). To a certain extent, conflict can be productive, as – if it is managed properly – it can highlight the pros and cons of different options and the underlying argumentation structure. As also stated several times in the preceding chapters, this kind of setting of a group discussion is meant to support debates instead of settling them.

Substantive outcome: citizen reports and strategic visions

For outsiders curious about the outcome of such an exploratory study like ULYSSES, an obvious question is: "So what did those citizens come up with in the end?" In Chapter 6 the research team reports on the different kinds of output from the groups, ranging from citizen reports to logbooks and video-tapes.

Each of these outputs has a substantive content. Though the research team stresses that the main goal was to advance the research agenda of Participatory Integrated Assessment, they also express the hope that the indicative findings regarding citizens' informed opinions and recommendations on addressing climate change and urban sustainability are of use for both the research and the policy community. And indeed, in

the end also the substantive outcomes appeared to matter. Participation, process, and form have to be related to the substantive results.

Outcomes from the citizen reports

For the COOL project, we feel that the overview and observations with regard to the citizen reports are interesting for two different reasons. First, the series of questions dealt with in the IA Focus Group citizen reports (see the list in Chapter 6, p. 129) show some similarities to the questions that are asked in the different steps of the COOL process leading up to the final strategic visions. For example, within the European component of the COOL project, the questions to be addressed in the strategic visions are:

(a) How will Europe, and the selected sectors in particular, look in 2050, assuming that the 80 per cent target has been achieved?
(b) Which steps have to be taken in order to reach 80 per cent reduction of carbon dioxide emissions?
(c) Where and when should responses be taken and by whom?
(d) What barriers are expected to these actions?

These questions are explored in COOL with a "backcasting" methodology briefly discussed in Box 8.1.

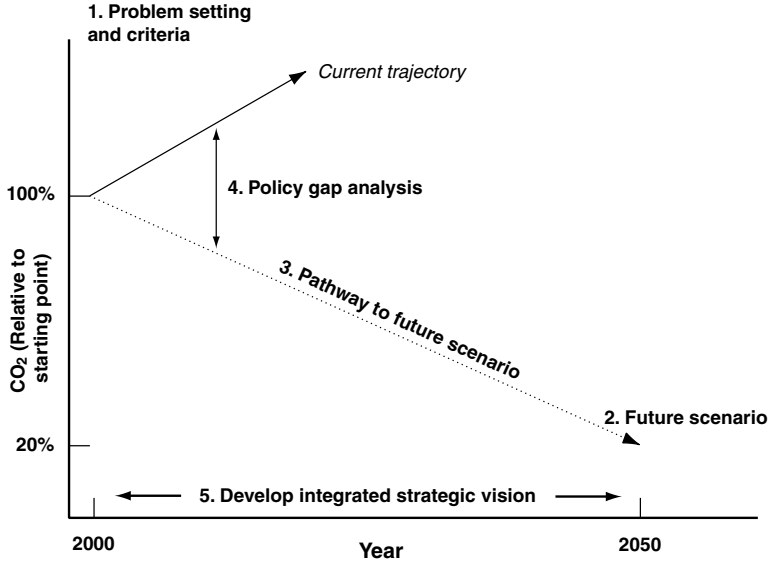
Second, even though the substantive outcomes of the citizen reports from the IA Focus Groups have to be seen in their context and to be treated with care, it is interesting to look on what they really say. The proposals of the citizens are in fact quite sophisticated. Even if this didn't come as a surprise to the ULYSSES research team, for others it is an interesting result. The citizens' proposals are, for example, quite comparable to the initial proposals formulated by the "expert" stakeholders taking part in the COOL Dialogues.

For example, the suggestion from the Venice citizens (Group B, 2 June 1997, see Chapter 6) to increase dissemination of information in order to bring about awareness and responsibility is very much in line with the suggested long-term information plan suggested by participants in the second COOL Europe workshop. Also, the plea for establishing common objectives to be attained by setting well-defined steps can be linked directly to the request of industry stakeholders in COOL to governments to be clear and consistent in their goals and standards. If there is no clear and consistent policy, it is difficult for stakeholders to act and take decisions, especially regarding long-term and strategic choices.

From this point of view it is also interesting to see what the citizens in the IA Focus Groups see as barriers to action. Lack of action from government is mentioned but also power relations: economic interests

Box 8.1: "Backcasting" methodology applied in the COOL project

Within the COOL project, the methodology of backcasting has been operationalized in five main steps, illustrated in the following figure and briefly explained below.



Step 1 – Define the problem and set the criteria for a solution (a reduction in greenhouse gas emissions and 80 per cent carbon dioxide emission reduction between 1990 and 2050 for the OECD countries, respectively). *Step 2* – Develop an "image of the future," an image of the social system or sector in 2050 that meets the requirements set by the criteria. *Step 3* – Path analysis: an analysis is made of the pathway from the image of 2050 back to today to identify the transformations that are necessary, the lead-time for different options that can contribute to such transformations (e.g., rate of development and diffusion of fuel cell technology), the crucial actors and conditions that make such options work, and the starting time to make these options contribute to the final image. *Step 4* is a comparison of current trends – not only in greenhouse gas emissions, but also in energy production and use, transport demand and supply, agricultural production and consumption – and the desirable trends according to the path analysis. This gap

analysis provides us with ideas on the necessary policies for the coming years to close this gap and set in motion the required social transformations. Finally, *Step 5* entails the formulation of an integrated strategic vision, in which the outcomes of the former four steps are integrated into one document. That document brings together the possible options and necessary measures to be taken, the time paths for these options and measures, the conditions that support these options measures, and the coalition of actors that are crucial for implementing these options and measures.

and lobbies. Some of the stakeholders in COOL represent certain economic interests and lobbies. In some cases, the COOL participants perceive the same barriers as the ULYSSES participants, in other cases the COOL participants are more optimistic about opportunities. For example, the COOL participants are far more enthusiastic about the possibilities for more cooperation instead of competition between transport companies and between companies and government in order to achieve a European-wide logistical information system for transport that would add to more sustainable transport planning.

In analyzing the expectations and behavior of the citizens themselves, the barriers for action mentioned are induced consumption needs and the expectation that most people are not prepared to decrease living standards. At the same time from the IA Focus Group collages discussed in Chapter 4, the conclusion is drawn that for the participants, strong reductions of energy use are more desirable than business-as-usual and that the precautionary principle should be applied. Participants in the COOL process expressed the need to know more about the view of consumers on the climate problem, their ideas on actions to be taken and their perception of the need for behavioral change. In this respect, the IA Focus Group citizen reports form interesting illustration material for the discussions in COOL. To some extent, the differences in group composition make the two projects complementary.

Outcomes from the stakeholder dialogue on venture capital and climate policy

Other substantive information that is relevant for the COOL Dialogues are findings from the stakeholder dialogue concerning venture capital and climate policy (see Chapter 7).

This specific stakeholder dialogue is even more like the COOL Dialogues than is the case for the IA Focus Groups with citizens, also

concerning the design of the process.[3] Proposals like increases in energy prices, changes in tax exemptions, government guarantee schemes and subsidies, as well as a plea for stronger harmonization return in the COOL Europe discussions as well. Of special interest to COOL is the comparison given in Chapter 7 between the outcomes of the stakeholder dialogue and the interviews with members of the European Commission. The EU seems to be much more reserved about the possibilities for the harmonization of policy measures than the participants in the stakeholder dialogue.

Directly of relevance for the COOL Dialogues is also the statement that policy measures are needed to provide targeted support for venture capital engagement in ecological energy investments. The question of whether this should be on the European or at the member state level has been a point of consideration within COOL as well.

Among the COOL participants there is the idea that governments should be urged to fund research and facilitate breakthroughs in technology development. In this respect the recommendations of the citizens and other stakeholders in the research discussed earlier in this volume are similar: the EU and national governments should be clear in communicating their commitment to reduction targets and act accordingly and consistently.

Multilayered purpose projects: participants and ownership

The research discussed earlier in this volume is an example of a study with a multilayered purpose. Several groups have been involved in the study, each with its own goal: the participants, the research team, the funding agency, local groups which were involved etc. In fact, Participatory Integrated Assessment projects are always multilayered. A long list of addressees and objectives can be formulated, often not completely without internal contradictions. What is the main product? The process, the outcome, the networks, the lessons that the research team has learned? Who is the main user? The participants, the funding agency, the policymakers, your fellow researchers? All users will push for the output of the project that they defined as the most important for themselves. A research team taking up such a project has to keep many balls in the air at the same time. Following the ULYSSES experience, we will examine one of those "juggling-balls" a little more closely: the role of the participants and their ownership of the process (see Box 8.2).

[3] There is one participant in the COOL process who also participated as stakeholder in the ULYSSES stakeholder dialogue on venture capital.

Box 8.2: The role of the participants and their ownership of the process

From the experiences in Venice and St Helens as described in Chapter 2 of this volume we learn that it is very important for the participants to have insight into the conditions and the scope of their personal and group involvement in the process. Important issues mentioned in this respect are: Context and objectives (Why are we meeting? What are the practical objectives and rules? Who is behind the meetings?); Knowledge (What kind of information is being provided to us? How do we discuss the topics? What kind of information do we provide?); Assessments (How do we, and others, interpret and assess knowledge? What will be done with the assessments?).

Not only is it motivating for the participants themselves to know what they can expect and what they can gain and contribute. It is also useful, not to say essential, for the process itself when the participants "own" the process and have a commitment toward it and toward its end product. The more the participants get the opportunity to define for themselves the objectives of their meetings, the relevant issues, the relevant policy arenas etc. the more they feel responsible for the process and for the end product. Of course, the meetings and discussions have to remain within the scope of the project: it is a challenge for the research team to keep the discussion to the point and at the same time not to steer too much and smother creativity. The ULYSSES study has shown that it is possible to bring this "ownership" about: both in "research" or "policy for real" settings. For future projects this is an important lesson. Within the National Dialogue of the COOL project one way of trying to facilitate "ownership" is by having a participant instead of a project team member chairing the meetings. Another way is by inviting participants to bring topics of interest to themselves to the table and to contribute major expert input in the dialogue on specific topics. The ownership in the COOL process is especially important, because of the ambition that the strategic visions produced by the participants should have an effect on the policymaking process.

Closing remarks

In this chapter, snap-shots have been shown of relevant outcomes and experiences from the ULYSSES project for other projects, especially the Dutch COOL project. These outcomes and experiences concern both process (the importance of revealing lines of argumentation, the importance of mutual learning and of ownership), and substance (the importance of dissemination of information, the need for international harmonization of policy). There might be some skeptics who will say those are only trivialities or things you could have known beforehand. However, the proof of the pudding is in the eating, and while eating, the pudding might be different than originally expected. Columbus was quite sure that he knew another route to India and that was the reason that he set sail to go there. On the way he discovered America. The ULYSSES voyagers might have found some things they had expected on their way, but also they have discovered many unexpected shores and strange animals. In the end the most important thing is that an example is given and experiences have been gained. It is a motivation for other groups to experiment as well. At the same time it is important to note that though one should certainly learn from experiences in other projects (and we know now that America exists), Participatory Integrated Assessment is still a matter of learning by doing. Constantly changing internal developments and external conditions force you to change the voyage. Depending on the passengers embarking on your voyage, you have to adjust your program. Depending on the weather, you have to change your course. Even if your colleagues told you several times how to find your way in New York, you will still reach your destination faster once you have actually been there. For each project the contexts have to be explored again and the researchers themselves have to go through a learning experience too. Though this is not easy, it is exciting!

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