

# Governance of the European Research Area: The Role of Civil Society

An abstract graphic consisting of several overlapping, semi-transparent wireframe boxes of varying sizes and orientations, creating a sense of depth and complexity. A central rectangular box is highlighted in a darker shade of orange, containing the text 'Final Report'. The background is a gradient of light to dark orange.

**Final Report**

by Henning Bantien, Michael Jaspers and Andreas Renner  
(with the collaboration of Matthias Adam, Jörg Mayer-Ries and Meike Wulfers)

Bensheim – Berlin – Brussels  
October 20<sup>th</sup>, 2003

## **Legal notice**

Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of the following information.

A great deal of additional information on the European Union is available on the internet. It can be accessed through the Europa server (<http://europa.eu.int>).

## **Contact persons**

For any questions or recommendations, please contact:

Philippe Galiay

European Commission

DG Research (SDME 6/58)

Rue de la Loi, 200

B-1049 Brussels

e-mail : [philippe.galiay@cec.eu.int](mailto:philippe.galiay@cec.eu.int)

Michael Jaspers

Institute for Organisational Communication  
(IFOK GmbH)

Berliner Ring 89

D-64625 Bensheim

e-mail: [jaspers@ifok.de](mailto:jaspers@ifok.de)

## **Date of print:**

October 20<sup>th</sup>, 2003

## **Acknowledgements**

---

The authors wish to thank Sheila S. Jasanoff of the John F. Kennedy School of Government, Harvard University, Lars Klüver of the Danish Board of Technology, Ortwin Renn of the Academy for Technology Assessment Baden-Württemberg, Teresa Rojo of the University of Sevilla, Roland Schaer of the Cité des Sciences, Sciences et Société, Andy Stirling of SPRU University of Sussex, Fabio Terragni of ASNM and Gérard Valenduc of the Fondation Travail-Université Centre de Recherche Travail & Technologies who guided us in their capacities as project monitors and intellectual partners throughout the project.

In addition, we are highly indebted to the 200 participants of the Brussels conference in June 2003 and, in addition, to the more than 90 individuals who so kindly enlisted their time and energy in the various telephone interviews and questionnaires. They answered our questions, openly shared their experiences and views, provided or directed us to other resources, stimulated our thought process and provided our work with invaluable insight. Although the findings and perspectives found in this study are our own, we could not have reached this result without the co-operation of our colleagues from around the world. We are sincerely grateful to each and every one.

Moreover, we would like to encourage readers to share their thoughts with us on the topic of the study. Contact information: [banthien@ifok.de](mailto:banthien@ifok.de), [mayer-ries@ifok.de](mailto:mayer-ries@ifok.de), [jaspers@ifok.de](mailto:jaspers@ifok.de), [renner@ifok.de](mailto:renner@ifok.de)

## Executive Summary

---

### Objective

In order to respond swiftly and effectively to the innovations affecting society, civil society must be involved in the political process. The general aim of this study is, first, to promote a **better understanding of the conditions** required when effectively involving civil society in the determining process of the European Research Area and, second, as a result of this, to **boost the culture of consultation** within the scope of research policy and the creation of the European Research Area. This present study is one of various initiatives undertaken by the Commission with the aim of reforming European governance and reinforcing the culture of consultation and dialogue within the EU, especially with regard to the creation of a European Research Area. The study particularly supports the **White Paper on European Governance (2001)** and the **Science and Society Action Plan (2001)** (in particular actions 22 and 23 thereof).

### The setting

The **methodology** of the study itself was participative. At all stages of the process, a lot of the input was gathered via an **international expert network**. In addition, the research was peer reviewed by an **international panel** of renowned experts and practitioners, themselves involved in civil society participation. Moreover, this report of the study served as the foundation for the **international conference** which was held in Brussels on June 12/13<sup>th</sup> 2003, jointly organised by the European Commission and IFOK. The results of the conference contributed to the **final report**.

### Structure of the report

The report consists of six main chapters, complemented by a bibliography and an excerpt from the data base on procedures of public participation in European science and technology based decision-making as well as in selected third countries contacted by IFOK. The conference proceedings can be found in the annex as well.

The report is structured as follows:

**Chapter 1** gives the reader access to the general **background**, the **objective** and the **focus** of the study.

**Chapter 2** illustrates the **scientific debate(s)** related to civil society participation. It defines what **civil society participation** means in the context of this study, sketches the **rationale for civil society participation** and gives a broad **overview of the major (scientific) communities** dealing with civil society participation in research-based policy-making. Eight important communities enter the picture - technology assessment, foresight, risk assessment, e-governance,

science and ethics, public understanding of science, the democratisation of expertise and sustainable development and environmental protection.

**Chapter 3** gives an overview of the **analytical Framework**, the **methods of civil society participation** as well as contributing ideas for their classification (according to design, through linkage with the political sector and regarding areas of application). Civil society or public participation is – particularly in Europe, with its multitude of cultural and political contexts – characterised by a variety of different approaches.

**Chapter 4** analyses the different viewpoints for the **assessment** of civil society participation, suggests **further lines of thought** for a comparative assessment of public participation procedures and indicates a **useful selection of practices and pitfalls** that policy-makers should take into account when faced with the challenge of tapping the full potential civil society participation offers to improve governance in the European Research Area.

**Chapter 5** summarises the **governance discussion within the EU** and its relevance for RTD policy-making. It outlines **initiatives** which have already been taken to strengthen the role of civil society participation in the European Research Area and identifies fields of action which are highly relevant for the Commission.

**Chapter 6** summarises the general lessons of the study and develops **policy recommendations** for the Commission and its partners the implementation of which can lead to a better involvement of civil society in research policy making in Europe. The presentation of each recommendation is following a scheme responding to all relevant questions which are related to them.

## Policy recommendations

There is an as yet unsatisfied demand for a more coherent and systematic dialogue with civil society that complements the recently established online consultations and that provides an added value to both the Commission and civil society. Workshops and conferences are important forums for a face-to-face exchange with civil society; yet alone they do not suffice to explore the full potential of civil society participation. Six rules may help to further improve the existing mechanisms:

1. Civil society participation goes beyond civil society consultation. Participation is about **mutual learning**.
2. The institutional bodies (advisory groups, committees etc.) for civil society participation must be **flexible and dynamic**.
3. Civil society participation implies the **participation of citizens involved in the issues concerned**.
4. There is a strong need for **professional standards** for civil society consultation.
5. There is a strong need for a **more systematic, priority-driven approach** of civil society consultation.
6. The roles of **industry and science** in participatory governance have to be taken into account when implementing participatory governance.
7. The instruments applied for civil society participation should be more **demand-driven** rather than supply-driven.

They policy recommendations which are summarized below<sup>1</sup> are based both on the analysis/input provided by

- the **conference** and
- the chapters 1 to 5 of the study

including the recommendations given by the expert panel.

---

<sup>1</sup> The following paragraphs summarise the „vision” of each recommendation. For the complete text of the recommendations, see chapter 6.

**Policy recommendation 1:****Creating a dynamic and flexible civil society forum**

A dynamic and flexible civil society forum could play a key role in developing a more structured and open culture of civil society consultation in European research policy. The forum is positioned at the intersection of DG Research and civil society and therewith facilitates the exchange between these two sectors. Consequently, it works in two directions: On the one hand, the civil society forum provides a point of „easy access” for informal civil society consultations. It supports the Commission in finding appropriate channels to communicate with civil society (in particular with the individual citizen) without creating additional bureaucratic structures and obstacles. The Commission makes use of the support instrument wherever it feels that it helps to improve policy-making. On the other hand, the forum will be a contact point for civil society. It collects input from various groups within civil society and processes the information according to the needs of the Commission.

The civil society forum will support the Commission in arbitrating between contending claims and priorities and will assist in developing a longer-term policy perspective. It is neither a „traditional“ advisory committee, nor an additional burden/ restriction for decision makers. It consists of a core group and multiple forums on specific issues. Their composition is dynamic, following the issues at stake and the stakeholders concerned. The forum works with a large pool of experts from all levels of civil society, including both individual citizens and representatives from civil society organisations such as consumer associations, environmental NGOs, community-based organisations, charitable organisations, educational and training organisations, foundations etc. It works on a task-oriented basis. Once the target (for example recommendations) has been achieved, the composition of the forum will be modified following the emerging issues.

The civil society forum will be the major access point and platform for a continued dialogue between civil society and the Commission that was started at the Conference on the role of civil society for governing the European Research Area in June, 2003.

**Policy recommendation 2:****Integrating Participatory Foresight in the Preparation of Framework Programmes and other Strategic Priorities**

The definition of thematic priorities for the EU research funding activities and the development of Framework programmes are key tasks and core competencies of DG Research. Areas of research have to be identified that both foster the competitiveness of the European economy (Lisbon goals) and fit the needs of society. They are crucial for the future of research in Europe, in particular with view to

the building of a European Research Area. The early involvement of civil society in the preparation of framework programmes and other strategic priorities via various foresight elements has clear advantages: potential achievements can be a better basis for policy-making, more transparency, a high level of credibility within society and more acceptance of decisions.

**Policy recommendation 3:**

**Europe an Academy for Civil Society Participation in Science and Technology**

Knowledge exchange and capacity building are key success factors for a better civil society involvement in the building of the European Research Area. This holds for all stakeholder groups: science, public authorities, civil society, the media and those professionals who carry out such processes. Since each stakeholder group plays a specific role in participatory procedures, the level of required knowledge and competence can vary. An academy is a flexible institution which provides training facilities which are individually designed for each stakeholder group, taking into account different interests, levels of knowledge and societal and cultural contexts. Each individual can make a choice among different (virtual or face-to-face) teaching opportunities according to his or her individual time budget or personal interests and skills. But the academy is more: whereas usual (Internet based) information platforms only provide static information, the academy can foster interaction between the stakeholder groups, enhance network activities, further develop knowledge on participatory processes and thus serve as a „(virtual) think tank” for civil society participation.

**Policy recommendation 4**

**Citizens debating on science: Universities as platforms for „European Future Days”**

Europeans want to be informed about new developments in science and technology which affect them. The direct dialogue with policy makers and scientists about their work helps to make science more transparent and to foster mutual understanding about opportunities, risks and concerns.

The „European Future Days” programme could focus on concerted Europe-wide initiatives – held annually on a particular ‘European Future Days’ – which bring research and policy makers closer to society on a local/regional level. The future issues should be of pan-European interest. The „European Future Days” can also provide opportunities to disseminate information about research policy-making on the European level, on participatory processes and can stimulate the implementation of these on the local and regional level.

Universities and other research institutes are invited to deliver this exchange. Universities are situated at the crossroads of research, education and innovation and therefore constitute the „natural home” for the transmission of knowledge. The growth of the knowledge economy, in particular, leaves universities in a favourable position to become more closely involved in community life. They should



increasingly become a forum for reflection on knowledge, as well as of debate and dialogue between scientists and people. The aim of the „European Future Days” is to involve a large number of actors. Media coverage and accompanying activities (e.g. in schools) can help to address a broader public.

**Policy recommendation 5:  
„European Science and Society Exchange Program”**

Due to the prevailing curriculum of scientific education and an increasing complexity and degree of specialisation which can be observed in the field of research, scientists are often not conscious of the full range of implications their work has for society as a whole. On the other hand, civil society, including NGOs, have a high demand for solid scientific advice. In addition, they often lack a full understanding of the important economic and institutional forces that technological research is mainly driven by.

The construction of a truly European Research Area needs an exchange of the different actors involved, so that the European dimension and the common interests of European civil society, as well as those of the European community of scientists and R&D related industries, come to be fully realized. The „European Science and Society Exchange Program” aims at ensuring this exchange, foster mutual understanding and strengthen the position of organisations from civil society.

**Policy recommendation 6:  
Identifying benchmark projects**

In order to boost motivation for investing in civil society participation, benchmarks can serve as an orientation for the European Commissions’ activities related to civil society participation. Benchmarks provide a good picture of how to implement one’s own principles as they refer to existing good practices. References are made to specific projects („project x”) undertaken by a certain administrative body („ministry of y in country z”).

Benchmarks summarize existing experience and provide knowledge for individual and context-sensitive solutions. They should refer to criteria that are measurable. Opaque criteria such as „success” of civil society participation procedures therefore have to be broken down into manageable criteria such as „transparency”. Transparency (for example transparency to participants) is an example of a criterion that plays a vital role for the European Commission’s own policy (see Minimum standards on consultation, White Paper on European Governance etc.), it plays an increasing role in the international agenda (such as Aarhus Convention); furthermore, there is a wide range of different

approaches, legal requirements and political cultures throughout the world (e.g. between the United States and Europe).

**Policy recommendation 7:**

**Supporting Existing Advisory Bodies in the Application of Civil Society Participation**

In a world of increasing complexity, it becomes more and more difficult to assess the impact of scientific and technological developments. How will GMOs, ethical testing, stem cell research, nanotechnology or new communication technologies affect our lives? What are the emerging scientific developments and key technologies with a high „ethical or societal impact” in the future? And how can scientists become aware of those potential concerns and deal with them?

The mechanisms that have been developed in order to respond to these challenges are manifold: institutionalisation of forecast or participatory technology assessment, establishment of research advisory bodies, working groups and task forces, ethics councils, public hearings organised by the parliament etc. However, even though these bodies have succeeded in bringing European research policy closer to the citizens, there is still a considerable potential for further improvement. In particular, there is a gap in the extent to which the particular priorities for timing or attention, or different value judgements and framing assumptions adopted in expert assessment are validated in relation to wider civil society.

A reinforced action of DG Research supporting existing bodies in exploring the potential of stakeholder participation could play a vital role in establishing a strong link between civil society and the Commission – and thereby raise the level of trust in European research policy particular in critical situations. Making use of the potential of both online consultations and face-to-face dialogues (stakeholder dialogues, citizen forums, consensus conferences etc.), the Commission will be able to realise a first-movers advantage, positioning itself at the forefront of modern public administrations. It is likely that other European institutions and networks (EP, EcoSoc, CoR, EPTA, TRUSTNET) will follow.

**Policy recommendation 8:**

**Towards a Convention on civil society participation in research policy-making**

A coherent involvement of civil society requires a harmonious foundation which clearly defines the ways in which civil society is involved in research and research (-based) policy. A convention can ensure participatory standards within the ERA and serve as a stimulation for parallel initiatives on the

trans-national/global level. It can be considered an achievement of various measures which have already been undertaken in the EU (see White Paper on Governance, Science and Society Action Plan etc.).

## Contents

---

<b>ACKNOWLEDGEMENTS .....</b>	<b>III</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>IV</b>
<b>Objective .....</b>	<b>IV</b>
<b>The setting.....</b>	<b>IV</b>
<b>Structure of the report.....</b>	<b>IV</b>
<b>Policy recommendations .....</b>	<b>VI</b>
Policy recommendation 1: Creating a dynamic and flexible civil society forum.....	VII
Policy recommendation 2: Integrating Participatory Foresight in the Preparation of Framework Programmes and other Strategic Priorities .....	VII
Policy recommendation 3: European Academy for Civil Society Participation in Science and Technology.....	VIII
Policy recommendation 4.....	VIII
Citizens debating on science: Universities as platforms for „European Future Days”.....	VIII
Policy recommendation 5: „European Science and Society Exchange Program” .....	IX
Policy recommendation 6: Identifying benchmark projects .....	IX
Policy recommendation 7: Supporting Existing Advisory Bodies in the Application of Civil Society Participation.....	X
Policy recommendation 8: Towards a Convention on civil society participation in research policy-making .....	X
<b>CONTENTS.....</b>	<b>XII</b>
<b>1 INTRODUCTION.....</b>	<b>1</b>
<b>Background and Motivation.....</b>	<b>1</b>
<b>Objective .....</b>	<b>2</b>
<b>Applied methodology .....</b>	<b>3</b>
<b>Areas of applications covered by the study .....</b>	<b>4</b>
<b>Geographical areas covered by the study .....</b>	<b>5</b>
<b>Structure of the report.....</b>	<b>6</b>
<b>2 THE SCIENTIFIC DEBATE: THE RATIONALE BEHIND CIVIL SOCIETY PARTICIPATION .....</b>	<b>7</b>

<b>Introduction.....</b>	<b>7</b>
<b>Definition of civil society participation .....</b>	<b>7</b>
Civil Society.....	7
Participation.....	9
<b>The rationale of civil society participation .....</b>	<b>10</b>
<b>Overview on (scientific) communities dealing with society participation in technology and science-based policy .....</b>	<b>12</b>
Technology Assessment.....	12
Risk Assessment .....	13
Foresight.....	14
Science and Ethics .....	17
E-Governance.....	17
Public Understanding of Science (PUS) .....	18
Democratising Expertise.....	20
Environmental Protection and Sustainable Development.....	21
Conclusion.....	24
<b>3 CLASSIFICATION .....</b>	<b>25</b>
<b>Introduction.....</b>	<b>25</b>
<b>Analytical framework: Outline and objectives of civil society participation procedures</b>	<b>26</b>
The EUROPTA framework (Simon Joss / Sergio Bellucci).....	26
The AFTA-framework (Ortwin Renn).....	28
The TAMI framework.....	30
Conclusion: The IFOK framework .....	31
<b>Overview of methods of civil society participation.....</b>	<b>32</b>
Advisory committees (advisory bodies / councils).....	32
Citizens' advisory council (citizens' advisory committee, community advisory panel, neighbourhood forum) .....	34
Citizens' jury (citizens' panel, citizens' review panel; similar: planning cell, citizens' forum).....	34
Consensus conference (consensus development conference, citizens' conference, PubliForum) .....	34
Focus groups .....	35
Future Workshops (Zukunftswerkstätten, similar: Future search conference).....	35
Initiative (referendum) .....	35
Mediation (compensation, bridge-building, benefit sharing) .....	36
Negotiated rule making (regulatory negotiation).....	36
Planning for real (community planning, citizens' exhibition) .....	36
Public hearings (similar: written comments) .....	37
Public survey (opinion poll).....	37
Round Tables .....	37

Scenario workshops .....	38
<b>Classification by process design.....</b>	<b>38</b>
Participants.....	38
Duration .....	41
Face-to-face vs. virtual communication.....	42
Size: number of participants .....	42
Reporting and dissemination of results .....	42
<b>Classification by connection with political-societal sphere .....</b>	<b>43</b>
The connection of the different sub-systems of society.....	43
Formal versus informal civil society participation .....	45
Policy-cycle.....	46
Multi-level governance .....	47
Classification by the political-cultural context .....	47
<b>Classification by areas of application.....</b>	<b>50</b>
Three areas of application.....	51
Research policy and research based policies .....	51
Basic research versus applied research.....	51
<b>Conclusion: Major trends .....</b>	<b>53</b>
<b>4 COMPARATIVE ASSESSMENT .....</b>	<b>55</b>
<b>Introduction: The need for context-sensitivity in the assessment .....</b>	<b>55</b>
<b>Assessment of methods as applied to different problem situations .....</b>	<b>57</b>
Knowledge Differences.....	57
Clashes of interests.....	58
Value conflicts .....	61
Visions .....	63
<b>Assessment in respect of the process design .....</b>	<b>65</b>
Participants.....	65
Duration and Timing .....	66
Face-to-face vs. virtual communication.....	67
Size: Number of participants.....	67
<b>Assessment with respect to the connection with the political-societal sphere .....</b>	<b>67</b>
Connection of the different subsystems of society .....	67
Formal versus informal civil society participation .....	70
Policy Cycle .....	71
Multi-level governance .....	71
Assessment in respect to the political-cultural context .....	71
<b>Assessment in respect to areas of application.....</b>	<b>72</b>

Three areas of application.....	72
Research policy and research based policy.....	72
Basic research and applied research.....	72
<b>Emerging lines of thought .....</b>	<b>73</b>
<b>5 THE EUROPEAN DIMENSION: CIVIL SOCIETY PARTICIPATION IN BUILDING THE EUROPEAN RESEARCH AREA .....</b>	<b>75</b>
<b>Civil Society Participation in European Governance .....</b>	<b>75</b>
Introduction.....	75
The White Paper on European Governance and its follow-up process .....	76
Strengthening Civil Rights: The Aarhus Convention.....	79
Outlook: Towards Participatory Democracy .....	81
<b>Civil society participation in RTD policy-making .....</b>	<b>81</b>
European Research Area and the Sixth Framework Programme.....	81
DG Research: Science and Society Action Plan and its follow-up .....	83
European Advisory Bodies related to Science Policies .....	88
<b>Conclusion and further Remarks .....</b>	<b>89</b>
<b>6 POLICY RECOMMENDATIONS.....</b>	<b>93</b>
<b>Introduction.....</b>	<b>93</b>
<b>Field of application I: Policy making .....</b>	<b>97</b>
Policy recommendation 1: Creating a dynamic and flexible civil society forum.....	97
Policy recommendation 2: Integrating Participatory Foresight in the Preparation of Framework Programmes and other Strategic Priorities .....	104
<b>Field of application II: capacity building .....</b>	<b>108</b>
<b>Introduction.....</b>	<b>108</b>
Policy recommendation 3: European Academy for Civil Society Participation in Science and Technology.....	110
Policy recommendation 4.....	114
Citizens debating on science: Universities as platforms for „European Future Days”.....	114
Policy recommendation 5: „European Science and Society Exchange Program” .....	118
Policy recommendation 6: Identifying benchmark projects .....	121
Policy recommendation 7: Supporting Existing Advisory Bodies in the Application of Civil Society Participation.....	124
<b>Field of Application III: Legal Framework .....</b>	<b>127</b>
Policy recommendation 8: Towards a Convention on civil society participation in research policy-making .....	128

<b>ANNEX 1: BIBLIOGRAPHY .....</b>	<b>131</b>
<b>Official Documents.....</b>	<b>131</b>
<b>Other Publications .....</b>	<b>133</b>



# 1 Introduction

---

*This chapter gives the reader access to the general background, the objective and the focus of this study. Moreover, the reader is provided with a coarse map of the study, namely the areas covered and the structure of the report.*

## Background and Motivation

Democratic systems in Europe are currently facing new challenges. Innovation and scientific progress are accelerating, providing great opportunities for economic and social development. Decision-making is thus becoming increasingly difficult and requires a great amount of expertise, particularly in a scientific and technological sense.

At the same time, the multitude of new technologies, possible research agendas and routes of development directly affect the lives of individual citizens – and are often highly disputed (as the public debates on food safety, genetic testing or nuclear energy exemplify) (Beck 1992, Jonas 1979, 1985). This situation poses a tremendous challenge to democracy in general, and to research policy and research-based policies in particular.<sup>2</sup>

These problems are of particular relevance within the European Union, with its decentralised political organisation and its **diversity of cultures**, norms and traditions (Taylor 1992, Rawls 1993). The creation of a European Research Area is therefore an ambitious project that can only be completed successfully if the research activities in Europe find **broad acceptance** within society. Research activities must not stand apart from society, but rather take into account the concerns of the citizens. New types of civil society participation such as those used in technological and risk assessment, in research agenda setting (for example on ethically sensitive issues) and in scientific policy consulting (for example via joint fact finding) may help to improve the public understanding of science, raise the acceptance of research policy (as well as decisions in other policy areas that draw heavily on scientific evidence) and improve the quality of scientific policy recommendations. **Civil society participation** is therefore very likely to play an important part in the debate on how to transform the European Union into the world's most competitive and dynamic knowledge-based economy by 2010, as envisaged by the Lisbon Summit.

This present study is one of various initiatives by the Commission aiming at a reform of European governance and reinforcing the culture of consultation and dialogue within the EU, especially with regard to the creation of a European Research Area. The study supports in particular two initiatives of the European Commission:

---

<sup>2</sup> Particular challenges are how to choose technologies (seen as a problem of „social choice“), how to deal with path dependencies etc.

- the **White Paper on European Governance** (2001)<sup>3</sup>, which aims at improving democratic governance within the European Union. The White Paper demands openness, participation, accountability, effectiveness and coherence as five political principles of good governance. In addition, both a better involvement of civil society and a reinforced culture of consultation and dialogue are requested.<sup>4</sup>
- the **Science and Society Action Plan** (2001) (in particular actions 22 and 23 thereof).<sup>5</sup> Following „Science, society and citizens in Europe” (SEC(2000)1973), this action plan aims at pooling efforts at the European level to develop stronger and more harmonious relations between science and society. Among other things, the action plan calls for an intensive exchange of information and best practices between Member States and the regions on the use of participatory procedures for national and regional policies. The Commission commits itself to organising events at regular intervals to enable civil society to participate in debates on specific issues. The Science and Society Action Plan supports the objective set at the **Lisbon Summit** for Europe to become the world’s most competitive and dynamic knowledge-based economy by the year 2010.

A presentation of civil society consultation procedures in progress within the Sixth Framework Programme for research and establishing the European Research Area will be given in chapter 5.

## Objective

In order to respond swiftly and effectively to the innovations affecting society, civil society must be involved in the political process. The general aim of this study is to first promote a better understanding of the conditions required in order to involve civil society effectively in the process of creating the European Research Area and second, as a result of this, to boost the culture of consultation within the scope of research policy and the creation of the European Research Area.

- The report presents current research on civil society participation, classifies and compares different types of participation and thereby gives a rich and colourful picture of different approaches, experiences and lines of discussion related to civil society participation in science

---

<sup>3</sup> European Commission (2001): European Governance. A White Paper. COM (2001)428 Final [http://europa.eu.int/comm/governance/white\\_paper/index\\_en.htm](http://europa.eu.int/comm/governance/white_paper/index_en.htm)

<sup>4</sup> White Paper on European Governance, p. 10, 14-17.

<sup>5</sup> European Commission (2001): Science and Society Action Plan, COM(2001)714 Final. <http://www.cordis.lu/rtd2002/science-society/home.html>. Action 22: „The Commission will organise, through workshops and networks, an exchange of information and best practice between Member States and the regions on the use of participatory procedures for national and regional policies.“ Action 23: „The Commission will organise regular events enabling civil society to participate (in the form of public hearings, consensus conferences or interactive online forums) in specific issues (biotechnology, environment, information technologies, health, innovation etc.), in cooperation with the Economic and Social Committee and the Committee of the Regions.“

and technology-based policy-making. It also focuses strongly on the identification of „useful practices” and the conditions necessary to encourage the culture of consultation within research policy-making and the establishment of the European Research Area.

Major research questions that led the project are:

- What are the major lines of discussion with regard to the role of civil society in (research-based) policy-making? What (scientific) communities deal with these issues?
- What kind of civil society participation procedures are applied in Europe (and its regions)? How can this colourful picture of processes be captured? How can different types of methods and institutional settings be classified?
- How are these processes embedded within society? What role do they play within the political decision-making process?
- What are the lessons to be learned from the experiences obtained so far? What are the useful practices, which are the pitfalls?
- How can civil society participation in research policy-making be improved in the future? What are the significant trends regarding better participation processes?
- What can be the role of the Commission in this area?

## Applied methodology

The methodology of the study itself has been a participatory one and combined desk research, questionnaire based interviews, expert meetings and peer-reviews.

- The Institute for Organisational Communication (IFOK)<sup>6</sup> has been commissioned with the study and is responsible for the process design, the collection and assessment of data and the report.
- An international panel of high-level expertise on civil society participation procedures and research policy-making<sup>7</sup> peer-reviewed the study and supported the IFOK research team by providing substantial input, by discussing criteria for the classification and comparative assessment and by providing methodological feedback for the study.
- About 70 international experts (scientists and/or practitioners) were interviewed by mail or by phone and contributed their advice and recommendations.

---

<sup>6</sup> See also [www.ifok.de](http://www.ifok.de)

<sup>7</sup> Members of the panel are: Sheila S. Jasanoff of the John F. Kennedy School of Government, Harvard University, USA; Lars Klüver of the Danish Board of Technology, Denmark; Ortwin Renn of the Academy for Technology Assessment Baden-Württemberg, Germany; Teresa Rojo of Pax Mediterranea S.L., Spain; Roland Schaefer of the Cité des Sciences, Sciences et Société, France; Andy Stirling of the SPRU University of Sussex, UK; Fabio Terragni of ASNM, Italy; and Gérard Valenduc of the Fondation Travail-Université Centre de Recherche Travail and Technologies, Belgium.

- An international conference with strong participatory elements was held in Brussels in June 2003. Roundabout 200 participants coming from 26 European countries and various backgrounds (science, public authorities, civil society, industry, research and practise of participatory processes), had a very fertile exchange in discussing the status quo (as presented in the interim report of this study) and consequently explored new ways towards a more participatory mode of policy-making in the area of RTD.

### **Areas of applications covered by the study**

There are various areas of application of science and technology-based research policy in which civil society participation is currently already being practised to a larger extent in research policy. Participatory technology assessment plays a dominant role. There exists a wide scientific community developing and practising new methods of civil society participation (such as consensus conferences).

Apart from technology assessment, other areas of application that have not yet been developed so far or that are not always directly linked to policy-making (as it is the case for public understanding of science) are:

- risk assessment
- technology foresight
- science and ethics (ethics councils)<sup>8</sup>
- e-governance
- public understanding of science
- democratising expertise
- sustainable development

Many methods of civil society participation have been developed in the spheres of environmental decision-making and regional planning, which are often closely related. As environmental policies tend to draw on scientific evidence and therefore belong to the group of research based policies, there is no clear division line between civil society participation in environmental decision-making and civil society participation in research-based policies.

The study covers both

- research policy and
- the wider field of research based policies

---

<sup>8</sup> For a brief overview of these fields see the following chapter.

Whereas one key challenge for research policy is to define the proper priorities for research (both basic research and applied research), other policies refer to scientific evidence most often in the context of regulatory activities, for example developing an appropriate legislative framework.

As well as coming from genuine research policy, most case studies identified originate from the following policy areas:

- consumer protection
- health care
- environmental policy
- agricultural policy
- energy policy
- transport policy

Among the issues that have been at the forefront of public debate are genetically modified organisms, genetic testing, nuclear energy / waste, food safety (mad cow disease), sustainable mobility / transport.

### **Geographical areas covered by the study**

The study focuses on the European experience. It covers the initiatives undertaken by the European Commission, the Member States and their regions and the accession countries. However, as the objective of the study is to help the European Commission in further exploring the potential of civil society participation in science and research-based policies in Europe, not all geographic areas are covered with the same intensity:

- **European Commission:** analysis of civil society consultation procedures in progress for preparing and implementing the Sixth Framework Programme for research and establishing the European Research Area.
- **Member States (and their regions):** analysis of civil society consultation procedures used in preparing research policy, including support for the expertise needed for other research-based policies.

In addition, the experiences in the accession countries and selected third countries are taken into account.

## Structure of the report

The argument of the report follows this structure:

- **Scientific debate**: clarification of the notion of civil society participation; brief overview on the role of civil society participation within the debate on new governance and criteria for assessment
- **Communities: major lines of discussion**: brief outline of the different (scientific) communities that deal with questions related to the study, explanation of their relevance for the objective of this study.
- **Classification**: discussion of different methods and dimensions of civil society participation procedures (and reference to experiences of the Member States).
- **Comparative assessment**: identification of „useful practices”.
- **The European Dimension**: Civil society participation in preparing the European Research Area.
- **Policy recommendations** : discussion of future initiatives for the improvement of civil society involvement.
- **Bibliography**: survey on the most relevant literature.
- **Data base (Annex)**: presentation of case studies in the Member States of the European Union (and their regions), including a selection of case studies from the accession countries and selected third countries.
- **Conference proceedings (Annex)**: summary of speeches, contributions and workshop discussion.

## **2 The scientific debate: the rationale behind civil society participation**

---

*This chapter illustrates the scientific debate(s) related to civil society participation. It defines what civil society participation means in the context of this study, sketches the rationale for civil society participation and gives a broad overview on the major (scientific) communities dealing with civil society participation in research-based policy-making.*

### **Introduction**

Today's community of social and political scientists engages in extensive discussion on public participation in science and technology policy. This includes a wealth of case studies, a number of meta studies and reviews, research reports, studies compiled for political institutions, and theoretical work (see the detailed bibliography in the annex). In general, the dominating points of view are either descriptive, focussing on the peculiarities of processes or on the relation of participation to political and social structures, or normative, discussing standards for the appraisal of participatory processes and implementing these in evaluation.

### **Definition of civil society participation**

#### **Civil Society**

There exists a broad range of definitions of civil society depending on the focus of the analysis. Two major lines will be briefly outlined below:

- Civil society as a **society of individual citizens**: Liberal political theorists<sup>9</sup> tend to highlight the freedom of individual citizens and the need for a protective state (James Buchanan) that protects civil rights without getting involved in activities that interfere with the private sphere. Civil society, then, is defined by its opposition to the state as a collective entity. In this context the notion of „civic society” (Bürgergesellschaft) is also employed. This notion refers to the political role of the citizens. It does not focus on the question whether the citizens are part of any scientific communities, run corporations or are engaged in non-profit organisations.
- Civil society as the **third sector**: sociologists in particular often define civil society as the intermediate sector that neither belongs to the state nor is part of the private-sector economy. Civil society thus covers all activities of the non-profit sector of the economy. It is often referred to as the third sector.<sup>10</sup>

---

<sup>9</sup> Two of the most renowned political thinkers that belong to this tradition are the John Rawls and James Buchanan. Both have used the contractarian analytical framework to derive normative criteria for a „good society”.

<sup>10</sup> See among others the works of H. Anheier or U. Beck. For A. Gramsci, civil society is a set of institutions through which society organised and represented itself autonomously from the state.

Neither of these two definitions seems adequate for the purpose of this study. The focus of this study lies on persons or group of persons within society who usually play a minor role in the formal decision-making process. The „target“ group varies according to the context. It can be either lay citizens, stakeholders or persons directly concerned by a certain policy.

It can be concluded that „the“ civil society does not exist as such, nor is there a particular defined set of stakeholders who have to be involved in a participatory process per se. In other words, the identification and selection of participants always depends on varying factors, such as the problem at stake and the purpose and the design of the process. Thus, the civil society that is ultimately involved will vary accordingly.

Another clarification has to be made at this point: Civil society is frequently referred to in the form of civil society **organisations**. This definition is widely used in official EU documents. The White Paper on European Governance as well as the working group on „Consultation and Participation of civil society“ both refer to a definition developed by the Economic and Social Committee<sup>11</sup>. The definition refers to the following civil society organisations:

- the **labour-market players** (trade unions and employers federations’, often referred to as the „social partners“)
- organisations representing **social and economic players**, which are not social partners in the strict sense of the term
- **non-governmental organisations** which bring people together in a common cause, such as environmental organisations, human rights organisations, consumer associations, charitable organisations, educational and training organisations
- **community-based organisations**, i.e. organisations set up within society at grassroots level, which pursue member-oriented objectives: youth organisations, family associations and all organisations through which citizens participate in local and municipal life
- **religious communities**

For a certain range of problems, however, it has proven successful to involve unorganised citizens. **This broader understanding of civil society<sup>12</sup>, which includes both civil society organisations (stakeholder groups) and individual lay citizens, will be adopted for this study.**

With the exception of the labour-market players and organisations mentioned above, industry is therefore not included in this definition of civil society.

---

<sup>11</sup> Economic and Social Committee (1999), CES 851/99 D/GW.  
[http://www.esc.eu.int/pages/en/acs/SCO/docs/ces851-1999\\_ac\\_en.PDF](http://www.esc.eu.int/pages/en/acs/SCO/docs/ces851-1999_ac_en.PDF)



## Participation

The notion of civil society participation is used in different contexts, of which civil society participation in science and technology based policy-making is only one. Moreover, due to the multiplicity of political cultures in Europe, there are different views of how civil society should participate in political decision-making processes.

Usually, different degrees of participation are distinguished. The spectrum of possible degrees of participation is illustrated by the so called „ladder of citizen participation”.<sup>13</sup> The ladder covers several different types of participation, from very passive (single-sided) to very (inter)active forms of civil society participation. The Danish Board of Technology for example differentiates between:

- providing information (for example pamphlets)
- taking feedback (for example Eurobarometer)
- getting into dialogue (for example citizen hearings)
- supporting articulation (for example consensus conferences)
- giving influence (for example mediation)
- giving power (for example direct democracy)

Even though it has to be acknowledged that there exists a wide range of different civil society participation methods that all have useful applications, the focus of this study is on a limited range of procedures: It is argued that the complex issue research (based) policy deals with needs of a **strong interaction among policy-makers and civil society**. Interaction goes beyond keeping the public informed of ongoing political debates and decisions. It means that civil society has its say, the means to formulate a position, for example, and to know that this position is being taken into account in the policy-making process.<sup>14</sup> „Useful” participation thus depends on mutual learning in the political and the public sphere. This learning process requires participation to be more than one isolated event with a brief exchange of statements, it must be a longer-term, deliberative process or structure with real opportunities for exchange.

There exists a wide range of literature on the desirability of direct civil society involvement in political decision-making.<sup>15</sup> In particular, it is controversially discussed whether direct civil society participation strengthens democracy (as suggested in publications such as „Healthy Democracy” by

---

<sup>12</sup> See also the Minimum Standards for consultation.

<sup>13</sup> The participation ladder originally has been developed by Sherry Arnstein in the late 1960s and includes forms of „non-participation” (such as manipulation of the public), forms of single-sided participation („information” / „consultation”) and forms of interactive participation („partnership”). Arnstein’s ideal are „delegation of power” and „citizen control” as very strong forms of direct civil society participation in policy-making.

<sup>14</sup> There are, of course, different ways in which they can be taken into account, see following chapter.

<sup>15</sup> An excellent overview is given by Peter Henning Feindt (2001).

Ned Crosby or „Democracy in Practice” by Thomas Beierle and Jerry Cayford) or whether it undermines the democratic institutions based on the election of representatives.

### The rationale of civil society participation

Under which conditions can we consider a given participatory process to be good or successful? A number of criteria for the assessment of public participation are frequently proposed. These include:<sup>16</sup>

- Strengthening the **accountability** and **transparency** of decision-making<sup>17</sup>
- Improving the **quality** and **legitimacy** of decisions
- Creating **acceptance** and a **consensus** concerning decisions
- Building **trust** between administration and civil society
- Stimulating individual and institutional **networking**
- Raising **public awareness** and knowledge on scientific issues
- Improving the **active involvement** of citizens in the democratic process
- Being **cost-efficient**

In general, these criteria can concern either the **processes** of participation themselves, or their **results**. In both respects, however, the assessment is often relative to the **particular perspective** of various actors. For example, an outcome like the blocking of a decision might be regarded as a failure of the process by some administrative agency, while at the same time it is considered a success by the citizens concerned (Chess/Purcell 1999, Webler 1995). This shows that the goals that different actors have can determine whether some result is considered successful. Also, whether the process is perceived to be fair, for example, can depend on the expectations that participants bring to the process.

Still, next to such **subjective** standards of evaluation, there is taken to be a number of general, **normative** criteria. They follow on theories about how good discourses and democratic participation should proceed. On the basis of Habermas’ theory of communicative action, it is concluded that the rules and the conduct of a discourse should ensure fairness and competence (Webler 1995, Renn forthcoming, Webler/ Tuler 2002). Fairness concerns the opportunity for participation, the openness and neutrality of the process concerning agenda, and the rules of conduct, and the form of the

---

<sup>16</sup> Many of these criteria are also stated in the various official documents of the EU-Commission on good governance.

<sup>17</sup> Transparency and accountability can mean rather different things. The sense discussed here may be taken to refer just to the consequences of direct engagement for those involved and the provision of more clear external procedural justification for resulting decisions. An extended understanding of transparency and accountability also relates to more ‘substantive’ than ‘procedural’ issues – such as the transparency and accountability achieved through documentation and validation of the divergent perspectives (values, interests, frames) under which expert evidence, analysis and judgement inform alternative possible decisions (Davies, et al, 2003). These might be contrasted, respectively, as the ‘closing down’ and ‘opening up’ of decision justification (Stirling, 2003)].

involvement in the political decision making (for example early in the decision making process). The result must also be fair, for example, concerning the distribution of chances and risks. Competence requires that the participants develop the best possible understanding of the problem and use the best available procedures to resolve competing claims (Webler/ Tuler 2002).

Other standards for the evaluation of participation are derived from theories of democracy. In general they agree that participatory processes should be based on an adequate understanding of the problems at stake and should have actual influence on political decision-making. According to pluralism, this means that organised interest groups, representing the interests of their members and having access to expertise, should be able to enter the competition for influencing political decisions. Direct participation theory, in contrast, takes citizens outside of their professional roles (as 'amateurs' or laypersons) to be the central actors of participation (Barber 1984). They should be given the opportunity of entering a process of both learning about the issues to be decided and transforming their initial interests, thus developing a broader perspective and becoming more fully developed citizens (Laird 1993, Fiorino 1990).

Adherence to these general standards is also believed to influence the acceptance of the process and of its outcome both by the participants and the wider public (Rowe/ Frewer 2000, Chess/ Purcell 1999, Joss/ Bellucci 2002).

To conclude, there are some general standards for participatory processes. They are **fairness** concerning access, conduct and result of the process, the improved **understanding** of the participants and the assurance of an actual **influence** on decision-making. Observance of these standards is important for participation to be meaningful and acceptable.

In addition, there are more concrete goals that can be set for participatory processes. They seem to be largely dependent not only on the specific circumstances of a participatory process, but may also vary according to the different actors involved. In some case the objective may be to reach consensus on a specific issue, in other cases the objective may be less ambitious (but as important) to clarify differences and to raise the level of tolerance for divergent values and norms within society (Davies et al, 2003; Stirling, 2003). The assessment of participation according to them, therefore, must always depend on context and perspective.

## Overview on (scientific) communities dealing with society participation in technology and science-based policy

There are a number of communities that address – among other things – the role of civil society within research and research based policies. They are all characterised by their institutions, practices, agendas, journals, conferences and networks.

They cover the following areas that are particularly relevant for this study:

- Participatory Technology Assessment (pTA)
- Participatory technology foresight
- Participatory risk assessment
- e-governance
- Science and Ethics
- Public Understanding of Science
- Democratising Expertise
- Sustainable Development and Environmental Protection

These communities do partly overlap, as with risk assessment and technology assessment. In the following, they are briefly outlined and their relevance for the question of this study is explained.

### Technology Assessment

Technology Assessment was introduced with the establishment of the Office of Technology Assessment (OTA) by the United States Congress in 1972. Its initial purpose was to alert parliament of important technological developments and risks, and to do so independently from government sources. Since its initiation, and with the transferral to Europe, technology assessment has changed considerably. Most importantly, in many countries, participatory forms of technology assessment have been developed.

Today, participatory Technology Assessment is the best-known area of civil society participation. It refers to „the class of methods and procedures of assessing socio-technological issues that actively involve various kinds of social actors as assessors and discussants“ (Joss/Bellucci 2002, p. 5). The aim is to include social, ethical and political aspects and thus broaden the perspective of the traditional TA. This corresponds to the general tendency of TA in Europe, which is to acknowledge the importance of societal dimensions of science and technology and to design TA exercises which correspond to this new perspective. The notion of „Innovation and Technology Assessment“ (ITA)<sup>18</sup> reflects this new understanding of TA. The aim is not the isolated assessment of certain technologies but the discussion of alternatives. The stakeholders are involved in participatory processes and **are given a platform on**

---

<sup>18</sup> [www.innovationsanalysen.de](http://www.innovationsanalysen.de)

**which they can formulate their visions and their concerns and where they can actively contribute to the creation of broader acceptance for decision-making.**

There is a wide community of institutions<sup>19</sup>, scientists and practitioners dealing with (participatory) Technology Assessment, and the corresponding scientific debate on such exercises has been very active and productive. For example, a number of major European studies dealing with participatory Technology Assessment have been conducted or have been started recently (for details see description in the data base):

- ADAPTA - **Assessing Debate and Participatory Technology Assessment**<sup>20</sup>
- EUROPTA - **European Participative Technology Assessment**<sup>21</sup>
- PARADYS - **Participation and the Dynamics of Social Positioning**<sup>22</sup>
- TAMI - **Technology Assessment in Europe: between Method and Impact**<sup>23</sup>
- STAGE - **Science, Technology and Governance in Europe**<sup>24</sup>

Technology assessment often is closely linked to parliamentary decision-making. The EPTA-network (European Parliamentary Technology Assessment<sup>25</sup>) supports the exchange among these governmental institutions.

### **Risk Assessment**

Risk assessment is in many respects closely intertwined with technology assessment. However, there are a number of distinctions that justify a separation of the two lines of discussion. Risk assessment has its own roots which have little to do with parliamentary initiatives to set up advisory bodies such as the Office of Technology Assessment (OTA) in the U.S or the European Institutions that belong to the European Parliamentary Technology Assessment (EPTA) network.

Risks are often associated with complex cause-effect relationships, uncertainty in the assessment of potential damages and probabilities as well as far-reaching ambiguities when it comes to interpreting complex and uncertain results (Renn 2002). The cognitive dimension plays an important role. To citizens, only those risks that are perceived are a problem. Other risks may be neglected. Civil society participation therefore aims at clarifying the knowledge based on which judgements about tolerable levels of risks are made.

---

<sup>19</sup> See EPTA-Network. See also List of links on ITAS-homepage.

<sup>20</sup> <http://www.inra.fr/Internet/Directions/SED/science-gouvernance/pub/ADAPTA/>

<sup>21</sup> <http://www.tekno.dk/subpage.php3?article=345&survey=14&language=uk&front=1>

<sup>22</sup> <http://www.uni-bielefeld.de/iwt/paradys>

<sup>23</sup> <http://www.europaeische-akademie-aw.de/projecte/tami.htm>

<sup>24</sup> <http://www.spsg.org/scisoc/stage/>

<sup>25</sup> <http://www.tekno.dk/EPTA/epta/index.php3>

What is more important, risk assessment plays a large role within the private sector. There are different sources for potential human or environmental damage that have been associated with certain industries (for example chemical plants, nuclear plants, waste incineration) such as endocrine disrupters (pseudo-estrogens), pesticides and herbicides, softeners, genetically engineered products, carcinogenic substances, complex mixtures, Ionizing and non-ionizing radiation, exposure to electromagnetic fields and radioactivity.

Risk assessment has to be clearly separated from risk communication that, to a smaller or larger extent, is closely intertwined with public relations activities. For certain industries with controversial businesses risk communication plays an important role. Similar to risk assessment there has been a trend towards dialogue-based instruments. In the U.S. and partly also in Europe, community advisory panels and neighbourhood forums („Nachbarschaftsforen”) have proven useful instruments for establishing partnerships between industry and community-based civil society organisations. They have been used in particular by the chemical industry (for example BASF).

In order to foster the exchange in Europe, the European Commission supports the TRUSTNET, a network of institutions dealing with risk assessment.

**Name:** TRUSTNET

**Duration:** Founded in 1997

**Method:** European Network

TRUSTNET is a pluralistic and interdisciplinary European network involved in the field of Risk Governance supported by the European Commission (DG RTD). The network intends to contribute to the quality of the decision-making processes within the governance of hazardous activities in Europe. It is carrying out a collective reflection on the difficulties encountered by the traditional risk regulations. It is assessing and diffusing the emerging concepts and experiences (precautionary principle, pluralistic expertise, decentralisation of risk management,...) as well as the innovative institutional arrangements (agencies, stakeholder participation, citizen conferences,...) that may enhance the quality, legitimacy and practicability of the decision-making processes on risk.

**Publication:** <http://www.trustnetgovernance.com/>.

### **Foresight**

Foresight exercises have increasingly been practiced for several decades in various fields, especially in the field of research and policy-making. Following a widely accepted definition, the term „foresight“ describes „the process involved in systematically attempting to look into the longer-term future of science, technology, the economy, the environment and society, with the aim of identifying the emerging generic technologies and underpinning areas of strategic research likely to yield the greatest

economic and social benefits.<sup>26</sup> Five characteristics specify such kinds of exercise: a focus on the long term perspective, communication among the actors, co-ordination of the strategies of the actors by means of interactions, consensus in terms of shared visions of the future and commitment to the results of the exercise.

When analysing the latest and current foresight activities and the scientific debates on them, several trends can be identified which will briefly be outlined here:

- The increasing role of foresight in the context of national research policy-making and long-term strategic planning of S&T funding activities.<sup>27</sup> Especially during the decade following 1990, many foresight activities with a wide range of methodologies have been carried out in Europe on national levels with the aim to provide guidance for decision-making.
- The shift from Technology Foresight to a broader notion of foresight. While early foresight processes aimed at identifying future developments in science and technology, current foresight processes have shifted towards a much wider approach and try not to restrict their considerations only to the economic and social context and their relevance for research and technology development. Foresight activities are seen to an increasing extent as a comprehensive attempt to identify future challenges and risks in society and at developing a common understanding and vision of what should be achieved in science and in society in general (Zweck/ Braun 2002). One major issue in this context is the focus on societal needs and how science will be able to meet these challenges and find solutions.
- This shift is in accordance with another significant change in foresight activities - they seem to become increasingly participatory. Early foresights were characterised by expert discussion, with a strong focus on future developments within their fields of expertise. Since then, the involvement of many scientists and disciplines, of other stakeholders, of different societal sectors and also of civil society, including the individual citizen, has become a major characteristic of the latest and of current foresight activities, leading to a significant change as far as applied methodologies and the nature of foresight results are concerned. The participatory dimension is today one of the most challenging and promising features of foresight and is largely discussed in terms of identification and selection of participants, their involvement and their contribution to foresight.<sup>28</sup>
- There is a clear trend towards regional foresight activities in various European countries. The major advantages of the regional approach is to address strategic questions in a locally restricted but socially comprehensive manner and to involve a wide range of societal stakeholders, which can also lead to new local or regional networks. The participative dimension is therefore potential strength of regional foresight processes. Activities on the

---

<sup>26</sup> Ben Martin, <http://www.unido.org/userfiles/kaufmanC/MartinPaper.pdf>.

<sup>27</sup> See Barré [http://prospectiva2002.jrc.es/download/FINAL\\_proceedings.pdf](http://prospectiva2002.jrc.es/download/FINAL_proceedings.pdf), p. 118.

<sup>28</sup> See Minutes of the Futur-Workshop in Berlin in December 2002 (forthcoming).

European level (for example initiatives from the Commission and the IPTS as well as a conference in Brussels in September 2002) show the dynamics in this area.<sup>29</sup>

- Having been successful on the national level, the European dimension of foresight has been identified as one of the most promising fields of activity in Research and Technology Development (RTD) and related foresight activities. The perspectives of Foresight on a trans-national and European level have been and will be discussed at various conferences.<sup>30</sup> Foresight ought to play a significant role in FP 6 projects and programmes.<sup>31</sup> High level group recommendations,<sup>32</sup> comparative studies and activities such as the Commission's initiatives or the various projects of the IPTS<sup>33</sup> strengthen network building<sup>34</sup> and trans-national cooperation and foster new perspectives on foresight activities for European regions, Member States and accession countries at the EU-level.<sup>35</sup> The ongoing activities of CREST cluster 6 („Foresight and Society“) are an interesting contribution to these co-ordination efforts. The objectives of Cluster 6 are to establish a pan-European forum of societal actors involved in Foresight exercises with a view to influence S&T policies, disseminate best practices and establish communication links with interested societal groups. In addition, the social aspect and the communication/awareness-raising potential of Foresight activities across Europe should be further developed.<sup>36</sup>

**Name:** eForesee

**Institution:** Crehan, Kusano & Associates sprl – Belgium (Co-ordinators)

**Duration:** ongoing

**Type:** Foresight

This two-year project will address challenges faced by policy-makers implementing foresight activities for smaller economies and regions. In particular it examines the potential role of foresight in

<sup>29</sup> For more information, see <http://foren.jrc.es>; <http://www.regional-foresight.de/>. See also the special issue of „The IPTS Report“ N° 59, November 2001, on: [Foresight and Regional Development](#), and the final report of the STRATA-ETAN expert group, [ftp://ftp.cordis.lu/pub/foresight/docs/regional\\_foresight\\_en.pdf](ftp://ftp.cordis.lu/pub/foresight/docs/regional_foresight_en.pdf).

<sup>30</sup> Conferences in Seville (May 2002) and Ioannina (May 2003).

<sup>31</sup> See paper on „Foresight in FP 6“. See also the presentation of Werner Wobbe at the Futur Workshop in Berlin in December 2002 (forthcoming).

<sup>32</sup> [ftp://ftp.cordis.lu/pub/rtd2002/docs/for\\_hleg\\_final\\_report\\_en.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/for_hleg_final_report_en.pdf).

<sup>33</sup> IPTS has the aim to provide prospective techno-economic analysis in support of the European policymaking process, see <http://ipts.jrc.cec.eu.int/>. For an overview on foresight activities in the EU, see for example <http://www.cordis.lu/rtd2002/foresight/home.html>.

<sup>34</sup> For the ESTO-Network, see <http://esto.jrc.es>.

<sup>35</sup> [http://les.man.ac.uk/PREST/Research/foren\\_conference.htm](http://les.man.ac.uk/PREST/Research/foren_conference.htm); [http://prospectiva2002.jrc.es/download/FINAL\\_proceedings.pdf](http://prospectiva2002.jrc.es/download/FINAL_proceedings.pdf); Foresight in the Enlarged European Research and Innovation Area: <http://medlab.cs.uoi.gr/conf2003>.

<sup>36</sup> See also Science and Society Action Plan (COM(2001)714 final), Action 28: „The Commission will facilitate the coordination of research and foresight exercises at regional, national and European level on issues related to the action plan. This coordination will take the form of forums, seminars for representatives of national ministries on the key issues of „science and society“ or networks of centers of excellence.“



dealing with the structural changes to the economy that accompany the accession process, as well as the integration of accession states into a European Research Area.

**Publication:** [www.eforesee.info](http://www.eforesee.info)

### **Science and Ethics**

Scientific developments and new techniques often raise important new ethical issues. These issues concern the question of which methods are morally acceptable within scientific research (for example stem cell research or cloning), or which new techniques should be applied in such areas as health care (as germ line therapy, pre-implantation diagnostics) or agriculture (genetically modified crops). While there is a wide-reaching and lively academic and public discussion on many of these topics, public participation in political decision-making in these areas assumes a number of different forms. For one thing, various institutions of technology assessment have initiated public discourses. Also, national ethics councils have been established in almost all European countries.

Institutionally, the national ethics councils are advisory committees to the national parliaments or governments. However, a number of important features distinguish them from other advisory councils. First, the kind of expert advice they are intended to provide is relatively new. It is often disputed in which sense there can be expertise in the area of ethics. At the same time, many of the ethics councils are composed such as to ensure a rich diversity of standpoints. Members usually include experts from various disciplines (the natural sciences, law, philosophy, theology), representatives of civil society organisations, and (sometimes) lay persons. They often work rather independently from the government or parliaments, in that they can choose topics to cover by themselves. Finally, they tend to work more openly than traditional advisory councils. They often allow for direct contributions and participation by interested citizens, have public meetings, and see as a major task to disseminate information and to stimulate public debate.

In its Science and Society Action Plan, the European Commission sets the goal of supporting the networking of European ethics councils.

### **E-Governance**

The Internet is a source of great expectations and hopes, especially when the aim is to inform a wider public or to interact with it. The number of processes which make use of the advantages of the medium of the Internet is increasing. However, in the field of Internet-based discourses concerning innovation and technical analysis, one can rarely find concrete internet performances fulfilling these expectations, as is pointed out in an evaluation study of virtual ITA discourses.<sup>37</sup> This study shows that

---

<sup>37</sup> IFOK: Evaluation internetgestützter Diskurse zur Innovations- und Technikanalyse. Final Report 2001.

solely Internet-based ITA discourses being held on complex technical topics with many and heterogeneous participants have currently only very small chance of proving successful. This seems to be due to particularly high requirements regarding the (technical, motivational and communicational) abilities of the participants and the professional organization of the discourse. The appropriate means that would widen its scope and facilitate more demanding sophisticated virtual ITA discourse is not yet available. If a serious professional effort were made to develop such a framework, however, it would indeed be possible to develop the large potential of virtual communication and thereby generate real added value to traditional forms of discourse.<sup>38</sup> In order to arrive at this standard, it is necessary to shape the discourse's architecture and background properly and to accompany its progression continuously. While the study has identified the installation of a proper framework as an important task for the near future, it concludes that Internet-based ITA discourses are likely to succeed only if they are – as individual virtual components – integrated into a more comprehensive discourse, which essentially comprises face-to-face communication. At present, virtual forms of discourse can only serve as an integrated structural supplement to established types of discourse. Furthermore, their link to political decision-making and their presence in traditional media is equally decisive.

**Name:** Interactive Policy-Making (IPM)

**Institution:** EU Commission

**Duration:** ongoing (since 2001)

**Method:** e-government

In April 2001 the European Commission adopted a communication on Interactive Policy-Making [IPM - C(2001)1014], which aims at improving governance by using the Internet for collecting and analysing reactions in the marketplace for use in the European Union's policy-making process. This initiative will be used by the Commission to evaluate existing EU policies and for open consultations on new initiatives.

Publication: <http://ipmmarket.homestead.com/>

### **Public Understanding of Science (PUS)**

Public understanding of science is a very active field involving various institutions, initiatives and specific methodologies for public information, raising awareness, spreading scientific knowledge and changing attitudes for a better understanding of science.<sup>39</sup>

---

<sup>38</sup> Note that it is sometimes possible to compensate for the alleged weaknesses of the Internet and to transform them into strengths.

<sup>39</sup> For more information, see: <http://www.cordis.lu/improving/public-awareness/selected.htm>. See also the ESCITE-Network: <http://ecsite.ballou.be/new/index.asp>.

This movement is particularly strong in the UK, where it was given programmatic status in the late 1980s following an influential report in 1985 by the Royal Society (the British academy of science). The Royal Society called for the improvement of the public's knowledge and appreciation of science and technology – mainly by educational measures. The report received a good response from policy-makers and the scientific community, resulting in various initiatives including grants for scientists who wanted to communicate their findings to a wider public.

An important field for the implementation of an „improved public understanding of science” is the science exhibition. In this respect, science exhibitions have become heavily politicised. In 1993, the UK government even made the „public understanding of science” official policy when it published „Realising Our Potential”, a White Paper on science and technology. The overall objective of this measure was still to achieve more positive attitudes towards science and technology, which was understood as crucial for its commercial exploitation. The early approach to „public understanding of science” has in general been an educational one, since „the public” was regarded merely as uninformed.

This unidirectional approach to PUS was replaced during the 1990s by a more interactive model for the interaction of science and the public. This went along with a certain deregulation of state functions in the early 1990s and an increasing emphasis on individual action and responsibility. As a consequence, interactive exhibitions, and participatory and „bottom-up” processes were carried out). Some PUS-institutions such as science museums have started to engage in procedures of participatory technology assessment. Representatives from politics and administration are increasingly involved in PUS activities, for example in workshops or public debates on risks and S&T issues. These exercises are mostly informal and not directly related to policy-making. Still, by facilitating direct dialogue between science and the public and by involving policy-makers personally, they can have quite a significant, indirectly political impact.<sup>40</sup>

Different associations are existing with the aim to co-ordinate and to enhance the work of PUS institutions. The ECSITE network is a forum for the exchange of experience and concerted action in particular for science museums in Europe.

**Name:** ECSITE - the European Collaborative for Science, Industry and Technology Exhibitions

**Duration:** Founded in 1989

---

<sup>40</sup> Today, different models of PUS are discussed, often with a strong deliberative focus. For conceptions such as „Public engagement with sciences (PES)“ and „Alternative public understandings of science (APUS)“, see for example Hagendijk, R./ Kallerud, E. (2003): Changing Conceptions and Practices of Governance in Science and Technology in Europe: A Framework for Analysis, STAGE, Discussion Paper 2.

**Method:** European Network

ECSITE is a not-for-profit organisation representing science and technology centres and museums throughout Europe. The organisation aims to promote public understanding of science and technology by co-ordinating and improving the activities of science centres and museums, natural history museums, zoos and aquariums. The common thread uniting all ECSITE members is a commitment to public engagement with science through accessible, interactive exhibits and programmes. ECSITE facilitates co-operation among Europe's science centres – establishing standards, sharing expertise, disseminating best practice, encouraging collaboration and developing training programmes.

Publication: <http://ecsite.ballou.be/new/index.asp>

**Democratising Expertise**

The complexity of the problems political decision-makers have to decide upon has steadily risen during the last few years. Scientific expertise is therefore becoming more and more important in policy-making. This raises the question of how to combine the meaningful inclusion of scientific knowledge with the democratic legitimacy of decision-making (Jasanoff 1990). For this question, a number of issues are important:

- Scientific expertise is often highly **controversial**. This is particularly true in respect to the assessment of risks. The question „how safe is safe enough?“, for example in the sphere of food safety or the safety of nuclear waste disposal, cannot be answered easily. Science can often only state what is not known or uncertain with differing degrees of probability. In addition, scientists often have conflicting views on how to tackle a problem or which recommendations follow from given findings. Disputes about the proper methodology and the correct assumptions are frequent. Often the object of investigation or the choice of methods is value-loaded.
- The notion of **knowledge** has undergone considerable change in meaning. The distinction between lay persons' or civil society's knowledge and expert knowledge no longer holds, since many forms of knowledge which are relevant to science (and policy-making) come from lay persons' contexts. The question is how to develop this knowledge and how to make it accessible and productive for further use.
- Some authors also maintain that the sciences themselves are currently undergoing substantial changes. According to them, scientific knowledge is to an increasing extent produced directly in the **contexts of application**, and some „extended peer review“ that includes consumers ascertains the quality and the „social robustness“ of scientific findings (Gibbons et al. 1994, Funtowicz et al. 2000).
- The idea of democratising expertise leads to the claim of a **demand-driven** research agenda, i.e. a research agenda that is set according to societal needs.

Next to institutionalised scientific advice for policy-makers, research centres that are closely linked with civil society organisations are of importance. They play an increasing role in empowerment of civil society. The „**science shops**“ that have been developed in the Netherlands have also played an important part in this. Science shops are institutes, which were originally founded to provide independent, participatory research support to NGOs on a demand-driven and affordable basis. They have since evolved and become institutions with a rich experience and advisory competence with respect to societal needs and issues, which sometimes promotes the idea of a purely demand-driven „shop“. One major achievement of science shops is to have developed very functional structures of good interactions between civil society and science – structures other institutions (for example in the field of participatory technology assessment) can build on, even at a time when many sciences shops have gone through a crisis or have been closed. The overall picture is that science shops are very close to societal needs and issues, but traditionally do not offer a forum for public and political interaction. We do find remarkable initiatives here, however, which aim at strengthening the interaction between research institutions and society and at improving cooperation in science, research and development of small to medium-sized NGOs.<sup>41</sup> The political sphere is little involved in these processes, and the study will therefore not focus on them. However it has to be pointed out that the interaction structures which have been developed by science shops are important in terms of mid-term and long-term interaction between science and society – with a significant indirect impact on policy-making.<sup>42</sup>

Another important question is how policy-makers acquire expertise. The European Commission has recently published guidelines on the collection and use of expertise.<sup>43</sup> They refer to the recommendations made by the working group „Democratising Expertise and Establishing Scientific Reference Systems“ (Final Report, May 2001.). The structures for scientific policy advice in the EU are currently being investigated by an international group of six research institutions.<sup>44</sup> The study includes the national, regional and trans-national levels. The aim is to characterise the institutions that give advice, to analyse advantages and disadvantages of the different methodologies and to identify useful practices.

### **Environmental Protection and Sustainable Development**

The discussion on participation in science and technology policy is intertwined with discussions on environmental regulation. With environmentally relevant decisions, scientific and technological

---

<sup>41</sup> These activities are supported by the European Commission. For more details, see [http://europa.eu.int/comm/research/science-society/scientific-awareness/shops\\_en.html](http://europa.eu.int/comm/research/science-society/scientific-awareness/shops_en.html) and the INTERACTS network: <http://members.chello.at/wilawien/interacts/main.html>.

<sup>42</sup> In the United States, there exists a strong movement of community-based research centres that also aim at enabling civil society to take part in highly complex (and controversial) debates concerning science and technology-based decision-making. The LOKA institute, situated in Washington D.C., which helps establishing community research networks, plays an important role.

<sup>43</sup> European Commission (2002), COM (2002) 713 final.

<sup>44</sup> See [http://www.isi.fhg.de/ti/Projektbeschreibungen/je\\_adbo\\_e.htm](http://www.isi.fhg.de/ti/Projektbeschreibungen/je_adbo_e.htm).

questions are often of major importance, and these cases especially are of particular interest for this study. In addition, many of the participatory methods which are applied in research policy-making today as well are used invariably across environmental regulation and participatory Technology Assessment.

The issue of environmental protection can be seen as the origin of many of the civil society participation procedures as we know them today. Environmental movements in many countries of Europe and elsewhere have led to a great variety of methods of civil society participation. In addition, a number of directives and conventions have formed a legal framework that fosters civil society participation.

In this context, the „Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters” (Aarhus Convention), adopted and signed by the European Community in 1998, is an important step towards strengthening the role of civil society in environmental decision-making. One of its major aims is to provide an opportunity for people to express their opinions and concerns on environmental matters and ensure that decision makers take due account of these.<sup>45</sup>

Today, environmental protection is usually discussed within the wider context of sustainable development. The underlying rationale is that the goals set for environmental protection cannot be achieved if the dynamics of the social and economic system are neglected. That is, the dependencies between the ecological and the socio-economic systems have to be taken into account when designing policies. **Environmental protection, social inclusion and economic prosperity are policy goals that cannot be pursued independently from each other.**<sup>46</sup>

The problems faced when aiming at implementing the concept of „sustainability” have much to do with research policy. Both the ecological systems as well as the socio-economic systems are much too complex that is possible to identify in the best way possible to achieve sustainable development. We do not know what additional risks to sustainability will come in 5, 10 or 50 years. In addition, sustainability is a concept that balances ecological, social and economic objectives – decisions, that

---

<sup>45</sup> There is substantial literature on participatory decision-making in environmental policies. Among these, there is one major comparative analysis that is of particular interest for the present report and that will thus be outlined briefly: The Regional Environmental Centre has conducted a study that explores the status of civil society participation both in the European Union and the Candidate Countries, called „Doors to Democracy: Current Trends in Public Participation in Environmental Decision-Making in Central and Eastern Europe”. This volume is part of a series of publications that aims at drawing conclusions on a pan-European level by gaining an overview of trends and practices in the NIS countries (former Russia), the Central and Eastern European region and the Western countries. The series was published by means of a cooperative effort by the REC, the European Environmental Bureau and Ecopravo-Lviv based on surveys from 15 CEE countries, 5 NIS countries and 11 Western European countries.

need to be taken by society. That is, sustainable development can only be achieved if societies learn how to deal with highly complex issues (IFOK/IWÖ 1998). It is a concept that focuses on institution and capacity-building which enables society to search for new – sustainable – development paths. Civil society participation therefore has been identified as the key to sustainability (Meister 2002; 2003).

**Name:** ULYSSES

**Institution:** Darmstadt University of Technology, Germany

**Type:** Technology Assessment ULYSSES (Urban Lifestyles, Sustainability and Integrated Environmental Assessment) is a European research project on public participation in Integrated Assessment. Integrated Assessment (IA) aims at providing support to decision makers by using a more integrated perspective than can be offered by disciplinary research. Important applications are problems of environment and sustainability. A number of projects are devoted to building computer models for such decision support. To enhance the effectiveness of this research, ULYSSES aims at embedding such models in a social discourse and to integrate also recommendations by citizens into assessments. The goal is to make decision support methods more relevant for application in democratic contexts. To reach this goal, ULYSSES has further developed techniques of moderated group discussions into a tool called IA-Focus Groups. These groups have used computer models to support their discussions, and formulate citizen recommendations as the result of their deliberations. ULYSSES has been coordinated by the Darmstadt University of Technology, Germany, and was supported by the European Commission, DG XII, RTD Programme Environment and Climate. The ULYSSES research team comprised researchers from ten research institutions in eight European countries.

Publication: <http://zit1.zit.tu-darmstadt.de/ulysses/>

**Name:** VISIONS

**Institution:** European Commission

**Duration:** 1998-2001

**Type:** Foresight

VISIONS is an Integrated Assessment project, which began in 1998 and finished in February 2001, under the auspices of DG XII of the European Commission. The project forms part of the Fourth Framework Program of the European Commission, Environment and Climate. The main objective of VISIONS was to create a set of alternative scenarios for future sustainable development paths, up to 2020 and 2050. The project aimed to provide a point of reference and practical tools for key-decision makers and stakeholders. The scenarios were used to test and apply state-of-the-art software tools, in

---

<sup>46</sup> For this reason, sustainability has been introduced in the Treaty of the European Union as a cross-sectoral policy.

combination with participatory methods for consensus building. The scenarios cover Europe as a whole and three selected regions: North West UK, Venice (Italy), and the Green Heart (The Netherlands).

Publication: <http://www.icis.unimaas.nl/visions/>

### **Conclusion**

The number of areas in which participatory exercises are applied is increasing, and the impressive number of studies, for example on pTA illustrates that the learning process on participation is very active and well underway. On the other hand, there is little discussion on how the experience of public participation can be transferred to other fields or stages of policy-making – such as funding activities, evaluation activities or activities shaping the structure of the research and innovation system.

The overview on the different lines of discussion makes it visible that there is an interdependency of science and society. The scientific community does not only influence the way how society observes certain problems, the research agenda of the scientific community is strongly influenced by civil society. That is, not only do lay citizens benefit from the exchange with the scientific community (for example on consensus conferences), scientists also benefit from a self-reflection on their research-projects, which is fostered by critical questions posed by lay citizens.



### 3 Classification

---

*Civil participation is – particularly in Europe with its different cultural and political contexts – characterised by a variety of approaches. This chapter gives an overview of the Analytical Frameworks, the Methods of Civil Society Participation as well as ideas for their classification (by design, by linkage with the political sphere and by areas of application).*

#### Introduction

Due to its decentralised structure and its multiplicity of cultures, Europe offers a broad field for experimentation with new modes of civil society participation. In many countries and regions, traditional forms of participation - election of political representatives, direct democracy, protest on the streets or legal action - have been completed by innovative, dialogue-oriented instruments.

The objective of this chapter is to draw a picture of the different types of procedures of civil society participation in science and technology-based decision-making, both in European and in other countries. Since there is not one single way of giving such an overview, different characteristics of participation will be taken as bases for classifying the field here. The various systematisations that thus accrue will draw the attention to various typical and crucial features and circumstances of participation. They are intended, in their entirety, both to capture the richness of the field and to make it perspicuous and tangible. As it will be seen later on in chapter 5, the success of civil society participation largely depends on the capability of designing a process that fits to the specific circumstances that policy-makers face. The chapter is structured as follows:

- Overview of different analytical frameworks classifying civil society participation procedures according to the **problem situations** and the ensuing **objectives** that are pursued.
- Presentation of the most relevant **methods** or **institutional settings** of these interactive forms of civil society participation.
- **typology** of different civil society participation procedures according to different dimensions. They are split into three groups:
  - **process design** (selection of participants etc.)
  - **relationships to the political decision-making process** (either direct or indirect, via media)
  - **areas of application** (within research policy and research based policies)

References to cases taken from different countries and regions in Europe complement the presentation.

## **Analytical framework: Outline and objectives of civil society participation procedures**

It has proven difficult to give a short and precise answer to the question of what civil society participation is good for. Even if we restrict the analysis to the policy-maker's perspective (that may differ from the perspective of civil society groups as each group has its own motives), we have to acknowledge that there exists a wide range of different problem settings. The extent to which civil society participation can improve policy-making depends very much on the context. The issue discussed, the level (local or national), the political culture and many other factors play a crucial role.

In order to reduce complexity, a number of classifications have been developed that identify different dimensions related to the objectives of civil society participation procedures. They help to give a picture of the different types of problems that may be resolved by getting civil society actively involved.

The following analytical frameworks are briefly outlined below:

- the EUROPTA framework (Simon Joss/ Sergio Bellucci)
- the AFTA<sup>47</sup> framework (Ortwin Renn)
- the TAMI-framework (TAMI method/impact group)

Based on this analysis, a new analytical framework will be developed that will be used for the comparative assessment (chapter 5).

### **The EUROPTA framework (Simon Joss / Sergio Bellucci)<sup>48</sup>**

The EUROPTA report proposes a two-dimensional analytical framework in order to assess different types of civil society participation. The aim of the framework is to bring out the features that may improve the political system's capability to reconcile diverging interests as a basis for decisions on technology policy that are acceptable to all or at least a majority of actors (Joss/Bellucci 2002, 18). The two basic problems of inequality and uncertainty are analysed with respect to **three dimensions** (Joss/ Bellucci, 2002, p. 18-19):

- **cognitive dimension** (problem of knowledge): the contestation of factual expertise
- **normative dimension** (problem of legitimisation): a lack of societal consensus concerning modern technologies
- **pragmatic dimension** (problem of management): limited capacities of the political system to steer technological developments

---

<sup>47</sup> The scheme has been used at the Akademie für Technikfolgenabschätzung (AFTA: Centre for Technology Assessment)

<sup>48</sup> EUROPTA: European Participative Technology Assessment

The notion of inequality refers to the existence of different – and often conflicting – interests, values and norms as well as different levels of (political) power. The notion of uncertainty refers to the different types of problems that arise due to the high complexity of the issues discussed. The table below illustrates the six different dimensions analysed in the EUROPTA report. The analysis has been made in the context of technology assessment.

	<b>cognitive dimension</b>	<b>normative dimension</b>	<b>pragmatic dimension</b>
<b>Inequality</b>	reflecting different actors' perspectives on scientific and technological issues, including the technologies' influence on their living conditions	reflecting the plurality of (possibly conflicting) norms and values that often get mixed up with interests	reflecting the unequal distribution of institutionalised or informal influence on decision-making processes shaping technology, as well as unequal distribution of resources that enable actors to take part in such processes
<b>Uncertainty</b>	is generated, as the understanding of a phenomenon becomes ever more complex, and, at the same time, principal limits of cognition emerge	arises from new questions and problems generated by scientific-technological developments, for which traditional ethical principles, norms and standards are not instructive or adequate any more and new ones are not (yet) in sight	results from the difficulties of political and social systems and institutions to reach conclusions and, under conditions of cognitive and normative uncertainty, to implement decisions in a turbulent environment

Source: Joss/Bellucci (2002, 18f)

Joss and Bellucci (2002, 20) derive three main policy tasks from this analytical framework. Policy tools should:

- enhance the decision-making process by making it **better informed** – that is, supporting decision-making in a way that ensures decisions are taken on the basis of the best available knowledge (cognitive dimension).
- broaden the **legitimisation** of decision-making by providing a voice also to those affected and/or to those previously marginalized, and thus democratise the decision-making process (normative dimension).

- contribute to the basis for **future consensus -building**, or for the clarification of disagreement; they should do this by providing forums where common searches for solutions to inequality or uncertainty problems can be made (pragmatic dimension).

### **The AFTA-framework (Ortwin Renn)**

Ortwin Renn suggests a threefold distinction between epistemological, reflective and participatory discourses. The distinction has been developed in the context of risk management and therefore pays special attention to the management of the uncertainty that characterises risky decisions (see the fig. below). The three types of discourses correspond to different, and increasingly complex, conflicts that may be resolved by civil society participation procedures:

- Within a **cognitive discourse**, experts (not necessarily scientists) discuss the potential opportunities and risks involved in a certain technique or decision, based on a common vision and the likely developments that can be foreseen without relying on pure speculation. The objective of such a discourse is to arrive at the most adequate description or explanation of a development that provides opportunities for the affected actors. The goal is to achieve a homogeneous and consistent definition and explanation of the phenomenon in question, as well as a clarification of dissenting views. It is best suited to conflicts that are mainly cognitive.
- With **reflective discourses**, next to the clarification of knowledge (as in cognitive discourses), the assessment of trade-offs between the competing possibilities like the extremes of rejection and embracement is also crucial. They can involve agency officials, external experts, stakeholders and affected groups. Reflective discourses are mainly appropriate as a means to decide on risk-averse or risk-prone approaches to innovations. This discourse provides answers to the question of how much uncertainty one is willing to accept for a given future opportunity.
- The third type of deliberation, the **participatory discourse**, is focused on resolving ambiguities and differences about values. Established procedures of legal decision-making, but also novel procedures, such as mediation and direct citizen participation, belong to this category. Participatory discourses are mainly appropriate as a means of searching for solutions that are compatible with the interests and values of the people involved and to resolve conflicts among them.

**Figure 2: The Risk Management Escalator**  
 (from simple via complex and uncertain to ambiguous phenomena)

			<i>Risk Tradeoff Analysis and Deliberation Necessary</i> Risk Balancing Necessary Risk Assessment Necessary
		<i>Risk Balancing Necessary</i> Risk Assessment Necessary	<b>Types of Conflict:</b> cognitive evaluative normative
		<b>Types of Conflict:</b> cognitive evaluative	
	<i>Scientific Risk Assessment Necessary</i>	<b>Actors:</b> Agency Staff External Experts Stakeholders such as Industry, Directly Affected Groups	<b>Actors:</b> Agency Staff External Experts Stakeholders such as Industry, Directly Affected Groups Representatives of the Public(s)
<i>Routine operation</i>	<b>Type of Conflict:</b> cognitive	<b>Actors:</b> Agency Staff External Experts Stakeholders such as Industry, Directly Affected Groups	
<b>Actors:</b> Agency Staff	<b>Actors:</b> Agency Staff External Experts		
<b>Discourse:</b> internal	<b>Discourse:</b> cognitive	<b>Discourse:</b> reflective	<b>Discourse:</b> participatory
<b>Simple</b>	<b>Complex</b>	<b>Uncertain</b>	<b>Ambiguous</b>

Source: Renn

### The TAMI framework<sup>49</sup>

The method/impact working group of the TAMI project has developed another framework that is based on the distinction of

- the **issue** dimension on the one hand. Three types of issues are identified: technological/scientific aspects, societal aspects and policy aspects.
- the **impact** dimension on the other hand. Again, three categories are identified: raising knowledge, changing attitudes (opinions) and initialising actions.

Similar to the EUROPTA framework presented above, the TAMI framework has been developed in the context of technology assessment.

**Table: Typology of Impacts**

<b>Impact Dimension</b> <b>Issue Dimension</b>	<b>I.</b> <b>Raising Knowledge</b>	<b>II.</b> <b>Changing Attitudes /opinions</b>	<b>III.</b> <b>Initialising Actions</b>
<b>Technological / scientific aspects</b>	<b>Scientific Assessment</b> Technical options assessed and made visible Comprehensive overview of consequences given	<b>Agenda Setting</b> Setting the agenda in the political debate Stimulating public debate Introducing visions or scenarios	<b>New R&amp;D Policies</b> New action plan or initiative to further scrutinise the problem decided New orientation in policies established
<b>Societal aspects</b>	<b>Social Mapping</b> Structure of conflicts made transparent	<b>Mediation</b> Blockade running Bridge building Self-reflecting among actors	<b>New Decision-Making Processes</b> New ways of governance introduced Initiative to intensify public debate taken
<b>Policy aspects</b>	<b>Policy Analysis</b> Policy objectives explored Existing policies assessed	<b>Re-Structuring the Policy Debate</b> Comprehensiveness in policies increased Policies evaluated through debate Democratic legitimisation perceived	<b>New Policies</b> New legislation is passed Policy alternatives filtered Innovations implemented

<sup>49</sup> TAMI - Technology Assessment in Europe: between Method and Impact

Using these dimensions of impact and dimensions of the issue gives us a matrix that shows nine types of impact of Technology Assessment. An inventory of 23 roles or functions of TA in policy-making that was developed by the members of TAMI-project can be arranged according to these types of impact.<sup>50</sup>

### **Conclusion: The IFOK framework**

The analytical frameworks outlined above have all a number of similarities. They refer to the problem of insufficient knowledge or uncertainty as well as to the problem of differing or conflicting interests. For the present purpose in this study, it is useful to take a pragmatic stance. It aims at giving policy-makers advice on how to explore the potential of civil society participation in the realm of science and technology-based decision-making. The distinction between insufficient knowledge on the one side and the problem of conflicting interests on the other side helps to identify typical problem constellations policy-makers are faced with.

This scheme will be extended in two dimensions: First, it seems to be useful to introduce the category „values” (or norms) even though if it is closely intertwined with the two categories already established. All the cognitive problems have a value-dimension; besides, interests and values are often difficult to separate: While interests can be understood as primarily concerning the actor’s preferences related to his personal situation (for example the availability of goods to him or the absence of risks), values refer to his broader conceptions of what is right or wrong, for example in a moral sense. Even if in practice these dimensions are sometimes difficult to separate, depending on the prevailing problem, different types of civil society participation procedures will be recommended. Second, it seems be helpful to introduce a further category, namely the visions of the future that actors have. Even if visions of a (desirable) future can perhaps ultimately be traced back to the categories already introduced, they are typically less articulated and, due to the often long term perspective and high degree of cognitive uncertainty, less fiercely contested. Developing and resolving opposing visions of the future often calls therefore for specific methods and is a standard type of problem that policy-makers are faced with.

The typology derived from these reflections is thus based on the characteristics of the initial constellation of actors, which are the starting point for a process. The actors (for example citizens, stakeholders, interest groups, experts, authorities) are regarded as being characterized by their knowledge of a particular topic, their interests, their values and their visions. The initial problem situation therefore can be seen as constituting differences and conflicts in these four respects:

---

<sup>50</sup> Executive Summary TAMI Method/Impact Group.

1. **Knowledge** (differences in or lack of knowledge)
2. **Interests** (conflicting interests)
3. **Values** (conflicting values)
4. **Visions** (different orientations or uncertainty about the future)

Participatory processes will in general be initiated to bring about a change in the constellation of these dimensions, for example to exchange the specific knowledge different actor groups have or to reach a compromise between conflicting interests. Or they aim at making this constellation more precise and known to policy makers, for example to inform policy makers about the moral evaluation of some topic by citizens or about the different conceptions of a desirable future.<sup>51</sup>

It is quite obvious that this separation of four dimensions is an analytical approach, whereas in practice these four dimensions are often intermediately related: It is for example the values which frame knowledge; interest are conditioned by knowledge and values as well. However, the clear distinction of these four dimension proves useful for the analysis and assessment of different approaches.

## **Overview of methods of civil society participation**

A wide range of different methods – or institutional settings – has been developed in order to improve policy-making by civil society participation. This section gives an overview of the different methods used. In practice, different methods are frequently combined. Some of the methods have been developed in policy areas such as local planning and environmental regulation. Since many of the methods have been applied in different contexts, only typical processes are listed.

The presentation includes also certain institutional bodies or mechanisms that have been developed for civil society participation, such as advisory committees or public hearings. Alternative names or the designation of related methods are given in brackets (Renn/ Webler/ Wiedemann 1995, 339ff, Beckmann/ Keck 1999).

### **Advisory committees (advisory bodies / councils)**

Advisory committees are institutions set up by government or parliament in order to consult these bodies on specific policy issues, often in respect to science and technology. Advisory committees usually consist of experts and/or high-level representatives from civil society and different stakeholder groups. Three different advisory committees are briefly outlined below:

- ethics councils

---

<sup>51</sup> Participatory processes in S&T policy often tackle problems in the environmental sector. But since there are many other issues these processes can deal with, it is not useful to classify the processes according to the issues.



- economic and social committees (social partners)
- councils dealing with specific issues (sustainable development / innovation)

One important type of such committees are ethics councils which exist in many countries, either on national, regional or sectorial level, and their aim usually is to give opinions on ethical problems and to stimulate the public debate on these matters. The oldest national ethics council is the French Comité Consultatif National d’Ethique pour les Sciences de la Vie et de la Santé, established in 1983. Other national councils have been established, among others, in Greece (1998), Finland (1991) and the United States (2001).<sup>52</sup> The European Group on Ethics, established in 1997, is an independent, pluralist and multidisciplinary body which advises the European Commission on ethical aspects of science and new technologies in connection with the preparation and implementation of Community legislation or policies.<sup>53</sup>

Another type of advisory body is institutions that have been created in order to foster social dialogue. They deal with various issues, such as those related to research policy and research-based policies, among others. These committees, representing the social partners in particular, have a long tradition in countries such as Germany or Austria („Sozialpartnerschaft”), in southern European countries and, in particular, in the European Union itself (Economic and Social Committee).

Finally, a number of new committees have been formed recently dealing with specific policy issues such as innovations or sustainable development. These committees tend to have a broader stakeholder representation and the social partners usually play a minor role. Examples are the National Sustainability Councils that exist in many countries within Europe today.<sup>54</sup> In Germany, an innovation council („Innovationsbeirat”) was established by the Government in 2001. Members are high-level representatives from the scientific community and stakeholder groups. In Italy there exists the National Board ENEA debating on alternative energies or the bioethics committee. These bodies are characterised by high-level representatives (i.e. scientists, lawyers, professionals, no direct involvement of lay persons) and an intellectual, idealistic and scholastic attitude – they sometimes risk to be quite remote from real life and questions of application as some people criticise.

---

<sup>52</sup> A list of some of the national ethic councils can be found at:

[http://www.ethikrat.org/english/committees/ethics\\_committees.html](http://www.ethikrat.org/english/committees/ethics_committees.html)

<sup>53</sup> See [http://europa.eu.int/comm/european\\_group\\_ethics/index\\_en.htm](http://europa.eu.int/comm/european_group_ethics/index_en.htm). The twelve members of this group are coming from academia.

<sup>54</sup> For further information see [www.nachhaltigkeitsrat.de/service/links\\_e/index.html](http://www.nachhaltigkeitsrat.de/service/links_e/index.html).

**Citizens' advisory council (citizens' advisory committee, community advisory panel, neighbourhood forum)**

Citizens' advisory councils are composed of local citizens, typically neighbours of a facility like a chemical plant. The councils are permanent institutions. Their aim is to give the public the opportunity to voice concerns and formulate questions, and to give industries the opportunity to address their issues. Typically, the selection of participants is highly restricted. Members are usually chosen by the institutional body seeking advice. The same is true for the agenda. Often, citizens' advisory councils offer few opportunities for participants to discuss issues outside of the prearranged charge. This instrument has been used widely by the chemical industry as part of their risk communication.<sup>55</sup>

**Citizens' jury (citizens' panel, citizens' review panel; similar: planning cell, citizens' forum)**

Citizens' juries are a means of acquiring informed recommendations about a specific policy or decision problem from a group of representative citizens. About 15 to 20 randomly selected citizens formulate a joint recommendation on a previously fixed set of questions. The jury is supported by a professional facilitator and has access to experts that represent all relevant positions. Often an advisory committee gives advice concerning the selection of the experts and the questions to be asked. The panel of citizens autonomously deliberates the question. Compared to citizens' juries, planning cells („Planungszelle“) are less focused. Whereas citizens' juries are typically asked to express a preference among three or four pre-selected policy options, planning cells are more engaged in designing policy options as well as making recommendations about which additional criteria might lead to policy acceptance (see also: Consensus conference). A recent example of a planning cell is the citizens' report („Bürgergutachten“) on consumer policy in Bavaria. The greatest number of cases, however, took place on a local level.

**Consensus conference (consensus development conference, citizens' conference, PubliForum)**

A consensus conference may be described as a public enquiry by a group of 10 to 30 randomly selected lay citizens who are charged with the assessment of a socially controversial topic of science and technology. They formulate a joint report. The citizens are autonomous in framing the problem and selecting the experts. They deliberate on the report, which, contrary to the denomination of the method, does not necessarily present a consensus, but can develop a number of diverging positions. The hearing of the experts and the presentation of the report are public. Usually, the citizens prepare the conference over two weekends. The conference itself with the hearing of the experts and the writing and presentation of the report takes four days. Consensus conferences have been held both under the auspice of participatory technology assessment and public understanding of science.

---

<sup>55</sup> For example the BASF Nachbarschaftsforum.

Altogether, hundreds of consensus conferences have been conducted in Europe and the United States. Very often, they dealt with questions related to medical technology<sup>56</sup> and biotechnology: „National consensus conference on plant biotechnology” (UK), „Bürgerkonferenz Streitfall Gendiaagnostik” (Germany) or the „Citizens Conference on Genetically Modified Food” (Denmark), „Genetic Testing in the Netherlands”. Other topics have been covered, too, such as „Traffic in Copenhagen” (Denmark) or „Elderly People and Information and Communication Technology” (Norway).

### **Focus groups**

6 to 12 participants (lay citizens or representatives of stakeholder groups) meet in face-to-face facilitated workshops in order to discuss issues related to science and technology. The method can be applied on all levels, from local to international. Focus groups provide a picture of the different perspectives, interests and visions of the participants. They have been used for example at the project „consumer focus groups on biotechnology” that produced a detailed report on the cultural construction on food as a valuable information for the government.

### **Future Workshops (Zukunftswerkstätten, similar: Future search conference)**

A future workshop is a method that aims at assigning those persons concerned by future developments an active role in developing future scenarios. Participants can be experts, lay citizens or people from the public authorities. They jointly develop desirable or potential future scenarios and discuss the necessary conditions for their implementation. Before starting to design future scenarios the participants collect criticisms of the present situation. The workshops tend to be held with groups of up to 15 people and last 1 to 3 days. They are supervised by a professional facilitator, who establishes a communicative and creative atmosphere. Future workshops are applicable to issues with a long-term perspective.

A future search conference is similar to a future workshop, but includes a larger number of persons (60 to 80 persons in one room or several hundreds in parallel rooms). In the United States, they are often used in organisational development processes, in Europe more often in community development. Their aims are to achieve shared goals and fast action.

### **Initiative (referendum)**

Many local, regional or national constitutions include the instrument of initiatives or referenda. They are launched either by the authorities or by citizens or groups collecting a certain quorum of

---

<sup>56</sup> The US-American National Institutes of Health have organised more than 100 „consensus development conferences“ on medical technology starting in the 1980s.

signatures. Depending on the procedure, the city council or parliament can be obliged to discuss a given issue, or a referendum is held whose outcome can be legally or politically binding.

In a number of European countries, referenda are frequently held on controversial issues related to science and technology based policy-making such as nuclear energy, biotechnology or abortion (for example Switzerland, Austria, Italy).

### **Mediation (compensation, bridge-building, benefit sharing)**

Mediation is used in a wide range of conflicts from the private to the political, for example environmental conflicts. The conflicting parties are directly involved or send representatives who are authorized to take decisions. With the help of a neutral third party, the attempt is made to reach a consensual solution through negotiations (search for win-win-solutions). The liability of the results is voluntary and usually not integrated into a formal administration process. Even though mediation and bridge-building have many characteristics in common, they have slightly different connotations. Bridge-building is not necessarily related to the resolution of an open conflict. The aim is to bring people together who would not have met otherwise and therefore could not have benefited from the exchange. Mediation brings people together who have conflicting interests (and know about them). The instrument has been used in particular in respect to environmental conflicts about large infrastructure projects (environmental mediation). One of the largest mediation processes in Europe has been the mediation process concerning Frankfurt airport.

### **Negotiated rule making (regulatory negotiation)**

A regulatory agency sets up a committee to reach a consensus over some specific regulation. The agency and all stakeholder groups are to be represented, and the agency commits itself to accepting an eventually emerging consensus as a preliminary regulation. Negotiated rule-making is applied in risk management and environmental regulation. Often, highly technical issues such as the fixation of thresholds are discussed, and the public is represented by professional representatives of interest groups. The method is used in particular by the U.S. Environmental Protection Agency.

### **Planning for real (community planning, citizens' exhibition)**

This method is often used in town planning. The participants are citizens from the target community, government officials, local councillors, and – if requested – experts. Planning For Real works with a community-assembled model on which problems and improvements are identified through pictorial option cards. The aims are to facilitate the exchange of information and visions and to enhance the self-mobilization energies.

The process „Listening to the City” gave participants an opportunity to help shape the redevelopment of Lower Manhattan and the creation of a permanent memorial to the victims of September 11<sup>th</sup>.

#### **Public hearings (similar: written comments)**

Public hearings are open forums where interested persons can attend and officials of some agency present their proposals and respond to questions and objections. Hearings often take place relatively late in the policy process, when a detailed plan has already been worked out. They are often prescribed by law. The aims can be to give concerned parties an opportunity to voice their objections, to warn the agency of potential opposition, to provide input to decision-making and to explain the proposal to the general public. Often citizens or interested groups are invited to submit written comments on some proposal or plan and thus voice objections. This presupposes that the plans are made public. The opportunity for written comments and the transparency that goes with it is often legally obligatory in planning processes or in cases such as the release of genetically modified organisms. In general, the legal provisions are much more far-reaching in the United States than in the European countries. An example for a public hearing in a European country that meets high standards of transparency is the „Speaking Out” series of hearings in the UK (for example the „Science Summit on Genetic Testing”) organised by the Science in Society-Committee funded by the Royal Society.

#### **Public survey (opinion poll)**

In surveys, the wider public is asked for their opinion. Surveys can measure both directions and intensities of beliefs as well as their setting in values and attitudes. The aims are to incorporate the views of affected people that would not otherwise make their views heard, and to counterbalance the biases that result from the more selective forms of participation. Recently, several institutions have started to explore the possibilities for online-based opinion polls. Often, they are used as one element among others (Listening to the City, Futur – the German research dialogue, RISCUM-II project in Sweden, environmental assessment of the Jurmala town-development plan in Lithuania). In the UK, a survey was conducted after participants of the Citizen Foresight on the Future of Food & Agriculture had criticised the method of the process. The survey asserted the outcome of the citizen foresight.

Public surveys are frequently used by the European Commission. A recent survey on issues related to science and technology related policy-making was on the attitudes of citizens in Europe (Gaskell/ Allum/ Stares 2003).

#### **Round Tables**

Round tables have some similarities with negotiated rule-making, but leave much more room for individual arrangements. Often round tables are used as a platform for negotiations with

representatives of certain industries or scientific organisations in order to establish codes of conduct with respect to environmental, ethical or social standards. Even though civil society participation is not obligatory, often various civil society organisations take part in such discussions. In contrast to negotiated rule making, round tables are not intended to lead to codified legal arrangements even if in practice the voluntary agreements reached have sometimes been transformed into legally binding rules later on.

### **Scenario workshops**

Scenario workshops evaluate possible future developments. They normally have a group size of 24 to 32 participants. The participants are usually residents, entrepreneurs, planners or technical experts. On the basis of a status quo analysis, the main influencing factors and key data are collected – while changing general conditions of future developments. The scenario technique is applicable for statements of economic, technological and social developments.

Scenario workshops have frequently been used in various countries, for example, the scenario workshop on Urban Ecology (Denmark), „Gene, Geld und Gelehrte“ (Germany), a citizens’ jury / scenario workshop on food and farming futures for Andhra Pradesh (India), Speaking out meetings on genetics and health (UK).

## **Classification by process design**

### **Participants**

Civil society participation procedures differ widely in the way participants are selected. A first, important category refers to the groups participating. In the following three different groups are discussed:

- stakeholders
- persons directly concerned
- lay citizens

**Stakeholder** participation usually takes place via organised interest groups. As illustrated in chapter 2, there is a wide variety of different stakeholder groups:

- **Labour-market players** are predominant in institutions that foster social dialogue. Such institutions exist both on the European level (Economic and Social Committee) and the national level (for example the „Sozialpartnerschaft“ in Austria). In Germany, the labour

union and the employers association of the Chemical Industry jointly initiated a dialogue to discuss the challenges posed by the concept of sustainable development.<sup>57</sup>

- **NGOs** as organisations that bring people together in a common cause play a major role in participatory processes dealing with controversial issues often related to environmental protection and/or human rights. Compared to lay citizens they have the advantage of being better informed on complex scientific issues and therefore try to represent the voices of those interests that seem to be underrepresented in political decision-making (such as the future generations). They played an important role in many discourse projects on bioethics, genetically modified organisms etc.
- **Community-based organisations** play a vital role in conflicts related to regional and spatial planning. Often they centre around controversially discussed infrastructure projects for example airports, waste incineration plants or nuclear waste deposits. Community-based organisations then participate in public hearings, organise other forms of protests (letters of protest, media campaigns, street demonstrations) or go to court or participate in mediation processes. In some cases, the engagement of local initiatives has initiated a public debate that continued on the national level. The project „AKEnd“, a discourse on how to resolve conflicts that go along with the search for a safe nuclear waste deposit, is rooted in such a local civil movement.
- **Religious communities** are particularly involved in processes that deal with difficult ethical questions (such as abortion, therapeutic cloning, transplantation medicine, research on stem cells and are usually represented in ethics councils. In Denmark, the future of religion itself is the subject of investigation of a discourse that is about to be started.<sup>58</sup>

Corporations are not included in this list of civil society stakeholder groups. The role of industry will be analysed in the following chapter.

A special group of stakeholders constitute **the people who are directly concerned** by a given problem or a envisaged decision taken by government. Their role is worth mentioning in two respects:

- On the one hand, there have been a number of processes where organisations of disadvantaged people (for example people with a high risk of transmitting hereditary diseases) have taken part. An example is the „panel de citoyens malades ou parents de malades en matière de recherche sur les cellules souches et le clonage thérapeutique“.
- On the other hand, people concerned by hazardous infrastructure projects often participate at public hearings or other, more interactive, dialogue forums. Often they are organised in community based organisations.

---

<sup>57</sup> The discourse „Bausteine für ein Zukunftsfähiges Deutschland“ (IFOK 1998) did not cover subjects that are directly related to research policy; however, it can be seen as a milestone project for innovative problem solving by the social partners.

<sup>58</sup> The process will be managed by the Danish Board of Technology.

The distinction between organised civil society (**interest groups**) on the one hand and **lay citizens** on the other hand plays an important role for classifying different types of civil society participation. One also has to distinguish between individual citizens who participate in a process because they are themselves affected by a certain issue and citizens who were randomly selected and who therefore do not represent a personal concern.<sup>59</sup> There exist a wide range of civil society participation methods that aims at bringing lay citizens and experts together in order to foster an informed decision-making process such as consensus conferences or citizen reports. There has also been larger citizens' conferences with several hundred lay citizens participating, for example the two citizens' conference on genetically modified food held in France and in Germany with 250 and 200 lay citizens respectively.

The different types of participants reflect different types of justification for civil society participation. Two typical selection principles can be identified:

- **balance of interests**: This criterion refers to the inequalities of power that have to be acknowledged when civil society participation aims at resolving a conflict. This is particularly relevant for mediation processes. The stakeholder groups participating will use their exit option if they realise that they have more attractive – i.e. powerful – means to pursue their interests outside the participatory problem solving arrangement.
- **representativeness**: This criterion is particularly relevant for civil society participation procedures that follow the model of an ideal discourse (although if statistical representativeness does not automatically lead to reliable results). In order to have a level playing field, it is important that the composition of participants represents the variety of different standpoints that exist in society. The result of a dialogue then should not depend on the economic or political power of the participants represented, but on the quality of arguments that are brought forward. Representativeness plays a role particularly for discourses on ethical issues that should be discussed independently from the interests of different stakeholder groups.

Balance of interests is a key criterion for negotiations, whereas the representation of the full spectrum of perspectives that exist in society is a fruitful basis for deliberation. The distinction between these two categories illustrates that the normative claim to let the „relevant” groups participate cannot be discussed apart from the given context.

---

<sup>59</sup> At the same time these two categories are sometimes difficult to separate: since each citizen is at any one time a lobbyist for his or her own interests emerging from his professional (for example scientific), political (for example member of NGO) or private (for example head of family) background. This multiplicity of interests has to be taken into account when approaching participatory processes.



In addition, several methods for the **selection of participants** can be distinguished (Joss/Bellucci 2002, 54). Below, the most common methods are briefly outlined and illustrated with a few examples:

- **random selection:** at the „Bürgerkonferenz Streitfall Gendiagnostik“ as a first step 10.000 lay citizens were randomly selected, followed by a lottery identifying 19 citizens to participate.
- **volunteering:** at the process „Listening to the City“ residents of New York could subscribe online via the Internet.
- **categorical self-selection:** A method often used at conferences where participants chose between different working groups. It is a key criterion for open space conferences.
- **co-nomination:** The group of participants of the first phase of the FUTUR research dialogue were selected by co-nomination, which was based on an initial list set up by the Ministry for Education and Research and the consortium of institutes that managed the process.
- **selection through networking:** at the „Diskurs Grüne Gentechnik“ the German government identified 30 stakeholder groups that themselves nominated a total of 100 persons who were invited to participate.
- **appointment:** this is the typical selection method for advisory bodies (ethics committees, economic and social committees). Their members are usually directly appointed by the government. In the case of the Economic and Social Committee, the European Council chooses the participants from a list set up by the national governments.

Often, the managing institutions have certain criteria to meet in order to reach a certain mix of participants. Often they refer to certain demographic criteria. The ethnic balance played a role in the process „Listening to the City“. In a number of cases the participants were chosen by age. At the ozone consensus conference in Austria the lay panel consisted of young people aged 18- 26, and among other criteria (higher education) the age (16 to 40) was a criterion for selection for the scenario workshop „Gene, Geld und Gelehrte“ in Germany. The ongoing project „Future Child“ in Malta addresses specifically young people and children. The same applies to the „young foresight“ process in the United Kingdom.

### **Duration**

Processes differ widely in respect to their duration. Single events (public hearings, conferences) exist alongside permanent institutions such as ethics councils or long-lasting processes such as the series of Citizens Conferences on Genetically Modified Food that ran from 1991-1998 or the Discourse on Genetically Modified Herbicide-Resistant Crops in Germany that lasted more than 2 years. The follow-up conference on genetically modified food in Norway ran from 1996 to 2000 (with two major events). Another aspect of duration is the way how processes are linked with one another. In some countries, institutions and practitioners have collected fruitful experiences in various processes over a long period. This professionalism and institutionalisation has proven very useful for the continuity of public debates and the evolvement of methods and process designs.

**Face-to-face vs. virtual communication**

Another dimension that gains importance is whether the civil society participation occurs through face-to-face dialogue (workshops, conferences) or other media. Among others, the following media have been used:

- online-voting (Danish Voting Conference on Drinking Water)
- surveys (Eurobarometer)
- chats and newsgroups
- facilitated online workshop (German future research dialogue)
- virtual events (Online-Conferences)
- press conferences, interviews etc.

**Size: number of participants**

It is amazing how greatly the number of participants may differ. A typical consensus conference takes place with about 10 to 30 participants, whereas other processes involve several thousand or more citizens. The project „Listening to the City” involved 6000 citizens of New York in a process of deliberating on how to rebuild the Ground Zero.

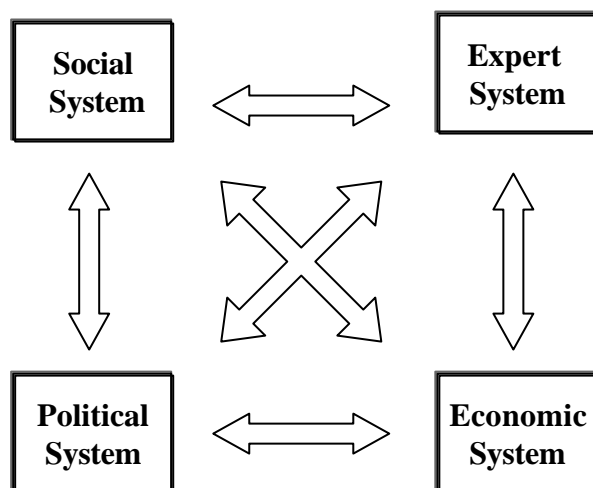
**Reporting and dissemination of results**

Processes differ in the way how they focus on the dissemination of their activities and results. However, reporting and dissemination activities are important issues to make processes better known both to different actor groups and the broader public. This is especially true for processes involving a limited number of actors. Of course, the role of media or of institutions related to PUSH in this context is crucial.

## Classification by connection with political -societal sphere

### The connection of the different sub-systems of society

The interrelationship between civil society and the political sphere in the domain of science-based policy issues can be best illustrated by looking at the different sub-systems of society:



The different processes analysed in this study are always positioned at the edge of several sub-systems of society. Even though many processes involve actors from more than two subsystems, most of the methods can be classified in a first approximation at the intersection of two subsystems. 6 intersections are briefly commented below:

- Community Advisory Panels build bridges between **private sector corporations** and **civil society**. The same applies to (environmental) mediation even though the role of representatives from political-administrative bodies and experts tends to play a larger role than at Community Advisory Panels
- Planning Cells, Planning for Real, Citizens' Jury are processes positioned at the intersection of **civil society** and the **political (-administrative) system**.
- The expert advisory panels (expert workshops, ethics committees, sustainability councils) that consult the government bring scientific expertise into the political decision-making process. They are positioned at the edge of the **expert system** and the **political system**. However, civil society today plays an increasing role in such advisory bodies.
- Risk benefit balancing (Ortwin Renn) is a core activity that brings together **experts** and **private corporations**. Participatory elements are introduced when risk communication is carried out in close feedback loops with civil society (Community Advisory Panels,

Neighbourhood Forums) or when community based research centres enable citizens to take part in the process of risk-balancing.

- The intersection of the **expert system** and **civil society** is the arena for a number of processes that aim at strengthening the exchange between experts and lay citizens such as consensus conferences, scenario workshops, future search conferences, community based research centres, science shops or projects run by science museums or science centres.
- There is a long tradition of interaction between the **economic** and the **political system**. This applies both to initiatives by private-sector corporations (lobbyism) as well as to measures undertaken by government (agencies) such as consultation of corporations, organisation of round tables with the social partners (social dialogue, Sozialpartnerschaft) or the establishment of advisory bodies, such as the Economic and Social Committee, where representatives of the employers' federations have a strong stand.

The most interactive methods of civil society participation are at the **intersection of all four societal sub-systems**. Consensus conferences, multi-stakeholder-dialogues and environmental mediation are prototypes for an interactive participation of civil society. Depending on the specific case, a method in some cases uses a wide range of participants, including representatives from civil society, the expert system, corporations and government, whereas others use a more focused group of participants. For example, the discourse projects „Genetic Testing in Germany”, the „ARL – Diskurs” and the discourse on „Crop protection and environmental concerns” was run only with experts (from different disciplines).

A further question is who initiates a process: the government, the scientific community, civil society or corporations. Indeed, **the greatest number of processes observed in this study were launched by a government or administrative bodies**. Research institutions are often asked to organise the process. Civil society plays a major role in setting the agenda, for example through the organisations of protest against certain regulatory measures.

In a couple of cases, discourse projects have been launched by corporations. For example, the Italian foresight process was initiated and funded by large Italian industrial and service companies. In the Netherlands, Unilever initiated a large Citizens' Conference on Genetically Modified Food (in cooperation with the consumer society) that ran from 1991 to 1998.

The first Swedish foresight project was an initiative run both by public and private institutions (IVA, NUTEK, the Swedish Foundation for Strategic Research and the Federation of Swedish Industries). The second round of this foresight exercise has started in early 2003 and has an increased implication of partners from industry and business.

Discourse projects have also been initiated by research organisations<sup>60</sup> such as the French National Institute for Agricultural Research (INRA): Taking into account the public debate on GMO in France, INRA has started in 2001 a pilot project which aims at opening up the planning of research programmes by systematically involving parts of civil society. The objective is to enable a „co-construction” of research programmes, i.e. to establish an advisory committee which helps to take into account the values, interests and concerns of those people who will be (more or less) affected by these research activities and their results.

### **Formal vers us informal civil society participation**

The distinction between formal and informal processes is important to form a clear picture of the landscape of different civil society participation procedures in the realm of science and technology based decision-making. However, it is not obvious what exactly this distinction is about. Four different interpretations that all offer useful distinctions are shown below:

- First, civil society participation can be either **legally obligatory**, i.e. be based on legal regulation, such as public hearings, or **voluntary** in the sense that it is complementary to legal or constitutional procedures, such as consensus conferences, future search conferences, foresights etc.
- Second, civil society participation procedures can be initiated either by a **government**, as most of the consensus conferences, ethics councils and advisory bodies, or by **civil society institutions or industry** such as the Unilever discourse on Genetically Modified Food.
- Third, civil society participation can take place via **institutionalised bodies** (such as the consultations of the Economic and Social Committee) or via the intervention of **non-institutionalised actors**.<sup>61</sup>
- Fourth, civil society participation can take place via **formalised processes** (for example with a longer duration, a clear methodology and defined objectives) or via **more open forms of interaction** (for example informal meetings, one-day workshops).

The institutional context differs from country to country. Some processes that are legally binding in one country may not be legally binding in another country. To give an example: although mediation mainly is a process that is not legally obligatory, in some countries such as the USA mediation is obligatory in certain cases (though not related to research policy or research based policies).

---

<sup>60</sup> Research institution have played a significant role in the exploration of new areas of application for participatory methods. Both in the United States and Germany, environmental mediation had been first introduced by research institutions via pilot projects („action research“) (IFOK: Environmental mediation in Europe. Study commissioned on behalf of the European Commission. Interim Report. April 2003.

<sup>61</sup> See ADAPTA report, p. 4.

### Policy-cycle

The policy cycle allows for another classification of civil society participation that helps to draw a picture of the full variety of procedures used in the different contexts. Usually three different phases of policy-making are identified:

- ex-ante: agenda-setting
- ongoing: decision-making and implementation
- ex-post: evaluation

The distinction is important in that it draws attention to the fact that the bulk of the processes can be found at the forefront of political decision-making (ex-ante). Here, a processes can for example either be designed to open up an issue (building awareness and sharing information) or to close it down (finding a solution) Still, some processes typically take place relatively late in the preparation of some decision (for example hearings), while others serve the purpose of first identifying possible options for decisions (for example scenario workshops). In general, there is a strong incentive for civil society organisations to make their arguments heard before political decisions have been made, and often also before the options are determined. Participation often is less attractive once decisions are taken and policies have to be implemented or evaluated. However, there are a number of institutionalised advisory bodies that accompany policy-makers throughout the policy-cycles. For example, sustainability councils tend to see their role not only in advising the government before decision-making, but also in commenting on the progress of implementation, including the evaluation of past programs.

For a number of controversial issues, the distinction of the three policy phases does not work because there is an ongoing process of regulation and re-regulation (for example in the area of bioethics), so that different phases exist parallel to one another.

In addition, the categories of ex-ante and ex-post can still be used in two different respects:

- Within the phase of political decision-making, civil society groups can be involved earlier or later. It has been criticised that the Economic and Social Committee does not have a pro-active role within the decision-making process so far. It comments on policy proposal once the European Commission has finalised its drafts.
- Technology assessment and foresight differ in respect to the state of technology development. There is a need for technology assessment once a technology has been developed (ex post with respect to technology development), whereas foresight deals with the question of which technologies could be (or should be) developed in the future (ex ante with respect to technology development).

### Multi-level governance

Much has been written on the difficulties and challenges of multilevel governance in Europe.<sup>62</sup> Civil society participation has to be seen as part of this multi-level governance system. Civil society participation in Europe takes places on a wide range of different levels of political decision-making:

- local (for example consensus conference on traffic in Copenhagen)
- regional (for example Citizens report on consumer policy in Bavaria)
- Member States (for example Diskurs „Grüne Gentechnik“ in Germany)
- European (see chapter 3 of this study)
- global (for example World Summit on Sustainable Development Johannesburg, World Economic Forum Davos, World Social Forum Porto Allegre etc.)<sup>63</sup>

Often, different levels of policy are intertwined. For example, the local protest against nuclear waste disposal in France led to a national debate that gave rise to a national research program on nuclear waste disposal. In addition, the role of the European institutions in shaping a common legislative framework has risen over the past years. This gives rise to the problem that a common European legislation is valid in regions with different cultural traditions and differing norms and values.

Even though the methods of civil society participation can usually be applied on all levels of policy-making, the context for the processes can differ substantially, depending on the level. A consensus conference with lay citizens on the European level will be very different (for example media coverage in the home region of the participants) from a consensus conference held on a local level.

### Classification by the political-cultural context

#### *Multiplicity of cultures and political systems within Europe*

Europe consists of a large variety of different regions, all having their own history and culture. As a consequence, different cultures of dialogue have evolved in the different states and regions. Hence, the notion of „participation“ is interpreted in different ways.<sup>64</sup> Three major lines are identified below according to the regional context:

- **The Northern European perspective: From consultation of the „social partners“ to stakeholder dialogues:** In many Northern European countries there is a long corporatist

---

<sup>62</sup> See the works of Helen Wallace, Beate Kohler-Koch, Fritz Scharpf or Hubert Heinelt.

<sup>63</sup> Two forms of participation have to be differentiated: on the one hand, there are self-organised movements such as the protest against WTO or the IMF by a colourful range of NGOs as well as a growing number of multi-stakeholder dialogues and consultative process organised by international organisations such as the United Nations.

<sup>64</sup> The second discussion paper of the STAGE network presents another typology with six types of governance, following in particular the classification of M. Elam and M. Bertilsson: Discretionary governance, Educational governance, Deliberative governance, Corporatist governance, Market governance and Agonistic governance, see Hagendijk, R./ Kallerud, E. (2003).

tradition of dialogue between policy-makers and the „social partners”. In particular in the Scandinavian countries there exist close relations between policy-makers and civil society organisations. Often they are actively involved in the decision-making process via consultation and other – more interactive – forms of participation. Civil society then plays a pro-active role rather than the role of a mere supplier of information. In Germany (as well as in Austria) the „social partners” (labour unions and employers associations) play a strong role in employment policy. Recently there has been a tendency in many countries to break up these traditional boundaries in order to involve even more civil society groups in the decision-making process. There is the tendency to move „from consultation to dialogue” and from „traditional lobbying” to „stakeholder dialogues” in these countries.

- **The Southern European perspective: Participation as a challenge of multilevel governance:** In many Southern countries there exists no strong tradition of civil society participation in political decision-making. In this context, strengthening civil society participation is often interpreted as strengthening the voice of local and regional authorities within the multilevel decision-making process in Europe. From this perspective, a more effective involvement of the Committee of the Regions and the Economic and Social Committee is seen as a key issue for strengthening civil society participation within the system of European Governance.
- **The Central and Eastern European perspective:** Civil society played a crucial role in the reform of the political systems during the late 1980s in Eastern Europe. Currently, a large effort is being made to develop a powerful legal framework for civil society participation. Driving forces are, among others, the adoption of the *acquis communautaire* of the European Union and the implementation of the Aarhus convention with respect to environmental policy-making. However, in Eastern Europe with its unique history of transparency and shared decision-making between government bodies and civil society, the public is perceived to play a significant role in the policy-making process

The brief picture sketched above is too rough to explain the different contexts in which civil society participation take place in Europe. The different designs of the political system (for example the direct democratic system in Switzerland with its unique characteristics of civil society participation), the different cultures of conflict resolution ( for example protests on the streets or strikes play a more important role in some countries than in others), the different levels of trust which the population has into the competence of decision-makers, these are all aspects which are highly important. Successful forms of civil society participation can not simply be transferred from one country (or region) to another.

### ***Different contexts in the United States and Europe***

The institutional-legal setting as well as the political culture differs widely in Europe and the US. This has a substantial impact on the role civil society plays in the decision-making process of science-based



policies. One important aspect regards the civil rights. The right to defend individual rights against government intervention plays a vital role in the US-American debate on public participation. As a consequence much legislation has been made in order to give citizens rights to inform themselves on government activities: already more than thirty years ago, the US Congress passed the „Freedom of Information Act“ (1966), the „Federal Advisory Committee Act“ (1972), the „Privacy Act“ (1974) and the „Government in the Sunshine Act“ (1976). Together, these laws greatly expanded citizens' access to government information and decision-making.

Due to this legal setting, public hearings tend to be more „interactive“ in the United States than in Europe because administrative bodies have to justify how they have dealt with citizens' comments they have received (a task that may cause severe problems once that online comments are used more widely: the low „entry costs“ may lead to a high number of comments that the public administration may not be able to handle adequately).

On the contrary, there are relatively little efforts made by the government in the US to actively involve civil society in public policy-making. There is little emphasis on capacity building, for example in order to raise the level of „scientific literacy“. Citizens have the right to attend public hearings, it is up to them to organise themselves in order to acquire the knowledge necessary to actively participate in the debate. As Sheila Jasanoff pointed out, this sometimes leads to the effect that corporations and stock market analysts are the most important stakeholder groups participating in hearings on complex issues such as GMOs - and not, as might be expected from a European point of view - environmental organisations, consumer protection associations etc. There is little government action to create a level playing field for NGOs that do not have the financial resources for lobbying activities which are important to have a say in the political arena.<sup>65</sup>

These differences are clearly visible in particular with regard to the sphere of environmental mediation: Whereas in the US, this form of civil society participation is discussed as an instrument for „alternative dispute resolution“, i.e. as an alternative to going to court, environmental mediation in Europe is seen much more as an instrument for civil society participation in policy-making that aims at achieving better informed decision-making.

Concerning the institutional set of scientific policy advice, there are significant differences between the US and the EU (on the federal and EU levels respectively). In the US, the use of scientific advice by Congress, federal government and federal agencies is subject to a number of regulations that provide opportunities for public participation. For example, all external advisory committees of federal agencies have to provide access to interested people (disclosure of proceedings, submission of

---

<sup>65</sup> For details see for example James Fishkins work on informed decision-making by citizens („deliberative polling“), Fishkin (1995).

evidence), and the composition of the committees has to be balanced with respect to the points of view presented.

In contrast to the US, risk regulation on the EU-level seems to be left to experts to a greater extent. Since 1997, the scientific committees have been reorganised. With the foundation of the Scientific Steering Committee, the responsibility for legislation and policy-making has been institutionally separated from responsibility for scientific advice, and increased transparency is given high priority. Still, membership to the councils is based exclusively on scientific excellence, and there are no open, formal procedures that ensure the possibility for comment by and direct involvement of interested individuals (König/Jasanoff 2002).

### ***Wide range of experiences in third countries***

There is much to be learned from the experiences in third countries outside Europe (and the US). For example, the participatory budget project now conducted for several years in Porto Alegre, Brasil, gives interesting insights in how to get the public more actively involved in priority setting.

A rich „tool box” of instruments of civil society participation has been developed in the sphere of development assistance such as the Participatory Rural Appraisal (PRA). Many aid agencies have gained rich field experience on community involvement. Besides that, the role of civil society is strengthened by the policy of the European Union to condition development assistance according to the criteria of „good governance”.

### **Classification by areas of application**

The classifications offered so far do not explicitly refer to the context of technology or science based policies. The question therefore has to be raised: Which are the productive areas of application of civil society participation procedures in science- and technology-based policy-making? In order to tackle this question, we need to have a closer look at the range of applications within the wider sphere of research policy.

In chapter 2, a number of lines of discussions have been identified with regard to 8 different (scientific) communities: technology assessment, risk assessment, foresight, science and ethics, e-governance, public understanding of science, democratising expertise and environmental protection and sustainable development. This distinction helps to clarify the different aspects, research questions and programs that deal with civil society participation in research and research based policy.

There are some key characteristics though that are common to all these types science- and technology-based policies: They deal with questions of extreme complexity and consequently are confronted with

great uncertainty (concerning risks). And often, decision-making concerns norms and values of citizens that may not be compatible.

### **Three areas of application**

Research policy-making can take action and decisions in three different areas:

- **Offering orientation** (for example visions): raising the level of understanding on complex science- and technology-based policies
- **Shaping the regulatory/institutional framework** (for example defining restrictions, shaping the innovation system or setting up regulatory frameworks)
- **Funding research activities**: identifying priorities for research

This distinction helps to realise that much of civil society participation concentrates on enhancing the knowledge and understanding of controversial issues. In these context, the legal regulation of these issues is frequently discussed (for example of GMOs or of nuclear energy). In contrast to this, funding decisions are rarely made in dialogue with civil society. There are a few exceptions, though: The German research dialogue FUTUR explicitly aimed to support the Ministry of Education and Research in defining priorities for research funding.

As the definition of priorities for research is one of the key subjects of research policy, this may be an explanation as to why it has been observed that civil society participation plays a minor role compared to other policy areas (such as environmental policy or development assistance) (Spichtinger 2002).

### **Research policy and research based policies**

Whereas the definition of priorities for research funding is an activity exclusively belonging to research policy, the development of a legal framework with respect to controversially debated issues (such as GMOs, therapeutic cloning, genetic testing etc.) is always at the intersection of research policy and other policy areas (health, environment, consumer protection, energy etc.). Research policy therefore often supports these policy areas as well. Similar to the concept of sustainability, the European research area is a cross-sectorial policy area.

### **Basic research versus applied research**

Another dimension for classifying research policy is the distinction between basic research and applied research. In basic research, conflicts usually only arise with respect to ethical norms for research activities themselves (such as the use of stem cells or animal testing). The applications of basic research in technology are often much more disputed, since the interests of the various actors are directly touched.

However, the traditional distinction between pure science and applied science seems increasingly inadequate (Gibbons et al 1994, Funtowicz and Ravetz 1993). The basic thrust of the distinction has been a linear model of technology development, according to which a first step of basic scientific research that can largely follow the internal logic of scientific development and curiosity leads to scientific theories that, in the second step, can be successfully applied to solve problems of practical importance. In contrast to this, much of the current „basic“ research for example in biomedical or environmental science is already dominated by intended applications. This means that the research is conducted with specific intentions for application, and itself often proceeds by attempting to develop applications.

At the same time, these areas are often too complex to allow for the formulation of larger-scale theories. Instead, models of limited range, combining resources from different disciplines, and aiming at options for intervention and control take precedence. The consequence is that scientific knowledge, at its very core, is increasingly uncertain – due to the complexity of the issues – and at the same time operates in areas that are of high relevance to political decision-making and administrative regulation.

In these cases, the use of participatory methods cannot be distinguished according to whether basic or applied research is concerned. That means, the early warning system to identify controversial issues (foresight, risk assessment, technology assessment) applies similarly to all parts of research, and correspondingly, to all areas of research policy.

## Conclusion: Major trends

The research on civil society participation in governing the European Research Area has revealed a number of trends that are common to many different applications of civil society participation, both in research policy and in other research based policies. The three major trends are identified below:

- **Openness and transparency:** Political and administrative decision-making is becoming more open and transparent on all levels. This trend answers to the demands of citizens and interest groups for more information on the grounds and procedures of decision-making and leads to increased accountability of the involved actors. The arena of political decision-making tends to move from „lobbies” to other, more open and transparent locations. To an increasing extent citizens can find out via the **Internet** which interest groups (for example employers associations, non-governmental organisations) have been consulted in the decision-making process and which arguments have been brought forward.
- **Inclusiveness:** Policy-making with respect to science and technology is also becoming more inclusive. This means that previously closed policy-circles are breaking up and new actors, mostly from civil society, are becoming involved. Also the basis of policy relevant knowledge is getting more inclusive. Increasingly, the monopoly of **scientific experts** for the supply of expertise is questioned. The specific knowledge of **practitioners, consumers, users or patients is** increasingly gaining importance for evaluating policy options, i.e. expertise is „democratised”. Hence, the notion of „science” is changing due to the fact that a scientific research process will have to integrate other people than only scientists. Science itself is held accountable by society for its choice of research topics and comes under pressure to serve societal (or economic) demands. The agenda of research – as can be seen for example in the case of foresight – is being formulated more and more according to societal demand, and less by independent „basic research”. As a consequence there is a growing demand for policy tools to raise „scientific literacy” of the public.
- **Interactivity:** Unidirectional policies tend to be replaced by interactive exchange and decision-making. Instead of mere information of the public by authorities and accountability of the authorities with respect to the public, the different actors often enter a discursive, dialogical process of deliberation, negotiation and decision-making. This also applies to the relation of science to society (public understanding of science), where the top-down approach to the dissemination of scientific knowledge tends to be superseded by mutual receptivity.

The common cause of these trends seems to lie in the **increasing complexity** of the societal and scientific frames for science and technology policies. Society is increasingly interlinked and diverse, both horizontally (with respect to the plurality of knowledge, interests and values) and vertically (from micro- to trans-national levels). Scientific and technological progress raises new issues, both concerning the increased awareness of ignorance that – seemingly paradoxically – has arisen from increased scientific knowledge, and concerning the normative evaluation of new options for action. In

addition, policy-making has to face global challenges (such as climate change, droughts and floods, population growth, poverty, terrorism), with the **sustainability of future developments** emerging as the pivotal yardstick that is, at the same time, highly abstract and demanding.

The increased complexity of policy-making concerning science and technology, as witnessed by the three major trends, seems to answer to this complexity of the societal and scientific frames.

## 4 Comparative Assessment

---

*In the previous chapter we have learned about different approaches to the interpretation and analysis of civil participation procedures as such. The question remains, how can the interaction between politics and civil society be improved by the means of participation? Taking this question as the point of departure, this chapter analyses the different viewpoints for the assessment of civil participation and suggests further lines of thought which will be discussed at the conference later this year.*

### **Introduction: The need for context-sensitivity in the assessment**

The purpose of this chapter is to assess the different methods of civil society participation and to identify practices that can improve governance in the area of research policy and research-based policies. Since the focus of this study is on the interaction between politics and civil society, the guiding question is how can the interaction between politics and civil society be improved?

However, an evaluation of civil society participation procedures has to acknowledge several important limitations.

- First, it is often insufficient to assess the methods in isolation from the specific contexts in which they are implemented. Much of the success of a certain process depends not only on the method as such, but on the way in which it is implemented. In addition, many specific circumstances of the process are crucial for its success. The context of the problem situation, including the history of the conflict, the personalities involved, the constellation of interests, the cultural and linguistic context and the political culture all have great influence on the course and the outcome of a process (Chess/ Purcell 1999, Webler/ Tuler 2002). The fact of whether a certain consensus conference deals with a local infrastructure project (for example how to avoid traffic jams) or with a national regulation in bioethics makes a considerable difference to the objectives of the process, for the requirements for informed discussion and for the conditions for consensus. Political culture varies considerably across different countries within Europe, for example with respect to the degree of trust in decision-making by politicians or the traditions of consultation and participation.
- Second, the evaluation of results from participatory processes can be made from the perspectives of different groups: those involved in the process, stakeholders and others who are not involved, and decision-makers. They usually assume distinguishable points of view towards the process and its results:
  - the deliverance point of view (those involved in the process),
  - the receiving point of view (stakeholders and others who are not involved), and
  - the actor's point of view (decision makers).

What can also be taken into account is whether the client (i.e. the initiator) of the process is satisfied with the results or not. The evaluation of a given method depends on these perspectives.

- Third, the fact that many different objectives can be pursued by civil society participation must also be taken into account. The failure or success of a process does not necessarily depend on whether or not a consensus has been achieved, for example. Diversity and dissent can also lead to very valuable results. It would in general be wrong to assess civil society participation exclusively according to its impact on political decision-making. Instead, the possible impact of participation should be viewed more broadly, including the effects on those involved, on wider society and on political culture.
- Fourth, it is often difficult to pin down and measure the impact of particular processes, for example on political decision-making or on public debate (Joss/ Durant 1995, Joss/ Bellucci 2002). Therefore, any assessment is confronted with empirical uncertainties about what the effects of a process actually were.

The objective of this chapter, therefore, cannot strictly be to identify best practices concerning civil society participation in research policy. Due to the complexity of the problem setting, it is impossible to derive a linear decision-tree here that would specify which type of problem could best be resolved with which standard type of solution (method, institutional arrangement etc.). Instead, **it is important to recognise the limitations that are set by context, perspective, different objectives and uncertainty.**

Nevertheless, if one focuses on methods that are well characterized and takes account of the contextual features, it still seems possible to present outlines of an assessment of methods and to identify some general trends regarding the suitability of certain methods to typical problem situations (Rowe/ Frewer 2000). The aim therefore is to specify „useful practices” – practices that seem suited to improving the governance of the European Research Area.

The assessment follows the categories that have been used to structure the field of methods, arrangements and applications of civil society participation procedures (chapter 4: classification). It will therefore discuss the methods with respect to

- different problem situations
- design elements of the processes
- the linkage with the political-societal sphere
- areas of application



## Assessment of methods as applied to different problem situations

This section refers to the four different initial problem constellations that have been identified in chapter 4. The categories are:

- **Knowledge differences:** The relevant actors differ with respect to the knowledge that they possess or that they consider reliable.
- **Clashes of interests:** The actors have competing interests.
- **Conflicting values:** Incompatible values are involved, which different actors deem more or less important for a given issue.
- **Deviating visions:** The actors have different visions of a desirable or likely future.

The initial problem constellations for most participatory processes will probably include differences and conflicts not only in one of these four dimensions, but in a number of them. In addition, if more than two actors are involved (for example a large number of civil society groups), the differences can vary with respect to any pair of them. Nevertheless, it is possible to view many of the methods of participation as dealing primarily with problems arising in one of the dimensions. Correspondingly, one can attribute a primary task to the processes. This task consists of bringing about some change in the initial constellation of knowledge, interests, values or visions, or of making this constellation transparent to policy-makers. The dimensions of initial constellations can thus be taken as the basis for an assessment of participatory processes.

### Knowledge Differences

Knowledge differences between relevant actors of science and technology policy arise between experts and non-experts (both policy-makers and lay people), between experts from different fields as well as between experts within the same field. In these cases, it is an important aim of participatory processes to disseminate the knowledge between the different actor groups and to reach a consensual description of the issues at stake. Furthermore, participation often aims at making knowledge available to experts and policymakers that concerned citizens possess.

When knowledge differences primarily consist of laypersons lacking knowledge that experts possess, a one-way transfer of information from experts to citizens seems appropriate. As for complex questions such as the assessment of risks, however, experts often disagree considerably. In such cases, laypersons should assume a more active role, by seeking advice from different experts, or by experts representing the different positions on which the citizens form an opinion. If the mobilisation of citizens' local knowledge is also important, experts and citizens should be involved in equal parts.

Frequently, involved citizens have an initial demand for additional knowledge to be able to develop an informed opinion. This demand is often met not only by providing written information to the lay

participants, but also by eliciting relevant scientific information from experts by means of queries. The format of the **query** helps the citizens to maintain an active role rather than being mere recipients of scientific knowledge.

If experts disagree on relevant issues, it is natural to first resort to the standards agreed within the scientific disciplines. In the context of participatory processes, however, expert disagreement is also dealt with in a number of other forms. It is part of the methodology of **citizens' juries** to involve experts that support different expert views. The task for the jury of lay people here is both to ask critical questions towards all sides and to reach an opinion with respect to the most credible expert statement. At **consensus conferences**, it is up to the participants to select the experts they consider to be relevant or reliable. In some countries, **advisory bodies** to the government or agencies have to be composed in such a manner that the entire range of different standpoints is represented. Laypersons can also play further roles in the management of expertise, for example by jointly defining the issues that have to be clarified through external expertise.<sup>66</sup>

As for **advisory bodies**, some countries have opportunities for participation, such as challenging the balanced composition of a council or submitting and commenting on expert deliberations. At first this openness tends to delay political decision-making and to make the scientific basis of decisions more contested. However, closed systems are unlikely to survive crises. Therefore, a recursive process in which expert judgement in a predefined scope alternates with phases of public deliberation offers the best prospects for finding accepted solutions on complex risk issues. (König/ Jasanoff 2002)

### **Clashes of interests**

Almost invariably, different actors have conflicting interests concerning disputed decisions. However the methodologies are not always specifically designed to deal with these interests. Where this is the case, the conflict of interests can be addressed either by an attempt at transforming the interests of the participants, making them more compatible, or by means of negotiations, in order to find a compromise that satisfies all parties. This subsection first discusses methods that primarily involve concerned citizens and then turns to methods of including organised interest groups. Finally, some typical problems are presented.

Public hearings and surveys are frequently applied methods of making the views and interests of **concerned citizens** known to policy-makers. **Surveys** allow for broad access and representativeness of the citizens involved. They furthermore provide rather detailed overviews of opinions and positions. However, they do not involve any learning on the part of the participants, and often have only minimal impact on political decision-making (Fiorino 1990, Rowe/ Frewer 2000). A central problem of surveys

as well as of forms of public involvement like **written comments** and **consultations** is that they only allow for unidirectional communication and therefore do not include any real interaction between different actors.

**Public hearings** do involve such interaction. One of the problems that hearings pose, however, is that they often take place relatively late in the policy process, when a detailed plan has already been worked out. This leads to citizens adopting a passive role and often finding themselves in opposition to a proposal that is perceived as already having been pre-decided. Although many people usually attend public hearings, it is often observed that opponents are over represented. The opposition of citizens is sometimes fairly effective, leading to administrations or agencies changing their plans. But from the perspective of administration, public hearings are usually a failure, since they almost never lead to a consensus (Fiorino 1990, Chess/ Purcell 1999, Rowe/ Frewer 2000).

More elaborate methodologies for conflicts of interests, therefore, concentrate on repeated dialogue. **Citizens' advisory councils** include interested citizens, usually from the neighbourhood of a plant, local authorities and industrial representatives. Due to the long-term existence of the council, industries can build up trust within their neighbourhoods by providing continuous and early information and by taking concerns seriously. Citizens' advisory councils can then play an important role in improving local interaction. In the case of citizens' advisory councils, not only the voicing, but also the transformation of the interests of the involved actors might be a goal in its own right, with citizens, local planners or companies recognising that their initial plans are not worth pursuing.

In situations where the interests are organised, it is advisable to secure the different **interest groups** for negotiation. If interested or concerned citizens are organised in groups, then, by including all organised groups, appropriate representation can be achieved. The search for mutually beneficial packages, rather than the search for the best argument, will be at the centre of the processes. Close interaction with political decision-making is often very important.

Different forms of **expert-stakeholder discourse** (with experts and stakeholder representatives) are used if the societal situation contains fixed and antagonistic interests. In the area of participatory technology assessment (pTA), the processes often deal with existing technological systems that lead to problems, but where the fixed situation prevents joint action. Here, a type of pTA that remains removed from decision-making can provide a forum for creative ideas that breaks up the existing fixed situation. The participants have to represent a large variety of views, but at the same time have to be able to strive for new ways of doing things. In addition, they should be able to convey the result to their community. In order for participants to be motivated to take part, the issue has to be urgent or the stakes high. The results of expert-stakeholder pTA are more useful to decision-makers if they include

---

<sup>66</sup> This has been practised, for example, by the regional dialogue forum that follows up the mediation of

policy proposals such as plans for RTD or scenarios, and less useful if they concentrate on problem-finding (Joss/ Bellucci 2002, 230-233).

**Negotiated rulemaking** does not involve ordinary citizens either, but rather stakeholder representatives (Fiorino 1990, Rowe/ Frewer 2000). Still, by pluralist standards, it can count as an exemplary form of participation. It improves competition between organised interests, can provide substantial education to participants, offers access to officials and may provide substantial influence on decision-making (Laird 1993). However, since participants are to function as representatives of their group members' interests, they are restricted in their autonomy to change their personal views and to transcend these interests in their search for the common good. Negotiated rule-making is therefore most successful if the problems to be solved are rather technical in nature, requiring substantial expertise, and is not suitable if basic value conflicts have to be settled (Renn/Weber/Wiedemann 1995, Laird 1993).

**Mediation** aims at transforming perceived zero-sum-games (distributional conflicts) into win-win-situations. By inviting the different stakeholder groups to participate in a negotiation, a platform for dialogue is created, which helps to identify solutions that benefit all parties concerned. Mediation is based on the assumption that people, even though they may always have conflicting interests concerning the distribution of resources, simultaneously have a shared interest in defining a common set of rules about how to deal with these conflicting interests. The standard example is the market economy: Even though each firm has a strong interest in receiving political privileges (subventions, protectionism etc.), at the same time it has a strong interest in a competitive market order that denies such privileges to all firms (including its competitors), because it is an overall more productive setting which, in the long run, is beneficial to all. Such positive-sum games can be identified even in situations where conflicting interests seem to prevail in a way that does not allow for mutual agreement on a common set of rules. For example, the development of a way of monitoring noise pollution near a large airport is beneficial to all relevant parties concerned, even if there is no mutual agreement on whether the airport should be extended or closed down (Meister 2003).

If there is a large number of different actors involved, with no exclusive mandate for political decision-making on any part, a **stakeholder conference** such as the EU conference on sustainable agriculture in developing countries (2003) can play a useful role. In this case, scientists, policy makers, development experts and civil society representatives from developed and developing countries met to hear presentations on and discuss the role of biotechnology in developing countries' agriculture. The state of the global discussion can be brought forward by exchanging information and positions and building up contacts and networks.

---

Frankfurt airport.

The participation in research-based policies often requires considerable resources. Where transparency in decision-making leads to regulators publishing large amounts of technical information (as is the case in the area of environmental regulation), this can easily lead to an **information overload** on the part of civil society organisations. Furthermore, an abundance of opportunities for participation in technical committees can overstrain NGOs. Unequal distribution of resources and motivation can lead to unequal representation of different groups and to professional negotiators taking precedence (Halffman 2003).

**Political prestige** can play an important role in the motivation of participants. The higher the political prestige of a process, the more likely a stakeholder is to take part. This is illustrated by the discourse „Green gene technology” in Germany, which enjoyed high prestige because it was initiated by a new minister and right after the Ministry had been restructured. This made participation attractive to stakeholders.

When interest groups are called for participation in negotiations, they often find themselves in (or try to avoid) a **trap of inclusion**. To take part in a participatory process they must accept the rules of the process and the legitimacy of the outcome. This can be contrary to the interests of NGOs if the procedure or the outcome is unlikely to create a win/win situation. Therefore, in order not to be trapped by being included in a consultation process, some NGOs prefer to keep their distance (Halffman 2003). This is illustrated by the discourse on genetically modified herbicide-resistant crops (Germany, 1991-93). This discourse led to the finding that risks associated with genetically modified crops are no different to those produced by conventional plant breeding. In order not to have to admit this discursive defeat, the environmental groups pulled out (van den Daele 2001). In contrast to this, „Eten en Genen” was significantly criticised by NGOs, presumably also because the discourse was explicitly addressed to lay citizens and did not include the environmental organisations.

### **Value conflicts**

In comparison to clashes of interests, value conflicts usually go deeper. Where moral values are at stake, participants usually find it hard to agree to compromises, since moral claims are generally considered not to allow for bargaining (van den Daele 2002). In cases of moral conflict, the aims of participatory processes therefore can be either to bring the participants to fundamentally rethink their positions, to look for pragmatic solutions that do not touch the basic conflicts, or otherwise to rest content with the elaboration of the different positions, raising mutual understanding and tolerance.

Additionally, it can be an objective at first to identify the different positions that exist and their common ground, and to make them known to policy-makers and other interested parties. To obtain such information, the participation of lay citizens will be more successful than the participation of organised stakeholder groups.

Different methods of **participatory technology assessment** with citizens as participants are used to assess technological developments. The methods are best applied to topics that are currently debated, where future development is open and the societal situation is not fixed. The relation to policy-making is in general indirect. Whether or not informing the politicians leads to success can depend on how familiar policy-makers are with this kind of information. Therefore, the efficiency of the methods can only be evaluated after repeated practice (Joss/ Bellucci 2002, 230/231).

Both at **consensus conferences** and with **citizens' juries**, the education and deliberation of citizens is a central aim. They thus score highly according to the norms of direct participation theory and to the requirements of fairness and competence. However, since only a small number of participants are directly involved, the fact that they are representative is problematic and can be questioned by outsiders. Additionally, there is usually no formal connection to decision-making procedures. Therefore, the actual influence of these processes is often only weak or moderate and depends on the particular relation of the process to the political sphere (Fiorino 1990, Laird 1993, Renn/ Webler/ Wiedemann 1995, Joss/ Bellucci 2002). Since the participating citizens attend a number of meetings involving intensive interaction and discussion, the processes can lead to a transformation of their basic views, thus allowing them to formulate a consensual position in their final report. But even if this cannot be achieved, the processes often lead to valuable elaborations of different basic positions. In particular, consensus conferences also address the wider public and thus contribute to the dissemination of knowledge and to public debate.

**Ethics councils** are often composed in such a way that they represent different moral positions and interests and assemble the necessary expertise. Furthermore, laypersons are sometimes included. Still, the composition of some councils has been criticised. Academics and especially scientists whose interests are at stake are seen to be too dominant compared to civil society. The composition should also not follow the proportions of political parties. Instead, it is crucial for the reputation of ethics councils that they work independently from parliament and government. Even though many councils work on enquiries from political institutions, they also choose topics by themselves. To strengthen their reputation of being independent, some councils try to avoid positioning themselves clearly on one side of current political debates. Instead, ethics councils usually address the wider public in a variety of ways, including the publication of reports, public hearings and public sessions, with press conferences and via the Internet.

The **institutional setting** can strongly influence the course of **moral controversies** concerning the implementation of technology. As has been shown in the case of green biotechnology, such disputes can lead to increased confrontation, or to the identification of possible consensus, depending on different institutional settings. If moral controversies are discussed in a public arena with a general audience, representatives of different positions are strongly inclined to emotional and/or personalized argumentation. Moral positions are presented as personal avowals, and opponents are often personally

attacked for violating basic moral duties. As a result, the initial opposition is strengthened, and disputes prevail. The results are different for longer-term discursive processes, during which participants meet on a voluntary basis and face to face, for a common cause and without an anonymous audience. Here, reasons are generally given and noted for different positions and opponents are not personally discredited. Moral controversies, in these contexts, are either avoided by concentrating on common moral grounds, or they are themselves made the subject of the discussion, by thinking about moral pluralism or by discussing procedures for dealing with the remaining controversy. As a result, moral disputes, where unresolved, tend to be hedged by tolerance and pragmatism. This is well illustrated by the „Discourse on genetically modified herbicide-resistant crops” (Germany 1991-1993) (van den Daele 2001).

### **Visions**

Visions are characterized by their future orientation. They typically concern expectations or wishes as to how a given aspect of everyday life, economy or technology will look in the middle to longer-term perspective. The visions of different actors are often rather vague initially. They therefore have to be developed by bringing together creative ideas and knowledge about possible trends. The result can lead to the identification of options for actions, the raising of new issues and the provision of visionary input to strategic planning.

In **scenario workshops**, where problems of local development usually take centre stage, the interaction between the different actor groups (citizens, local authorities, business, planners) can break up stereotyped conceptions and thus overcome barriers for communal decision-making. As the questions dealt with are typically of local importance, it can be difficult to find wider resonance for the results. Therefore, a special effort has to be made to secure an audience. (Andersen/ Jaeger 1999)

The series of scenario workshops on urban ecology in Denmark (1992-1993) is an example of a particularly successful implementation of the method. The proposals worked out by participants from four different communities were found to raise new, innovative issues. Their public and political impact was considerable, with the new Minister for Environment backing the report and putting urban ecology on his agenda, a national committee being established, and the methodology of scenario workshops being adopted and circulated by the EU. The main factor that contributed to this success was the high awareness of urban ecological issues on the part of the public as well as politicians at the time. At the same time, the issue had not yet been rigidly framed, and there was a basic consensus that something had to be done on it. (Joss/ Belucci 2002, Andersen/ Jaeger 1999)

In **foresight processes**, the possible uses and benefits of future technologies are explored. The results provide a basis for strategic planning and the funding of research. Since future societal needs and

problems are often central to foresight, the involvement of civil society can be very fruitful. At the same time, foresight requires much expertise. The challenge therefore is to design processes whereby the interaction between laypersons and experts functions well. Since foresight processes can deliver orientation and legitimacy to policy-making, they may serve as a useful strategic instrument.

The political impact of foresight depends on the linkage between the foresight processes and the political sphere. The German foresight process „Futur“ has a very strong link to policy-making, since it was initiated by the Federal Ministry of Research and Education and at the beginning of the process the Ministry committed itself to implementing the results. The Austrian Technology Delphi (1996-1998) has had a relatively big impact on politics, not only because it was initiated by a Ministry, but also because the Ministry was clearly involved in this process. Yet the heavy involvement of politicians can also have a negative impact on the process, as the example of the Traffic Forum Salzburg has shown. In this case the process was disturbed by the fact that a vice mayor followed his own personal agenda. The Irish technology foresight had a high impact not only on strategic research planning, but also on institutional reframing. This might have been due to the fact that it was the first exercise of this kind in Ireland, that many of the relevant people and institutions were involved and that it fitted in well with the political preparations for the first basic research programme.

Foresight processes, with their numerous steps, often include different methods in order to combine their advantages.<sup>67</sup> Nevertheless, **processes should be kept as simple as possible in general.** (Stirling) A high degree of complexity may lead to a good quality of results but can obscure the process, both for the public and the participants, and lead to a lack of transparency. The German foresight process „Futur“, for example, only provided the public with an unclear picture, in spite the fact that all of the steps, methods and results were widely communicated.

---

<sup>67</sup> Renn therefore calls for a „cooperative approach“.



## Assessment in respect of the process design

### Participants

The selection of participants is a crucial factor when designing a participatory process. Different types of target groups have been identified (chapter 4):

- stakeholder groups
- those directly concerned
- lay citizens

Stakeholders should be involved particularly when conflicting interests are dealt with. It is then important that the representatives of the participating organisations have a mandate to negotiate.

Another category of participants is those who are immediately concerned, whether they are individual citizens or organised stakeholder groups. Those who are concerned are the target group of a certain specialised processes, such as public inquiries. Lay citizens are important in reflective discourses where the primary targets are agenda-setting and building public awareness.

The degree of organisation of participants can differ widely. Lay citizens are not usually involved in processes where conflicting interests are negotiated. Instead, they often participate in exercises such as planning cells where „good, compelling arguments“ are sought. Stakeholders and organised interest groups represent group interests, for example the interests of companies, but also of groups which are not represented in traditional lobby mechanisms. The higher the political level, (for example EU level), the more these groups are involved.

Of the various modes of selection of participants, random choice is best suited to discourses with the focus on independency and/or representativeness of the actors (for example in the case of value conflicts). Volunteering can ensure a high level of motivation. Co-nomination opens up traditional circles of participants and also leads to a high profile (for example in specific expertise) of the participants.

Participants can be selected either according to their representativeness or to achieve a balance of interests. The former aims at representing all the societal groups and involving them all, with equal rights. The latter aims at involving all interest groups according to their political or economic weight.

If lay panels stand at the centre of the processes, the quality of the outcome crucially depends on its interaction within the panel. If the interaction does not succeed, the results can be of poor quality. In the case of the Ozone Consensus Conference in Austria, such results were consequently not used by policy-makers. In contrast to this, the interaction between the participants worked well in the case of the Danish „Future search – traffic in Copenhagen“ process. Competent stakeholders (who had never met before), lay citizens and users discussed their concerns and developed suggestions for solutions.

The results had a considerable impact on policy-making, and also pushed for a restructuring of the institutional landscape. However, even good results do not guarantee high political impact. While the first German consensus conference on a national level, the citizens' conference „Genetic testing”, produced results of a good quality, their reception by policy-makers was rather poor.

Citizens' panels can also be used to involve „those who are concerned” in a broader sense. In the case of the French „Conférence de malades”, organized by the Association Française contre les Myopathies (2002/2003), a panel of persons affected by myopathy worked on and published recommendations concerning therapeutic cloning and stem cells. Such a selection of participants can give a particular weight to the results. At the same time, the composition could be challenged for being biased.

### **Duration and Timing**

As mentioned in chapter 4, civil society participation processes can have very different durations. The following points must be considered:

- a longer-lasting process allows for a thorough clarification of different standpoints and arguments. However, it is expensive and often people or organisations cannot afford to participate. Not only processes that span over months to years (such as the discourse on genetically modified herbicide-resistant crops in Germany that was extended over more than 2 years), can be a burden to those participating but also planning cells that take up 4 workdays. Therefore the lay participants here are usually compensated for their loss of earnings.
- timing a short process in relation to the policy-making is much easier. In contrast to this, longer processes can lack impact on political decision-making or on the public debate because the topics are often no longer current by the time the process has produced results. The British consensus conference on plant biotechnology, for example, had no visible impact on policy-making since there was no relevant policy-making underway.

The timing of a participatory process with respect to the phase of technology development, the policy cycle and the public debate is crucial. Even though participation is possible in all phases of the development of technologies, the problem setting must, of course, be adapted (for example depending on whether the process deals with funding research or with implementing the technology). Relative to the policy process, it is important that political decisions have not already been taken, or, if this is the case, that they are re-opened for dispute. But even a good timing relative to political decision-making cannot guarantee that the results will be well received by policy makers. This is much improved if the topics (or the issue of public participation in general) have a high profile in the public sphere and in the media and are currently being discussed, or if individual politicians want to put them on their agenda. This does not make the public aware of the process, but also makes policy makers take an interest in the views of the citizens (Joss/ Bellucci 2002, 246-248).

**Face-to-face vs. virtual communication**

Internet-based discourses are often characterised by a number of problems. It is difficult to engage the participants for a long time, since with Internet-based discourses, it is easier for participants to give up. Often, many of them remain passive, while a small number dominate the discussion. A particularly serious problem lies in the usually low degree of interactivity. New contributions tend to ignore previous ones, or refer to them only marginally. This, however, can be improved if the participants know each other personally. Therefore, it is often advisable to combine Internet-based discourses with face-to-face meetings.<sup>68</sup> A good example of a combination of Internet-based expert dialogue and a conference is the ARL-Discourse in Germany.

**Size: Number of participants**

A number of methods of civil society participation are based on an intensive dialogue involving a small number of participants (for example 10 to 30 people at a typical consensus conference). The quality of the outcome, however, does not depend primarily on the number of participants, but on their selection. Nevertheless, processes with a small number of participants are frequently criticised for not being representative, especially if lay citizens and those who are not representative of any interest group take part. In some cases, the results of a participative discourse have been combined by a representative survey or a public opinion poll (for example Citizen Foresight on the Future of Food & Agriculture / Eten en Genen in the Netherlands). Processes with a very large number of participants (such as „Listening to the City“) tend to be given much greater media coverage. They are therefore particularly well suited to starting a public debate or to raising awareness of a certain issue.

**Assessment with respect to the connection with the political -societal sphere****Connection of the different subsystems of society**

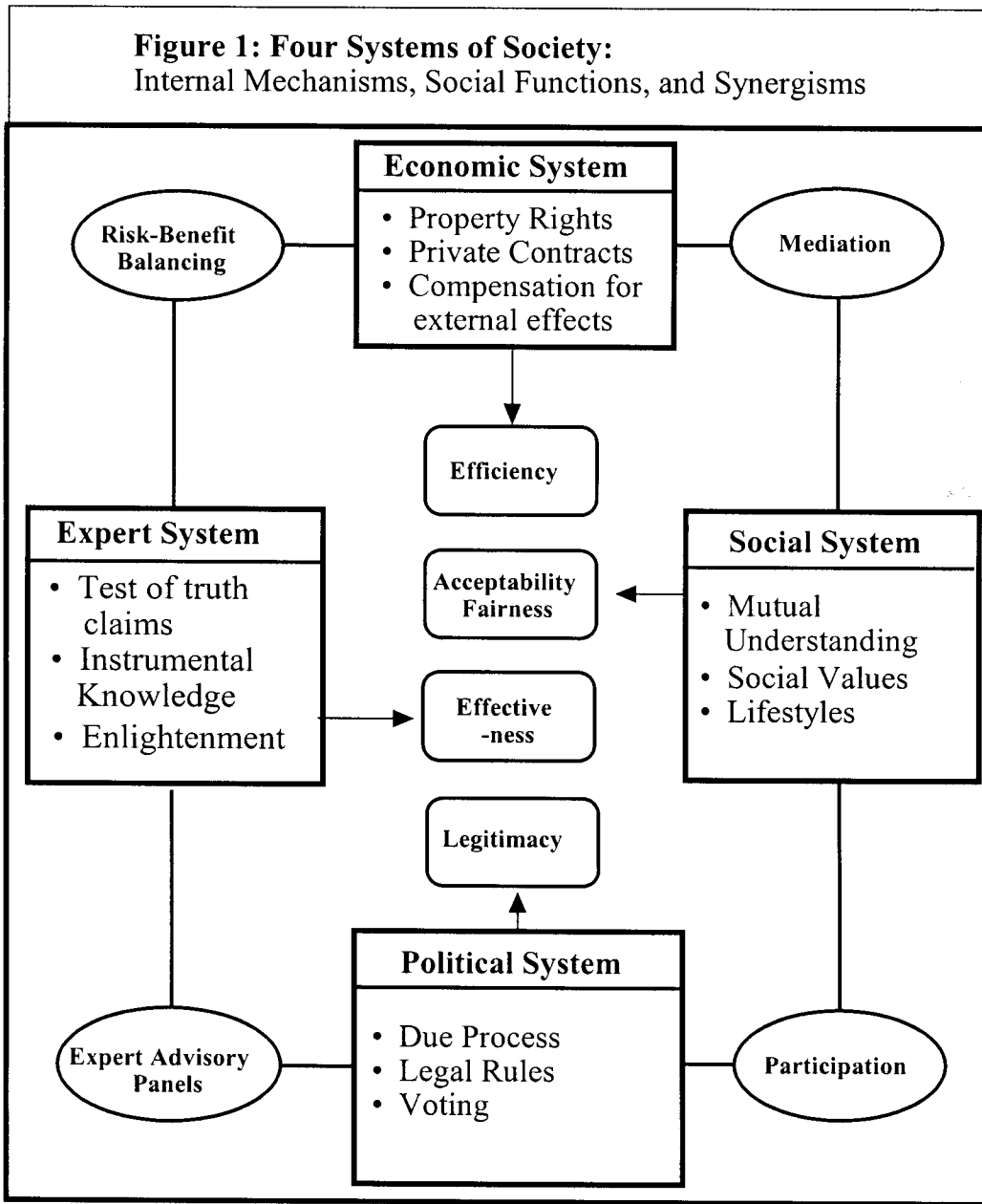
The role of civil society in science and technology related policies can best be described by means of the interdependencies among the different subsystems of society. The chart below developed by Ortwin Renn (2002) illustrates the interplay of the societal, political, scientific and economic systems.<sup>69</sup> Each of the systems can be characterised by specific modes of operation. The interaction among the different subsystems is important for political decision-making that takes the criteria „efficiency“, „acceptability and fairness“, „effectiveness“ and „legitimacy“ into account. Civil society plays an important role not only by direct interaction with the political system, such as in elections or in the consultation of civil society groups by government. Many forms of civil society participation do

---

<sup>68</sup> This was one finding of the study on Internet-based discourses on innovation and technology assessment conducted by IFOK (2001). See also <http://www.hansardsociety.org.uk/HearingVoices.htm>

<sup>69</sup> It has to be noted that chart does not illustrate examples of the interaction between the expert system and the social system (for example Public Understanding of Science) as well as the interaction between the economic system and the political system (for example lobbyism).

not include direct interaction between civil society and the political sphere. Still, they can also have an indirect impact on political decision-making. This can include stimulating communication or debate, setting the political agenda, removing a blockade within the policy process, contributing to an informed decision-making process (for example through expert-stakeholder dialogues that raise the level of knowledge) or building consensus outside the political-judicial system (mediation) (Cf. Joss/Bellucci 2002, 243). It is therefore wrong to evaluate processes only according to their direct impact on political decision-making. Even if no direct impact can be discerned, dialogue and participation can contribute to a valuable culture of problem-solving, for example by changing attitudes within civil society and public authorities.



Source: Ortwin Renn (2002)

**Formal versus informal civil society participation**

Formal processes, even though they are legally obligatory and therefore often directly linked to the political decision-making process, do not in general have any greater impact on decision-making than informal, voluntary processes. In contrast, some informal processes have had a significant impact on political decision-making. For example, the voting conference on drinking water in Denmark was informal, yet the government still implemented the proposals made. Many formalised processes of civil society consultation are criticised because they have a small impact on political decision-making if civil society has little opportunity to get actively involved in the decision-making process. For example, the Economic and Social Committee of the European Union usually only comments on policy proposals once they have been drafted, but does not play a proactive role.

The large proximity of a process to decision-makers is not always an advantage. Advisory bodies that work directly for the government are instrumentalised much more frequently for the objectives of the government or are criticised for being instrumentalised. In general, there seems to be a trade-off between closeness, making direct impact more probable, and independence, making the proposals more generally accepted. Sometimes it seems more effective to include political decision-makers in civil society participation process that are organised outside the political arena, as, for example, in the Austrian technology delphi or the German research dialogue „Futur“. The governments in both cases drew on the results when forming their decision, even though they were not obliged to do so.

The institution conducting the process should in general be located neither too closely to nor too far away from political decision-making. Close contacts improve the mediation of the results and thus the influence of a given process on decision-making. Sometimes, if indirect political influence by means of stimulating public debate is the most important result of the process, such contact is not necessary. However, the independence of the institution is also important for maintaining its reputation and credibility within the political sphere (Joss/ Bellucci 2002, 251/252).

This balance between a relatively close link to parliament on the one hand and independency on the other has been achieved by the Danish Board of Technologies in Denmark and the Rathenau-Institute in the Netherlands. Their good links to political debate also seem to be due to the consensus and dialogue-oriented political cultures in both countries.

In general, participatory processes are more likely to be successful if there is a tradition of informal political processes and direct participation. In Switzerland, where there is an established tradition of direct participation, non-representative participation was at first faced with opposition, since it was seen as competing with the traditional, representative forms of participation. The corporatist traditions of most European countries do not in general hinder participation, but the corporatist structures sometimes have to be taken into account (Joss/ Bellucci 2002, 249-250). Innovative forms of dialogue and civil society participation can help to break up neo-corporatist structures that privilege certain civil society organisations (such as the social partners).

### Policy Cycle

Much of what has been said about the best timing of processes also applies to the position of participation within the policy cycle. In general it is better – for the impact, the motivation of the participants, and the value of the process - to bring in participation early on in the decision making process. However, civil society participation can improve policy-making during all stages of the policy-cycle. The evaluation of policies is generally underdeveloped. This also applies to procedures of civil society participation. **This may well be a profitable area in which to introduce further innovations.**

In many respects, the notion of the policy cycle and the linear conception of decision-making that goes with it can be misleading. Participation should instead be viewed as a structured system of engagement. From this perspective, continuous, long-term relations and interaction are most important when it comes to participation (Jasanoff).

### Multi-level governance

The multi-level structure of European governance poses specific challenges for the design of civil society participation processes. It might well be that it is more effective to conduct certain discourses, for example on ethically sensitive issues, on a national or regional level (giving the national government advice on how to bargain on the European level), rather than on a European level.

Even though the methods themselves can be applied on all levels of governance, and many problems can also be dealt with on any level, the conditions for successful involvement are likely to differ considerably with the context. A consensus conference that has successfully been conducted in one Member State could thus be a complete failure when repeated on a local or European level.

### Assessment in respect to the political-cultural context

The political-cultural context is one of the most important aspects that has to be taken into account when designing civil society participation processes. Successful practices made in one region can not simply be transferred to other regions. The most important aspects are in that respect are:

- the different **legislative frameworks**: direct democracy, accountability of public administrations, windows of opportunities to experiment with new methods of civil society participation etc.
- the different **institutional settings** concerning advisory bodies, formal consultations of civil society organisations: ethic councils, social and economic councils etc.
- the different **cultures of conflict resolution**: the role of NGOs, strikes, street protests, informal dialogues with political decision-makers, round-tables and voluntary agreements, trust in the formal decision-making process etc.

Apart from that, it has to be acknowledged that experiences made in one case can not be assumed to be repeatable if the process is copied in quite a similar setting. Civil society participation has great „volatility” – subtle differences in the setting may have a major impact on the outcome.<sup>70</sup> However, this is not an argument against civil society participation. It is a plea to confront diversity. Much can be learned from a wide variety of perspectives and experiences.

## **Assessment in respect to areas of application**

### **Three areas of application**

Today, participation in research policy-making mostly serves as a contribution to **orientation** issues. In other domains, such as **regulation**, civil society is involved to a lesser degree. However, decisions on **funding** are also highly controversial and could profit from civil society participation. Yet there is only very little experience with civil society involvement in defining priorities for government spending so far. One of the few exceptions are the Australian process on defining research priorities and the German research dialogue „Futur“.

### **Research policy and research based policy**

Civil society participation is of particular importance in all policy areas that deal with controversial issues. Very often, these issues are at the intersection of research policy and other policy areas such as environment, health, consumer protection, energy etc. Much of the insights concerning civil society methods gained in the area of environmental policy can be of use for improving the governance of the European Research Area.

### **Basic research and applied research**

There is a clear tendency to bring basic research and applied research closer together. This distinction seems to lose importance. That implies that the questions to be dealt with in the sphere of applied research (for example the strategic use of technologies to raise the economic competitiveness or to foster a sustainable development) touch also basic research. Moreover, civil society participation can help to give an early warning of what applications may be controversial. Ethical questions that may come up due to discoveries in the sphere of basic research should be addressed at an early stage. To sum up: It is important to link up basic research and applied research.

---

<sup>70</sup> This effect plays a vital role in chaos theory. Its founding father, Edward Lorence, argued for example that „one flap of a sea gull's wings would forever change the future course of weather“.



## Emerging lines of thought

There is one crucial idea which emerges out of the discussion in this study: in order to develop an adequate and forward-looking picture of civil society participation in research policy, we should not simply stop with the documentation of a specific set and number of participatory processes. Rather – and this might be at the end the core message of this study – **we should look for a pool of approaches that fits in with the emerging new networks of various players in research policy-making**. Thus, new forms of governance demand new ways of policy-making and participation.

This key message is centred around a number of lines of thought that have been derived from the analysis:

- **Context-sensitivity:** The study showed that there exist numerous experiences that have been made in different areas of research and research-based policies. These combine to form a vivid picture of the possible objectives, methods, process designs and relevant contexts for participation processes. The main general conclusion from these experiences is that the choice of a method for participation must at the same time be highly responsive to the specific circumstances of its application, and must be seen as part of a longer-term process of establishing new forms of participation within society. There is ample evidence that participation as such is not a key to all problems. In various situations, participation has shown not to be helpful. It is crucial to understand when participation leads to valuable results (and to an added value).
- **Three-fold approach:** The plea for „context sensitivity” has strong implications for policy-making. It does not make any sense to evaluate standard methods for civil society participation in terms of „good” or ”bad”. As the study shows, there are no processes that can be said to be the right solution for a certain type of problem, independent of the circumstances and independent of the point of view. Therefore it is impossible to provide precise, accurate or analytical guidelines for the implementation of methods for civil society participation. Instead, the matching of problem and method follows three steps: First, there has to be an analysis of the problem to be resolved and the specific context. Second, the specific problems involved have to be classified according to typical characteristics. It is only after these two steps that the relevant methods can be identified and the process can be designed accordingly. A fourth and additional step could be the ex-post evaluation of the process design and the way public participation is carried out.
- **Professional process design and process management:** The challenge today is no longer to further elaborate different standard types of civil society participation methods, but to learn how to use the pool of methodologies in order to design complex processes. The challenge is particularly great since politics is only one „player” among many. The dynamics of processes that involve different groups within society (civil society, experts, policy-makers) is difficult

---

<sup>71</sup> This was one of the key aims of the international conference which was held on June 12/13<sup>th</sup>, 2003.

to control as flat hierarchies replace the traditional hierarchical system that policy-makers in government and administrations are used to. There is a growing need for both professional process design and professional process management.

- **Institutional setting:** It largely depends on the institutional setting whether useful practices of civil society participation are fostered – or whether the potential lies idle. The formal standing of the process, however, often has little to do with the factual role of civil society in decision-making. Informal processes that do not have any legally established connection with decision-making can still be highly relevant if they respond to latent or urgent needs of civil society. Social movements can exert an important impact by acting on the public formation of awareness or opinion that rational policy-makers (having a strong interest at being re-elected) cannot ignore.

## 5 The European Dimension: Civil Society Participation in Building the European Research Area

---

*This chapter summarises the governance discussion within the EU and its relevance for RTD policy-making. Moreover, it outlines initiatives which have already been taken to strengthen the role of civil society participation in the European Research Area, including a conclusion and further remarks.*

### Civil Society Participation in European Governance

#### Introduction

The interaction between the European Institutions and civil society takes various forms:

- through the **European Parliament** as the elected representative of the citizens of Europe,
- through the institutionalised advisory bodies of the EU (**Economic and Social Committee** and the **Committee of the Regions**), based on their role according to the Treaties, and
- through less formalised direct **contact with interested parties**.<sup>72</sup>

It is these less formalised direct contacts that are at the focal point of this chapter.

The Amsterdam Treaty Protocol 7 stipulates that „The Commission should [...] consult widely before proposing legislation.”<sup>73</sup> Therefore we should welcome the fact that the Commission has a longstanding tradition of consulting interested parties from outside when formulating its policies, as it incorporates external consultation into the development of almost all its policy areas.<sup>74</sup> However, the mechanisms for consultation are currently being challenged. Until recently each department within the Commission had its own mechanisms and methods for consulting its respective sectorial interest groups. Critics pointed out that some interest groups might gain privileged access to the Commission. The Commission, therefore, has started several initiatives in order to „reduce the risk of the policy-maker just listening to one side of the argument or of particular groups getting privileged access”.<sup>75</sup>

This debate has recently been revived, particularly by the White Paper on European Governance (European Commission 2001), which defines criteria for „good governance” within the European Union.

---

<sup>72</sup> We may distinguish two different types: open consultations (which are based on communications and green/white papers, for example) and the consultation of target groups (which can be ad-hoc, structured and formalised consultation).

<sup>73</sup> See also the current Environmental Action Plan that highlights the importance of stakeholder consultation.

<sup>74</sup> European Commission (2002, p. 3). Towards a reinforced culture of consultation and dialogue - general principles and minimum standards for consultation of interested parties by the Commission. Communication from the Commission. COM (2002)704 final.

[http://europa.eu.int/comm/governance/docs/comm\\_standards\\_en.pdf](http://europa.eu.int/comm/governance/docs/comm_standards_en.pdf)

<sup>75</sup> White Paper on European Governance.

### **The White Paper on European Governance and its follow-up process**

The reform of European Governance is of major importance for the future of Europe and determines the political agenda. The European Convention and the governance activities of the European Commission are outstanding examples of this. The reform of governance addresses the questions of how the EU uses the powers given by its citizens and how to make policy-making more inclusive and accountable. Civil society participation plays a vital role in this concept. The paper calls for „a reinforced culture of consultation and dialogue”. Civil society involvement is seen as an effective means to arbitrate between competing claims and priorities and assists in developing a longer-term policy perspective. „Participation is not about institutionalising protest. It is about more effective policy shaping based on early consultation and past experience“.<sup>76</sup> In addition, the White Paper calls for improved interactions between experts, policy-makers and the public sphere.<sup>77</sup>

The White Paper defines five core principles of **good governance** :

- **Openness:** The Institutions should work in a more open manner; in particular, they should actively share information about what the EU does and the decisions it takes.
- **Participation:** The quality, relevance and effectiveness of EU policies depend on ensuring wide participation throughout the policy chain – from conception to implementation. Improved participation is likely to create more confidence in the end results and in the institutions which deliver policies.
- **Accountability:** Roles in the legislative and executive processes need to be clearer.
- **Effectiveness:** Policies must be effective and timely, delivering what is needed on the basis of clear objectives, an evaluation of future impact and, where available, of past experience.
- **Coherence:** Policies and action must be coherent and easily understood.

The five principles reinforce the already existing principles of proportionality and subsidiarity. Implementing these principles, as well as a better combination of different policy tools, such as legislation, social dialogue, structural funding, and action programmes need to be achieved.

The White Paper proposes a number of initiatives that are highly relevant to the question of how to strengthen the role of civil society in governing the European Research Area. It proposes, among other things, to establish

- **Minimum standards for consultation of civil society** for legislative decision-making processes
- Guidelines for the **good use of expertise in Community policy-making**

<sup>76</sup> White Paper on European Governance, p. 15.

<sup>77</sup> White Paper on European Governance, p. 10, 14-17.

- An **online database** of civil society organisations and consultative committees that provides accessible information about ongoing consultation processes as well as **online consultation** within the inter-active policy-making initiative.

These issues are analysed more in detail below.

### 1. General principles and minimum standards for consultation

In December 2002, the Commission adopted **General Principles and Minimum Standards for Consultation**<sup>78</sup> as had been proposed in the White Paper on European Governance. The overall rationale of the proposed guidelines and standards is to ensure that all relevant parties are consulted in an adequate way.

The document states that the Commission should make available in a concise manner all information needed to facilitate responses; publish widely in order to meet all target audiences, using a single access point on the Internet; allow sufficient time for responses; acknowledge receipt of contributions and display results of open public consultations on the Internet; and allow all relevant parties to express their opinions.

It must be acknowledged that the principles and minimum standards of the European Commission do not give binding rights to EU citizens or their organisations. Citizens can complain that in certain cases the consultation did not take place or was too narrow, but they cannot insist on rectification.<sup>79</sup>

### 2. Collection and the use of expertise

In addition, the European Commission recently published a communication on the **collection and the use of expertise**.<sup>80</sup> It aims at encapsulating and promoting good practices related to the collection and use of expertise at all stages of Commission policy-making. There are three components.

---

<sup>78</sup> European Commission (2002), COM (2002)704 final [http://europa.eu.int/comm/governance/docs/comm\\_standards\\_en.pdf](http://europa.eu.int/comm/governance/docs/comm_standards_en.pdf). This issue was previously analysed in depth by the working group „Consultation and Participation of Civil Society”. Report of the Working Group 2a, White Paper on European Governance (2001), [http://europa.eu.int/comm/governance/areas/group3/report\\_en.pdf](http://europa.eu.int/comm/governance/areas/group3/report_en.pdf).

<sup>79</sup> A legislative approach is called for by a number of NGOs, see for example Hontelez (2003). <http://www.europa.eu.int/comm/environment/governance/pdf/conferences/03012728hontelez.pdf>.

<sup>80</sup> European Commission (2002): Communication from the Commission on the collection and use of expertise by the Commission: Principles and Guidelines, „Improving the knowledge base for better policies”, COM(2002) 713 final. [http://europa.eu.int/comm/governance/docs/comm\\_expertise\\_en.pdf](http://europa.eu.int/comm/governance/docs/comm_expertise_en.pdf). The guidelines are based on the recommendations of the working group 1b „Democratising Expertise and Establishing Scientific Reference Systems”. Report of the Working Group 1b, White Paper on Governance, May 2001. [http://europa.eu.int/comm/governance/areas/group2/report\\_en.pdf](http://europa.eu.int/comm/governance/areas/group2/report_en.pdf).

- The core principles of quality, openness and effectiveness should underpin all activities of the Commission in this domain.
- The set of guidelines should be used to help departments implement the principles.
- Finally, a series of practical questions should help departments design methods for collecting and using expert advice appropriate to the circumstances of specific cases.

With its communication the Commission wants to help its departments mobilise and exploit the most appropriate expertise, with a view to establishing a sound knowledge base for better policies. Moreover, the Commission seeks high credibility for its process of collecting and using expert advice.

### 3. Online Consultation of Civil Society

The Commission is currently developing various Internet-based mechanisms in order to make civil society consultation more transparent and effective. Core initiatives are:

- The setting up of database(s) as a means of achieving more transparency. An example is **CONECCS**: a database for Consultation, the European Commission and Civil Society. The database is supposed to provide information about the Commission's formal or structured consultative bodies, in which civil society organisations participate.<sup>81</sup>
- **Internet**-based activities aimed at gathering information and feedback such as, „**Your Voice in Europe**“,<sup>82</sup> act as the European Commission's „single access point“ to a wide variety of stakeholder consultations<sup>83</sup>, discussions and other tools which enable the individual to play an active role in the European policy-making process. This page is part of the activities of the **Interactive Policy-Making Initiative** (IPM) as part of the Action No. 8b (White Paper on the administrative reform of the European Commission), the aim of which is to improve governance by using the Internet for collecting and analysing reactions in the marketplace for use in the European Union's policy-making process.<sup>84</sup> Another example is the **Dialogue with Citizens**<sup>85</sup> - a web site with plenty of information and links concerning citizens' rights and opportunities for participation in Europe.

These online forums do not replace face-to-face interaction. The Commission regularly holds **workshops** and **conferences** on a large variety of issues that bring together the concerned actors and stakeholders (some of whom have little or no experience of meeting) and thus fosters exchange between different stakeholder groups and the Commission.

---

<sup>81</sup> [http://europa.eu.int/comm/civil\\_society/coneccs/index\\_en.htm](http://europa.eu.int/comm/civil_society/coneccs/index_en.htm)

<sup>82</sup> [http://europa.eu.int/yourvoice/index\\_en.htm](http://europa.eu.int/yourvoice/index_en.htm)

<sup>83</sup> [http://europa.eu.int/comm/research/consultations/list\\_en.html](http://europa.eu.int/comm/research/consultations/list_en.html)

<sup>84</sup> [http://europa.eu.int/comm/reform/refdoc/index\\_en.htm](http://europa.eu.int/comm/reform/refdoc/index_en.htm)

<sup>85</sup> [http://europa.eu.int/citizens/index\\_en.html](http://europa.eu.int/citizens/index_en.html)

### Strengthening Civil Rights: The Aarhus Convention

The Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters („Aarhus Convention”) does not address research policies directly; however, environmental policy has a lot in common with research policy. One issue that has been dealt with within the Aarhus framework are GMOs. At their meeting held from 21<sup>st</sup>-22nd October 2002 at Lucca, Italy, the parties to the convention adopted **„guidelines on access to information, public participation and access to justice with respect to genetically modified organisms”**.<sup>86</sup>

The Aarhus Convention has been judged as the „most significant international legal instrument on the environmental rights of Europe’s citizens“.<sup>87</sup> It emerged out of the **„Environment for Europe”** process. The Convention was negotiated and signed in 1998 by 36 European countries, including all 15 EU member states and the European Community. The Convention entered into force in 2001.<sup>88</sup>

The Convention is based on three closely interrelated pillars:

- access to information,<sup>89</sup>
- public participation in decision-making
- access to justice.

#### Civil Society Participation as defined in the Aarhus Convention

Article 6.2:

The public concerned shall be informed, either by public notice or individually as appropriate, early in an environmental decision-making procedure, and in an adequate, timely and effective manner, inter alia, of:

- (a) The proposed activity and the application on which a decision will be taken;
- (b) The nature of possible decisions or the draft decision;
- (c) The public authority responsible for making the decision;
- (d) The envisaged procedure, including, as and when this information can be provided: (i) the commencement of the procedure; (ii) the opportunities for the public to participate; (iii) the time and venue of any envisaged public hearing; (iv) an indication of the public authority from which relevant information can be obtained and where the relevant information has been deposited for examination by

<sup>86</sup> <http://www.unece.org/env/pp/mop1/gmo.guidelines.e.doc>

<sup>87</sup> R. Hallo of the Stichting Natuur en Milieu (NL) in his contribution „Developing instruments for a reinforced culture of consultation and dialogue“ at the conference „Environmental Governance and Civil Society: Challenges and Opportunities for Europeans“ held on January 27-28, 2003, in Brussels.  
<http://www.europa.eu.int/comm/environment/governance/pdf/conferences/03012728hallo.pdf>

<sup>88</sup> Several EU member states have already ratified, the rest are moving toward ratification. The Community is currently working on ratification.

<sup>89</sup> See also: EU directive on freedom of access to information on the environment adopted in 1994.

the public; (v) an indication of the relevant public authority or any other official body to which comments or questions can be submitted and of the time schedule for transmittal of comments or questions; and (vi) an indication of what environmental information relevant to the proposed activity is available; and

(e) The fact that the activity is subject to a national or transboundary environmental impact assessment procedure.

Article 6.3:

The public participation procedures shall include reasonable time-frames for the different phases, allowing sufficient time for informing the public in accordance with paragraph 2 above and for the public to prepare and participate effectively during the environmental decision-making.

Article 6.4:

Each Party shall provide for early public participation, when all options are open and effective public participation can take place.

Article 6.8:

Each Party shall ensure that in the decision due account is taken of the outcome of the public participation.

The Aarhus Convention goes far beyond the general principles and minimum standards adopted by the European Commission in as far as it defines civil rights.

1. Moreover, the participation of civil society is not only seen as a means to improve the **quality of decision-making** but as a **basic democratic right**. These two objectives have been confirmed in the Lucca declaration that has been adopted by the first meeting of the parties of the convention at Lucca, in October 2002.

Several directives of European Environmental law have had an indirect impact on the culture of civil society participation in (environmental) decision-making, for example the **Environmental Impact Assessment Directive**<sup>90</sup>, the **European Water Framework Directive**<sup>91</sup> or the **Directive on Integrated Pollution Prevention and Control**.<sup>92</sup> They all deal with the conflicts between ecological, economic and social interests that could be only balanced via a consultation of the parties concerned. The implementation of these directives could lead to severe trade offs between what will lead to the highest environmental improvement and what is still affordable for the industry.

<sup>90</sup> The existence of Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, amended by Directive 97/11/EEC, has served as a harmonizing element of the requirements for participation in relation to environmental impact assessment.

<sup>91</sup> „Directive (2000/60/EC of the EP and Council, of 23 October 2000) establishing a framework for Community action in the field of water policy”.

<sup>92</sup> The European Commission has recently issued a communication on the „Progress in implementing Council Directive 96/61/EC concerning integrated pollution prevention and control“ COM(2003) 354 final.



In addition, the **Sixth Environmental Action Plan** („our choice, our future”)<sup>93</sup> 2001-2010 highlights the role of civil society and stakeholder groups in environmental policy and recommends an intensive culture of consultation with various stakeholder groups.

### **Outlook: Towards Participatory Democracy**

The Commission’s commitment to higher involvement of civil society in policy-making has now received prominent support from the highest level of Community policy. The European Convention recognises the importance of broad and continuous participation for democracy in the Union.

Part I of the Convention provides for the establishment of participatory processes in EU policies. The Title VI „The democratic life of the Union” of the proposed draft treaty establishing a Constitution for Europe includes an article on participatory democracy (Art. 46).

#### **Article 46: The principle of participatory democracy**

1. The Union Institutions shall, by appropriate means, give citizens and representative associations the opportunity to make known and publicly exchange their views in all areas of Union action.
2. The Union Institutions shall maintain an open, transparent and regular dialogue with representative associations and civil society.
3. The Commission shall carry out broad consultations with parties concerned in order to ensure that the Union's actions are coherent and transparent.
4. No less than one million citizens coming from a significant number of Member States may invite the Commission to submit any appropriate proposal on matters where citizens consider that a legal act of the Union is required for the purpose of implementing the Constitution. A European law shall determine the provisions for the specific procedures and conditions required for such a citizens' initiative.

### **Civil society participation in RTD policy-making**

#### **European Research Area and the Sixth Framework Programme**

The European Research Area as well as its predominant financial instrument, the Framework Programmes, constitute the overarching framework within which the question of civil society participation is to be addressed.

---

<sup>93</sup> European Commission (2001): Environment 2010 – Our Choice, Our Future. The 6<sup>th</sup> EU Environment Action Programme 2001-2010. Luxembourg <http://europa.eu.int/comm/environment/newprg/>.

Launched by Commissioner Busquin in 2000, the creation of a **European Research Area (ERA)** addresses three fundamental problems relating to the situation of research in Europe:

- insufficient funding,
- lack of an environment to stimulate research and exploit results, and
- the fragmented nature of activities and the dispersal of resources.

All this can be seen against the backdrop of a Europe where scientific research and technological development are of ever-increasing importance for economic growth, competitiveness, employment, and the emergence of new ways of life and activities - as it was asserted by the Lisbon summit in March 2000. To overcome these problems an „internal market“ in research must be developed, an area of free movement of knowledge, researchers and technology, with the effect of an increased cooperation, especially through a greater mobility among researchers, stimulated competition and a better allocation of resources. The creation of such an internal market demands both an improved coordination of national research activities and policies, and the development of European research policy that takes all relevant aspects of other EU and national policies into account. Hence the European Commission and the other Community institutions, the Member States, scientific community and industry are being called upon to work with joint efforts and an integrative approach towards the achievement of the ERA. A great number of activities are on the agenda and have already taken place under the roof of the ERA, the most important being the Sixth Framework Programme for Research and Technological Development (FP 6).

The **Sixth Framework Programme (FP 6)** is the predominant financial instrument of the European Commission for implementing the ERA. Standing in the tradition of past framework programs, FP 6 has been re-shaped so as to be fully supportive of the ERA-objectives. Achieving a greater coherence of research activities by means of an invigorated co-ordination of research, by integrating research into other EU-policies and promoting mobility and collaboration among researchers in Europe is therefore one of the chief functions of FP 6. The priorities of the Sixth Framework program are:

- Life sciences, genomics and biotechnology for health
- Information society technologies
- Nanotechnologies and nanosciences, knowledge-based multifunctional materials and new production processes and devices
- Aeronautics and Space
- Food quality and safety
- Sustainable development, global change and ecosystems
- Citizens and governance in a knowledge-based society

The FP 6 was drafted on the one hand according to the mechanisms as defined in the Treaty establishing a European Community (Art. 251). These comprise negotiations between the

Commission, the European Parliament and the Council. On the other hand there had taken place numerous consultations with stakeholder groups and national administrations (via CREST for example). Until now, the consultation of experts and corporations by policy-makers has been dominant compared to the consultation of civil society and its organisations. Yet the Sixth Framework Programme of the EU – aiming at the development of structural links between institutions and activities concerned with the dialogue between the scientific community and society at large – marks the start of a new era.

An innovative element was the broad consultation of civil society and stakeholder groups through the invitation to hand in „Expressions of Interests” (EoI). According to the Commission some 12,000 expressions of interest were received by the June 2002 deadline.<sup>94</sup> Roughly 10% covered priority 7 „Citizens and Governance in a knowledge based society“.<sup>95</sup> The EoI came from all over Europe and beyond, with a fair spread across all the thematic priorities. Academia and research institutes were responsible for the bulk of them, with industry only submitting 14% of the total.

With a budget of 17.5 billion euros for the years 2002 – 2006 FP 6 represents about 4 to 5 percent of the overall expenditure on RTD in EU Member States. Of this amount 80 Million Euros are specifically reserved for the field of „Science and Society”.

### **DG Research: Science and Society Action Plan and its follow-up**

The debate on the reform of governance in the EU has significant consequences for RTD policy-making. As already pointed out in the introduction of this study, the use of scientific expertise in the political process has increased, whereas civil society rarely participates in these processes. The dangers of closed decision-making, of an „expertocracy“ or „technocracy“, can only be avoided through more civil society involvement, enabling a closer interaction between citizens and policy-makers. A number of measures have already been taken to establish this closer interaction. They will be presented below, taking into account the overall context of RTD policy-making on the EU level.<sup>96</sup>

The Directorate General’s mission is, among others, „to promote a better understanding of the role of science in modern societies and stimulate public debate about research-related issues at European level.“<sup>97</sup> The establishment of the most recent directorate within DG Research, „Science and Society“,

---

<sup>94</sup> [http://eoi.cordis.lu/search\\_form.cfm](http://eoi.cordis.lu/search_form.cfm)

<sup>95</sup> [ftp://ftp.cordis.lu/pub/fp6/docs/eoi\\_analysis\\_117.pdf](ftp://ftp.cordis.lu/pub/fp6/docs/eoi_analysis_117.pdf)

<sup>96</sup> For more details, see for example the study by Spichtinger on „Civil society and the EU“ (2002), available under [www.geocities.com/dspichtinger/cseu.html](http://www.geocities.com/dspichtinger/cseu.html).

<sup>97</sup> The other aims as currently defined currently ([http://europa.eu.int/comm/dgs/research/index\\_en.html](http://europa.eu.int/comm/dgs/research/index_en.html)) are: to develop the European Union’s policy in the field of research and technological development and thereby contribute to the international competitiveness of European industry; to coordinate European research activities with those carried out at the level of the Member States and to support the Union’s policies in other fields such as environment, health, energy, regional development etc.

in 2001, can be seen as a significant influence of the White Paper on Governance. Its Mission is to reconcile science and society (see the science and society objectives in FP 6), and to do so with a relatively small budget.<sup>98</sup>

In 2001 DG Research elaborated a „**Science and Society Action Plan**“.<sup>99</sup> Following „Science, society and citizens in Europe” (SEC(2000)1973), this action plan aims at pooling efforts at the European level to develop stronger and more harmonious relations between science and society.

It is structured in three parts and addresses the following issues:

- A science policy closer to citizens<sup>100</sup> (involving civil society, producing gender equality in science, research and foresight for society)
- Responsible science at the heart of policy-making<sup>101</sup> (the ethical dimension in science and the new technologies, risk governance, the use of expertise).
- Promoting scientific and educational culture in Europe<sup>102</sup> (public awareness, science education and careers, dialogue with citizens)

These three pillars are reflected in the current work programme „Structuring the ERA” (Section 4: Science and Society) that follows-up on the Science and Society Action Plan.

DG Research recently invited civil society and stakeholder groups to submit **Expressions of Interests in the field 'Science and Society'** (April 1st to June 2nd, 2003) to give the public an opportunity to help implement the specific programme 'Structuring the European Research Area'. The invitation aimed at helping the Commission identify topics that could be the subject of calls for proposals in 2004 and beyond. A total of 260 expressions of interest from 29 different countries were submitted before the deadline of 2 June. The Commission will be using the information as an input to the revision of the Science and Society work programme for 2004.

Below, a short description of major initiatives within the framework of the Science and Society Action Plan is given. The focus is on those activities which enhance the involvement of civil society.

### 1. A science policy closer to citizens

The Commission aims at creating a more dynamic interface between science and policy making. In particular, it encourages the active participation of society at large in policy development.

---

<sup>98</sup> 0.3 percent of FP 6 is available for this issue. See Spichtinger (2002), p. 39.

<sup>99</sup> European Commission (2001): Science and Society Action Plan, COM(2001)714 Final <http://www.cordis.lu/rtd2002/science-society/home.html>

<sup>100</sup> In the current work programme the corresponding headline is: „Bringing Research Closer to Society”

<sup>101</sup> In the current work programme the corresponding headline is: „Responsible Research and Application of Science and Technology”

<sup>102</sup> In the current work programme the corresponding headline is: „Stepping up the science/society dialogue and women in science”

The Science and Society Action Plan refers to existing activities such as

- the formation of expert advisory groups within FP5<sup>103</sup> or, at the European level, of the European Research Advisory Body or
- the EPTA-network created by the European Parliament with regard to technology assessment (EPTA, STOA)

However, these bodies do not provide for the direct participation of civil society but represent experts only. This gap is addressed by the actions 22 and 23 of the Science and Society Action Plan:

- Action 22 aims at boosting the exchange among the Member States and their regions: „The Commission will organise, through **workshops and networks**, **an exchange of information and best practice between Member States and the regions on the use of participatory procedures** for national and regional policies.“
- Action 23, on the other hand, refers directly to European policy-making: „The Commission will organise **regular events enabling civil society to participate** (in the form of public hearings, consensus conferences or interactive online forums) **in specific issues** (biotechnology, environment, information technologies, health, innovation etc.), in cooperation with the Economic and Social Committee and the Committee of the Regions.“

The Commission regularly organises conferences in order to foster the exchange with civil society in the area of research policy and research based policies. Among the conference organised or co-funded by the European Commission are:

- Conference to launch the EU's Sixth Framework Programme for research: The European Research Area and the Framework Programme (November, 2002)
- Conference: Foresight in the Enlarged European Research and Innovation Area (May, 2003)<sup>1</sup>
- the conference „Governance of the European Research Area: The Role of Civil Society“ that was held within the framework of this study (June, 2003).<sup>104</sup>

Internet-based methods for consultation have rapidly increased in importance not only for the Commission as a whole but in particular for DG Research. Recent **online stakeholder consultations** covered two policy issues: a) the Action Plan on Environmental Technologies (ETAP) that currently is prepared jointly by DG Environment and DG Research<sup>105</sup> and b) the role of the universities in the Europe of Knowledge.

<sup>103</sup> 20 EAGs have been founded for key actions under FP5.

<sup>104</sup> On October 17th/18th, 2000, the Commission already organised a conference on the role of civil society within research policy. The title was: „Science and Governance in a Knowledge Society: The Challenge for Europe“ <http://www.jrc.es/sci-gov/sumcon.html>

<sup>105</sup> <http://europa.eu.int/comm/environment/etap/index.htm#stakeholderconsultation>. The evaluation of the comments received also is available on the Internet: <http://europa.eu.int/comm/environment/etap/pdfs/030730consultationoutcome.pdf>.

## 2. Responsible science at the heart of policy-making

Under this heading a number of initiatives related to ethics and risk management are addressed. A number of these entail the direct involvement of civil society.

- Action 30: An **open dialogue** will be established between NGOs, industry, the scientific community, religions, cultural groups, philosophical schools and other interested groups on „**critical issues**” for example the ethical impact of new technologies on future generations, human dignity and integrity.
- Action 33: An **international dialogue on ethical principles** will be developed through a series of conferences and workshops.
- Action 35: The Commission will initiate an **exchange of experience and good practice between key actors concerned with risk issues**, in different sectors and different levels across Europe.

In addition, the European Commission supports the TRUSTNET<sup>106</sup>, an interdisciplinary European network involved in the field of Risk Governance supported by the European Commission. The network intends to contribute to the quality of the decision-making processes within the governance of hazardous activities in Europe. It is carrying out a collective reflection on the difficulties encountered by the traditional risk regulations. It is assessing and diffusing the emerging concepts and experiences (precautionary principle, pluralistic expertise, decentralisation of risk management,...) as well as the innovative institutional arrangements (agencies, stakeholder participation, citizen conferences,...) that may enhance the quality, legitimacy and practicability of the decision-making processes on risk. Civil society does not play a significant role in the work of TRUSTNET so far. However, it is desirable to involve civil society more actively in risk management activities in order to secure a high level of trust within society.

In addition, the access to information plays a vital role in order to reach a high level of trust.

## 3. Promoting scientific and educational culture in Europe

This section within the Science and Society Action Plan addresses in particular the question of how most effectively to raise awareness and how to initiate public debates on issues related to science policies. It is closely related to PUSH.

The Commission supports initiatives such as:

---

<sup>106</sup> <http://www.trustnetgovernance.com/>.

- **ECSITE - the European Collaborative for Science, Industry and Technology Exhibitions:** ECSITE is a not-for-profit organisation representing science and technology centres and museums throughout Europe. The organisation aims to promote public understanding of science and technology by co-ordinating and improving the activities of science centres and museums, natural history museums, zoos and aquariums. The common thread uniting all ECSITE members is a commitment to public engagement with science through accessible, interactive exhibits and programmes. ECSITE facilitates co-operation among Europe's science centres – establishing standards, sharing expertise, disseminating best practice, encouraging collaboration and developing training programmes.<sup>107</sup> The Commission intends to foster the exchange among science shops. The networking of **Science Shops** will be encouraged in particular through the creation of a permanent inventory and through promotional tools (database etc.).<sup>108</sup>
- **European science and technology weeks:** This initiative aims at raising the awareness for science and new technologies. European Science and Technology Week demonstrates and explains the impact of science, its uses, and its applications in the daily lives of European citizens and are often accompanied by national science weeks.<sup>109</sup>
- **Research forum for interactive debates.**<sup>110</sup> The objective of this Internet forum is to discuss the value of life Sciences for sustainable agriculture in a context of economic and social urgency, focused on the needs of developing countries. Some of the **Strategic Accompanying Measures** of FP 5, especially those designed to support the European research policies in the field of life sciences, are important tools for completing research projects by raising public awareness of the implications of new technologies.<sup>111</sup> Strategic Accompanying Measures have been evolved and are to be continued in FP 6 as Specific Support Actions, the aim of which is to complement the implementation of FP 6. This will include for example support for conferences, seminars, studies and analyses, working groups, expert groups, operational support and dissemination; information and communication activities, or a combination of these as appropriate.
- **SINAPSE e-network:** In view of making better use of scientific knowledge in policy making, the Commission has started to develop the SINAPSE e-network (Scientific INformAtion for Policy Support in Europe). The network aims at increasing the dissemination and use of scientific advice by developing an electronic library of available scientific opinions and advice issued in Europe and elsewhere, at enabling the Commission to conduct informal scientific consultation, at giving to the scientific community and other stakeholders the possibility to

---

<sup>107</sup> <http://ecsite.ballou.be/new/index.asp>

<sup>108</sup> <http://www.scienceshops.org/>.

<sup>109</sup> [http://europa.eu.int/comm/research/science-society/scientific-awareness/science-week\\_en.html](http://europa.eu.int/comm/research/science-society/scientific-awareness/science-week_en.html)

<sup>110</sup> <http://europa.eu.int/comm/coreseervices/forum/index.cfm?forum=Research>.

<sup>111</sup> For illustration of the measures see the examples in the project data base „Identifying and defining consensus on key food issues“ and „Bridging the gap between science and the citizens“. For further activities in the context of PUSH, see <http://www.cordis.lu/improving/public-awareness/home.htm>

send early warning signal and raise awareness on scientific issues, which necessitate or could benefit the attention of public authorities Europe-wide as well as at offering the members of the network a secure communication tool for intra and interdisciplinary discussions. The SINAPSE-network will be open to all scientists, scientific organisations and anyone with an interest in science. In line with the efforts undertaken to develop new forms of governance, SINAPSE will facilitate the involvement of actors that cannot, at present, easily be consulted or share their knowledge/viewpoint.<sup>112</sup>

### European Advisory Bodies related to Science Policies

There exist a number of advisory bodies that help to intensify the exchange between DG Research and other stakeholder groups such as public administrations on the national level, industry, scientific communities – or civil society organisations:

- **CREST (Comité pour la Recherche Scientifique et Technique):** CREST activities are not a participatory processes in themselves but they can initiate, facilitate and review participatory processes in the member states and the accession countries and give advice on the application of civil society involvement within the Community. CREST was set up in 1974 to contribute to the coordination of national policies and the definition of Community projects in the field of science and technology. In CREST-clusters, national administration representatives from member states and accession countries co-ordinate their activities in various policy fields. Currently, there are 8 clusters for RTD policy: „Science, Technology, Innovation and the media” (STIM), „Co-ordination of national Science Weeks”, „Science Education”, „Dialogue and Participation”, „Women and Science”, „Research and Foresight”, „Ethics” and „Governance, Risks and Expertise”.
- **European Research Advisory Board (EURAB)<sup>113</sup>:** EURAB is a high-level, independent, advisory committee created by the Commission to provide advice on the design and implementation of EU research policy. EURAB is made up of 45 top experts from EU countries and beyond. Its members are nominated in a personal capacity and come from a wide range of academic and industrial backgrounds, as well as representing other societal interests. EURAB delivers advice and opinions on specific issues either at the request of the Commission or on its own initiative. The board is free to cooperate with organisations and institutions interested in European research, to create working groups on specific themes and to consult with other experts who could enrich its reflection. EURAB was created on June 2001 by a Commission decision, which describes in legal terms its mandate, principles of functioning and the criteria to be used for its composition. The criteria of selection of the members do **explicitly exclude civil society**: The board consists of 20 members with an academic focus nominated on the basis of a proposal from the European Science Foundation

---

<sup>112</sup> [http://europa.eu.int/comm/research/science-society/science-governance/sinapse\\_en.html](http://europa.eu.int/comm/research/science-society/science-governance/sinapse_en.html)

<sup>113</sup> [http://europa.eu.int/comm/research/eurab/index\\_en.html](http://europa.eu.int/comm/research/eurab/index_en.html)



(ESF), 20 members with a business and industrial focus nominated on the basis of a proposal from the Union of Industrial and Employers' Confederation of Europe (UNICE) and five members that are identified by the Commission. (Article 3 2001/531/EC, Euratom)

- **European Group on Ethics in Science and New Technologies (EGE):**<sup>114</sup> The Group is an independent, pluralist and multidisciplinary body which advises the European Commission on ethical aspects of science and new technologies in connection with the preparation and implementation of Community legislation or policies. In December 1997 the European Commission set up the European Group on Ethics to succeed the Group of Advisers on the Ethical Implications of Biotechnology. During its first mandate the EGE (1998-2000) provided opinions on subjects as diverse as human tissue banking, human embryo research, personal health data in the information society, drug use in sport and human stem cell research. At the specific request of the President of the Commission, Romano Prodi, the Group also wrote the Report on the „Charter on Fundamental Rights related to technological innovation“. On 24 April 2001 the Commission appointed the twelve Members for the period 2001-2004 and amended the EGE remit in order to strengthen the role of the Group (EGE 2001-2004). The secretariat of the Group is an integral part of the Group of Policy Advisors<sup>115</sup>, a unit that reports directly to the President.

In addition there are a large number of Working Groups and Task Forces, often including representatives of different directorate generals.<sup>116</sup> They are free to consult experts from outside the Commission. These working groups, however, are not the primary medium for stakeholder consultation.

## Conclusion and further Remarks

The analysis in this study has shown that civil society is not equally involved within all stages of the policy-cycle. Just as industry lobbying, civil society participation is strongest in the phase of preparing policy proposals. At this stage the incentives to participate are the greatest as civil society (or industry) intervention has the biggest impact on the outcome of the political decision-making process. However, it is worth analysing how the benefits of civil society participation could be deployed throughout the whole policy-cycle.

### Step 1: Basic choices and agenda-setting

Several debates in the EU (for example the debate on GMOs) have shown that European governments sometimes had serious difficulties in playing a proactive role in dealing with controversial and/or ethical issues and civil society's concerns. It is not easy to develop a common understanding on how

---

<sup>114</sup> [http://europa.eu.int/comm/european\\_group\\_ethics/index\\_en.htm](http://europa.eu.int/comm/european_group_ethics/index_en.htm)

<sup>115</sup> [http://europa.eu.int/comm/dgs/policy\\_advisers/index\\_en.htm](http://europa.eu.int/comm/dgs/policy_advisers/index_en.htm)

to deal with these issues on the European level, especially when the public debate has already significantly evolved in each member state.

Public authorities should be able to take the initiative. This requires a European „early warning system“ where the Commission, civil society and national bodies cooperate to detect controversial issues before or at the very beginning of the public debate and where public concerns can be identified and taken into account at an early stage of the policy cycle. This system can deal with „traditional“ controversial issues as well as with emerging developments in science and technology and their conflict propensity.

### **Step 2: Preparation of policy-proposals**

As noted above, the broadest involvement of civil society (as well as of industry) takes place at this stage of the policy cycle. However, no conclusions can be drawn from the „quantity“ of civil society participation to the „quality“ of civil society participation.

Today, there exist a wide range of **parallel mechanism** of direct civil society consultation that does not in all cases allow for a transparent and efficient decision-making process. One key characteristic of the present system is that each societal group (civil society, academia, industry, public administration) has its own communication channels with the European Commission and mechanisms for consultation by the European Commission

- **The social partners** play a vital role within the Economic and Social Committee
- **Academic institutions** articulate their points of argument primarily on conferences, as members of working groups or European-funded networks or through expressions of interests.
- **Public administrations** are represented in the Committee of the Regions, take part in networks and are addressees of the open method of consultation.
- **Industry** traditionally addresses the European Commission via its lobbying activities .

Other mechanisms for consultation are advisory bodies where several societal groups are represented, for example the European Research Advisory Board (EURAB) with members from a wide range of academic and industrial backgrounds.

**Civil society, however**, so far lacks clearly defined mechanisms: they are either directly consulted by the Commission, are partially represented in the Economic and Social Committee or copy the lobbyist approach (with a much lower budget than its industry „competitors“).<sup>117</sup>

---

<sup>116</sup> For example there exists an intersectoral working group on nanotechnology that is hosted by DG research.

<sup>117</sup> See also the analysis of Spichtinger (2003).

This co-existence makes it difficult to draw a picture of what society's needs really are. On the contrary, the European Commission is faced with a multiplicity of different, often contradicting arguments. What it therefore needs is an integrative approach based on platforms that bring together the different perspectives that exist within society (civil society, industry, public administration, academia). A new institutional body on a meta level will not be the answer: It would be too inflexible and much likely paralysed in order to mediate among the relevant groups and networks. In a dynamic world, the relevant partners for a fruitful discourse on issues related to science policies change too quickly as that a rigid administrative body could adjust according to the permanent changing needs.

This means, rather than creating new channels for the consultation of civil society organisations, new **platforms for the dialogue** with a widely defined civil society – including industry and academia – should be created.

Apart from this, measures should be taken in order to strengthen the capacity of civil society in order to enable civil society organisations to actively participate in the dialog processes. Often, these organisations suffer not only from financial restrictions but also from a lack of experienced manpower.

### **Step 3: Decision-making**

In a representative democracy, civil society does not play a direct role in the actual decision-making. Moreover, the decision-making process – involving the European Council, the European Commission, the European Parliament as well as the Economic and Social Committee and the Committee of the Regions – is clearly defined in the European Treaty.

There are a few exceptions, however:

- **Codes of Conducts and environmental agreements:** First, more and more often codes of conducts and (voluntary) environmental agreements are negotiated directly with industry.
- **Comitology:** Second, there exist a wide range of administrative bodies that cope with the definition and harmonisation of technical norms and standards.

A more active and systematic participation of civil society within these bodies/institutions in the preparation of decisions could improve the quality of the decision-making process.

### **Step 4: Policy implementation**

Civil society is the addressee of policies, for example in the field of Public Understanding of Science. It is desirable that civil society is involved more actively in the conception of initiatives related to PUS.

Besides, civil society could play a more active role in the monitoring of the implementation of science policies. This aspect will be discussed below (evaluation).

**Step 5: Policy evaluation (assessment)**

The evaluation of science policies is a very demanding task. Participants of the conference complained that there is a lack of competent scientists that could evaluate programmes because those experts with the greatest experience tend to participate in those programmes and therefore are not eligible for the evaluation.

This is one reason why it is important to explore further mechanisms for policy evaluation. One promising approach is a double peer review process of research programmes:

- a traditional evaluation process run by scientists, topped by a
- participatory process with representatives of civil society, industry and academia that focuses more strongly on the question how the research corresponded to societal needs

In the following chapter various policy recommendations are presented that aim at exploring the potential of civil society participation as a means to improve research governance throughout the policy-cycle and to strengthen the capacity of civil society to participate in the governance of the European Research Area.

## 6 Policy Recommendations

---

### Introduction

The analysis of the current practices of civil society participation in European RTD policy-making indicates the following:

During recent years, the European Commission has initiated or supported a tremendous number of new communication channels with experts and civil society organisations. Much effort has been invested in two areas in particular:

- the **exchange between the Commission and experts** (through EURAB, European Group on Ethics, the SINAPSE pilot project etc.) and
- the development of **Internet-based mechanism for consultation** such as the online forum for dialogue and consultation at the Your Voice in Europe Website (IPM-initiative), supported by online databases (CONECCS, EURETHNET etc.).

However, there is one area where consultations procedures still play a minor role. There is an as yet unsatisfied demand for a more coherent and systematic dialogue with civil society that complements the recently established online consultations and that provides an added value to both the Commission and civil society. Workshops and conferences are important forums for a face-to-face exchange with civil society; yet they alone do not suffice to explore the full potential of civil society participation. Seven rules may help to further improve the existing mechanisms:

1. Civil society participation goes beyond civil society consultation. Participation is about **mutual learning**. It is **interactive**; it is neither a single-sided process (collecting opinions and information from civil society for example via online consultations)<sup>118</sup> nor a process that could be limited to unrelated single events (such as individual conferences). In order to establish favourable conditions for a process of mutual learning, the Commission needs to ensure transparency with respect to the follow-up process, the justification and implementation of the policies discussed.
2. The institutional bodies (advisory groups, committees etc.) for civil society participation have to be **flexible and dynamic**. Their composition has to be adjusted according to the issues at stake. They should work in a target-oriented fashion and within limited time frames.
3. Civil society participation implies the **participation of citizens involved in the issues concerned**. Neither researchers on civil society participation, organised ‘stakeholder’ interests (such as representatives of the large European civil society organisations

---

<sup>118</sup> Online consultations have the enormous advantage of reaching citizens all over Europe. However, apart from specific online dialogues that have been held in the past, they are not interactive and consequently give little opportunity for mutual learning.

(labour unions, Environmental NGOs etc.) nor „professional citizens” (such as individual ‘consumer’, local’ or ‘lay’ members of committees) can represent civil society to a full extent.

4. There is a strong need for **professional standards** for civil society consultation; the process started with the general principles and minimum standards for consultation should therefore be continued; much could be learned from the exchange with those involved in the Aarhus process on civil society participation in environmental decision-making.
5. There is a strong need for a **more systematic, priority-driven approach** of civil society consultation. It would not make sense to get civil society involved in the discussion of every activity the Commission is pursuing. However what is needed is a master plan on whom should be consulted on which subjects within what time frame, and this should be drawn up jointly with civil society. It has to be transparent for citizens to be able to reconstruct the reasons why the Commission is getting involved in a particular dialogue with civil society (as well as for the Commission, which needs to know its own expectations in respect to its value added for an improved process of policy-making)
6. The role of **industry and science** in participatory governance has to be taken into account when implementing participatory governance. The focus on more civil society involvement should not lead to approaches where other important actors are excluded.
7. The instruments applied for civil society participation should be more **demand-driven** rather than supply-driven. Choice of approach should not be determined simply by the availability of new media (for example the Internet) or methods (for example citizen juries). Rather this should itself be a matter for open engagement and justified on the basis of analysis of specific circumstances (lines of conflict, major groups involved, ongoing developments and tendencies etc.).

Applying these key findings offers mutual benefits for both the Commission and civil society, many of which might be realised within a reasonable time frame and at reasonable cost.

Two further remarks may help in order to find a proper balance for proceeding with this recommendation:

- On the one hand, need for new – complementary – forums that allow for the **integration of different perspectives** has been identified. The issues at stake have to be analysed from a multidisciplinary perspective in order to gain a complete picture of the situation. The European Commission therefore should continue its efforts to make decision-making processes more transparent by creating platforms for dialogue and mutual learning and exchange among different groups of society rather than relying primarily on separate – and apparently opaque – channels for communicating with each group. Civil society consultation

therefore should be seen as part of a strategy to foster effective exchange between representatives from all sectors within society, including both civil society and industry.

- On the other hand, the Commission should **avoid multiplying the number of advisory bodies**. Given that the Commission is already involved in many forms of civil society consultation (and still is faced with criticism), the problem seems to be not so much the question of „what” to do, but rather „how” to do it (how to do it better). The policy recommendations therefore focus primarily on how to improve the implementation of civil society participation procedures that provide an added value both to the civil society participants and the European Commission. The recommendations illustrated in this chapter aim at filling existing implementation gaps as well as at introducing new approaches for the improvement of civil society participation. It is not the aim to increase civil society participation at any cost. Civil society participation is not an universal remedy. It therefore does not make sense to introduce more and more rules that oblige the European Commission to engage into a thorough dialogue with civil society whatever initiative may be on the agenda. The goals must rather be to identify areas of application where an in-depth dialogue with civil society produces a significant advantage for the Commission (and society). Civil society participation should make scientific policy-making procedures more efficient, not more complicated. Improving the understanding of civil society’s concerns, for example, is an important step in raising the acceptance of EU science policies which, in turn, reduces the future workload of the Commission.

Taking these two findings into account, it is advised to further elaborate the mechanisms for civil society participation step by step, by creating more opportunities for the exchange between different stakeholder groups.

The policy recommendations are clustered into three groups:

- |   |
|---|
| <ul style="list-style-type: none"> <li>• <b>Policy -making</b> (field of application I)</li> <li>• <b>Capacity building</b> (field of application II)</li> <li>• <b>Legal framework</b> (field of application III)</li> </ul> |
|---|

They are based both on the analysis/input provided by

- the **conference** and
- the previous chapters of the **study**

including the recommendations given by the expert panel.

Many of the policy recommendations which are presented below can be combined. This combination is even recommended, since it can lead to clear advantages:

- improvement of information exchange
- cost-saving
- more coherence in the Commission's activities
- better communication of activities in the field of participatory governance

The Civil Society Forum (policy recommendation 1) can be considered as a key-stone for the use of synergies, but also the European Academy (policy recommendation 3) has elements which link it to other recommendations (e.g. the development of benchmarks or exchange programmes between civil society and science). However, the reasons why the recommendations are presented separately are that each of them responds to significant challenges, and that each of them can be fully implemented as a singular measure.

It is also important to note that many recommendations seem to be relevant for other DGs as well; close cooperation might therefore be helpful for benefiting from synergies on this level, too.



## Field of application I: Policy making

The following policy recommendations refer to the task of bringing research closer to society (i.e. chapter 2 of the Science and Society Action Plan: „A science closer to the citizens”). Three recommendations are presented, all of which aim at enhancing civil society involvement throughout the policy-cycle. The most important suggestions include:

- creating a dynamic and flexible **civil society forum** that interacts with a wide range of different civil society actors
- systematically anchoring elements of **participatory foresight** within the process of defining and implementing framework programmes.
- enhancing the **communication with civil society** within research projects funded under FP 6.

<b>Policy recommendation 1: Creating a dynamic and flexible civil society forum</b>
---

This policy recommendation has a wide range of cross-connections to other policy-recommendations. A dynamic and flexible civil society forum could address a number of challenges that are outlined in this chapter and therefore could be interpreted as an overarching framework.

### Vision

A dynamic and flexible civil society forum could play a key role in developing a more structured and open culture of civil society consultation in European research policy. The forum is positioned at the intersection of DG Research and civil society and therewith facilitates the exchange between these two sectors. Consequently, it works in two directions:

- On the one hand, the civil society forum provides a point of „easy access” for informal civil society consultations. It supports the Commission **in finding appropriate channels to communicate with civil society** (in particular with the individual citizen) without creating additional bureaucratic structures and obstacles. The Commission makes use of the support instrument wherever it feels that it helps to improve policy-making.
- On the other hand, the forum will be a **contact point for civil society**. It collects input from various groups within civil society and processes the information according to the needs of the Commission.

The civil society forum will support the Commission in arbitrating between contending claims and priorities and will assist in developing a longer-term policy perspective. It is neither a „traditional” advisory committee, nor an additional burden/ restriction for decision makers. It consists of a core group and multiple forums on specific issues. Their composition is **dynamic, following the issues at**

**stake** and the stakeholders concerned. The forum works with a large **pool of experts** from all levels of civil society, including both individual citizens and representatives from civil society organisations such as consumer associations, environmental NGOs, community-based organisations, charitable organisations, educational and training organisations, foundations etc. It works on a **task-oriented basis**. Once the target (for example recommendations) has been achieved, the composition of the forum will be modified following the emerging issues.

The forum

- accompanies the Commission in **preparing its policies** (early consultation with respect to the design of framework programmes, work programmes and other supportive actions)
- gives **feedback** to Community actions (and therewith complements the online consultations of civil society)
- acts as an **early warning system** and „value consultants” for emerging conflicts (identification of developments with a high societal / ethical impact)
- **scans the horizon** for current developments in research in the European Union as well as in third countries that will affect European Research Area
- draws a **vivid picture** of the different debates and cultures related to research and research-based policies within Europe
- considers the findings of relevant participatory exercises undertaken at national or regional level
- applies techniques for **joint fact-finding** on controversially debated issues
- provides a platform for the discussion of **new topics** and the experimentation of **new methods**.

The **range of methods** which can be applied is broad (for example from online consultation to scenario processes). The forum makes use of **modern techniques of dialogue and communication**. The civil society representatives will be invited to participate in events such as scenario workshops, policy background workshops, public forums or citizen panels that help to bridge the gap between experts and civil society. In addition, the forum will provide a platform for multi-stakeholder dialogues including representatives from industry.

The civil society forum will be the **major access point** and platform for a continued dialogue between civil society and the Commission that was started at the Conference on the role of civil society for governing the European Research Area in June, 2003.

### Recommendation

In order to create a dynamic and flexible civil society forum as described above, the Commission would have to ensure the professional and independent management of the civil society forum. The tasks of the management would be:

- to build up and continuously update a **pool of experts** that goes far beyond the existing networks of social partner representatives regularly consulted through the existing bodies (for example the experts could be selected on basis of a co-nomination)
- to professionally **design and facilitate the various dialogue processes** that take place within the forum, based on a thorough knowledge and experience in managing platforms for stakeholder dialogues and mediation processes
- to ensure the **continuity** of the forum and to establish the right balance between flexible and continuous activities.
- to monitor and maintain contact with other actors co-ordinating relevant participatory exercises at national or regional level in order to readily present the findings as appropriate for consideration by the Forum

The management of the Civil Society Forum will make use of a number of **different formats** that help to encourage the active participation of civil society in policy development and to enhance the Commission's citizens outreach:

- Organisation of **scenario workshops** with the main actors of civil society (consumer groups, environmental groups, science communities, and others), as well as industry representatives, with the aim of constructing several governance scenarios for dealing with the new challenges of technological and scientific changes. The results of previous research dialogues such as FUTUR could be integrated into such an approach („participatory foresight”);
- Organisation of **policy background workshops** in the field of science and technology, bringing together major EU policy makers and representatives of stakeholder groups or organizations. These workshops should include a small group of up to 20 individuals, pursue a specific subject, such as a new line of technology or a specific governance approach for science and technology, and should not be open to the public in, order to facilitate an honest and relaxed exchange of information. These workshops should end, however, with a public statement. The main objective here is to give policy makers an opportunity to listen to concerns and wishes of main societal actors outside of the usual policy channels (in particular the typical lobbying organizations).
- **Public forums**, in which a specific issue such as „EU-supporting activities for specific technological developments” is debated. Such a forum can be organised in different formats, including open space conferences, round table discussion or Delphi processes. The main objective here is to generate several alternatives for handling this issue, collect arguments for and against each of the selected options and develop an understanding of the preferences and

values of each actor. Consensus may not emerge, but at least all participants will have learned more about the reasons that each group has voiced to support its perspective, and this information will be more effectively conveyed to third parties.

- **Citizen panels or juries** could be of tremendous help for bringing in the views of the individual citizens of Europe when it comes to controversial issues such as support for stem cell research or development of GMOs. The idea here is to use ordinary citizens as value consultants for the EU policy makers. The panelists are usually selected by random methods (like in a survey), they are exposed to an intensive educational programme with lectures, group work, field tours, talks with scientists, policy makers and stakeholders, and other learning methods. Such an educational programme can be expanded over a weekend or over several weekends depending on the issue. Panels could be simultaneously organized in several or all European countries. Such a process could add legitimacy to the policy process and promote a feeling of European integration within the European Research Area. It need not be initiated solely at EU level, but might also arise through co-ordination or integration of parallel relevant initiatives undertaken at national or regional level.

In addition, the civil society forum provides a platform for the exchange of different perspectives by initiating **stakeholder dialogues** that comprise a wider range of participants including industry and public administration. (COM).

It is recommended that members from outside the European Union also be included, in particular representatives from the **candidate countries** as well as from **third countries** – the selection should depend on the subjects which are to be discussed. Taking into consideration the opinion of representatives from outside the EU means „internationalising” the questions dealt with by the forum, that is, to realise its international dimensions, for example the prospects for consent or dissent on questions of global concern and the opportunities for a concerted action. It also means adopting a comparative approach to participatory methods, which can prove to be very useful for both sides.

### **What can be learned from existing experiences?**

Even though the Commission has started major initiatives to improve its civil society consultation mechanisms (for example by defining general principles and minimum standards) , there a consistent approach is still lacking. Each unit takes its own approach towards civil society consultation.

The conference, as well as interviews with members of the Commission, have highlighted two major lessons learnt from past experience that are addressed directly with the proposal to create a dynamic and flexible civil society forum:

- Even though input from civil society is welcomed by the Commission, **civil society representatives find it difficult to participate**. The current possibilities for participation are based in particular on invitations to submit Expressions of Interest and on online consultations

are felt to be one-sided. Participants tend to feel frustrated as they do not know how or whether the Commission reflects on the input received.

- Initiating a dialogue with civil society very often puts **the additional burden of an increased workload** on its staff: Whereas the importance of civil society participation is acknowledged and the staff are encouraged to intensify the exchange with civil society, there is a lack of adequate support to create forums for the exchange with civil society. It seems that the success of civil society participation depends strongly on individual persons within the Commission that engage in such a venture.

This shows that **simply creating another „standard-type” advisory body** would not be a solution for the problems sketched above. There has been an inflationary increase of all sorts of advisory bodies in political decision-making throughout Europe. Very often, these bodies are not constituted such as to resolve problems. Many of them have an inflexible structure and adopt the function and working mode of lobby groups. Thus there is a strong need to retain the flexibility to select the participants according to the issue at stake and, closely related to this aspect, to maintain direct contact to the experts within corporations, NGOs, think tanks and research institutions. In the longer term, the forum should be self-organised by civil society groups themselves.

#### **Actor(s)**

This initiative addresses directly the European Commission, DG Research (in particular: Unit C „Science and Society”). It involves civil society representatives from throughout Europe and beyond. Depending on the selected method, representatives from the industry sector, the scientific community and public administrations will be addressed, too.

The Forum fits well into the existing „landscape” of advisory bodies. It complements existing mechanisms such as the European Research Advisory Body (**EURAB**) or the European Group of Ethics in Science and New Technologies (**EGE**). Moreover, it fosters exchange between the Commission and other European Institutions such as the Economic and Social Committee (**EcoSoc**) and the Committee of the Regions (**CoR**).

Finally, the forum complements the recently established forums for online consultations by regular face-to-face events. The civil society forum

- will reflect the input from **online consultation** (for example accessible on the Your Voice in Europe homepage) and
- will make use of electronic networks and data bases such as the Scientific Information for Policy Support in Europe (**SINAPSE**), the **CONECCS** data base on civil society organisations or the currently revised **EURETHNET** as a systematic information tool on ethical issues in science.

### Frameworks

This policy recommendation directly refers to

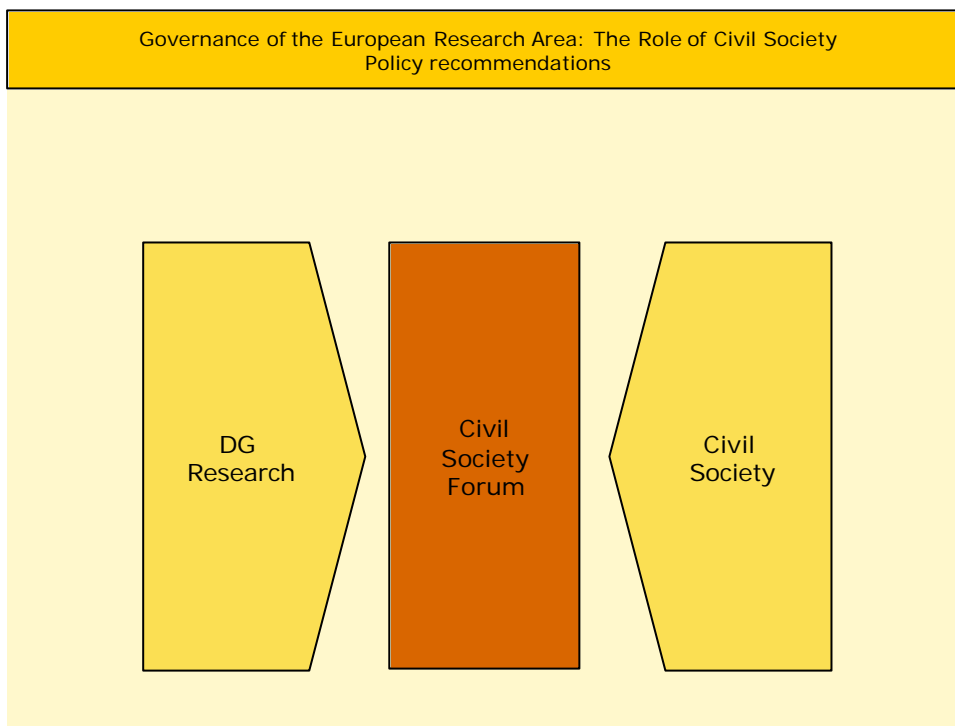
- Action 23 („organisation of regular event enabling civil society to participate”) of the **Science and Society Action Plan** (section 2: „A science policy closer to the citizens) as well as to
- point 4.3.1.2 („encouraging the active participation of society at large in policy development”) of the **work programme 2003** „Structuring the ERA”.
- In addition, it takes up a **major claim** that has been expressed at the **conference** „Governance of the European Research Area: The Role of Civil Society” (in particular: working group 5).

### Time scale

A detailed concept could be developed during winter 2003/2004 so that the civil society forum could start its work during the 1<sup>st</sup> half of 2004. A possible line of action could be:

- Clear definition of the legal status, the mandate and the relation of the civil society forum both to DG Research and other existing bodies (definition of a framework for a „structured dialogue”).
- Preparation of a call for tender in order to assign a professional management of the dialogue process.

The Civil Society Forum would be initiated as a pilot project, on a small scale. Providing multiple „docking stations” for future applications in related fields, the forum could be enlarged step by step. It could also serve as a model for a larger network of civil society participation mechanisms at various DGs. What is more, it has strong links to other policy recommendations of this study, in particular, to the creation of an European academy for civil society participation in science and technology and the institutionalisation of participatory foresight in the preparation of future framework programmes and strategic priorities.



**Policy recommendation 2:****Integrating Participatory Foresight in the Preparation of Framework Programmes and other Strategic Priorities****Vision**

The definition of thematic priorities for the EU research funding activities and the development of Framework programmes are key tasks and core competencies of DG Research. Areas of research have to be identified that both foster the competitiveness of the European economy (Lisbon goals) and fit the needs of society. They are crucial for the future of research in Europe, in particular with view to the building of a European Research Area. The early involvement of civil society in the preparation of framework programmes and other strategic priorities via various foresight elements has clear advantages: potential achievements can be a better basis for policy-making, more transparency, a high level of credibility within society and more acceptance of decisions.

**Recommendation**

- The Commission has already made successful steps towards a better involvement of stakeholder groups, for example by collecting EoIs for the preparation of work programmes or funding activities. The development of new ways of consultation should be continued and encouraged. The recommendations which are presented below follow a modular foresight approach towards the improvement of civil society involvement in the building of future Framework Programmes. We strongly recommend that civil society be involved in a timely and systematic fashion when preparing thematic priorities and instruments of future framework programmes. This can include: initiating a European participatory foresight process for the preparation of FP 7, addressing representatives and individuals from civil society in the member states and focusing on future societal needs in Europe. The elements of this foresight process can be manifold: identification of participants via co-nomination; focus-groups and online-discussion in each member state; future scenario workshops for the development of long-term visions, societal needs open forums in co-operation with research institutes and universities (addressing a wider public); parallel hearings on EU-level in Brussels; final open-space conference for the development of recommendations.
- Conferences and hearings on the national and regional level where representatives from civil society are invited to comment on draft framework programmes. This includes in particular activities focusing on the „Science and Society” issue.
- The Commission initiates and receives the results of these various participatory elements and reports on how they are taken into account.
- The Commission invites national and regional authorities to inform civil society on how to participate in the building of new framework programmes.



- The Commission invites a group of professional advisors and selected representatives from civil society who continuously monitor the participatory process and give general/strategic advice to the COM. This group could have strong links with the Civil Society Forum (see recommendation no. 1).

The expected achievements are a definition of appropriate areas of research that can be defined neither by politics nor by the scientific community itself alone. Civil society, as well as industry, is a group that can give a viable input for this challenging exercise, too. By integrating the different perspectives existing within society at different stages of the priority setting process, the Commission receives valuable input for defining future priorities for the development of a European Research Area. In the longer term, it aims at embedding the „science and society” issue into all thematic priorities („mainstreaming”). This gives the European Commission a strong backing to justify its proposal for a new working programme, which is very important, since the European Commission is always faced with a multiplicity of proposals for amendments drafted by the other European Institutions, such as the European Parliament or the various advisory bodies (EcoSoc, CoR). These institutions will have to justify their proposals with rational arguments; they cannot do so simply by referring to the fact that they represent civil society.

#### **What can be learned from existing experiences?**

There are many experiences in foresight the Commission can learn from when designing their own foresight procedures. In addition, the Commission has already collected substantial experience with new forms of civil society participation, both positive and negative. For example, the invitations to submit EoIs prior to designing FP 6 have been a success measured by the number of inputs provided by civil society (understood as the non-political sphere including research institutions, industry etc.). However, this became confusing since the people that participated were left unclear about their role within the process of decision-making. Moreover, it proved difficult to keep track of how the Commission was reflecting on the input they had received.

#### **Actor(s)**

This policy proposal directly addresses the European Commission, DG Research. Co-operation partners can be national authorities (comprising CREST-activities), scientists, actors in the field of PUSH and national and regional foresight procedures.

The project involves experts within academia, civil society, industry and public administration who can give valuable input on successful ways of integrating civil society in political decision-making processes.

#### **Frameworks**

These recommendations are in accordance with the Science and Society work programme 2003 where the use of foresight is strongly recommended for the preparation of strategic decisions. They also

support the implementation of the general principles and minimum standards for consultation defined by the Commission.

### **Time scale**

Even though the next framework programme seems far off (the current programme runs until 2006), the European Commission should initiate the participatory process for the definition of its work programme at an early stage, i.e. in 2004.

### **Additional option: Strengthening the culture of Citizens/Scientists Dialogue in future research activities funded by the Commission**

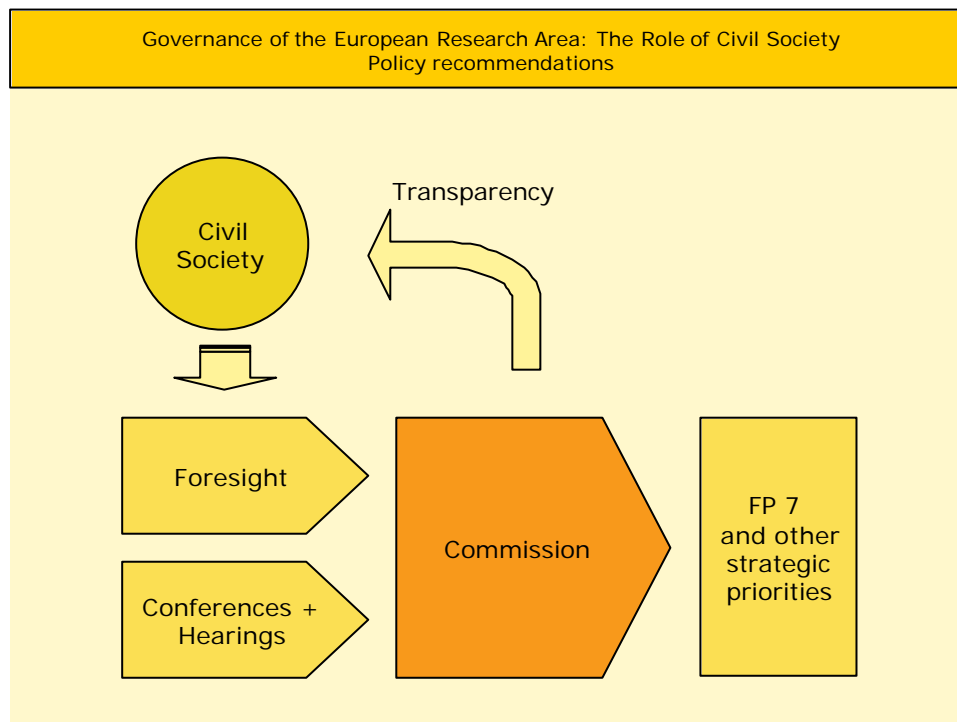
Engaging in a sincere dialogue with civil society should be more than an optional add-on to research programmes, but should become normal and integral parts of future framework programmes and their instruments. The communication with the „outer sphere” promises advantages not only for citizens, who will be better informed on ongoing research activities, but also for the researchers themselves. They have new opportunities to reflect on the societal needs of future research; what is more, they profit from a high level of trust within society. New incentives for scientists and the dissemination of relevant knowledge on participatory procedures among scientists can foster this dialogue. The achievements are an effective civil society participation in the implementation and evaluation of research activities that demonstrate to civil society that the Commission takes participation seriously (for example in terms of transparency), and this with a good cost-benefit ratio.

It is therefore recommended that future framework programmes and strategic activities should enhance this culture of dialogue. Measures which foster this culture can be discussed and developed parallel to or in combination with the participatory foresight procedures mentioned above. Examples of these measures are as follows:

- Scientists or research institutions which apply for EU funding should not only be encouraged but should be obliged to declare in their proposals how they will disseminate and communicate their key findings and how they want to interact with civil society. This communication and interaction is particularly important for a) (potentially) controversial issues and b) issues related to „Science and society”.
- The Commission should offer incentives and rewards for the citizens/scientists dialogue: Additional funds should be available for scientists who want to enter a systematic dialogue with civil society, who are inviting NGOs to join scientific consortia and to take an active role in research and communication activities.
- Training activities can support this dialogue: scientists should learn when and how to involve civil society and how to apply different approaches, for example focus groups or hearings. This requires the development of a „toolbox”, where methods of civil society involvement are explained to scientists.

- In their proposals, scientists should declare whether their research is related to issues where civil society feels particularly concerned, and how they are going to take these concerns into account. This requires a database, for example, where scientists find information about relevant issues and ongoing debates.
- The evaluation of proposals should take the communication and aspect into account and make it a „hard” criterion (comparable to ethics or gender issues). This requires for example the development of checklists and standards for „good” civil society involvement.

This set of recommendations can build on the experience gained from the development and implementation of other issues (e.g. gender and ethical issues) in the current and previous framework programmes.



## Field of application II: capacity building

### Introduction

Research policies have already made a considerable move towards a stronger involvement of civil society. The Commission today plays a very active and progressive role in this area, e.g. with view to its various PUSH activities.

However, more professionalism in designing and running participatory processes is required and further improvements have to be made by all actors involved (scientists, the media, politicians, citizens) when it comes to being prepared for a true dialogue and knowing about the different ways in which participation is possible.

There is a clear need for individual/institutional capacity building measures on different levels and for different target groups.

- Good participation requires a high degree of professionalism and accountability on behalf of those who conceptualise and carry out these processes. Likewise, many aspects of the design of participatory processes (such as recruitment and problem framing) are themselves a legitimate matter for participatory consultation. The training of professionals and the constitution of responsible agencies are therefore key success factors in ensuring the quality and efficiency of participatory processes. This includes sufficient knowledge on participatory processes, on methods, skills, process management and results – both on the regional/national and on the European level. The ways in which experience is made accessible need to be improved, including opportunities for the development of new methods and processes. The identification of benchmarks can be helpful to learn about methods and to discuss how „useful practices” can be transferred into other political/cultural contexts. Network activities can help to foster mutual learning processes.
- Governments should not consider participation as a burden, but as a helpful instrument for the improvement of political decisions and their acceptance. In addition, public authorities often do not have sufficient knowledge on existing methods of how to best involve civil society (depending on the issue, level, legal/cultural frameworks). They should therefore receive guidance and incentives for involving civil society and thus for implementing the criteria of openness and transparency in their decision-making. Capacity building measures can help them to see and make better use of the advantages and opportunities of participatory processes. This includes procedures for how best to make use of participation, starting with the identification of potential purposes, the implementation of the process and the way in which to deal with the results.
- Public understanding of science is often associated by scientists with unfair or uninformed criticism by lay people, or inappropriate political influence or control of scientific work. Capacity building can contribute to changing such attitudes. The dissemination of knowledge on the opportunities for participatory processes and incentives for scientists to engage in or

initiate participatory processes is one approach. What is also important is to create the capacity within the scientific community in order to allow them to talk about science and to communicate research results and their implications in different terms. Universities and research institutes already play a major role in capacity building (for society and scientists), but their contribution to the interaction between science, civil society and policy makers could be much more prominent.

- The media should be granted better access to information. Additional training activities about civil society participation procedures can deepen the understanding of participatory governance as well.

Additional aspects of capacity building activities should include

- the activation and involvement of target groups via the adequate use of new communication technologies and new media, and
- the establishment of networks between East and West EU-Countries, related to the specific differences in the role of research policy and participation within these societies.

**Policy recommendation 3:****European Academy for Civil Society Participation in Science and Technology****Vision**

Knowledge exchange and capacity building are key success factors for a better civil society involvement in the building of the European Research Area. This holds for all stakeholder groups: science, public authorities, civil society, the media and those professionals who carry out such processes. Since each stakeholder group plays a specific role in participatory procedures, the level of required knowledge and competence can vary. An academy is a flexible institution which provides training facilities which are individually designed for each stakeholder group, taking into account different interests, levels of knowledge and societal and cultural contexts. Each individual can make a choice among different (virtual or face-to-face) teaching opportunities according to his or her individual time budget or personal interests and skills. But the academy is more: whereas usual (Internet based) information platforms only provide static information, the academy can foster interaction between the stakeholder groups, enhance network activities, further develop knowledge on participatory processes and thus serve as a „(virtual) think tank” for civil society participation.

**Recommendation**

The academy is a modular-based learning platform running on EU-level, with a clear focus on the requirements not only of different target groups but also of each country, taking into account the broad range of cultural and structural differences in various countries and regions. It is important to find the right balance between EU-wide issues and learning activities, taking into account national frameworks.

Due to the specific dynamics and requirements of participatory governance in the field of RTD policy-making, the activities of the academy should primarily focus on this particular policy area. Links to other policy areas and the broadening of the academy’s scope should be considered as an additional step in a long-term perspective.

The academy provides a flexible learning platform which offers various capacity building measures for different target groups, thus improving the acceptance for and the implementation of participatory processes. The range of teaching methods is broad, combining „traditional” face-to-face approaches (e.g. summer schools, seminars, workshops) with the full potential of new information and communication technologies and interactive e-learning facilities (such as virtual seminars or discussions in online forums). The academy not only makes knowledge on civil participation accessible, but also provides an area for mutual learning activities, inviting its users to share their individual experiences.

The **members** of the academy are acknowledged experts and practitioners in the field of civil society participation, bringing with them considerable personal and institutional networks. Their task is to reflect on civil society participation in Europe, to collect information and to continuously improve the

training activities of the academy. They identify benchmarks and highlight standards for assessing the quality of the processes (including the establishment of labels and awards, for example). They can also provide input for the debate on governance in the ERA and provide advice to policy makers. The members of the academy are supported in their work by a group of professionals or an agency which sets up the institutional structure and ensures the academy's services – and this in close cooperation with the academy members, DG Research and national or regional actors involved.

The academy can respond to the different **requirements** of individual stakeholder groups, both with a focus on EU and national issues, for

- Professionals: Providing knowledge on existing processes (e.g. databases, studies, scientific literature, evaluations, benchmarks); learning about methods; offering a platform for testing new methods; developing benchmarks; providing a forum for the exchange of experience, coaching and mutual learning.
- Civil society: Providing knowledge on civil society participation in general (e.g. legal frameworks, good governance); information on ongoing or future participatory procedures on the regional, national and EU-level and on how to participate; information on „controversial” issues and new scientific developments; training activities on how to initiate a process; particular activities for NGOs (e.g. fostering the exchange of experience between NGOs; clarification of the differences between participatory processes and other forms of engagement).
- Policy makers: Information on „how to use” and implement civil society involvement and on what civil society participation can contribute to policy-making; training activities on how to initiate and fund civil society participation; knowledge on how civil society is organised and how it can be addressed; knowledge on civil society concerns and existing positions with respect to controversial issues.
- Scientists and industry: Knowledge on how civil society is structured, on controversial issues and new forms of governance in RTD policy-making; training in how to understand and how to address civil society; information about incentives and ways in which to better involve civil society in research activities. The participation in activities of the academy can be accredited and rewarded, for example with certificates or credit points.
- Media: Information about existing methods and ongoing participatory processes.

The academy is a powerful instrument which responds to various **challenges**:

- Improving the acceptance and the quality of civil society participation by building capacities in all stakeholder groups. More professionalism in designing and running participatory processes is still required in Europe.
- A wide range of information about participatory processes is already available (e.g. on websites, in databases or publications), but quite often in a static way. The training activities of the academy provide an individualised and didactic approach to the existing information.

- The stakeholders will know the academy as a prestigious institution for the reflection on participatory processes in Europe and beyond.
- The activation and involvement of target groups can be enhanced by the use of new communication technologies and new media.
- The academy fosters networks between Member States and Candidate States (on an administrative or NGO-level) and thus helps to disseminate know-how and to strengthen civil society in Eastern Europe.
- The academy develops knowledge and tools that are readily available for Commission services and the proposed Civil Society Forum (policy recommendation 1).

### **What can be learned from existing experiences?**

There are already many initiatives and online activities of the EU which aim to better involve different stakeholder groups by using new media and IT-technologies (e.g. eEurope, IPM, Your Voice in Europe). The academy can use some of the experience which has been gained there as a starting point and further develop these approaches – now with view to RTD policy-making and a clear focus on capacity building measures.

### **Actor(s)**

The Commission initiates such an academy in close cooperation with member states. Whereas the technological infrastructure should be set up on EU-level, the development of training activities should take place in close cooperation with actors on the national or regional level. The academy addresses science, public authorities, civil society, industry professionals and media, on EU, national and regional level.

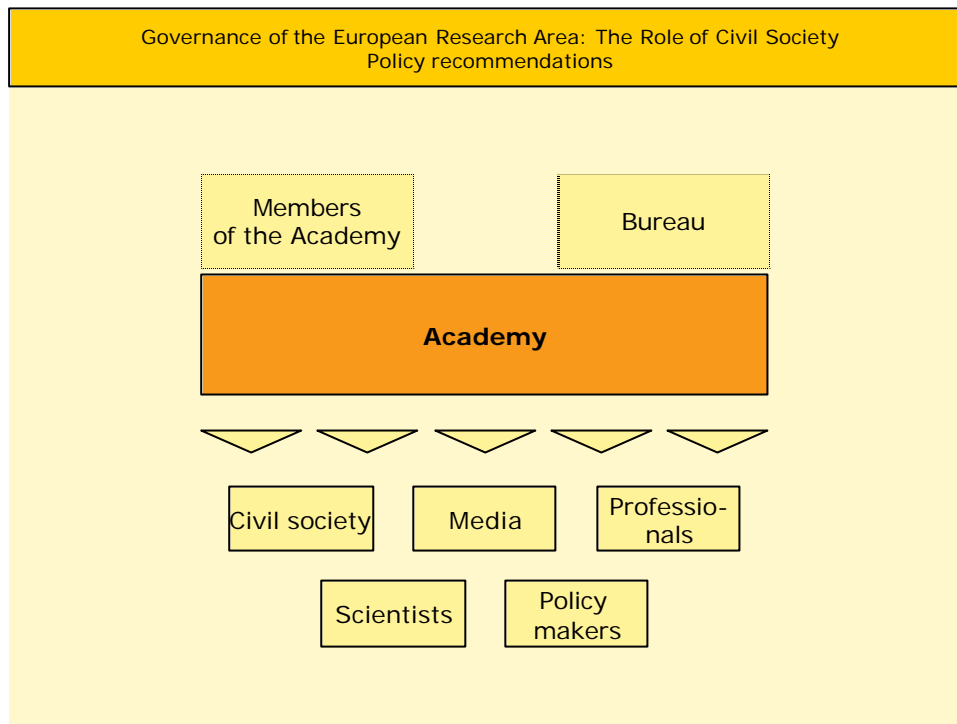
### **Frameworks**

The academy supports various Actions of the Science and Society Action Plan, in particular Actions 1-4 and 22.

### **Time scale**

The building of a academy is a mid-term project. First steps for the conceptualisation can take place in 2003. The start of first capacity building activities will be in 2004. The full range of activities can be reached at the end of 2005.





**Policy recommendation 4****Citizens debating on science: Universities as platforms for „European Future Days”****Vision**

Europeans want to be informed about new developments in science and technology which affect them. The direct dialogue with policy makers and scientists about their work helps to make science more transparent and to foster mutual understanding about opportunities, risks and concerns.

The „European Future Days” programme could focus on concerted Europe-wide initiatives – held annually on a particular ‘European Future Days’ – which bring research and policy makers closer to society on a local/regional level. The future issues should be of pan-European interest. The „European Future Days” can also provide opportunities to disseminate information about research policy-making on the European level, on participatory processes and can stimulate the implementation of these on the local and regional level.

Universities and other research institutes are invited to deliver this exchange.. Universities are situated at the crossroads of research, education and innovation and therefore constitute the „natural home” for the transmission of knowledge. The growth of the knowledge economy, in particular, leaves universities in a favourable position to become more closely involved in community life. They should increasingly become a forum for reflection on knowledge, as well as of debate and dialogue between scientists and people. The aim of the „European Future Days” is to involve a large number of actors. Media coverage and accompanying activities (e.g. in schools) can help to address a broader public.

**Recommendation**

Universities already play a major role in capacity building (for society and scientists), but their contribution to the interaction between science, civil society and policy makers could be even more effective and important. The challenge is to profit from the universities’ local and regional networks and skills to foster this interaction.

The „European Future Days” initiative is a Community level programme (including the definition of common topics, distribution of information material, PR activities etc.), but most of the activities take place on the local level. This initiative will be held all across the EU once a year, and each year it will be dedicated to one common theme. The definition of this theme could be used to reflect on those questions which are of the greatest concern to academic research in Europe. Sub-themes should be convened in order to spell out the main question. Apart from these thematic constraints, there are no restrictions as to how the topics will be delivered to the public. However, emphasis should be laid on promoting the two central ideas to be sustained by this initiative, which are, first, to reflect the role universities and research institutes play in the local community and in society as a whole, and second to point out the European dimension of both the issues that are being discussed and of the university

and research institute as a pan-European institution. Participants of this dialogue are civil society, scientists and policy makers.

Topics of the Future Days should either be of current importance or may be those which are important for the future. They should concern the entirety of European societies, but at the same time should allow for a local perspective. The topic of Bioscience may serve as a first example: participants could exchange information about their respective activities - especially ongoing research projects in this area and their applications or implications at the local community level. Bioscience could be discussed on the level of health care or agriculture: What does a GM agriculture imply? Participants would then exchange knowledge and opinions about the ways the topic should be approached in future on local and higher levels (national, European).

Guiding questions which can be discussed during the Future Days can be:

- What are current/future developments in research policy-making on the global or EU-level? How do they affect research activities on the local or regional level? What are the differences with regard to public or scientific debate in other European countries?
- What is the „regional dimension” of controversial issues? How does the local scientific community deal with civil society concerns in their daily work?
- What are current/future research activities in the region: How are civil society concerns or societal demand taken into account in universities or in (local) industries?
- How is civil society involved in research policy-making in each country/Europe? How can this involvement be improved? What are ongoing activities, e.g. in the context of the building of the ERA?

For the European dimension, a comparative approach should be adopted. Also, joint projects of European Universities and research institutes (and the involvement of students from other European countries) would serve the purpose of a common European approach.

In order to make the public familiar with the current debates in research and research policy-making, the Future Days must be accompanied by a broad media coverage. Foresight activities, creative elements and the experimentation of new participatory processes can help to involve a broad public. The „European Future Days” strengthen the role of universities and research institutes as a (regional) interface between science and society and contribute to the building and strengthening of local/regional networks. This can also include schools and thus contribute to making science more attractive to young people.

The expected achievements are:

- To enhance public understanding of the system of scientific research, especially the functional relationship between universities and other research bodies, industry, governments and wider society.
- To support the idea of social responsibility in research and teaching. This includes an awareness of on the part of researchers and students of the social context of their research and its applications.
- To build up and strengthen local networks and partnerships, both among individuals and institutions, such that universities and research institutes are perceived as a permanent point of interaction between science and society, not only during the „European Future Days” but above all beyond.
- To strengthen European networks of Universities and of civil society actors
- To present the issues that are discussed in European terms, thereby fostering a „European way of thinking”.

### **What can be learned from existing experience?**

There are many examples of how the public can be involved in science: the European science week, national science weeks and various PUSH activities (in particular at university level) may serve as an example here. When implementing the recommendation one could take advantage of existing networks at European universities, especially those that teach and carry out research in the sciences. However, the European Future Days introduce new aspects, e.g. a common European topic and the focus on interactivity between science and society with a view to participation in research and research policy-making. One should consider whether this initiative could be implemented with clear links to science weeks or other science events on the national and regional level. But even without this link, the main challenge will be to ensure the coherence of the activities (in terms of time and common focus).

### **Actor(s)**

The Commission initiates and coordinates the European Future Days, provides the overall framework and defines the topics. National authorities serve as links to regional/local research institutes. On the local level, universities and research institutes serve as nuclei for the activities, involving scientists and students, local authorities, civil society, media and industry.

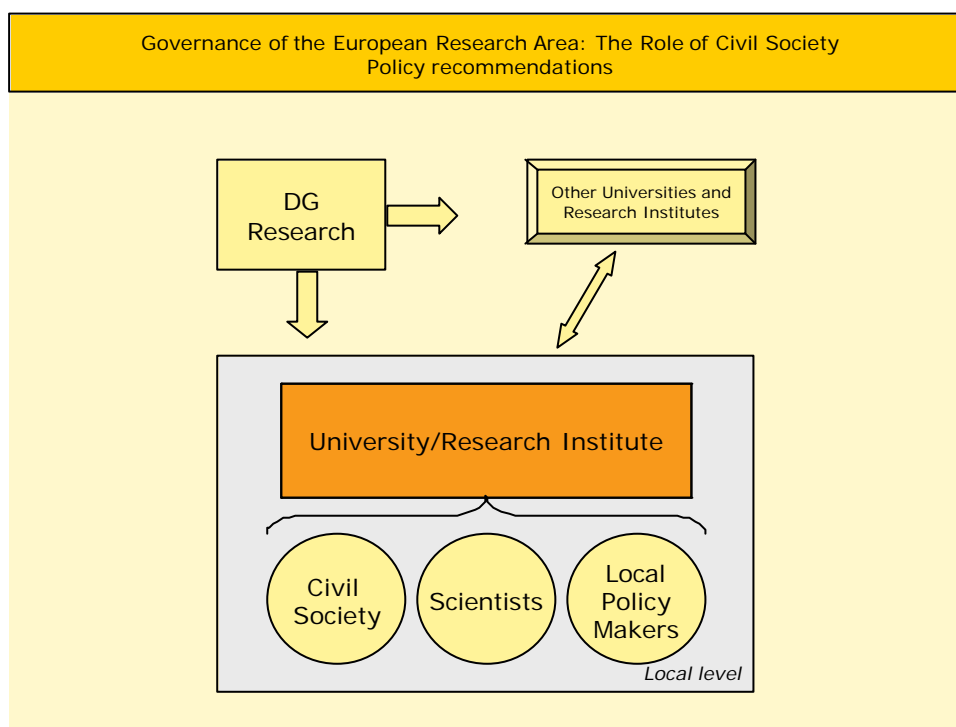
### **Frameworks**

- This initiative responds to Action 20 and Actions 7 and 8 of the Science and Society action plan.
- It is in accordance with the Science and Society Work Programme 2003, „promoting science and scientific culture, particularly among young people” (p. 10 ff.).

- The initiative supports the Lisbon agenda, since its aim is to strengthen the role of universities as a central location for scientific research and the transmission of scientific knowledge.
- The importance of universities in linking the spheres of economy, science and society and even a responsibility to do so has been recognised by the universities themselves, as can be seen from the Graz Declaration (European University Association, 4.7.2003) Nr. 5 and 7.
- It should be considered in the context of the Communication by the Commission on the Role of the Universities in the Europe of Knowledge,<sup>119</sup> where it is stated that „The universities also have a major role to play in initiatives under the „Science and Society” action plan” (p. 10).

### Time scale

The design will be finalised in 2004. The realisation of the first European Future Days can then take place in 2005.



<sup>119</sup> For the consultation process on this communication see [http://europa.eu.int/comm/research/consultations/list\\_en.html](http://europa.eu.int/comm/research/consultations/list_en.html) and [http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003\\_0058en01.pdf](http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003_0058en01.pdf)

**Policy recommendation 5:  
„European Science and Society Exchange Program”****Vision**

Due to the prevailing curriculum of scientific education and an increasing complexity and degree of specialisation which can be observed in the field of research, scientists are often not conscious of the full range of implications their work has for society as a whole. On the other hand, civil society, including NGOs, have a high demand for solid scientific advice. In addition, they often lack a full understanding of the important economic and institutional forces that technological research is mainly driven by.

The construction of a truly European Research Area needs an exchange of the different actors involved, so that the European dimension and the common interests of European civil society, as well as those of the European community of scientists and R&D related industries, come to be fully realized. The „European Science and Society Exchange Program” aims at ensuring this exchange, foster mutual understanding and strengthen the position of organisations from civil society.

**Recommendation**

The „European Science and Society Exchange Program” supports the exchange between researchers and members of NGOs which will raise the level of mutual understanding and help to establish personal links between the sectors, both with the desired effect that scientists may be as much responsive to the demands of society as civil society will be to economic demands and to the chances technology offers to society as a whole.

It establishes an exchange between science and society via internships for scientists at civil society organisations (environmental organisations, consumer associations etc.). This programme addresses a wide range of groups (in particular young actors) within the scientific community: students, young researchers, university professors, researchers working in corporations, but also civil society activists who want to get to know „the other side of the story”.

The „European Science and Society Exchange Program” includes:

- The setting-up of a combined Intra-European scholar and fellowship programme and the coordination and funding of the activities – either in the form of single projects the intern is contributing to, or by subsidizing the intern to reduce the costs he or she is facing. Funding could be higher for activities with partners outside the EU. The obligatory reporting on the part of the grantee and evaluation of the reports can also be included in the programme.
- The programme is open to students of scientific and social and humanities disciplines (i.e. including ecology, geography, law, philosophy), to professionals from the field of scientific research both in universities, research centres and research-based industries. The participation

in this exchange programme should be accredited and provide an added value for scientists' careers.

- The programme is also open to civil society activists (or scientists working for NGOs) who want to gain experience from the business sector.
- The activities include short to middle-term internships in civil society organisations, especially NGOs, and in R&D related industries, notably in those departments which deal with issues of Corporate Responsibility.
- The programme could be managed / monitored jointly by industry and NGOs (mediated by the COM).

The expected achievements of this initiative are manifold: it helps change long-standing attitudes by overcoming prejudices and opposition and enhancing a mutual understanding of the sectors, leading to capacities for a constructive dialogue and interaction. This is particularly true for a pragmatic dialogue of industry and civil society. In addition, it provides civil society organisations with scientific advice and stimulates long-term partnerships between scientists and Civil Society organisations. In the long term, it will help to promote a new generation of scientists who know better how to deal with Civil Society concerns and who adopt a „social attitude” towards their scientific work. One extension of this programme could be to foster the exchange between NGOs, e.g. between old and new member states, and to enhance knowledge exchange and network building.

#### **Actor(s)**

The main actor is the European Commission, initiating and funding the exchange. Target groups are civil society organisations, scientists and R&D related industries. The latter could also act as co-financers.

#### **What can be learned from existing experiences?**

It can be drawn on the experiences made in the Marie Curie Actions, now implemented as the Sixth Framework Programme's Human Resources and Mobility (HRM) activities.

#### **Frameworks**

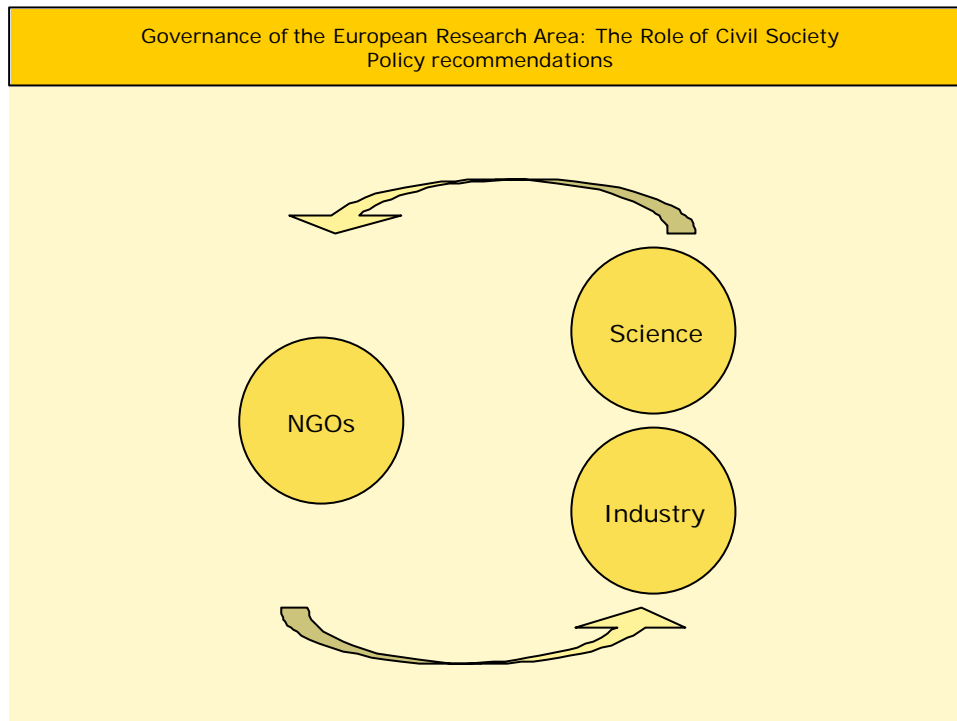
This initiative contributes to achieving the aims presented in the Communication from the Commission to the Council and the European Parliament: Researchers in the European Research Area: One Profession, multiple careers<sup>120</sup>, e.g. to „develop a European platform for the social dialogue of researchers” (p. 24)

---

<sup>120</sup> Communication from the Commission to the Council and the European Parliament: Researchers in the European Research Area: One Profession, multiple careers, COM(2003) 436 final;  
[http://europa.eu.int/comm/research/fp6/mariecurie-actions/pdf/careercommunication\\_en.pdf](http://europa.eu.int/comm/research/fp6/mariecurie-actions/pdf/careercommunication_en.pdf).

**Timeframe**

The design and implementation of this exchange programme can take place in 2004.





**Policy recommendation 6:  
Identifying benchmark projects****Vision**

In order to boost motivation for investing in civil society participation, benchmarks can serve as an orientation for the European Commissions' activities related to civil society participation. Benchmarks provide a good picture of how to implement one's own principles as they refer to existing good practices. References are made to specific projects („project x”) undertaken by a certain administrative body („ministry of y in country z”).

Benchmarks summarize existing experience and provide knowledge for individual and context-sensitive solutions. They should refer to criteria that are measurable. Opaque criteria such as „success” of civil society participation procedures therefore have to be broken down into manageable criteria such as „transparency”. Transparency (for example transparency to participants) is an example of a criterion that plays a vital role for the European Commission's own policy (see Minimum standards on consultation, White Paper on European Governance etc.), it plays an increasing role in the international agenda (such as Aarhus Convention); furthermore, there is a wide range of different approaches, legal requirements and political cultures throughout the world (e.g. between the United States and Europe).

**Recommendation**

The objective is to provide the European Commission (and public administrations on the national and regional level) with orientation when trying to define and implement minimum standards on consultation.

The initiative to develop good criteria comprises several elements:

- Evaluation of international benchmark projects on specific issues such as transparency of administrative decision-making processes
- Analysis of how these benchmarks could help to implement the Commission's strategy to obey certain general principles and minimum standards for consultation
- Development of a strategy to implement benchmarks within Commission and to spread knowledge on benchmark within Europe.
- Besides, a prize could be awarded each year to public administrations that best meet the benchmarks defined. This could, for example, take place in cooperation with the Committee of the Regions with the aim of promoting regional initiatives for a better involvement of civil society.

Once the benchmarks are identified, mechanisms and platforms will be established that ensure a continuous process of learning about how to better explore the potential of civil society participation.

One potential result could be to further develop and concretise the minimum standards of consultation with regard to the special requirements of civil society participation in research policy-making.

**What can be learned from existing experiences?**

The project aims at exploring exactly the question of how the European Commission could learn from existing experiences. At present, there is a wide insecurity with respect to the question of which standards for „transparency” should or could be met.

**Actor(s)**

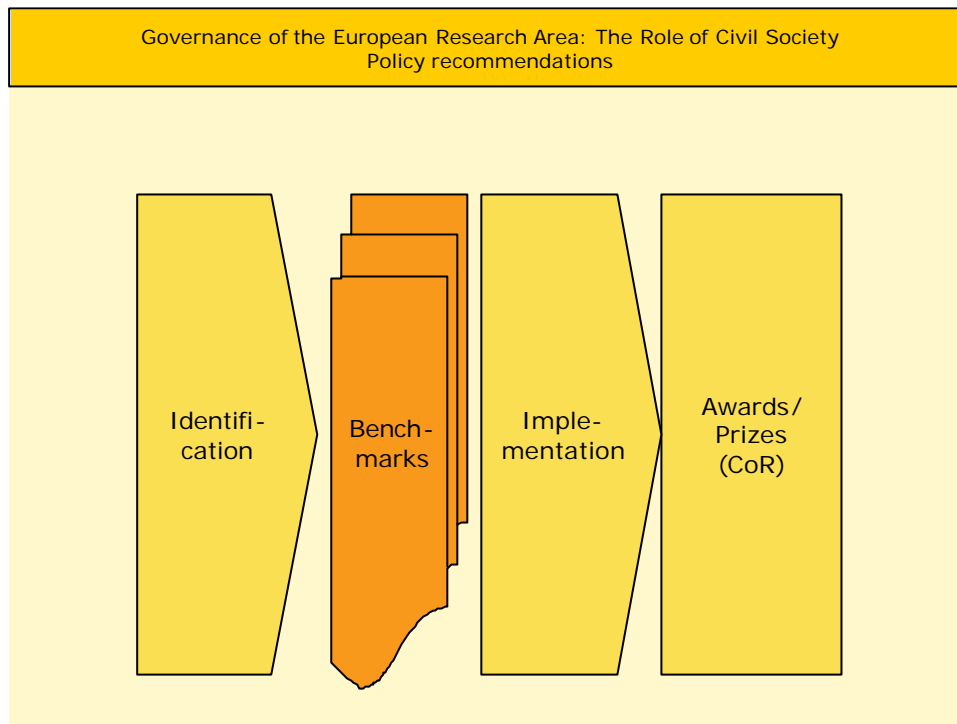
This recommendation addresses directly the European Commission, DG Research. The results will be valuable also for public administrations on other levels (national, regional). The benchmark is based on an analysis of good practices world-wide. Target groups therefore are public administrations that set new standards related to transparency or other, measurable, criteria.

**Frameworks**

Relevant frameworks, include the General Principles and minimum Standards for Consultation, the Science and Society Work programme 2003, p. 4, and the Science and Society Action Plan, Action 9.

**Time scale**

As a first step, a study is to be conducted in order to define benchmarks. This could be carried out during the first half of 2004. By early Autumn 2004, a process of organisational development within the European Commission could be launched in order to define paths on how to set incentives to meet the benchmarks identified.



**Policy recommendation 7:****Supporting Existing Advisory Bodies in the Application of Civil Society Participation****Vision**

In a world of increasing complexity, it becomes more and more difficult to assess the impact of scientific and technological developments. How will GMOs, ethical testing, stem cell research, nanotechnology or new communication technologies affect our lives? What are the emerging scientific developments and key technologies with a high „**ethical or societal impact**” in the future? And how can scientists become aware of those potential concerns and deal with them?

The **mechanisms that have been developed** in order to respond to these challenges are manifold: institutionalisation of forecast or participatory technology assessment, establishment of research advisory bodies, working groups and task forces, ethics councils, public hearings organised by the parliament etc. However, even though these bodies have succeeded in bringing European research policy closer to the citizens, there is still a considerable potential for further improvement. In particular, there is a gap in the extent to which the particular priorities for timing or attention, or different value judgements and framing assumptions adopted in expert assessment are validated in relation to wider civil society.

In particular **in times of crisis or critical events** (such as BSE or SARS, Aids, blood scandals, accidents in chemical industrial sites or nuclear power plants), the public often loses confidence in the existing institutional mechanisms. People doubt whether adequate decisions will be taken if it turns out that they have not been taken in the past. They have a different view on the underlying assumptions of political decisions to that of the „professionals”, but they do not whether or how their concerns are taken into account by the existing bodies.

A reinforced action of DG Research supporting existing bodies in exploring the potential of stakeholder participation could play a vital role in establishing a strong link between civil society and the Commission – and thereby **raise the level of trust** in European research policy particular in critical situations. Making use of the potential of both **online consultations** and **face-to-face dialogues** (stakeholder dialogues, citizen forums, consensus conferences etc.), the Commission will be able to realise a first-movers advantage, positioning itself at the forefront of modern public administrations. It is likely that other European institutions and networks (EP, EcoSoc, CoR, EPTA, TRUSTNET) will follow.

**Recommendation**

It is recommended that DG Research launches an initiative to offer assistance to the various advisory bodies in the realm of research policy and in order to make use of the full range of civil society participation methods. The initiative is a step towards implementing (and adopting) the minimum standards for consultation for the purposes of DG research. In particular, it helps to identify areas of application where civil society participation promises a substantial value added to the Commission.

The assistance should comprise frameworks on

- how to select the appropriate stakeholder groups / participants
- how to set incentives for civil society groups to get involved
- how to combine online consultations with face-to-face events most effectively
- how to document the sensitivity of expert findings to different technical framing assumptions
- how to regain trust in times of crises and critical events
- when it is recommended to fall back on external expertise (e.g. neutral platforms for mediation)

#### **What can be learned from existing experience?**

Today, there is a wide range of bodies that have been created in order to make better use of existing expertise in order to put EU-research policy-making on a sound basis. For example:

- the European Research Advisory Body (EURAB) that over-arches a great number of European Advisory Groups (EAG) created within FP5
- the European Group on Ethics in Science and New Technologies (EGE)
- numerous working groups on task forces on issues currently debated such as nanotechnology, food safety etc.

All of these bodies have the right to organise round tables or to consult civil society organisation but rarely make use of it because the individuals involved lack the expertise or the (financial) resources to make use of these instruments. The same applies to other European institutions or networks.

The rationale behind this recommendation therefore is that, rather than multiplying the number of advisory bodies, it will be more productive to help the existing bodies work more efficiently. This is particularly relevant for those bodies that deal with controversial issues (ethical issues, risk management).

#### **Actor(s)**

This policy recommendation addresses the science and society directorate within DG Research and the advisory bodies on issues related to research policy that have been set up by the Commission. The Commission may fall back on professional assistance by a service outside the Commission that has tools readily available in order to implement this proposal.

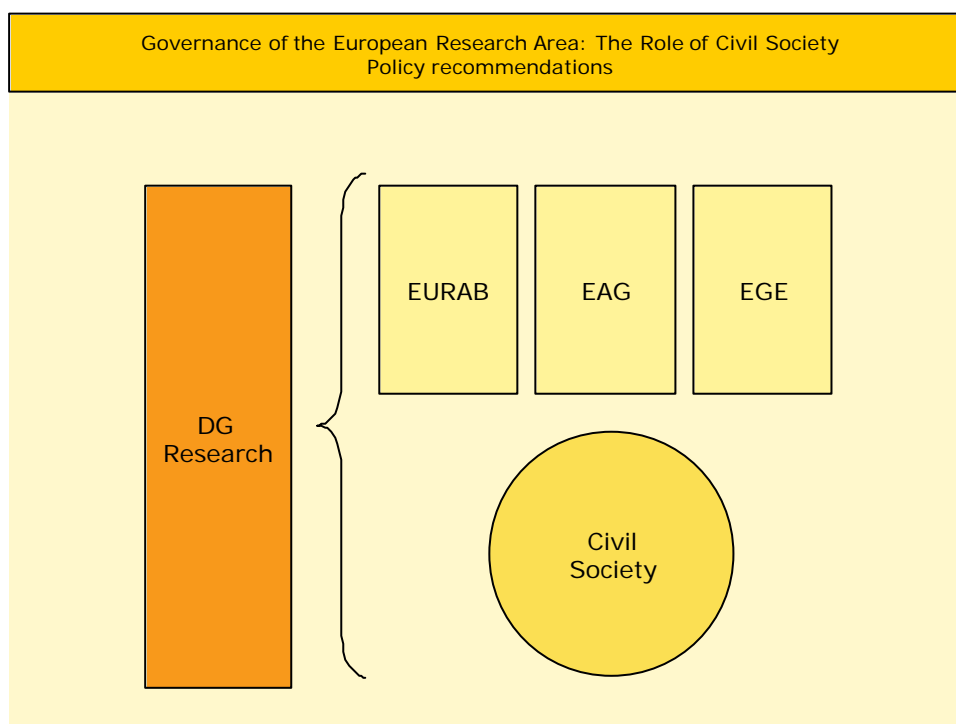
### Frameworks

The recommendation takes up the action 23 of the Science and Society Action Plan and refers to the White Paper on European Governance that calls for „a reinforced culture of consultation and dialogue”. Furthermore, it is part of the implementation of the „general principles and minimum standards for consultation” adopted in December, 2002. Moreover, the proposal refers to the draft work programme for 2004 that comprises the development of methodologies „for the rapid mobilisation of expertise in times of crisis or critical events”.

As one aim of the task force is to demonstrate how to link online media with face-to-face events, further initiatives of the Commission (such as Your Voice in Europe, online consultations, CONECCS, EURETHNET, the SINAPSE network) are incorporated in this proposal.

### Time scale

This recommendation can be implemented in early 2004.



### **Field of Application III: Legal Framework**

A legal framework which ensures participatory rights and principles of civil society involvement does not yet exist, neither on the EU-level or beyond. Yet the importance of such a framework is obvious in relation to:

- The provision of executive guidance for participatory procedures for which a sufficient quality of process-related information is often missing. There are clear deficits concerning rules of access to information, informational justice and decision making.
- The problem of overly extended physical and institutional distances between citizens and legislative/administrative bodies is an important issue, also the typical short-term-view of political reflection.

Evolving the international legal framework for better civil society involvement in the EU and beyond is therefore a significant challenge.

Learning from the „Aarhus convention”, which may serve as a model, can mean implementing EU wide or trans-national procedural rights with view to participatory matters in research policy-making. But learning from „Aarhus” is quite a challenge, since the framework conditions in the field of (global) environmental policy and (global) research policy differ widely. In addition, the relevance of the ongoing implementation of „Aarhus” for research or research-based policies is still unclear. The building of conflicting or overlapping legal frameworks should be avoided. With respect to the international context, the possible effects of participation concerning the global research competition have to be taken into account as well.

**Policy recommendation 8:****Towards a Convention on civil society participation in research policy-making****Vision**

A coherent involvement of civil society requires a harmonious foundation which clearly defines the ways in which civil society is involved in research and research (-based) policy. A convention can ensure participatory standards within the ERA and serve as a stimulation for parallel initiatives on the trans-national/global level. It can be considered an achievement of various measures which have already been undertaken in the EU (see White Paper on Governance, Science and Society Action Plan etc.).

**Recommendation**

To achieve this ambitious goal, a participatory process involving civil society and other actors should be initiated, focusing on the aims and the requirements of such a trans-national legal framework for civil society involvement.

Elements of this process can be:

- Feasibility study and master plan
- Identification of type of decisions and fields that should be covered and what will be the appropriate level (national/EU level)
- Development and adoption of the convention
- Implementation of legislative measures.

The participatory standards could be:

- The right to know how public concerns have been taken into account in research activities (i.e. conceptualisation, implementation, evaluation of these activities)
- The same for research funding activities.

Expected achievements are:

- Building harmonious standards for civil society involvement in the ERA
- Promoting Europe as a trend-setter in this area
- Initiating global initiatives for a legal framework for participatory principles.

In particular, the project would have to clarify how to avoid or deal with the current division line between environmental research that is covered by the Aarhus Convention on environmental governance and other research that is not covered by the Aarhus Convention.

**What can be learned from existing experiences?**



Analysing the debate on the White Paper on European Governance can be fruitful for the preparation and implementation of the recommended process. The debate on the „Aarhus convention” is very instructive in this context as well. The „Aarhus convention” serves as a model for this initiative, but the differences between environmental policy-making and research policy-making are quite obvious. It is therefore impossible to simply transfer the Aarhus principles to the field of research policy. Instead, the way how Aarhus has come into place and how it is currently implemented can be highly instructive for similar initiatives.

**Actor(s)**

The Commission should initiate the debate on a future convention. Potential partners are representatives from civil society, national authorities, science, UN, OECD and WTO.

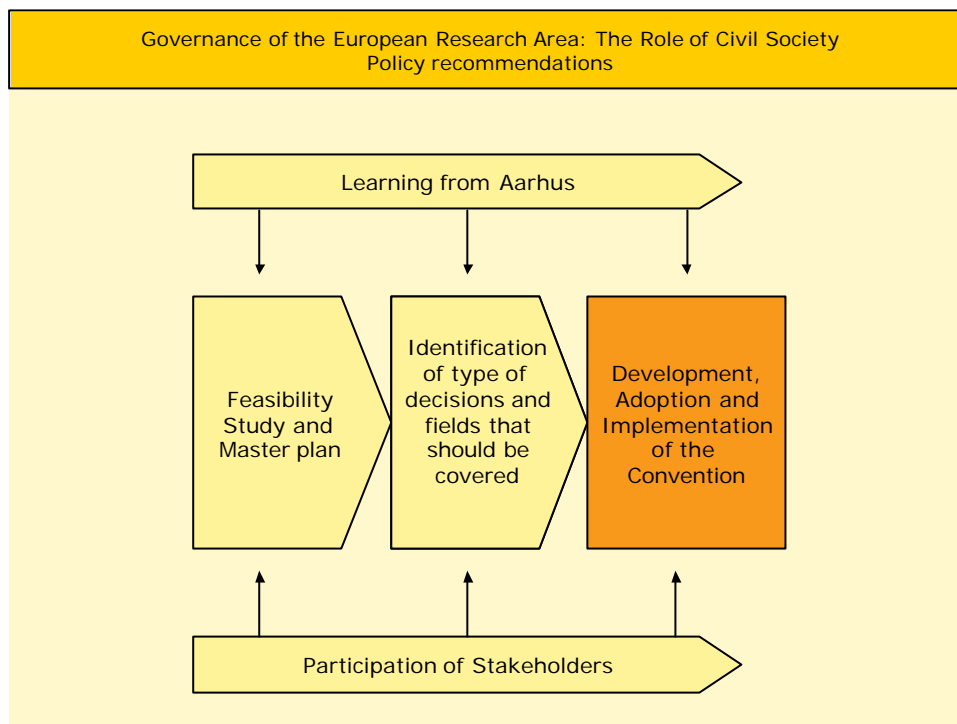
**Frameworks**

Existing frameworks and initiatives which are relevant for this recommendation are:

- White Paper on European Governance
- Science and Society Action plan
- General principles and minimum standards for consultation of interested parties by the Commission
- Aarhus convention
- The debate on a Constitution for Europe.

**Time scale**

The achievement of such a convention is a long-term process, but the initiative should be taken as soon as possible. The first milestone could be to set up (via a participatory process) a master plan on how to achieve and implement this convention.



## Annex 1: Bibliography

---

### Official Documents

- Economic and Social Committee (1999): The Role and Contribution of Civil Society in the Building of Europe. CES 851/99 D/GW  
[http://www.esc.eu.int/pages/en/acs/SCO/docs/ces851-1999\\_ac\\_en.PDF](http://www.esc.eu.int/pages/en/acs/SCO/docs/ces851-1999_ac_en.PDF)
- European Commission (1993): Communication on an open and structured dialogue between the Commission and special interest groups. OJ C 63 of 5/3/1993
- European Commission (2000): Commission Working Document: Science, society and the citizen in Europe, SEC(2000) 1973  
<http://europa.eu.int/comm/research/area/pdf/science-society-en.pdf>
- European Commission (2000): The Commission and Non-Governmental Organisations: Building a Stronger Partnership. COM(2000)11 Final.  
[http://www.europa.eu.int/comm/secretariat\\_general/sgc/ong/en/communication.pdf](http://www.europa.eu.int/comm/secretariat_general/sgc/ong/en/communication.pdf)
- European Commission (2000): Towards a European Research Area.” Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions. COM(2000) 6.  
<http://europa.eu.int/comm/research/era/pdf/com2000-6-en.pdf>
- European Commission (2001): Communication from the Commission: Towards a Strategic Vision of Life Sciences and Biotechnology.
- European Commission (2001): Communication from the Commission on Interactive Policy-Making (IPM). COM(2001)1014.  
<http://ipmmarkt.homestead.com/>
- European Commission (2001): European Governance. A White Paper. COM (2001)428 Final.  
[http://europa.eu.int/comm/governance/white\\_paper/index\\_en.htm](http://europa.eu.int/comm/governance/white_paper/index_en.htm)
- European Commission (2001): Democratizing Expertise and Establishing Scientific Reference Systems. Report of the Working Group 1b, White Paper on Governance.  
[http://europa.eu.int/comm/governance/areas/group2/report\\_en.pdf](http://europa.eu.int/comm/governance/areas/group2/report_en.pdf)
- European Commission (2001): Consultation and Participation of Civil Society. Report of the Working Group 2a. White Paper on Governance.  
[http://europa.eu.int/comm/governance/areas/group3/report\\_en.pdf](http://europa.eu.int/comm/governance/areas/group3/report_en.pdf)
- European Commission (2001): Democratizing Expertise and Establishing European Scientific Reference Systems. Preparation of the European Commission’s White Paper on European Governance. Results of an Internet Questionnaire, March – May 2001.  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/governance\\_questionnaire\\_01.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/governance_questionnaire_01.pdf)
- European Commission (2001): Science and Society Action Plan, COM(2001)714 Final  
<http://www.cordis.lu/rtd2002/science-society/home.html>
- European Commission (2001): Workshop on Democratizing expertise and establishing European scientific reference systems, Summary Report, Brussels, 30 March 2001.  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/ss\\_workshop\\_gov.doc](ftp://ftp.cordis.lu/pub/rtd2002/docs/ss_workshop_gov.doc)
- European Commission (2001): Environment 2010 – Our Choice, Our Future. The 6<sup>th</sup> EU Environment Action Programme 2001-2010. Luxembourg <http://europa.eu.int/comm/environment/newprg/>
- European Commission (2002): Communication from the Commission on the collection and use of expertise by the Commission: Principles and Guidelines, „Improving the knowledge base for

- better policies”, COM(2002) 713 final.  
[http://europa.eu.int/comm/governance/docs/comm\\_expertise\\_en.pdf](http://europa.eu.int/comm/governance/docs/comm_expertise_en.pdf)
- European Commission (2002): Developing New Modes of Governance. Forward Studies Unit (Notis Lebessis, John Patterson), Working Paper.  
[http://europa.eu.int/comm/cdp/working-paper/nouveaux\\_modes\\_gouvernance\\_en.pdf](http://europa.eu.int/comm/cdp/working-paper/nouveaux_modes_gouvernance_en.pdf)
- European Commission/ DG Research International and national advisory bodies on Scientific Advice (2002). DG RTD Unit C-2  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/advisory\\_bodies.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/advisory_bodies.pdf)
- European Commission (2002): Strengthen the Dimension of Foresight in the European Research Area.  
<ftp://ftp.cordis.lu/pub/rtd2002/docs/roadmapfsinfp6020802.zip>
- European Commission (2002): The Role of Foresight in the selection of research priorities. Conference Proceedings.  
[http://prospectiva2002.jrc.es/download/FINAL\\_proceedings.pdf](http://prospectiva2002.jrc.es/download/FINAL_proceedings.pdf)
- European Commission (2002): Thinking, Debating and Shaping the Future: Foresight for Europe.  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/for\\_hleg\\_final\\_report\\_en.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/for_hleg_final_report_en.pdf)
- European Commission (2002). Towards a reinforced culture of consultation and dialogue - general principles and minimum standards for consultation of interested parties by the Commission. Communication from the Commission. COM (2002)704 final.  
[http://europa.eu.int/comm/governance/docs/comm\\_standards\\_en.pdf](http://europa.eu.int/comm/governance/docs/comm_standards_en.pdf)
- European Commission (2003): Communication from the Commission to the Council and the European Parliament: Researchers in the European Research Area: One Profession, multiple careers. COM(2003) 436 final.  
[http://europa.eu.int/comm/research/fp6/mariecurie-actions/pdf/careercommunication\\_en.pdf](http://europa.eu.int/comm/research/fp6/mariecurie-actions/pdf/careercommunication_en.pdf)
- European Commission (2003): Communication from the Commission on the Role of the Universities in the Europe of Knowledge. COM(2003) 58 final.  
[http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003\\_0058en01.pdf](http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003_0058en01.pdf)
- European Commission (2003). Workprogramme 2003. Science and Society. Modified in line with Commission Decision C (2003) 998. 2. April 2003.  
[ftp://ftpnl.cordis.lu/pub/fp6\\_wp/sp2/en/t\\_wp\\_200203\\_en.pdf](ftp://ftpnl.cordis.lu/pub/fp6_wp/sp2/en/t_wp_200203_en.pdf)
- United Nations Economic Commission for Europe (1998). Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, vom 25. Juni 1998.

## Other Publications

- Agence Nationale d'accréditation et d'évaluation en santé (ANAES) (1999): Les conférences de consensus: base méthodologique pour leur réalisation en France, Paris.
- Allansdottir, A./ Pammolli, F./ Bagnara, S. (1998): Italy", in Durant, J./ Bauer M.W./ Gaskell G. (eds.): *Biotechnology in the Public Sphere: A European Sourcebook*, London, Science Museum, 89-102.
- Allansdottir, A/ Bagnara, S (2001): Bioethics, Biotechnology and the Public: le notizie di Politeia, XVII, 63.
- Allansdottir, A./ Bonacorsi A/ Gambardella, A/ Mariani, M./ Orsenigo, L./ Pammolli, F/ Riccaboni, M. (2001): Innovations and Competitiveness in the European Biotechnology Industry, Report commissioned by the European Commission, DG Enterprise as background paper for the competitiveness report 2001.
- Ammon, U./ Behrens, M. (eds.) (1998): Diabgische Technikfolgenabschätzung in der Gentechnik: Bewertung von ausgewählten Diskurs- und Beteiligungsverfahren. Dokumentation einer Tagung der Sozialforschungsstelle Dortmund und der Fern Universität Hagen, Münster, Litverlag.
- Andersen, I.-E./ Jaeger, B. (1999): Scenario workshops and consensus conferences: toward more democratic decision-making", in: *Science and Public Policy*, Vol. 26, No. 5, 331-340.
- Anderson, I.-E./ Jaeger, B. (2000): Danish Participatory Models: Scenario Workshops and Consensus Conferences: Towards More Democratic Decision-making", in: *TA-Datenbanknachrichten* 3 (9), 331-340.
- Anderson, S. (1996): Expertenurteil und gesellschaftlicher Konsens. Ethischer Rat und Konsenskommissionen in Dänemark in: Honnefelder, L./ Streffer, C. (eds.): *Jahrbuch für Wissenschaft und Ethik*, Bd. 1, 201-208.
- Arnstein, S.R. (1969): A Ladder of Citizen Participation. *American Institute of Planners Journal* 35, 216-224.
- Baeriswyl, M./ Bütschi, D. (2000): PubliForum Electricity and Society, in: The Danish Board of Technology (eds.): *EUROPTA – European Participatory Technology Assessment. Participatory Methods in Technology Assessment and Technology Decision-Making*.
- Bai, K. (a.o.) (1987): In Japan, Consensus Has Limits, in: *Hastings Center Report: Special Supplement* 17 (3), 18-20.
- Banthien, H./ Herz, J. (2001): Evaluation of internet-based discourses concerning innovation and technical analyses, discussion paper, conference e-society, Berlin.
- Barber, B. (1984): *Strong democracy: Participatory politics for a new age*, Princeton, New Jersey, Princeton University Press.
- Barthes, Y./ Callon, M./ Lascoumes, P. (2001): *La démocratie technique*, Paris, Seuil.
- Bauer, M./ Durant, J./ Gaskell, G. (1998): *Biotechnology in the public sphere: a comparative review*, London, Science Museum, 217-227.
- Bauer, M./ Gaskell, G. (eds.) (2002): *Biotechnology - The making of a global controversy*, Cambridge, Cambridge University Press.
- Beck, U. (1992): *Risk Society*, London, Sage.

- Beckmann J./ Keck, G. (1999): Beteiligungsverfahren in Theorie und Anwendung. Leitfaden, Akademie für Technikfolgenabschätzung (ed.), Stuttgart.
- Beierle, T.C./ Cayford, J. (2002): Democracy in Practice: Public Participation in Environmental Decisions, Baltimore, RFF Books, 160.
- Bereano, P. (2001): Report on Danish 'Citizen Consensus Conference' on Genetically Engineered Foods, March 12-15, 1999, May 1999. <http://www.loka.org/pages/DanishGeneFood.html>
- Birnbacher, D. (1999): Wofür ist der „Ethik-Experte“ Experte?, in: Rippe, K.P. (ed.): Angewandte Ethik in der pluralistischen Gesellschaft Freiburg, Schweiz, 267–283.
- Bischoff, A./ Selle, K./ Sinning, H. (1996): Informieren, Beteiligen, Kooperieren: Kommunikation in Planungsprozessen; eine Übersicht zu Formen, Verfahren, Methoden und Techniken, Dortmund, Dortmunder Vertrieb für Bau- und Planungsliteratur.
- Bora, A. (1994): Grenzen der Partizipation? Risikoentscheidungen und Öffentlichkeitsbeteiligung im Recht, in: ZfRSoz, Vol. 15, No.2, 1994, 126-152.
- Bora, A. (1999): Discourse Formations and Constellations of Conflict: Problems of Public Participation in the German Debate on Genetically Altered Plants”, in: Patrick O'Mahony (ed.): Nature, Risk and Responsibility. Discourses of Biotechnology, London, Macmillan, 130-146.
- Bora, A. (1999): Differenzierung und Inklusion. Partizipative Öffentlichkeit im Rechtssystem moderner Gesellschaften, Baden-Baden.
- Bora, A. (2002): ‚Wer gehört dazu?‘ – Überlegungen zur Theorie der Inklusion, in: Hellmann, K.-U./ Schmalz-Bruns, R. (eds.): Theorie der Politik. Niklas Luhmanns politische Soziologie, Frankfurt a.M., Suhrkamp, 60-84.
- Bora, A./ Döbert, R. (1993): Konkurrierende Rationalitäten - Politischer und technisch-wissenschaftlicher Diskurs im Rahmen einer Technikfolgenabschätzung von gentechnisch erzeugter Herbizidresistenz in Kulturpflanzen, in: Soziale Welt, Vol. 44, No. 1, 75-97.
- Bora, A./ van den Daele, W. (1997): Partizipatorische Technikfolgenabschätzung. Das Verfahren des Wissenschaftszentrum Berlin zu transgenen herbizidresistenten Kulturpflanzen, in: Köberle, S./ Gloede, F./ Hennen, L. (1997): Diskursive Verständigung? Mediation und Partizipation in Technikkontroversen, Baden-Baden, 124-148.
- Bora, A./ van den Daele, W. (1997): Partizipatorische Technikfolgenabschätzung. Das WZB-Verfahren zu Kulturpflanzen mit gentechnisch erzeugter Herbizidresistenz, in: Köberle, S./ Gloede, F./ Hennen, L. (eds.): Diskursive Verständigung? Mediation und Partizipation in Technikkontroversen, Baden-Baden, Nomos, 124-148.
- Bösch, S. (2002). Science Assessment: Eine Perspektive der Demokratisierung von Wissenschaft. [www.sciencepolicystudies.de](http://www.sciencepolicystudies.de)
- Branscomb, L./ Holton, G./ Sonnert, G. (2001): Science for society - Cutting edge basic research in the service of public objectives - A blueprint for an intellectual bold and socially beneficial science policy, Report on the November 2000 conference on basic research in the service of public objectives.
- Braun, K. (2002): Deliberative Modelle als Mittel der Demokratisierung von Bioethik- und Biomedizinpolitik. [www.sciencepolicystudies.de](http://www.sciencepolicystudies.de)
- Bürgerpanel Transplantationsmedizin (2001): Transplantationsmedizin. Bericht des Bürgerpanels (Februar 2001). [www.publiforum2000.ch](http://www.publiforum2000.ch).
- Bütschi, D. (2000): TA mit Bürgerbeteiligung: Die Erfahrungen der Schweiz, in: TA-Datenbank-Nachrichten 3 (9), 28-33.

- Bütschi, D./ Nentwich M. (2002): The Role of Participatory Technology Assessment in the Policy-making process, in: Joss, S./ Belucci, S. (eds.): Participatory Technology Assessment. European Perspectives, London, Centre for the Study of Democracy, 235-256.
- Bütschi, D./ Nentwich, M. (2000): The Role of PTA in the Policy-Making process”, in: The Danish Board of Technology (eds.): EUROPTA - European Participatory Technology Assessment. Participatory Methods in Technology Assessment and Technology Decision-Making, 135 – 153, [www.tekno.dk/europta](http://www.tekno.dk/europta).
- Callon M./ Lascoumes P./ Barthe, Y. (2001) : Agir dans un monde incertain. Essai sur la démocratie technique, Paris, Le Seuil.
- Callon, M. (1981): Pour une sociologie des controverses technologiques”, in: Fundamenta Scientiae, Vol. 2, No. ¾, 381-399.
- Callon, M. (1995): Technological conception and adoption network: Lessons for the cTA practitioner, in: A. Rip/ Shot, J./ Misa, T. (eds.), Managing technology in society. The Approach of constructive Technology assessment, London, Frances Pinter, 307-330.
- Cambrosio, A./ Limoges, C. (1991): Controversies as governing processes in technology assessment”, in: Technology Analysis and Strategic Management, Vol. 3, No.4, 377-396.
- Chess, C./ Purcell, K. (1999): Public Participation and the Environment: Do we know what works?”, in: Environmental Science and Technology, Vol. 33, No. 16, 2685-2692.
- CNA (2001): La nécessité du débat public et ses aspects méthodologiques dans le domaine alimentaire, Paris, Ministère de l’Agriculture, Conseil National de l’Alimentation.
- Commandeur, P./ Joly, P./ Levidow, L./ Tappeser, B./ Terragni, F. (1996): Public debate and regulation of biotechnology in Europe”, in: Biotechnology and Development Monitor, No. 26, 2-9.
- Coleman, S./, Gøtze, J. (2001): Bowling together: Online Public Engagement in Policy Deliberation, London <http://www.hansardsociety.org.uk/bowling.pdf>
- Crosby N. (1995): Citizen juries: one solution for difficult environmental questions, in: Renn, O./ Webler, T./ Wiedemann, P. (eds.): Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse, Dordrecht, Kluwer Academic Publishers, 157-174.
- Crosby, N. (forthcoming 2003): The Citizens Jury Process and Environmental Decisions, in: Sexton, K./ Burkhardt, T.D. (eds.): Better Environmental Decisions: Strategies for Governments, Business and Communities.
- Crosby, N. (forthcoming 2003): Healthy Democracy.
- Cuhls, K. (1998): Technikvorschau in Japan. Ein Rückblick auf 30 Jahre Delphi-Expertenbefragungen, Heidelberg, Physica.
- Cuhls, K. (2000): From Forecasting to Foresight Processes – New Participative Foresight Activities in Germany”, paper presented at the EASST, Vienna, September 2000
- Cuhls, K. (2000): Wie kann ein Foresight-Prozess in Deutschland organisiert werden? Gutachten herausgegeben von Michael Domitra, Stabsabteilung der Friedrich-Ebert-Stiftung, Bensheim.
- Cuhls, K./ Blind, K./ Grupp, H. (2001), Innovations for our Future, Delphi ‘98: New Foresight on Science and Technology, (Technology, Innovation and Policy, ISI Vol. 13).
- Cuhls, K./ Kuwahara, T. (1994): Outlook for Japanese and German Future Technology, Comparing Technology Forecast Surveys, Heidelberg, Physica.

- Dacheux, E. (2000): Overcoming Indifference, Non-profit-making Associations in the European Public Sphere, Paris, The CNRS Communication Series.
- Daele, W. van den (1990): Risiko-Kommunikation: Gentechnologie, in: Jungermann, H./ Rohrman, B./ Wiedemann, P. M. (eds.): Risiko-Konzepte, Risiko-Konflikte, Risiko-Kommunikation. Monographien des Forschungszentrums Jülich, Band 3, Jülich, 11-58.
- Daele, W. van den (1998): Annäherungen an einen uneingeschränkten Diskurs. Argumentationen in einer partizipativen Technikfolgenabschätzung, in: Honnefelder, L./ Streffer, C. (eds.), Jahrbuch für Wissenschaft und Ethik, Bd. 3, 15-32.
- Daele, W. van den (1999): Der Sachverständige reicht zur Beurteilung komplexer Themen nicht aus: Ethikkommissionen und moralische Orientierung. Allgemein akzeptierte moralische Urteile gibt es nur ganz selten, in: Das Parlament, Vol. 49, No. 23.
- Daele, W. van den (2001): Von moralischer Kommunikation zur Kommunikation über Moral. Reflexive Distanz in diskursiven Verfahren, in: Zeitschrift für Soziologie, Vol. 30, No. 1, 4-22.
- Daele, W. van den (2001): Zweierlei Moral. Die wechselnde Konjunktur der Ethikräte, in: Die Welt, 03.05.2001.
- Daele, W. van den/ Pühler, A./ Sukopp, H. (eds.) (1994): Materialien des Verfahrens zur Technikfolgenabschätzung des Anbaus von Kulturpflanzen mit gentechnisch erzeugter Herbizidresistenz, WZB-discussion papers FS II, 300-318.
- Daele, W. van den/ Pühler, A./ Sukopp, H. (eds.) (1996): Grüne Gentechnik im Widerstreit. Modell einer partizipativen Technikfolgenabschätzung zum Einsatz transgener herbizidresistenter Pflanzen, Weinheim.
- Daele, W. van den/ Pühler, A./ Sukopp, H./ Bora, A./ Döbert, R./ Neubert, S./ Siewert, V. (1996): Grüne Gentechnik im Widerstreit. Modell einer partizipativen Technikfolgenabschätzung zum Einsatz transgener herbizidresistenter Pflanzen. Weinheim u.a., VCH.
- Daele, W. van den (1997): Risikodiskussionen am Runden Tisch. Partizipative Technikfolgenabschätzung zu gentechnisch erzeugten herbizidresistenten Pflanzen, in: Martinsen, R. (ed.): Politik und Biotechnologie, Baden-Baden, 281-301.
- Davies, G. / J. Burgess / A. Stirling / M. Eames / S. Mayer / K. Staley / S. Williamson, *Deliberative Mapping: Appraising Options for Addressing 'the Kidney Gap'*, final report, June 2003  
<http://www.deliberative-mapping.org>
- Deepening of foresight exercises having taken place in 6 countries,  
<http://esto.jrc.es/docs/foresight2.pdf>.
- Dienel, P. C. (2002): Die Planungszelle. Der Bürger als Chance, 5. Auflage mit Statusreport, Westdeutscher Verlag.
- Dienel, P.C. (1996): Das ‚Bürgergutachten‘ und seine Nebenwirkungen, in: Feindt, P./ Gessenharter, W./ Birzer, M./ Föchling, H. (eds.): Konfliktregelung in der offenen Bürgergesellschaft, Dettelbach, Röhl, 113-135.
- Dodier, N. (1999) : L’espace public de la recherche médicale. Autour de l’affaire des ciclosporines”, in: Réseaux No. 95, 109-154.
- Donnet-Kamel, D. (1998): La conférence de citoyens: une innovation démocratique.
- Duerrenberger, G./ Behringer, J. (1999): Die Fokusgruppe in Theorie und Anwendung, Stuttgart.
- Eijndhoven, J. van (2000): The Netherlands: Technology Assessment from Academically Oriented Analyses to Support of Public Debate”, in: Vig and Paschen.



- Eijndhoven, J. van (a.o) (1987): *Verbreiding van besluitvorming over Wetenschap en Technologie, Een schets van het probleemgebied en aanzetten tot een onderzoeksbenadering*. NOTA, W2, Utrecht.
- Eijndhoven, J. van C.M. (1997): *Technology Assessment: Product or Process?*, in: *Technological Forecasting and Social Change*, No. 54, 269-286.
- ESRU (Environmental and Society Research Unit) (2000): *Local Outreach*, Environment Agency, Bristol.
- Est, Q.C. van (1999): *Winds of change. A comparative study of the politics of wind energy innovation in California and Denmark*, Utrecht, International Books.
- Feindt, P. H. (2001): *Regieren durch Diskussion?* Frankfurt, Peter Lang.
- Fietkau, H.-J./ Weidner, H.(1998): *Umweltverhandeln. Konzepte, Praxis und Analysen alternativer Konfliktregelungsverfahren*, Berlin, Ed. Sigma.
- Finney C., (1999): *Extending public consultation via the Internet: the experience of the UK Advisory Committee on Genetic Testing electronic consultation*, in: *Science and Public Policy*, Vol. 26, October.
- Fiorino D. (1995): *Regulatory negotiation as a form of public participation*, in: Renn, O./ Webler, T. Wiedemann, P.: *Fairness and Competence in Citizen Participation*, Dordrecht, Kluwer Academic Publishers, 223-237.
- Fiorino, D. (1990): *Citizen participation and environmental risk: A survey of institutional mechanisms*, in: *Science, Technology, & Human Values*, Vol. 15, No. 2, 226-243.
- Fischer, F. (2000): *Citizens and experts in biotechnology policy. The consensus conference as alternative model*, in: Barben, D./ Abels, G. (eds.): *Biotechnologie – Globalisierung – Demokratie. Politische Gestaltung transnationaler Technologieentwicklung*, Berlin, Ed. Sigma, 359–372.
- Fishkin, J.D. (1995): *The Voice of the People. Public Opinion and Democracy*, New Haven, Londen, Yale University Press
- Food and Drug Administration (1999): *FDA Announces Public Meetings on Bio-engineered Foods, 1999*, <http://www.fda.gov/bbs/topics/NEWS/NEW00695.html>
- Fuchs, M. (2001): *Internationaler Überblick zu Verfahren der Entscheidungsfindung bei ethischen Dissens. Gutachten für die Enquête-Kommission „Recht und Ethik der modernen Medizin“ des Deutschen Bundestages*, [http://www.bundestag.de/gremien/medi/medi\\_gut\\_fuchs.pdf](http://www.bundestag.de/gremien/medi/medi_gut_fuchs.pdf).
- Funtowicz, S. / J. Ravetz (1993): *Science for the post-normal age*, in: *Futures* 1993, 739-755.
- Funtowicz, S./ Shepherd, I./ Wilkenson, D./ Ravetz, J. (2000): *Science and Governance in the European Union: a Contribution to the Debate*, in: *Science and Public Policy*, Vol. 27, No. 5.
- Galloux, J-C/ Mortensen, A./ Cheveigné, de T./ Allansdottir, S./ Chatjouli, A./ Sakellaris, G (forthcoming): *Bioethics: Public concerns and political issues -a comparison of four EU countries*, in: Bauer, M./ Gaskell, G. (eds.): *Biotechnology - The making of a global controversy*, Cambridge, Cambridge University Press.
- Gaskell, G./ A.Illum, N. C./ Bauer, M./ Durant, J./ Allansdottir, A./ Bonfadelli, H./ Boy, D./ deCheveigne, S./ Fjaestad, B./ Gutteling, J. M./ Hampel, J./ Jelsoe, E./ Jesuino, J. C./ Kohring, M./ Kronberger, N./ Midden, C./ Nielsen, T. H./ Przystalski, A./ Rusanen, T./ Sakellaris, G./ Torgersen, H./ Twardowski, T./ Wagner, W. (2000): *Biotechnology and the European public*, in: *Nature Biotechnology*, Vol. 18, No. 9, 935-938.

- Gaskell, G. /Allum, N. /Stares, S. (2003). Europeans and Biotechnology in 2002. Eurobarometer 58.0 (2<sup>nd</sup> Edition: March 21<sup>st</sup> 2003). A report to the EC Directorate General for Research from the project 'Life Sciences in European Society' QLG7-CT-1999-00286. Methodology Institute, London School of Economics, London WC2A 2AE, UK.  
[http://europa.eu.int/comm/public\\_opinion/archives/eb/ebs\\_177\\_en.pdf](http://europa.eu.int/comm/public_opinion/archives/eb/ebs_177_en.pdf)
- Geißel, B. (2002). Lokale Vernetzung und Wissensintegration von Laien (-wissen) und Experten (-wissen) durch neue Partizipationsformen. [www.sciencepolicystudies.de](http://www.sciencepolicystudies.de)
- Gibbons (a.o.) (1994): The New Productions of Knowledge. The Dynamics of Science and Research in Contemporary Societies, London, Sage.
- Goorden, L./ Vandenabeele, J. (2002): Public Participation in Decision-Making on Technologie - a Challenge for Citizens and Experts, University of Antwerp.
- Gramsci, A. (1971): Prison Notebooks. New York, International Publishers.
- Grin, J. (1998): Participation, co-production and power. Rationale and praxis of interactively performed Technology Assessment: the example of the GIDEON project, Paper at the International Conference of Evaluation: Profession, Business or Politics? Organised by the European Evaluation Society, Rome, 29-31.
- Grin, J./ van de Graaf, H. (1996): Technology Assessment as Learning", in: Science, Technology, & Human Values, No. 1, 72-99.
- Grin, J./ van de Graaf, H./ Hoppe, R. (1997): Technology assessment through interaction. A guide, Den Hag, Rathenau Institute.
- Grote, J. R. (ed.) (2002): Participatory governance: political and societal implications, Opladen, Leske + Budrich.
- Hackmann, H. (2001): Governance theories and the practice of science policy making, in: Science Policy - Setting the agenda for Research MUSCIPOLI Workshop 1 Proceedings, The Danish Institute for Studies in Research and Research Policy";  
[http://www.afsk.au.dk/ftp/Muscipoli/2001\\_8.pdf](http://www.afsk.au.dk/ftp/Muscipoli/2001_8.pdf)
- Hage, M. (2003): Vom gesellschaftlichen Umgang mit neuen Risiken: Das Beispiel des diskursiven Verfahrens „Eten en Genen“ in den Niederlanden, Draft, Workshop „Politik und Expertise“, Graduiertenkolleg „Auf dem Weg in die Wissensgesellschaft“, Universität Bielefeld.
- Hagendijk, R./ Kallerud, E. (2003): Changing Conceptions and Practices of Governance in Science and Technology in Europe: A Framework for Analysis, STAGE, Discussion Paper 2.
- Halfman, W.(2003): Boundaries of Regulatory Science: eco/ toxicology and aquatic hazards of chemicals in the US, England, and the Netherlands, 1970-1995, Dissertation University of Amsterdam.
- Hallo, R. (2003). Developing instruments for a reinforced culture of consultation and dialogue. Contribution to the Conference Environmental Governance and Civil Society: Challenges and Opportunities for Europeans. Brussels, 27-28 January 2003.  
<http://www.europa.eu.int/comm/environment/governance/pdf/conferences/03012728hallo.pdf>
- Hamstra, A. M. (1995): The role of the public in instruments of constructive technology assessment", in: Joss, S./ Durant, J. (eds.): Public Participation in Science: The Role of Consensus Conferences in Europe, London, Science Museum.
- Hofman, P.: Public Participation in Environmental Policy in the Netherlands,  
[http://www.info.tdri.or.th/library/quarterly/text/m98\\_4.htm](http://www.info.tdri.or.th/library/quarterly/text/m98_4.htm).

- Hontelez, J. (2003). Introduction to the Conference on „Environmental Governance and Civil Society: Challenges and Opportunities for Europeans“. European Environmental Bureau.  
<http://www.europa.eu.int/comm/environment/governance/pdf/conferences/03012728hontelez.pdf>
- IFOK (2001). Evaluation internetgestützter Diskurse zur Innovations- und Technikanalyse. Abschlussbericht. Berlin: Institut für Organisationskommunikation.
- IFOK (2003). Environmental Mediation in Europe. Study on behalf of the European Commission. (forthcoming).
- IFOK (ed.) (1997): Bausteine für ein zukunftsfähiges Deutschland, Wiesbaden, Gabler.
- IFOK/ IWÖ Arbeitsgemeinschaft (1997): Institutionelle Reformen für eine Politik der Nachhaltigkeit. Studie im Auftrag der Enquete-Kommission „Schutz des Menschen und der Umwelt“ des Deutschen Bundestages, Berlin/ Heidelberg/ New York, Springer.
- IPTS (2001): „[The IPTS Report” N° 59, November 2001: Foresight and Regional Development](#)
- Irwin, A. (1995): Citizen Science: A Study of People, Expertise and Sustainable Development, in: Yearley, S. (ed.): Environment and Society, London, Routledge.
- Irwin, A. (2001). Constructing the scientific citizen: Science and democracy in the biosciences, in: Public Understanding of Science, 10(1), 1-18.
- Irvine, J./ Martin, B. R (1989): Research Foresight: Creating the Future, Netherlands Ministry
- Irvine, J./ Martin, B. R. (1984): Foresight in Science, Picking the Winners, London/ Dover.
- Jasanoff, S. (1990): The Fifth Branch: Science Advisers as Policymakers, Cambridge, MA, Harvard University Press.
- Jasanoff, S. (1995): Product, Process, or Program: Three Cultures and the Regulation of Biotechnology, in: Bauer, M. (ed.): Resistance to New Technology: Nuclear Power, Information, Technology, and Biotechnology, Cambridge, Cambridge University Press.
- Jasanoff, S. (2002): Citizens at Risk: Cultures of Modernity in Europe and the U.S., Science as Culture, 11.3, pp. 363-380.
- Jasanoff, S. (2002): New Modernities: Reimagining Science, Technology, and Development. Environmental Values, 11.3, pp. 253-276.
- Jaspers, M. (2001): Futur - Der deutsche Forschungsdialog, in: Development and Perspectives. An interdisciplinary journal for futurist studies and technology assessment, No. 1, 1-22
- Joly, P. B. (2000): Les politiques publiques sur l'utilisation des OGM dans l'agriculture et dans l'alimentation : le face à face Etats-Unis/Europe, in: Les Cahiers Français, No. 294.
- Joly, P. B./ Kreziak, D. (2001): Les experts et les profanes face à l'évaluation des OGM : un conflit de rationalité, in : Aubert, F./ Sylvestre, J.P. (eds.): Confiance et rationalité, Paris, INRA Editions, 131-152.
- Joly, P.B, (1999): Besoin d'expertise et quête d'une légitimité nouvelle: quelles procédures pour réguler l'expertise scientifique, in: Revue Française des Affaires Sociales, Vol. 53, No. 1, 45-53.
- Joly, P.-B. (2001): Les OGM entre la science et le public? Quatre modèles pour la gouvernance de l'innovation et des risques, in: Economie Rurale, No. 266, 11-29.
- Joly, P.-B./ Assouline, G. (2001): Assessing Debate And Participative Technology Assessment in Europe , Final report, Grenoble, INRA Economie et Sociologie rurales.

- Joly, P.-B./ Assouline, G./ Kréziak, D./ Lemarié, J./ Marris, C. (2000) : L'innovation controversée : le débat public sur les OGM en France, Grenoble, INRA.
- Joly, P.-B./ Marris C. (2001): Agenda-Setting and Controversies: A Comparative Approach to the Case of GMO in France and in the United States, International Workshop on European and American Perspectives on Regulating Genetically Engineered Food, INSEAD, Fontainebleau, June 8-9, 2001.
- Joly, P.-B./ Marris, C. (2001): Mise sur agenda et controverses : Une approche comparée du cas des OGM en France et aux Etats-Unis, Colloque „Risques collectifs et situations de crise. Bilans et perspectives“, 7-8-9 février 2001, Auditorium du CNRS, Paris.
- Joly, P.B/ Marris C./ Assouline G./ Lemarié J. (1999): Quand les candides évaluent les OGM: Nouveau modèle de 'démocratie technique' ou mise en scène du débat public, in: Annales des Mines (Responsabilité and Environnement), avril, 12-21.
- Jonas, H. (1979): Das Prinzip Verantwortung. Versuch einer Ethik für die technologische Zivilisation. Frankfurt, Insel-Verlag
- Jonas H. (1985): Technik, Medizin und Ethik. Zur Praxis des Prinzips Verantwortung. Frankfurt, Insel-Verlag
- Jones, M/ Guston, D. H./ Branscomb, L.M. (1996): Informed Legislatures: Coping with Science in a Democracy.
- Joss S. (2002): Towards the Public Sphere: Reflections on the Development of Participatory Technology Assessment”, in: Bulletin of Science, Technology & Society, Vol. 22, No. 3, 220-231.
- Joss, S. (1998): Danish consensus conferences as a model in participatory technology assessment in impact study of consensus conferences on Danish Parliament and Danish public debate”, in: Science and Public Policy, Vol. 25, No. 1, 2-22.
- Joss, S. (2000): Citizen Foresight (UK)”, in: The Danish Board of Technology (eds.): EUROPTA - European Participatory Technology Assessment. Participatory Methods in Technology Assessment and Technology Decision-Making, October 18, 58, [www.tekno.dk/europta](http://www.tekno.dk/europta).
- Joss, S. (2000): UK National Consensus Conference on Plant Biotechnology”, in: The Danish Board of Technology (eds.): EUROPTA - European Participatory Technology Assessment. Participatory Methods in Technology Assessment and Technology Decision-Making, [www.tekno.dk/europta](http://www.tekno.dk/europta).
- Joss, S. (2000): Die Konsensuskonferenz in Theorie und Anwendung, Stuttgart.
- Joss, S. (2002): Toward the Public Sphere – Reflections on the Development of Participatory Technology Assessment”, in: Bulletin of Science, Technology & Society, No. 22, 220-231.
- Joss, S. (ed.) (1999): Public Participation in Science and Technology Research Policy, Science and Public Policy, Vol. 26, No. 5.
- Joss, S./ Bellucci, S. (eds.) (2002): Participatory Technology Assessment. European Perspectives, Centre for the Study of Democracy, (= EUROPTA-project).
- Joss, S./ Bellucci, S. (eds.) (2002): Participatory Technology Assessment. European Perspectives, Centre for the Study of Democracy.
- Joss, S./ Durant, J. (eds.) (1995): Public participation in science : The role of consensus conferences in Europe, London, Science Museum.
- Kathlene, L./ Martin, J.A. (1991): Enhancing Citizen Participation: Panel Designs, Perspectives, and Policy Formation”, in: Journal of Policy Analysis and Management, Vol. 10, No. 1, 46-63.

- Keenan M. (2003): *Technology Foresight: Implementation and Evaluation in the UK*, Cheltenham, Edward Elgar, forthcoming.
- Kerner, M. (1996). (ed.): *Aufstand der Laien: Expertentum und Demokratie in der technisierten Welt*, Aachen: Thouet Verlag.
- Kloot Meijburg, H.H. van der/ Meulen, R.H.J. ter (2001): *Developing standards for institutional ethics committees: lessons from the Netherlands*, in: *Journal of Medical Ethics*, No. 27, Suppl. I, 36–40.
- Klüver, L. (1995): *Consensus conferences of the Danish Board of Technology*, in Joss, S./ Durant, J. (eds.): *Public Participation in Science: The Role of Consensus Conferences in Europe*, London, Science Museum.
- Klüver, L. (1999): *Ethics as an integrated aspect of technology assessment*, in: *EPTA ANNUAL CONFERENCE 1998, „Technological choices in their ethical context*”, PE 168.391/ Final.St. STOA, The European Parliament, Luxembourg, July 1999.
- Klüver, L./ Nentwich, M./ Peissel, W./ Torgersen, H./ Gloede, F./ Hennen, L./ Eijndhoven, J.v./ Est, R.v./ Joss, S./ Bellucci, S./ Bütschi, D. (2000): *EUROPTA – European Participatory Technology Assessment. Participatory methods in technology assessment and technology decision-making*, The Danish Board of Technology, [www.tekno.dk/europta](http://www.tekno.dk/europta).
- Klüver, L.: *Final Report, ADAPTA - ADAPTA Assessing Debate Participatory Technology Assessment*.
- Köberle, S/ Gloede, F./ Hennen, L. (eds.) (1997): *Diskursive Verständigung? Mediation und Partizipation in Technikkontroversen*, Baden-Baden, Nomos.
- König, A./ Jananoff, S. (2002): *The Credibility of Expert Advice for Regulatory Decision-making in the US and EU. Comparative Case Studies on Ambient Air Quality Standards and Regulation of Genetically Modified Crops*, <http://www.ksg.harvard.edu/cbg/research/rpp/RPP-2002-07.pdf>.
- Kronberger, N./ Dahinden, U./ Allansdottir, A./ Seger, N./ Pfenning, U./ Gaskell, G./ Allum, N./ C.Rusanen, T./ Montali, L./ Wagner, W./ de Cheveigné, S./ Diego, C./ Mortensen, A. (2001): *‘The train departed without us’: Public Perceptions of Biotechnology in ten European Countries*, in: *Le notizie di Politeia*, No. XVII, 63.
- Kubicek, H./ Hagen, M. (1999): *Gesellschaftliche Partizipation im Internet? Zur Anschlussbedürftigkeit interaktiver Medien*, in: Breisig, T. (ed.): *Mitbestimmung. Gesellschaftlicher Auftrag und ökonomische Ressource*, München, 375-407.
- Kuhlmann, S. et al. (ASTPP) (1999): *Improving Distributed Intelligence in Complex Innovation Systems*, Final Report of the Advanced Science & Technology Policy Planning Network, Karlsruhe.
- Laird, F.N. (1993): *Participatory Analysis, Democracy, and Technological Decision Making*, in: *Science, Technology, & Human Values*, No. 18, 341-361.
- Lanham, MD/ Guston, D.H. (forthcoming): *Scientific and Technical Expertise in Service of Society*, in: Hill, C.T/ Cheney, D. (eds.): *Science and Technology Policy in the United States: A Time of Change* (World Guides to Science and Technology Series, P. Dufour and J. de la Mothe, series eds.), Cartermill Press.
- Levidow, L. (1998): *Democratizing technology - or technologizing democracy? Regulating agricultural biotechnology in Europe*, in: *Technology in Society*, No. 20, 211-226.
- Levidow, L./ Marris, C. (2001): *Science and Governance in Europe: lessons from the case of agbiotech*, in: *Science and Public Policy*, Vol. 28, No. 5, 345-60.

- Lividow, L. (1998): Democratising technology or technologising democracy? In: Technology in Society, Vol 20/2.
- Lynch, D./ Da Ros, J: Science and Public Participation in Regulating Genetically-Engineered Food: French and American Experiences.  
[http://www.insead.fr/events/gmoworkshop/papers/5\\_Lynch\\_Da%20Ros.pdf](http://www.insead.fr/events/gmoworkshop/papers/5_Lynch_Da%20Ros.pdf)
- Magnette, P. (2001). European Governance and Civic Participation: Can the European Union be politicised? <http://www.jeanmonnetprogram.org/papers/01/010901.html>
- Marris C. (2001): Public views on GMOs: deconstructing the myths. Stakeholders in the GMO debate often describe public opinion as irrational. But do they really understand the public?, in: EMBO Reports, Vol. 2, No. 7, 545-548.
- Marris, C. (2001): Swings and roundabouts: French public policy on agricultural GMOs since 1996. Politeia, n°60: 22-37.
- Marris, C./ Joly, P.-B. (1999): Participation des citoyens français dans l'évaluation des choix scientifiques et technologiques, in: Risque et Démocratie: savoirs, pouvoir, participation. Vers un nouvel arbitrage ? Cahiers de la sécurité intérieure, No. 38, 97-124.
- Marris, C./ Joly, B.P. (1999): Between consensus and citizens: public participation in technological decision-making in France, in: Science Studies, Vol. 12, No. 2, 3-32.
- Marris, C./ Joly, P.-B. (1999): Between Consensus and Citizens: Public Participation in Technology Assessment in France", in: Science Studies, Vol. 12, No. 2, 3-32.
- Marris, C./ Wynne B./ Simmons, P. /Weldon, S. (a.o.) (2001): Public Perceptions of Agricultural Biotechnologies in Europe - [Final Report](#) of the [PABE research project](#).
- Martello, M. L. (2001): A Paradox of Virtue?: 'Other' Knowledges and Environment- Development Politics", in: Global Environmental Politics, Vol. 1, No. 3, 114-141.
- Martin, B. R. / Science and Technology Research, University of Sussex: Technology Foresight in a rapidly globalizing economy, <http://www.unido.org/userfiles/kaufmanC/MartinPaper.pdf>.
- Massen, S. (2002). Die Gesellschaftliche Disziplinierung Bio- und Gen-ethischer Fragen durch die politische Institutionalisierung von „Diskurs“. [www.sciencepolicystudies.de](http://www.sciencepolicystudies.de)
- Mayer, I. (1997): Debating technologies. A methodological contribution to the design and evaluation of participatory policy analysis, Tilburg, Tilburg University Press.
- McDonald, J. (1999): Mechanisms for Public Participation in Environmental Policy Development: Lessons from Australia's First Consensus Conference", in: Environmental and Planning Law Journal, Vol. 16, No. 3, 258.
- Meister, H-P./ Bantien, H./ Mayer-Ries, J/ Jaspers, J. (2001): Auf der Suche nach den Antworten von Morgen: der deutsche Forschungsdialog Futur, in: TA-Datenbank-Nachrichten, Vol. 10, No. 4.
- Mejlgaard, N. (2003): „Foresight and Scientific Citizenship”, proceedings Norway 2030 Foresight to Scenarios - Methodology and Models. July 2002, European Free Trade Association, Brussels.
- Mirenowicz, J. (2000): Consensus conferences and research : a tale of great expectations. Transdisciplinarity Joint Problem-Solving among Science technology and Society, Zurich.
- Monitoring Foresight Activities (2001): <http://esto.jrc.es/docs/foresight1.pdf>.
- Mowery, D./ Rosenberg, N. (1979): The influence of market demand upon innovation : A critical review of some recent empirical studies", in: Research Policy, No. 8, 102-153.
- Müller, A./ von Schell, T. (1996): Bürger als Gutachter der Technikgestaltung: Das Beispiel der Bürgerforen ,Biotechnologie/Gentechnik - eine Chance für die Zukunft?', in: Wienhöfer, E.

- (ed.): Bürgerforen als Verfahren der Technikbewertung, Stuttgart, Akademie für Technikfolgenabschätzung, Arbeitsbericht Nr. 67, 69-81.
- National Academy of Sciences' Institute of Medicine (1998): Scientific Opportunities and Public Needs: Improving Priority Setting and Public Input at the National Institutes of Health, released July 8, 1998, <http://www.nap.edu/readingroom/books/nih>
- National Research Council (1996): Understanding Risk: Informing Decisions in a Democratic Society, Washington, DC, National Academy Press.
- Nedeva, M./ Georghiou, L./ Loveridge, D./ Cameron, H (1996): The use of co-nomination to identify expert participants for Technology Foresight", in: R&D Management, Vol. 26, No. 2, 155–168.
- Nennen, H.-U. / Garbe, Detlef (ed.) (1996): Das Expertendilemma. Zur Rolle wissenschaftlicher Gutachter in der öffentlichen Meinungsbildung. Heidelberg/Berlin/New York: Springer.
- Núria FONT, Universitat Autònoma de Barcelona: New Instruments of Citizen Participation, [http://www.diba.es/icps/working\\_papers/docs/Wp\\_i\\_152.pdf](http://www.diba.es/icps/working_papers/docs/Wp_i_152.pdf) of Education and Science (ed.).
- O'Mahony, P. (ed.) (1999): Nature, Risk and Responsibility. Discourses of Biotechnology, London, Macmillan.
- Paradys - Participation and the Dynamics of Social Positioning - The Case of Biotechnology. Images of Self and Others in Decision-Making Procedures. [http://www.unibielefeld.de/iwt/paradys/German\\_start.html](http://www.unibielefeld.de/iwt/paradys/German_start.html)
- Questiaux, N. (2001): Cinquième Conférence européenne des Comités d'éthique (COMETH) ", in: Les Cahiers du Comité Consultatif National d'Éthique Pour les Sciences de la Vie et de la Santé, No. 26, 54.
- Rebori, M./ Singletary, L./ Ball, A.: Joint Fact-Finding. Managing Natural Resource Disputes- No. 8 [www.unce.unr.edu/publications/factsheets/FS%2000/FS00-05.htm](http://www.unce.unr.edu/publications/factsheets/FS%2000/FS00-05.htm).
- Regional Environmental Centre (1998): Doors to Democracy, Current Trends and Practices in Public Participation in Environmental Decisionmaking in Western Europe, June 1998 (Project Management: Fe Sanchis Moreno, Terra Environmental Policy Centre), <http://www.rec.org/REC/Publications/PPDoors/WEST/cover.html>.
- Renn O./ Webler T./ Wiedemann P. (1995): A need for discourse on citizen participation", in Renn O./ Webler T./ Wiedemann P. (eds.): Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse, Dordrecht, Kluwer Publishers.
- Renn, O. (1992): The social arena concept of risk debates. Social theories of risk, Westport, Praeger.
- Renn, O. (1995): Umweltkonflikte und innovative Konfliktregelungen, Möglichkeiten und Grenzen diskursiver Verfahren, in: Arbeitsgemeinschaft für Umweltfragen e.V. (ed.): Umweltmediation in Deutschland. Innovative Formen bei Regelungen von Umweltkonflikten, Bonn, Arbeitsgemeinschaft für Umweltfragen, 19-34.
- Renn, O. (2003): Die Zunahme partizipativer Verfahren als Ausdruck eines veränderten Staats- und Gesellschaftsverständnisses", In: Wörner, J.-D. (ed.): Das Beispiel Frankfurter Flughafen. Mediation und Dialog als institutionelle Chance, Dettelbach. 226-240.
- Renn, O./ Webler, T. (1992): Anticipating Conflicts: Public Participation in Managing the Solid Waste Crisis", in: GAIA, No. 2, 84-95.
- Renn, O. (2002): Hormesis and Risk Communication. Stuttgart: Center of Technology Assessment.

- Renn, O. (2002a). The Challenge of Integrating Deliberation and Expertise: Participation and Discourse in Risk Management. Accepted Contribution for a Review Article to the 2000 Risk Symposium Volume: Risk and Governance, ed. by T.L. McDaniels and M. Small.
- Renn, O., Meirion, T. (2002), Final Report of the STRATA-ETAN Expert Group: „Mobilising the regional foresight potential for an enlarged European Union – an essential contribution to strengthen the strategic basis of the European Research Area (ERA)”, [ftp://ftp.cordis.lu/pub/foresight/docs/regional\\_foresight\\_en.pdf](ftp://ftp.cordis.lu/pub/foresight/docs/regional_foresight_en.pdf)
- Rip, A. (1986): ‘Controversies as informal technology assessment’ Knowledge: Creation, Diffusion”, in: Utilization, Vol. 8, No. 2, 349-371.
- Rip, A./ Shot, J./ Misa, T. (eds.) (1997): Managing technology in society, London, Frances Pinter.
- Rip, A. (2002). Co-Evolution of Science, Technology and Society. [www.sciencepolicystudies.de](http://www.sciencepolicystudies.de)
- Rosenbaum, N. (1978): Public Participation and democratic theory”, in: Langton, S. (ed.): Citizen participation in America: Essays on the state of the art, Lexington, MA, Lexington Books, 43-54.
- Rowe, G./ Frewer, L., (2000): Public participation methods: A framework for evaluation”, in: Science, Technology and Human Values, Vol. 25, No. 1, 3-29.
- Saretzki, Th. (1996): Das WZB-Verfahren: Diskursivität und Partizipation in der Technikfolgenabschätzung und –bewertung, in: Prittowitz, V. von (ed.): Verhandeln und Argumentieren. Dialog, Interessen und Macht in der Umweltpolitik, Opladen, Leske + Budrich, S. 138-167.
- Saretzki, Th. (1996): Technikfolgenabschätzung – ein neues Verfahren der demokratischen Konfliktregelung?, in: Feindt, P./ Gessenharter, W./ Birzer, M./ Föchling, H. (eds.): Konfliktregelung in der offenen Bürgergesellschaft, Dettelbach, Röhl, 191–213.
- Saretzki, Th. (1997): Mediation, soziale Bewegungen und Demokratie, in: Forschungsjournal Neue Soziale Bewegungen, Vol. 10, No. 4, 27-42.
- Schell, T./ von, Seltz, R. (eds.) (2000): Inszenierungen zur Gentechnik. Konflikte, Kommunikation und Kommerz, Wiesbaden, 54-67.
- Schensul J.J. (2002): Democratizing Science Through Social Science Research Partnerships”, in: Bulletin of Science, Technology & Society, Vol. 22, No. 3, 190-202.
- Schicktanz, S. (2003): Bürger als Experten? Möglichkeiten und Grenzen der Bürgerbeteiligung am bioethischen Diskurs. Skriptvorlage. Workshop „Politik und Expertise“, Graduiertenkolleg „Auf dem Weg in die Wissensgesellschaft“. Universität Bielefeld.
- Schwab, F. (2000): Konsensus-Konferenzen über Genfood. Ist das PubliForum der Schweiz ein Sonderfall? Arbeitsdokument TA-DT 26/2000 des Schweizerischen Wissenschafts- und Technologierats.
- Sclove, R. E. (1995): Democracy and technology, The Guilford Press, New York.
- Screening the foresight exercises undertaken in 12 countries, <http://esto.jrc.es/docs/foresight4.pdf>.
- Sève L. (1997): Ethics National Committee: It is because it has no legal power that the committee is independent”, in: Responsabilité & Environnement, No. 7.
- Slovic, P. (1993): Perceived Risk, Trust and Democracy”, in: Risk Analysis, Vol. 13, No. 6, 675-682.
- Spichtinger, Daniel (2002). Civil Society and the EU. An Analysis Focusing on the Interactions between the Commission and Civil Society Organisations, with Particular Emphasis on Research Policy. Thesis. <http://www.geocities.com/dspichtinger/cseu.html>



- Spichtinger, Daniel (2003). Civil Society Interaction with the Commission in EU research policy. working paper. [www.geocities.com/dspichtinger/cseu.html](http://www.geocities.com/dspichtinger/cseu.html).
- Steinmüller, K./ Kreibich, R./ Zöpel, C. (eds.), (2000): Zukunftsorientierung in Europa, Ergebnis und Perspektiven, (ZukunftsStudien, Band 22), Baden-Baden, Nomos Verlagsgesellschaft.
- Stern, P. C./ Fineberg H. V. (eds.) (1996): Understanding Risk: Informing Decisions in a Democratic Society. Washington DC, National Academy Press.
- Stirling, A. (1999): On science and precaution in the management of technological risk, Final Report for the EC Forward Studies Unit, Brussels. [ftp://ftp.jrc.es/pub/EURdoc/eur19056en.pdf](http://ftp.jrc.es/pub/EURdoc/eur19056en.pdf)
- Stirling, A. (2003): Risk, Uncertainty and Precaution: Some Instrumental Implications from the Social Sciences”, in: Berkhout, F./ Leach, M./ Scoones, I. (eds.): Negotiating Change. Elgar, 2003
- Tijink, D. (1999): Wetenschapsverkenningen als vorm van participatieve beleidsanalyse. Een empirisch onderzoek naar succesbepalende factoren bij OCV-verkenningen, Delft, Delft University Press
- Tindale, S. (2002): Public consultations – a listening government or pure greenwash? <http://www.greenpeace.org.uk/contentlookup.cfm?&ucidparam=20021213142856&Men>
- Ueberhorst, R. (1996): Zur Reform der Politikformen in der Demokratie einer pluralisierungsstarken Wissenschaftsgesellschaft, in: Kerner, M. (ed.): Aufstand der Laien: Expertentum und Demokratie in der technisierten Welt, Aachen, 157-191.
- Valenduc G./ Vendramin P. (1995): Building a bridge between research programmes and the needs of society. PD4-01 report for the European programme VALUE/ Interfaces for Innovation, Luxembourg.
- Wallace, H. (ed.) (1997): Participation and policy-making in the European Union, Oxford, Clarendon Press.
- Webler T./ Tuler S. (2002): Unlocking the Puzzle of Public Participation Bulletin of Science”, in: Technology & Society, Vol. 22, No. 3, 179-189.
- Webler, T. (1995): Right’ Discourse in Citizen Participation: An Evaluative Yardstick”, In: Renn/ Webler/ Wiedemann (eds) (1995), Fairness and Competence in Citizen Participation. Evaluating Models for Environmental Discourse. Dordrecht: Kluwer, 35-86.
- Webler, T./ S. Tuler (2002): Unlocking the Puzzle of Public Participation”. In: Bulletin of Science, Technology & Society 22, 179-189.
- Wehling, P. (2002). Weshalb weiß die Wissenschaft nicht, was sie nicht weiß ?- Forschungsperspektiven einer Soziologie des wissenschaftlichen Nichtwissens. [www.sciencepolicystudies.de](http://www.sciencepolicystudies.de)
- Weidner, H. (1996): Umweltmediation: Entwicklungen und Erfahrungen im In- und Ausland, in: Feindt, P./ Gessenharter, W./ Birzer, M./ Föchling, H. (eds.): Konfliktregelung in der offenen Bürgergesellschaft, Dettelbach, Röhl, 137–168.
- Weingart, P. / Salzmann, Ch. / Wörmann, S. (2002). Die gesellschaftliche Diskussion wissenschaftlichen Fortschritts in den Massenmedien. Der Fall der Biotechnologie und die Biomedizin. [www.sciencepolicystudies.de](http://www.sciencepolicystudies.de)
- Wink, R. (2002). Governance wissenschaftlichen Fortschritts: Ist die Politik überflüssig geworden? - Transnationalisierung der Wissensprozesse und ihre Konsequenzen. [www.sciencepolicystudies.de](http://www.sciencepolicystudies.de)
- Wynne, B. / Irwin, A. (1996). Misunderstanding Science? The Public Reconstruction of Science and Technology. Lancaster University.

Wynne, B. / Irwin, A. (1996). *Misunderstanding Science? The Public Reconstruction of Science and Technology*. Lancaster University.

Zilleßen, H./ Barbian, Th. (1992): *Neue Formen der Konfliktregelung in der Umweltpolitik*, in: *Aus Politik und Zeitgeschichte*, B39-40, 14-23.

Henning Banthien, Michael Jaspers, Andreas Renner (with the collaboration of Matthias Adam, Jörg Mayer-Ries and Meike Wulfers), European Commission, Institute for Organisational Communication, October 20th, 2003



<http://creativecommons.org/licenses/by-nd/2.0/fr/deed.fr>