

10  
EUROPEAN UNIVERSITY INSTITUTE  
Department of Political and Social Sciences

**International Policy-Making as a Learning Process:  
The European Community and the Greenhouse Effect**

by  
Markus Jachtenfuchs

Thesis submitted for assessment with  
a view to obtaining the Degree of Doctor of the  
European University Institute

Examining jury:

Prof. Beate Kohler-Koch (University of Mannheim, supervisor)  
Prof. Klaus Eder (European University Institute, co-supervisor)  
Prof. Giandomenico Majone (European University Institute)  
PD Dr. Wolfgang Wessels (Institut für Europäische Politik, Bonn)  
Dr. Ole Wæver (Centre for Peace and Conflict Research, Copenhagen)

Florence, January 1994

LIB  
301  
.11  
JAC

European University Library



3 0001 0015 4419 8







EUROPEAN UNIVERSITY INSTITUTE  
Department of Political and Social Sciences

14  
R0230

**International Policy-Making as a Learning Process:  
The European Community and the Greenhouse Effect**

by  
Markus Jachtenfuchs



Thesis submitted for assessment with  
a view to obtaining the Degree of Doctor of the  
European University Institute

30/1/11  
30/3/02

Florence, January 1994



# Content

List of Tables.....	iv
List of Figures.....	v
Abbreviations.....	vi
Introduction.....	1
<i>I. Theoretical Framework: Analysing Social Interaction.....</i>	<i>5</i>
A. Rational Choice Theory and the Emergence of Preference Structures.....	5
1. Rational Choice Theory and International Interaction.....	6
2. Game Theory.....	8
3. Zürn's Theory of Preference Change.....	10
4. Limitations of Rationality.....	13
5. Values and Preferences.....	18
B. Cultural Theory and Plural Rationalities.....	20
1. Only One Type of Rationality?.....	21
2. Cultural Theory and the Construction of Reality.....	27
3. Towards a Constructivist Perspective.....	30
C. Frames.....	34
1. A Constructivist Conception of Frames.....	34
2. Interpretative Frames.....	38
3. Action Frames.....	40
D. Learning.....	45
1. Simple and Complex Learning.....	46
a) Simple Learning.....	47
b) Complex Learning.....	50
2. Individual and Collective Learning.....	54
3. Sources of Learning.....	61
4. Pathological Learning.....	63
E. The Role of Institutions.....	66
1. Notions of Institutions and Institutional Explanations.....	66
2. Institutions and Frames.....	69
F. Summary.....	74
<i>II. Issue Framing and the European Community.....</i>	<i>77</i>
A. Specific Features of the European Community.....	77
1. Characteristics of a Domestic Political System.....	78
a) Comprehensive Scope.....	79
b) A Hierarchical Legal System.....	82
c) Density of Interaction.....	85

d) The Existence of a Parliament .....	88
2. International: States Negotiating in the Council .....	91
B. Specific Features of Environmental Policy .....	94
1. Environmental Policy as a Problem of Public Goods Theory .....	94
2. The Role of Knowledge.....	96
3. Risk and Uncertainty.....	102
4. Summary .....	106
III. <i>Framing the Greenhouse Effect in the European Community</i> .....	107
A. Introduction .....	107
> B. A Methodology for Frame Analysis .....	111
> C. Ideal-Types of the Existing Frames .....	117
1. Classic Environmental Policy .....	119
2. Sustainability .....	122
3. Integration Frames .....	126
D. Orientation .....	130
1. Climatological Research .....	131
2. Energy .....	137
3. The Emergence of the Greenhouse Issue .....	143
4. Summary .....	146
E. Clearing up the Issue .....	148
1. The Development of the Greenhouse Strategy .....	149
a) The Commission's Strategy Paper .....	150
b) The Council Conclusions on Climate Change Policy.....	156
2. Energy Policy.....	162
3. Economic Instruments .....	170
4. External Relations .....	177
5. The Changing Role of Knowledge .....	185
6. Summary .....	192
F. Defining a Strategy .....	194
1. Energy Policy.....	195
2. Leadership.....	201
3. The Tax Debate in the Commission .....	207
a) Response Strategies and the Choice of the Tax.....	208
b) The Debate Among the Commission's Directorate-Generals.....	211
c) The Debate With Member States and Industry .....	218
4. From the "Policy Options" to the "Community Strategy" .....	221
a) The Policy Options Paper .....	221
b) The Drafts of the Community Strategy .....	227
c) The Final Community Strategy .....	228
5. The Commission's Problem Definition .....	232
G. The Problem Definition After the "Community Strategy" .....	236
1. The Commission: Towards Sustainability .....	237
a) Implementing the Greenhouse Strategy.....	237
b) The Programmatic Change of Environmental Policy.....	244
2. The Council: Conflicting Frames.....	252

a) Policy-Specific Frames.....	253
b) The Re-nationalisation of Policy Measures .....	262
3. Industry: Defending Classic Environmental Policy .....	266
4. The New Problem Definitions .....	270
Conclusion.....	273
Annexes .....	280
Annex 1: Data About the Greenhouse Effect .....	280
Annex 2: Research on Climate Change .....	287
Annex 3: Commission Departments Mentioned in the Text .....	289
Bibliography.....	290
Books and Articles.....	290
Documents .....	309

## List of Tables

<b>Table 1: Ideal-Typical Frames of Environmental Policy</b> .....	<b>126</b>
<b>Table 2: Frames of Integration</b> .....	<b>129</b>
<b>Table 3: Ideal-Typical Frames of Energy Policy</b> .....	<b>139</b>
<b>Table 4: Basic Facts About Greenhouse Gases</b> .....	<b>280</b>
<b>Table 5: Total and Per Capita Emissions of Carbon (1989)</b> .....	<b>281</b>
<b>Table 6: Economic Sectors and Total CO<sub>2</sub> Emissions in the EC (in per cent)</b> .....	<b>285</b>
<b>Table 7: Structure of Gross Energy Consumption in the EC (in per cent)</b> .....	<b>286</b>
<b>Table 8: Research on Climate Change as a Part of Environmental Research</b> .....	<b>287</b>

## List of Figures

Figure 1: The Learning Cycle.....	48
Figure 2: An Individualistic Explanation of Organisational Action .....	56
Figure 3: Societal Frames and Institutions.....	72
Figure 4: Institutions and Policy Frames.....	73
Figure 5: Causes of the Greenhouse Effect .....	137
Figure 6: Per Capita Emissions of Carbon in the EC (in tons).....	282
Figure 7: Per Capita Emissions of Carbon in the World (in tons).....	283
Figure 8: Share of World Carbon Emissions .....	284
Figure 9: Research on Climate and Total Environmental Research.....	288

## Abbreviations

ACEA	Association of European Automobile Manufacturers
AP	Action Programme
B	Belgium
CAP	Common Agricultural Policy
CdP	Cellule de Prospective (Forward Studies Unit)
CEFIC	Conseil européen des fédérations de l'industrie chimique
CEMBUREAU	European Cement Association
CFCs	Chlorofluorocarbons (substances damaging the ozone layer and contributing to the greenhouse effect)
ch.	Chapter
CIAB	Coal Industry Advisory Board
CIS	Commonwealth of Independent States (successor of the Soviet Union)
CO <sub>2</sub>	Carbon dioxide
COREPER	Comité des représentants permanents
CSCE	Conference on Security and Cooperation in Europe
D	Germany
DG	Directorate-general
DK	Denmark
Doc.	Document
E	Spain (España)
EAP	Environmental Action Programme
EC	European Community
ECE	Economic Commission for Europe
ECU	European Currency Unit
EEB	European Environmental Bureau
EEC	European Economic Community
EFTA	European Free Trade Association
EP	European Parliament
EPOCH	European Programme on Climatology and Natural Hazards
EPP	European Peoples' Party (Christian Democrats in the European Parliament)
ERP	Environmental Research Programme
EURELECTRIC	European Committee of Electricity Supply Industries
EUROFER	European Steel Association
EUROMETAUX	European Association of Metals
EUROPIA	European Petroleum Industry Association
F	France



<b>GATT</b>	<b>General Agreement on Tariffs and Trade</b>
<b>GDP</b>	<b>Gross domestic product</b>
<b>GHGs</b>	<b>Greenhouse Gases</b>
<b>GR</b>	<b>Greece</b>
<b>I</b>	<b>Italy</b>
<b>IEA</b>	<b>International Energy Agency</b>
<b>IFIEC-EUROPE</b>	<b>European Federation of Industrial Energy Consumers</b>
<b>IPCC</b>	<b>Intergovernmental Panel on Climate Change</b>
<b>IRL</b>	<b>Ireland</b>
<b>L</b>	<b>Luxembourg</b>
<b>MECU</b>	<b>Million ECU</b>
<b>MEP</b>	<b>Member of the European Parliament</b>
<b>NGO</b>	<b>Non-Governmental Organization</b>
<b>NL</b>	<b>Netherlands</b>
<b>OECD</b>	<b>Organization for Economic Cooperation and Development</b>
<b>OJ</b>	<b>Official Journal (of the European Community)</b>
<b>ORGALIME</b>	<b>Association of the Mechanical, Electrical, Electronic and Metalworks Industries of the EC and EFTA Countries</b>
<b>P</b>	<b>Portugal</b>
<b>para.</b>	<b>Paragraph</b>
<b>R &amp; D</b>	<b>Research and Development</b>
<b>Rainbow</b>	<b>Green Group in the European Parliament</b>
<b>SAVE</b>	<b>Specific Actions for Vigorous Energy Efficiency</b>
<b>SEA</b>	<b>Single European Act</b>
<b>Soc.</b>	<b>Socialist Group in the European Parliament</b>
<b>STEP</b>	<b>Science and Technology for Environmental Protection</b>
<b>THERMIE</b>	<b>“European Technologies for Energy Management”</b>
<b>UK</b>	<b>United Kingdom</b>
<b>UN</b>	<b>United Nations</b>
<b>UNCED</b>	<b>United Nations Conference on Environment and Development</b>
<b>UNICE</b>	<b>Umbrella Organization of European Industry</b>
<b>VAT</b>	<b>Value-Added Tax</b>
<b>WCED</b>	<b>World Commission on Environment and Development</b>
<b>WWF</b>	<b>World-Wide Fund for Nature Protection (environmental NGO)</b>



## Introduction

The central idea of this study is a simple one. It is to develop the argument that action must be explained by the way actors reflect about a problem. The study argues that those reflections and their consequences for action can be described in systematic ways. Behind this basic statement lies a fundamental assumption: Besides analysing the interests, preferences and strategies of actors and the resulting interaction, it is at least equally important to study the emergence of these interests, preferences and strategies. In other words, it is important to examine not only how actors get what they want but also why they want what they want. Systematic patterns of reflection, this is the thesis, are at the basis of interests, preferences and strategies.

The primary category for the subsequent analysis is the definition of the problem adopted by actors. It describes how actors construct a specific situation. This construction allows a specification of the initial guiding question. It is now possible to ask how preferences can be explained in relation to problem definitions. The thesis in this respect is neither that interests and preferences of actors have to be taken as given nor that actors are completely free to define them. Instead, interests and preferences depend on problem definitions. The second specification of the initial question is to ask how the emergence of problem definitions can be explained. Problem definitions, I will argue, depend on basic patterns of perceiving and interpreting the world which will be called "frames".

The way how actors frame an issue (or define a problem) is thus not a function of their interests. It is not an active process of decision. Instead, it is argued that actors can develop their interests and preferences only on the basis of a problem definition within a specific frame. If these frames change, i.e. if actors fundamentally change their way of perceiving and interpreting the world, it is possible to speak of a learning process. "Learning", in this usage, is deliberately confined to relatively rare cases in order to maintain it as a meaningful concept which does not include every change of behaviour or every change of behaviour on the basis of new information. The term "learning" is instead reserved to those cases where actors change their interpretation of the world and of their relationship to it.

Frames can be considered as a form of the organisation of knowledge. Knowledge has recently become an important concept in international relations theory, in particular with regard to international environmental policy-making. The new debate on the role of knowledge in international environmental relations and on "epistemic communities" as promoters of co-operation risks, however, to become a revival of the old functionalist hope of by-passing and finally superseding political conflicts by allegedly unpolitical technical problem-solving. This is not the purpose of the approach developed here. On the contrary, it is claimed that any definition of a problem contains ideas about a legitimate order of things and of the identity of the actor in relation to it. In other words, problem definitions and frames are political.

These last remarks are also destined to reject the reproach that talking about problem definitions, knowledge and learning was "idealistic" and neglected power and interests as central categories of political science. The present study indeed tries to take up a rather scattered debate which has been going on in several sub-fields of the social sciences and which is concerned with paradigms, research programmes, belief systems, world views, basic political cultures, or, to use the simplest expression, with the role of ideas in politics. If frames are the basis of problem definitions and thus of actors's preferences and interests, there is no need to oppose power and ideas as they concern different levels of action. An actor using power to pursue his interests acts on the basis of his world view. A change of his world view would also lead to a recalculation of his interests and redirect the use of his power.

If a change of frame can lead to a change of preferences, frames can become targets of action. The analysis thus moves from looking at frames *of* action to the analysis of frames *for* action. Whereas the former are abstractions of the patterns according to which actors construct their preferences on the basis of their perception and interpretation of reality, the latter are used by actors to pursue their goals by achieving a redefinition of the world view and hence of the preferences of other actors. Frames thus become a means for action. In this sense, knowledge is power.

There is no need in this concept to distinguish between the ideal types of the horizontally organised "anarchical" international system and the vertically organised hierarchical state. To change problem definitions of

another actor by promoting a different interpretation of the world is a process of arguing and convincing which is not fundamentally different in the international system, within a state or in an intermediary organisation such as the European Community. In *this* process, power does not play a role. Behaviour can be constrained by power, problem definitions cannot.

In any case, the present study endeavours to propose a method, not a theory. It argues that looking at the way problem definitions emerge on the basis of certain frames can help to explain why actors want what they want and what they can want. For doing so, it tries to give a theoretical foundation to the concept of "frames" which allows to avoid the pitfalls mentioned above. Only in the second place, it proposes theoretically founded hypotheses for the empirical analysis. The main aim of this proceeding is to present a different way of looking at policy-making, a look which sheds light on interrelationships neglected by other approaches. I do not claim to invalidate, to modify or to encompass other theories and to propose a better one. I only argue that the theoretical premises and fundamental concept the analyst adopts have implications for the results of the empirical work. This is as such a trivial statement but it can be formulated in a stronger way: Looking at the politics of interest is an important and legitimate way of political analysis. This should, however, not lead to the conclusion that it were the only way of finding out big and important things. Looking at the way interests are constructed might be equally interesting and, in some particular fields, even more promising than taking these interests as given. To illustrate this claim is the purpose of the present study.

Part I is devoted to a theoretical clarification of the concept. Starting from a very basic discussion on notions of action and of rationality, it proposes the concept of "frames" as an analytical tool to grasp the cognitive structures of problem definitions which are the basis for action. A change of frames, it is argued subsequently, can be conceptualised as "learning". This part ends with a consideration of the relationship between institutions and frames.

Part II constitutes the transition between the theoretical elaboration and the empirical analysis. Whereas the preceding part has discussed the concept of frames in a very general manner, this part discusses the relationship of the theoretical concept to the objects of the empirical study, namely the European Community and environmental risks.

Part III, finally, contains the empirical study. After proposing a methodology for the empirical analysis of frames, it presents the ideal types of the two basic frames which will be used in the empirical study as analytical tools. In the following chapters, the argument is illustrated with a case study on the European Community and the greenhouse effect. The latter seems particularly well-suited for the present purpose. Intensive research and an increasing attention of policy-makers have not yielded substantial insights into the consequences of the greenhouse effect on the environment, on the political and the economic systems. In particular, the effects on particular regions of the world, let alone on single states, remain largely unknown. Hence, the policies of states and of international organisations with respect to the greenhouse effect have to deal with uncertainty. When the nature of the problem to be dealt with is unknown or controversial, actors cannot rely on safe knowledge to develop interests and strategies. Instead, problem definitions become crucial for action.

The empirical study extends from the early 1980s, when the EC launched a first climatological research programme, to the Rio summit in June 1992 for which the EC Commission had presented a comprehensive strategy as well as operational proposals to deal with the greenhouse effect. Later developments have been considered only occasionally. As I had a privileged access to EC documentation and profited from the open-mindedness of my interview partners, I hope that the study is not only of theoretical and methodological value but also of interest for students of EC environmental policy. Its aim would be reached if it were read as a theoretically informed study of practical relevance which avoids the extremes of pure theory and mere data collection.

# I. Theoretical Framework: Analysing Social Interaction

## A. Rational Choice Theory and the Emergence of Preference Structures

In contemporary social science, rational choice theory occupies a prominent place. It rests on an ideal model of man and on a corresponding conception of rationality. *Homo oeconomicus*, which almost exclusively dominates microeconomics and has gained increasing predominance in sociology and political science, is generally seen as an all-informed goal maximiser pursuing his interests according to a well-ordered scale of preferences. He can be portrayed as an egoistic self-contained unity, constantly seeking to adapt himself to changing circumstances in his environment, pulled forward by the prospect of future rewards. The assumption of *homo oeconomicus* as the explanatory model frequently goes hand in hand with the adoption of methodological individualism, i.e. the view that social phenomena have to (and can only) be explained by looking at individual action. The rationality of *homo oeconomicus* is instrumental; simply stated, it says: if you want A, you must do B. *Homo oeconomicus* is rational by definition; if he does not act anymore according to the basic requirements of rational choice theory, he ceases being *homo oeconomicus*. In this case, the theory becomes useless as it cannot explain what is irrational in its own conceptual framework.

The purpose of this section is not to make a substantive contribution to the theoretical debate on rational action. Given the predominance of rational choice theory, however, it seems appropriate to justify why the present study does not choose the rationalistic approach. The reason lies in the topic of the study. In the language of rational choice theory, it would deal with the emergence and change of preference structures and the emergence, change and use of norms, values and symbols. The purpose of this section is to show that this task cannot be accomplished within a rationalistic framework as these concepts themselves remain largely outside the scope of the theory.

A major theoretical problem for rational choice theory is the construction and change of actors' preferences. Whereas some writers argue that an

endogenous explanation of preference change is possible, the view adopted here is that these attempts still miss a considerable part of reality due to their rather narrow conception of rationality. The claim made here is that *if* preference changes, norms and values are in the centre of analysis (as they are in the present study), rational choice theory is an inappropriate tool.

In this first section, I justify my refusal to adopt a rational choice framework by the inability of this theory to explain how actors come to their preferences and how and why these preferences change. In the case study, I present the story of the European Community and the greenhouse effect as a process during which different actors *develop* their preferences. Such an attempt must choose an approach other than rational choice. Therefore, I do not claim to "invalidate" rational choice theory. On the contrary, the story of the European Community and the greenhouse effect could well be told on the basis of rational choice theory. However, it would be a different story, one about interests and interaction results instead of one about the emergence and change of problem definitions.

### *1. Rational Choice Theory and International Interaction*

Although a prominent proponent of rational choice theory holds that "the theory of rational action is first and foremost normative ... and only derivatively, explanatory"<sup>1</sup>, it seems that at least in international relations theory, the explanatory version of the theory is far more widespread<sup>2</sup>. The normative theory tells actors what they should do to achieve their goals optimally under the prevailing circumstances. In this theory, actors face a certain set of actions they can take. These actions have consequences which materialise with a certain probability and which can be assessed by the utility attached to them which is based on his preferences. The theory can be further refined in order to tell the actor how to assess the probability of the consequences of his action (which is basically a problem of information processing) and probably even how to assess the utilities attached to the

1. Elster, *Rationality and Social Norms*, p. 2.

2. See, for instance, Zürn, *Interessen und Institutionen*, who makes a considerable conceptual effort to find out under which conditions rational choice theory can explain behaviour.



consequences of action. Frequently, however, preferences and utilities are simply taken as given, as beliefs, values and tastes seem inappropriate for rational scrutiny. This pure version of rational choice theory is an abstract exercise like mathematics and can be detached from empirical reality.

The explanatory version of rational choice theory assumes that actors behave as the normative version of the theory would tell them to do. A weaker argument holds that the “real” motives and processes behind human (or corporate) decisions may be different but that analysing them *as if* they would follow the prescriptions of the normative theory<sup>3</sup> yields substantive results. An argument frequently used to justify the “as if” assumption is parsimony: rational choice theory allows to explain relatively many things with relatively few theoretical assumptions.

In the field of international relations, the conceptualisation of the state and of the international system by most theorists corresponds closely to the homo oeconomicus and the market although there are important differences. The first and foremost property of the international system is the lack of any central government which would be able to enforce sanctions, i.e. the condition commonly labelled as “anarchy”. In this system, states act strategically, i.e. by assessing the consequences of their behaviour and by conceiving behaviour in terms of these consequences<sup>4</sup>. As there is no central instance, the dominant strategy is self-help<sup>5</sup>. Norms only have a marginal place in this view. States follow norms only if and as long it is in their interest. This can be easily justified on rational choice grounds: even if a norm puts heavy burdens on a state, its violation might even entail more serious consequences for that state. However, states are free to decide whether to follow a norm or not on the basis of a cost/benefit assessment. Norms do not have an existence of their own. They do not constrain the behaviour of states beyond their rational calculation of whether it is good for them to obey or not.

3. Schlicht, *Rationality, Bounded or not, and Institutional Analysis*, p. 704 seq.
4. This argument relies probably too much on the image of the bureaucratic politics in most industrialised states, be they capitalist or formerly socialist. It can deal less well with cases of charismatic leadership.
5. See Waltz, *Theory of International Politics*, p. 104.

This view of the state has important consequences for rational choice approaches to international relations theory. Not only is the international system, within limits, comparable to a market but also do states not change. There is only a small step from this statement to the assumption that preferences of states do not change either. This assumption finds its justification in the focus of international relations theory in the fifties and sixties when it dealt mainly with military and balance of power problems in the cold war context of a confrontation of hostile blocs. Under these conditions, survival could realistically be assumed to be a first preference<sup>6</sup>. This (often implicit) empirical assumption fits well with the general theoretical image of the state of international relations theory where the state has to secure its survival in a hostile environment. In this view, preferences can change but are unlikely to do so *as a matter of fact* because of the nature of the international system.

The invariance of preferences can also be stipulated as a theoretical requirement: According to this view, preferences *must* be held constant during an interaction for methodological reasons in order not to fall into the trap of "explaining" a change of behaviour simply by a change of preferences<sup>7</sup>. Only then can the result of the interaction of states be analysed. Although this theoretical requirement is, strictly seen, limited to a single interaction and does not preclude a change of preferences between several interactions, it entails the risk of altogether neglecting changes of preferences as sources of behavioural change. In this case, behavioural change as a result of preference change would be excluded *by definition*.

## 2. Game Theory

For writers who consider states as rational utility maximisers, rational choice and especially *game theory* appears to be a particularly useful tool for the analysis of the strategic interactions of the constituent elements of the

6. It must, however, be added that this characterisation applies decreasingly for newer approaches which take into account the increasing importance of non-military policies in international politics.
7. This argument is put forward by Weede, *Der ökonomische Erklärungsansatz in der internationalen Politik*, p. 255.

international system, the states. Game theory, the theory of interdependent decisions, has acquired a high degree of sophistication and formalisation after the second world war<sup>8</sup>. It assumes that preferences remain stable during the game. This methodological necessity has conducted game theorists to neglect the area of preference formation and preference change, although there have been arguments that even the emergence of preference can be explained endogenously, i.e. by means of game theory<sup>9</sup>. The games themselves are in any case stripped off any empirical information<sup>10</sup>. This sometimes makes game theorists deduce actors' preferences from the structure of the decision situation instead of looking for them empirically<sup>11</sup>. This leads to a tendency to infer preferences from "objective" properties of actors, such as resources (monetary, military, emission data, etc.) or their position in the international system (bloc adherence, upstream or downstream location in environmental disputes). In this case, preference structures are the premises of game theoretical analysis. This cannot be criticised as such but removes the findings of game theory from real-world situations. Taking preferences as premises might lead to serious misinterpretations of concrete historical situations when the results of the abstract analysis are applied to concrete situations<sup>12</sup>. A more serious

8. For early attempts that have become classics, see Luce/Raiffa, *Games and Decisions*; Rapoport, *Fights, Games, and Debates*; Schelling, *The Strategy of Conflict* and Riker, *The Theory of Political Coalitions*. The purpose of this section is not to offer an extensive critique of game theory but only to discuss some of its major features as a highly developed form of rational choice theory which are important for the later argument that the formation and change of preference structures cannot be adequately analysed with rational choice approaches.
9. See the more detailed discussion of this point in the next section, pp. 10 seq.
10. See Axelrod/Keohane, *Achieving Cooperation under Anarchy*, p. 227 and Snidal, *The Game Theory of International Politics*, pp. 27-28.
11. See Snidal, *The Game Theory of International Politics*, pp. 40-44.
12. A well-known example is the interpretations of trench warfare during World War I as prisoners' dilemma situations in the influential book of Axelrod, *The Evolution of Cooperation*. Critics argue that these situations have instead been assurance games, see Gowa, *Anarchy, Egoism and Third Images*, p. 180 or challenge the usefulness of the standard prisoners' dilemma and stag hunt games in general; see Wagner, *The Theory of Games and the Problem of International Cooperation*. Be that as it may, the situation of trench warfare is modelled by the analyst and references to reality are only occasional. The conclusions of these analyses lose much of their explanatory, let alone predictive, value.

danger is the deduction of preferences from the outcome of the decision situation. This would amount to mere tautology<sup>13</sup>.

The emergence and change of preference structures is thus a blind spot of game theory:

“Logically, the game starts only after the actors have been constituted, and their order of preferences has been considered as part of the game. Instead, such limits as the resources available to the actors, their learning capacity, their priorities, and the payoffs of alternative modes of strategic behavior must be accounted for in a conceptual framework other than that of ‘rational choice’. In this sense, relying exclusively on game theory amounts to eliminating important constituents and preconditions of the game not only from the methodological, but also from the sociological agenda; and that certainly is a high price to pay for methodological purity ... Apart from the possibility of viewing actors and structures as mutually determinative, we would ... argue that there are even cases in which adequate explanations can be conducted without any reference to ‘individualistic’ categories of actors and actions.”<sup>14</sup>

Rational choice theory and its game theoretical branch cannot explain how the basis of the game or the rational decision, namely actors’ preferences, come into being<sup>15</sup>.

### 3. Zürn’s Theory of Preference Change

The possibility of an endogenous explanation of preference change is a central task for rational choice theory. In the following text, it will be discussed with reference to *Michael Zürn’s* theory on the subject. Zürn has

13. Game theorists frequently stress that this trap has to be avoided, see e.g. Snidal, *The Game Theory of International Politics*, p. 40.

14. Berger/Offe, *Functionalism vs. Rational Choice*, p. 525. Similarly Kohler-Koch, *Zur Empirie und Theorie internationaler Regime*, p. 50 and Jervis, *Realism, Game Theory and Cooperation*, p. 319.

15. “How preferences are formulated and how learning occurs may be more important than the actual choice, yet both rational choice and neorealism are weak in this dimension”; Nye, *Neorealism and Neoliberalism*, p. 248.

been chosen as an example because of the clarity and stringency of his arguments<sup>16</sup>.

For Zürn, an *autonomous* (“selbstgesteuerter”) change of preferences relies on the capacity of actors to voluntarily restrict their set of options in order to pursue a long-term goal instead of short-term interests. The example given is Ulysses who bound himself to the mast of his ship in order not to follow the singing of the sirens<sup>17</sup>. In this example, however, Ulysses’ preferences are clear and ordered: in the first place, he wants to survive and only in the second place to listen to the sirens’ singing (which would, however, compromise his first preference). This example also reveals a general problem of rational choice theory, namely the requirement to have a consistent order of preferences<sup>18</sup>. Ulysses has a long-term and a short-term preference. Which of them has priority for him cannot simply be decided by declaring that long-term prevails over short-term. In the chosen example, the predominance of the long-term preference can be explained by a universal value, namely survival. One could also assume two decision situations: before the passage in front of the sirens and while doing so. Ulysses’ preferences would then change according to the situation. When he listened to the sirens, his preferences would change to a behaviour that is irrational for rational choice theory. Then, however, the fact that he has bound himself to the mast of his ship does not change his preferences (even then he wants to join the sirens) but only the options for action available to him. Another example would be a drug addict who decides to surrender to the police and to make an anti-drug therapy, knowing that this choice will be very painful. Instead of binding himself to a mast, he confines himself behind the walls of his cell in order to prevent himself from following his first preference of consuming drugs.

Zürn’s second and third example for the same category of autonomous preference change are cases of true changes of preferences. A smoker who publicly declares his intention to stop smoking is for some time caught by his own rhetoric and fears the social cost of breaking his promise. After a

16. The following is a discussion of Zürn, *Interessen und Institutionen*, pp. 132-135.

17. See also Elster, *Ulysses and the Sirens*, pp. 36 seq.

18. See Zürn, *Interessen und Institutionen*, p. 90.

while, however, his desire to smoke decreases and “not smoking” rises to the top of his preference list. The same, Zürn argues, could happen with Germany if the government decided to refrain from using military means of foreign policy by giving public declarations and inserting a respective paragraph into its constitution. Besides the objection that in the example of the smoker biological processes (e.g. a physical desire to smoke which decreases after a period of — voluntary or forced — abstinence) might be at least as important as social ones<sup>19</sup>, both rely on a hidden socialisation hypothesis. A sustained repetition of certain actions and social practices, Zürn argues implicitly, leads to a change of preferences. Why this should be so remains obscure in this analytical framework. The transfer of the socialisation hypothesis from the individual to a highly aggregated collective actor, the state, makes the argument even more questionable: it is a mere hope to assume that a normative engagement of the government would lead to a socialisation of actor groups within the state (political parties, elites, media, etc.). To argue that the normative engagement to refrain from military means in the pursuit of foreign policy goals would at least socialise the government itself cannot answer the question why governments are not slaves of all past norms and laws but constantly try to change them (besides the possibility of a simple change of government).

Zürn’s other three modes of preference change (*adaptive*, *rationalising*, and *via learning*) all deal with the cognitive capacities of actors and their desire to reduce cognitive dissonance. *Adaptive* change of preferences means that an actor drops a goal when he realises that he cannot reach it and replaces it with a more realistic one: when the Soviet Union realised that it could not win the arms race, it switched to disarmament as its first goal. Change of preferences through *rationalisation* seems to contain two different patterns<sup>20</sup>. The first one is the observable tendency of individuals to justify

19. In any case, the boundaries are fluid: Ulysses’ desire for the sirens appears to be almost biological.

20. It is not completely clear what “rationalising” change of preference really means in this context. On the one hand, it could simply be used in a psychological sense, meaning that earlier behaviour is interpreted by the actor as good and useful for the achievement of his goals, in other words that *ex post*, good reasons are attached to past deeds (in this case it would correspond to the example of the fox and the grapes given by Zürn as an example of an *adaptive* change of preferences). On the other hand, “rationalising” preference change could also mean that norms and values do indeed guide behaviour and lead to a long-term preference change by “framing” the

their actions by their preferences: I do something because I want to do it. This introduces an element which is usually foreign to rational choice theory: decisions have to be justified. Justifying a pattern of behaviour is not yet a change of preference. Again the socialisation hypothesis has to explain that these justifications become "real" preferences. The second element is another version of the socialising force of norms, e.g. in the case of a state which has once adhered to an international regime and after some time changes its original preferences under the influence of the norm and the interaction patterns induced by the regime. Finally, change of preferences via *learning* closely resembles the adaptive mode of preference change. Here, circumstances change and the information collected by the actor about this change leads to a change of preferences. The notion of learning in this context relies on a cognitive stimulus-response model.

In sum, Zürn can explain preference changes via rational calculation (in the meaning of rational choice theory) although he has to introduce a socialisation hypothesis external to his theory which remains obscure. However, he does not — and cannot — even deal with preference changes based on changes of values. <

#### 4. *Limitations of Rationality*

Apart from the problems with an endogenous explanation of preference change, rational choice theory has been criticised for making unrealistic assumptions about actors<sup>21</sup>. An recent criticism, which has its origin in sociology, is concerned with the very conception of rationality itself which restricts rationality to instrumental action out of self-interest while neglecting the role of norms and values. The second modification to rational choice theory is older and has its roots in cognitive psychology. It relaxes

situation. Although it is fair to admit that any categorisation has its flaws (see on the subject of his own categories Zürn, *Interessen und Institutionen*, p. 135), the vagueness of these categories seems surprising, given their central place in the argumentation and their permanent use in the subsequent text. Although this is not a systematic argument, it underlines the difficulties rational choice theory has with the endogenous explanation of preference change.

21. For a stimulating discussion of solutions to this problem, see Scharpf, *Games Real Actors Could Play*.

some of the assumption about the properties of homo oeconomicus without leaving the field of rational-choice rationality. Both approaches thus try to draw limits to actors' rationality in order to make it more realistic. However, this effort is insufficient for the present purpose.

The older line of argumentation has been introduced into the debate by Herbert Simon and figures under the heading of "substantive" instead of "instrumental" rationality. In classic economic theory, actors have complete information about their environment, unlimited information processing capacities and perform a continuous recalculation of their options of action on the basis of their preferences according to this information. It has become a commonplace to state that these assumptions are unrealistic. One attempt to solve this problem was to point to the (internal) limitation of actors' information processing capacities. In this model, actors are no more completely informed about their options and fully aware of their preferences at any moment. They do not try anymore to maximise their utility in view of some optimal goal but only look for satisfactory strategies faced with an overwhelming environmental complexity. Cognitive constraints thus prevent actors to reach an optimal goal but induce them to stop searching at an acceptable goal when they have reached the limits of their cognitive capacities. This conception of "satisficing"<sup>22</sup> instead of "optimising" was strongly influenced by results of cognitive (individual) psychology.

> According to it, the rationality of actors is "bounded" and can only lead to results below "objective" optimum outcomes. The conception of bounded rationality shifts the attention from the pursuit of strategies for optimal solutions to the search of procedures for good solutions<sup>23</sup>.

In this way, some of the obviously unrealistic assumptions of traditional rational choice theory<sup>24</sup> can be corrected. When information processing and its constraints become problematic, the recommendation that one should focus on ways and means to improve information processing is not far away.

22. See Simon, *From Substantive to Procedural Rationality*.

23. Simon calls the latter "procedural rationality"; see Simon, *From Substantive to Procedural Rationality*. See also March, *Decisions and Organizations*, pp. 266-293 ("Bounded Rationality, Ambiguity, and the Engineering of Choice") and id., *Variable Risk Preferences and Adaptive Aspirations*.

24. Zürn calls them the "hyper-rationality assumption", see Zürn, *Interessen und Institutionen*, pp. 82 seq.



Institutions, either in the form of classic international organisations or of international regimes are a possibility to reduce information deficits and transaction costs. In a functional interpretation, this is why institutions exist in the international system despite the fact that states even in this model still follow the logic of anarchy.

> Yet, the concept of bounded rationality does not depart from standard rational choice theory in its conceptualisation of preferences. It simply says that, flatly spoken, actors try to make the best out of a given situation instead of trying to pursue unattainable goals. The objection against introducing cognitive factors<sup>25</sup> into the economic model of man is that it leads to an ever-increasing complexity of this model without yielding substantially new insights. Opponents prefer strictly deductive reasoning despite its known mismatch with reality because it is able to provide clear and testable hypotheses instead of losing ground in a huge number of studies in inductive analysis<sup>26</sup>. Other critics have objected that the concept of "bounded rationality" is a half-way solution as it gives up the rationality concept by introducing factors such as aesthetic judgement, emotions, etc.

> On the one hand, "bounded rationality" is not radical enough as it still sticks to the concepts of traditional rational choice theory, though in a softened form, on the other hand it is too radical by de facto giving up the notion of rationality itself<sup>27</sup>.

> In recent years, important modifications of the analytical framework of rational choice theory seem to come not from cognitive psychology but from sociology. The central argument of this debate is that one can integrate central features of homo sociologicus<sup>28</sup> in a broadened rational-choice

25. See for instance Rubinstein, *Comments on the Interpretation of Game Theory*.

26. See Lindenberg, *Homo socio-oeconomicus*, p. 734.

27. See Schlicht, *Rationality, Bounded or not, and Institutional Analysis*, pp. 711, 716.

28. Homo sociologicus is seen as norm-guided and conforming. He is insensitive to changing circumstances and a helpless object of social forces. His behaviour is determined by the past in the form of internalised social norms. From the rational choice point of view, his behaviour is not rational as his socialisation prevents him from optimising his goals. Proponents of the sociological approach claim, however, that norm-guided behaviour cannot simply be called irrational because it follows another rationality than the one prescribed by rational choice theory which claims to have the monopoly definition of rationality. Sociological approaches also deny the possibility to explain behaviour only by referring to the individual. Norms, they claim, are not reducible to the part the individual has internalised. Norms do not

framework. A central feature of attempts to make rational-choice theory more "realistic" is the acknowledgement that actors are not completely free to choose their options but are constrained in some way or another. Whereas the notion of bounded rationality places the constraints of rational action within the actor in the form of cognitive limitations and finite information processing capacities, the concept of "framing"<sup>29</sup> takes up the notion of norms existing outside the actors. Whereas *homo sociologicus* is entirely guided by norms, their role in an enlarged rational choice framework is merely to define the decision situations and restrict the options from which an actor can choose. Due to the premises of methodological individualism, norms must be internalised by the actors in order to be effective<sup>30</sup>.

Norms then prescribe goals for certain *situations*. Actors do not try to maximise their utility in an abstract universe but under specific circumstances. What may be rational in one situation may not be rational in another.

"Briefly stated, a situation is framed by a goal (and the relevant goal criterion) in the sense that that goal will select the relevant alternatives and thereby 'define' the situation. Other utility arguments play at that time only an indirect role by influencing the firmness of the grip (the 'salience') the frame has on the definition of the situation. When utility arguments in the background become stronger, they will reduce the salience of the present frame and may cause a 'frame switch'."<sup>31</sup>

only constrain but also enable behaviour. Reality is intersubjectively defined and thus again not reducible to individual views of reality.

29. Note that "framing" is used here in a rational-choice context. The notion of framing developed later (pp. 34 seq.) which constitutes the basis of the present thesis is considerably different.
30. This must not be confused with the discussion on the rational pursuit of norms. The fact that people observe norms can often perfectly be explained by rational choice-theory on the basis of self-interest. Thus, it may be perfectly rational for me to follow a norm of revenge in a traditional society as I know that disobedience will lead to my complete isolation and probably even to violence against myself. In international relations, it is rational even for a superpower to respect the norm of diplomatic immunity because the non-respect of this norm could entail the breakdown of the norm and to sanctions or violence against its own diplomats. The disadvantages could thus outweigh the advantages of breaking the norm.
31. Lindenberg, *Homo socio-oeconomicus*, p. 743. On similar lines, see Kahneman/Tversky, *Choices, Values, and Frames*. See also Lindenberg, *Choice and Culture*.

The idea of some kind of universal utility function is not given up. The universal norm (e.g. "maximise your profit", "increase your social status") is only pushed into the background by the situational goal but can supersede the situational goal. The move from universal to situational decision situations makes rational-choice analysis much more attractive for the political scientist who cannot rely on universal goals because there is no analogy to the market with a huge number of actors and a strong selection mechanism in the form of competition.

In the notion of "framing" outlined above, however, norms are assumed as influencing the definition of the situation because they have been internalised by the actor. How social norms emerge and how they are maintained, which factors influence the salience of a norm, and how norms are internalised is not explained from a rational choice perspective<sup>32</sup>. Norms and values still remain exogenous to rational choice theory. Whereas traditional rational choice theory neglects the question altogether, more recent approaches acknowledge their existence as a constraint operating within actors. The challenge for rational choice theory is therefore to make the emergence and internalisation of norms and values endogenous to rational choice theory<sup>33</sup>.

One way to tackle the problem is to reduce the explanatory scope of the theory. What cannot be explained by the theory is declared as a secondary question by the analyst<sup>34</sup>. As a consequence, preference change as a

32. See Ziegler, *Norms as Frames of Action*, p. 8. But see Coleman, *Foundations of Social Theory*, chapters 10 and 11.

33. There have been repeated calls for such a theory in recent years but none of them has been conclusive so far; see for instance Sen, *Rational Fools*. For a stimulating attempt to explain the emergence of norms by needs to reduce complexity without completely leaving a rational choice framework see Gehring, *Dynamic International Regimes*, in particular chapter 9 ("Expectations, Norms, and Social Institutions in the International System").

34. "Die Frage nach der Entstehung der Norm, die sich zum Wert verfestigt hat, ist im Rahmen einer situationsstrukturellen Analyse ... irrelevant, sie stellt sich allerdings in einem anderen, historisch weiter zurückliegenden Kontext." Zürn, *Interessen und Institutionen*, p. 143. There can be no objection in principle to such a proceeding under the condition that the theorist explicitly recognises that his approach is only designed to explain part of reality. One could read the statement above as simply acknowledging that rational choice theory is only a part of a wider theory of action. This could be justified either by the fact that the partial theory can explain most cases of social interaction or by the parsimony of the theory, in other words, by the

consequence of a change of values and norms remains inaccessible to rational choice theory.

### *5. Values and Preferences*

Making values<sup>35</sup> a part of actors' preference structures cannot explain why certain values are part of the individual preference structure. Rational choice theory answers this question in principle by saying that it is in the self-interest of actors to be motivated by a specific value. This is certainly true for universally shared, self-evident, or "generic" values but debatable for those values that are not universal or self-evident ("immanent values")<sup>36</sup>.

Generic values (maximising wealth, status, or power, surviving) can easily be regarded as part of the individual's preference structure. There is no need to justify their presence because they are obviously in the self-interest of actors (on the contrary, behaviour not following these preferences has to be explained). Generic values are universal by definition and as such not very interesting for the analysis. Not much is lost when they are simply accepted as part of the individual's preference structure as they are also not subject to change. Their vagueness makes them a weak tool for understanding specific situations<sup>37</sup>.

Immanent values (e.g. the absolute right of nature to remain intact as opposed to the right of human beings to a healthy environment) are more

coherence and formalisation of its models. In both cases, however, the implicit universalistic claim of rational choice theory is lost.

35. Values are good reasons which people ascribe to their action. They can also motivate action (e.g. "believing in God"). Norms are prescriptions for action (such as "do A" or conditionally: "if A, do B, else C", etc.), e.g. "go to church".
36. For the distinction between "generic" and "immanent" values see Hechter, *Should Values Be Written Out of the Social Scientist's Lexicon?*
37. In structural realism, for instance, the assumption that the first preference of states is to assure their survival might still be a useful assumption for deducing hypotheses about the stability of bipolar as compared to multipolar systems. If this level is left and the analysis is directed towards specific issue areas, such a universal value becomes useless. How, for instance, can the emergence of an agreement on environmental co-operation in the Mediterranean be explained by the desire of states to survive? See P. Haas, *Saving the Mediterranean*.

interesting but more difficult, and indeed, impossible to deal with in rational choice analysis. As they are not universal, their presence has to be explained. One possibility is to define that every part of the preference structure of an individual is in the self-interest of that individual. Obviously, a definition is not an explanation. Another possibility is to call these preferences irrational. Again, this is no explanation but a regretting neglect<sup>38</sup>. Rational choice theory cannot identify a process whereby non-universal values become part of the individual preference structures as this process must be prior to preference formation<sup>39</sup>. They cannot be chosen rationally<sup>40</sup>, or at least not within the rationality concept of rational choice theory<sup>41</sup>. Immanent values have to be communicated in order to become an often unconscious part of individual preference structures.

These later remarks argue that rational choice theory cannot fully deal with preference change because of its conception of rationality. Rational choice theory seems to have monopolised the use of the term but in reality has restricted it to one specific type of it, namely what it calls "instrumental rationality"<sup>42</sup>. The rationality of rational choice theory is the type of action that corresponds to the ideal homo oeconomicus portrayed above. This conception of rationality seems too narrow. Whether all types of action beyond rational-choice rationality are simply called "irrational" is in the first place only a terminological question. As it carries, however, normative

38. The question is whether one can justify this neglect. It seems that in international politics as in other areas of social life, much behaviour is motivated by preferences that are "irrational" for rational choice theory. Calling them irrational means excluding them — or important parts of them — from the analysis. Consider religious factors in international politics: the readiness of tens of thousands of young Iranians to die as martyrs in the war against Iraq can hardly be explained by a "rational" pursuit of norms (e.g. by a fear of sanctions).

39. See Eder, *Why Talk About Values?*, p. 5.

40. Eder gives the example of cultures prohibiting the consumption of pork meat. Whereas in some cases this eating taboo can be explained by the pursuit of rational goals (avoidance of diseases, reducing resource consumption) these reasons do not apply for all cultures where eating pork meat is a taboo. In these cases, the taboo can only be explained by a process of communication of symbols which carry meanings and good reasons; see Eder, *Die Vergesellschaftung der Natur*, pp. 117 seq.

41. See also Kratochwil, *Rules, Norms, Values, and the Limits of 'Rationality'*.

42. Or what Simon has called "substantive rationality". In a review article on different concepts of rationality, Jon Elster gave more than a dozen different versions of this type of rationality. These were, however, all variations about one theme, namely utility maximising; see Elster, *Rationality*.

implications making rational-choice rationality the “better” type of behaviour, such a labelling should preferably be avoided. Secondly, this labelling means that what is “irrational” in rational-choice theory cannot be explained by it.

The result of this chapter is thus that rational choice theory cannot deal with preference formation and in particular not with the question why non-universal values become part of the preference structure. Even attempts to modify rational choice theory by introducing the concept of “framing” or of “bounded rationality” do not tackle this question. They cannot do so because they also rest on the premise of methodological individualism and on an individualist notion of rationality. By doing so, the analyst does not only make important metatheoretical assumptions<sup>43</sup> but also directs empirical research in directions the theory can deal with and deflects it from phenomena where the theory is of little use, for instance because they are simply called “irrational”. Indeed, culture, ideas and religion are often neglected in studies dealing with the interaction of states. The preceding chapter has argued that this is hardly surprising given the conceptual basis of the dominant rationalistic approach. As the theme of the present study is precisely the emergence of preference structures, the emergence, change and use of norms, values and symbols, it has to leave the framework of rational choice.

## B. Cultural Theory and Plural Rationalities

The following chapter tries to extend the critique of rational choice theory of the first chapter and prepare the theoretical ground for the empirical analysis of Part III. The central features of this elaboration are the notion of rationality adopted by rational choice theory and its conception of preferences. Both exclude some parts of social reality in a systematic way from the analysis. This chapter argues that these problems can be fruitfully

43. Habermas claims “daß wir uns allgemein mit der Wahl bestimmter soziologischer Handlungsbegriffe auf bestimmte ontologische Voraussetzungen einlassen. Von den Weltbezügen, die wir dem Akteur damit unterstellen, hängen wiederum die Aspekte der möglichen Rationalität seines Handelns ab”; Habermas, *Theorie des kommunikativen Handelns*, Vol. I, p. 126.

tackled by adopting a constructivist perspective which allows for plural realities that are socially constructed. The constructivist perspective also sheds light on the emergence of preferences. A most interesting perspective is the conflict of different rationalities based on different constructions of reality, a situation not foreseen in rational choice theory.

### *1. Only One Type of Rationality?*

As its name already indicates, rational choice theory has virtually monopolised the concept of “rationality”. The preceding chapter has tried to demonstrate that this has important consequences for the empirical analysis in so far as it excludes all types of behaviour which are not rational in the sense of rational choice theory from the analysis. The rationality concept of rational choice theory is based on the specific concept of strategic action as a means-ends relation. This does not have to be the case. On the contrary, four basic concepts of action can be identified which have different characteristics and which lead to other rationalities than rational choice theory does. The implication of this view is that rational choice theory and methodological individualism are only one of several possible ways of seeing and analysing the social world. In the following section, I will briefly discuss these four concepts of action<sup>44</sup> in order to make clear my own approach chosen in this study, its rationality implications and the consequences this has for empirical analysis.

Rational choice theory uses the concept of *strategic action*. This implies a special attention to the relationship between means and ends. According to this concept, an actor tries to reach certain ends or goals. He does so by choosing and applying means that are appropriate in a given situation. Strategic action implies that the actor takes the calculus of at least one more strategic actor into account while assessing the appropriate means to

44. The discussion is based on Habermas, *Theorie des kommunikativen Handelns*, Vol. I, pp. 126 seq. The aim of this section is not a comprehensive analysis of different types of rationality but only a demonstration that different types of action and of rationality, often chosen implicitly by the analyst, have different implications for the design and the results of any empirical analysis. The same argument is used in the context of international relations theory by Wendt/Duvall, *Institutions and International Order*, p. 55.

achieve his ends. A central category of this concept of action is the *decision*. Decisions are aimed at achieving goals by choosing between different alternative patterns of action. Decisions are dependent on the assessment of the situation by the actor<sup>45</sup>. This concept of action assumes that actors try to choose goals and means under the criterion of a real or expected utility which is to be maximised. Frequently, this view assumes a “general” or “objective” utility not only in the field of economics, but also in the social or political reality<sup>46</sup>. This utility is a premise, not an object of empirical inquiry.

The model of strategic action does not preclude dealing with cognitions. On the contrary, more recent theories all agree that the objective world is not fully intelligible to the actor but only within the limits of his cognitive capacities. These capacities constrain, bind, or frame the actor’s calculation of his utility. The cognitive capacities of strategic actors must allow for the existence not only of things but of other actors (decision-making systems). The strategic actor thus refers to one world outside himself which he analyses by means of his cognitive capabilities<sup>47</sup>.

The concept of *norm-regulated* action does not apply to an atomic actor which encounters other, similarly structured actors in his environment but instead to an actor as member of a social group which orients its behaviour at shared values. These values find their expression in norms, i.e. in prescriptions. An actor complies with a norm (or violates it) as soon as he is in a situation to which the norm applies. Action is thus not guided by a future reward but by a present prescription. Norms express the agreement existing in a social group. They create generalised expectations within the group in the sense that the other members of the group, as soon as they are in the situation to which the norm applies, behave according to this very

45. See for instance the “situation-structural” approach of Zürn, *Interessen und Institutionen*.

46. The assumption of a general utility or a “social welfare function” has already been criticised by American pluralist thinking of the 1960s; see in particular Lindblom, *The Intelligence of Democracy*. Still, it occasionally re-emerges, for instance in environmental policy analysis; see for instance the interview with the climatologist Klaus Hasselmann on his research programme in *Der Spiegel* 41/1992, p. 272.

47. The actor builds “cognitive maps” of his environment; see, for instance, Axelrod, *Structure of Decision*.



norm. The central category of norm-regulated action is thus norm-compliance. Non-compliance may lead to sanctions by other members of the group. The generalised expectations of behaviour created by norms are not only cognitive in the sense that they allow predictions about a certain behaviour which can reasonably be expected but also normative in the sense that the members of the group are *entitled* to expect a specific behaviour. Normative expectations can continue their existence despite a different cognitive reality whereas cognitive expectations, on the contrary, can be falsified and then have to be corrected<sup>48</sup>.

Norm-regulated action presupposes the existence of a world of norms beside the objective world as the two worlds to which the actor refers<sup>49</sup>. The world of norms is the social world in which the actor exists together with other actors referring to the same normative context. These norms do not exist as such but only because the group of actors acknowledges their existence. The *validity* of a norm means that actors agree to it in principle because it regulates their action and interaction problems. The *effectiveness* of a norms, however, means that its validity claim is factually accepted by those concerned by the norm. This *intersubjective* agreement is the basis of the social (and not only private) validity of the norm.

In this model, there is again a confrontation of the actor with the world(s). As in the model of strategic action, the actor faces a world which he can recognise cognitively and in which he can intervene, either in order to pursue his goals or to sustain legitimised relations with other actors. These models reflect the common distinction between *homo oeconomicus* and *homo sociologicus*. There might even be areas of overlap between the two models

48. On the distinction between cognitive and normative expectations see Galtung, *Expectations and Interaction Processes* and Luhmann, *Rechtssoziologie*, p. 42.

49. If the actor refers only to the world of norms, the analysis is restricted to the realm of law, and, more specifically, to legal positivism. An admittedly extreme, but in principle still valid statement says that the lawyer "kann die Welt des Seins und die Welt des Sollens in seinen Begriffen nicht verbinden und muß sich darum entscheiden, ob er als Soziologe und Psychologe das tatsächliche Geschehen, das Handeln der Menschen erklären, oder die Rechtsnormen erfassen, ob er seine Begriffe aus der einen oder aus der anderen Welt abstrahieren will. Der Jurist darf sich nicht mit Fragen befassen, die der Psychologe oder der Soziologe aufwirft und daher nur dieser mit seinen besonderen Forschungsmitteln zu beantworten imstande ist"; Kelsen, *Hauptprobleme der Staatsrechtslehre*, p. VIII.

- › which at least partly be captured by the concept of “framing” (in the meaning of rational-choice theory).
- › The model of *dramaturgic* action goes one step further: It conceptualises the actor itself as a world to which he can have a reflective relationship<sup>50</sup>. Dramaturgic action sees social interaction as an encounter where the actors are engaged in a performance and constitute their mutual public. For the actor, the aim of the performance is to present himself in a specific way in the eyes of his public. Dramaturgic action is often in some sort a supplement to strategic action. It refers to the style of the activity, to its presentation which is given a life of its own. When acting according to this model, people act *as* policeman, diplomat or politician<sup>51</sup>. Action thus frequently acquires a double face: people are not just doing something in order to achieve their goals, but do it in a specific style. In this field of research, the *forms* of action consequently require a particular attention. The model of dramaturgic action does not have to remain restricted to the action of people but can equally be extended to organisations or states<sup>52</sup>.

As actors act as if they were playing before an audience, the manipulative aspect of this play is of central importance. This manipulation is, however, not identical with strategic action. The actor may be entirely convinced of

- 50. This model is much less developed and much more recent as the preceding ones. It has been introduced by Erving Goffman; see his *Strategic Interaction, Encounters, and Frame Analysis*; see also Gusfield, *The Culture of Public Problems* and Garfinkel, *Studies in Ethnomethodology*, and in particular his discussion of rationality (ibid., pp. 262 seq.).
- 51. See for instance Gusfield, *The Culture of Public Problems*, p. 80/81: “... I want to describe that confrontation as a confrontation between good and evil. The drinking-driver is the leading protagonist in the moral drama of automobile accidents. He supplies a major explanation for a source of death and destruction. To convert him from sin to virtue is a salient element in the public drama of the auto and American society.” and later: “Conceptualizing public actions as drama means that we think about them *as if* they were performances artistically designed to create and maintain the attention and interest of an audience.” (ibid., p. 175, emphasis is the original).
- 52. An example which comes to mind is the arms race between the two superpowers. In this case, the presentation of one side to the other was of central importance in the framework of deterrence (and of its credibility). This importance of the presentation to the other side is not reducible to strategic action (in the sense that certain actions have to be performed or statements made in order to make sure that the other party assesses the situation in a specific way) but includes a performance for the domestic public as well as for the state community. Diplomacy is full of ritualised presentations (c.f. also the expression “the diplomatic stage”).

the truth of what he is playing. He does not do so only in order to hide his "real" intentions. By playing, he creates an image of himself not only for the public but also for himself. Only if the public would judge the play solely under the criterion of goal achievement, it could be reduced to strategic action. The worlds in which dramaturgic action takes place are the inner and the outer world.

The model of *communicative* action, finally, shifts its attention to the role of language as a medium of exchange which reflects the references of the actor to the world<sup>53</sup>. All three preceding concepts of action refer to language or can at least be constructed as if they would do so. The strategic model can be reformulated in a way as if the egoistic, utility-maximising acts of actors were mediated via speech acts. Norm-regulated action has to assume a consensus between the participants of interaction which exists — at least in principle — in the form of language. The dramaturgic model of action has to rely on speech in order to communicate the play of the actor to the public. Thus, in the model of communicative action, the actor in principle refers to three worlds (the objective, the subjective, and the social world).

The communication, according to which all three preceding types of action can be modelled, does not take place in a vacuum but on the background of a culturally transmitted pre-understanding<sup>54</sup>. In each interaction, actors use part of their stock of knowledge<sup>55</sup> which is relevant to the interaction. In this concept, actors are not restricted to one decision situation but can *negotiate* the definition of the situation. By doing so, they modify their stock of knowledge relevant to the situation. Definitions of situations create orders by which actors relate elements of the situation to the structure of their stock of knowledge. There may be encounters of actors with fundamentally different definitions of the situation. If none of them has a monopoly of interpretation, they face the difficult task of finding areas of

53. This tradition goes back to Wittgenstein. See his *Tractatus Logico-Philosophicus* and the *Philosophische Untersuchungen*, which despite their fundamental conceptual difference retain one common theme, namely that reality is only intelligible through language.

54. See Habermas, *Theorie des kommunikativen Handelns*, Vol. 1, p. 150.

55. See Schütz, *Der sinnhafte Aufbau der sozialen Welt*.

agreement. Communication in this case, it can be assumed, is difficult to achieve and precarious<sup>56</sup>.

This short overview of concepts of action had the purpose to demonstrate that the concept of action chosen by rational-choice theory is by no means exclusive but on the contrary a rather limited one. It relates the actor to an objective world and focuses on means-ends relationships without further inquiring the conditions for these relationships. All four models of action have their own type of rationality. Rational-choice rationality is only a particular type. The first three concepts of action stress certain actor-world relations and discourage others. This has implications not only for theorising but also for empirical analysis<sup>57</sup>.

There is no need to oppose those rationalities or, for instance, norm-guided to strategic action. Norms or the public drama in which actors are engaged might decisively influence what the interest of strategic actors is<sup>58</sup>. Whether Habermas' synthesis of strategic, norm-guided and dramaturgic action in the concept of communicative action is the only possible one is not at issue here. I merely wanted to show that different concepts of action lead to different rationalities and that, at least in principle, communication among these rationalities is possible.

56. It is interesting to note in passing that both Habermas and Luhmann, despite their fundamentally different approaches to construct a theory of society, both give a central role to communication; see Luhmann, *Soziale Systeme*, chapter 4 ("Kommunikation und Handlung"). But see also Goffman, *Strategic Interaction*, on the concept of "communication": "This concept has been one of the most promising in the social sciences. For the last fifty years every generation of students has applied it with new hope to new areas. But although communication has often been offered as a medicine, it has seldom produced cure" (p. ix).

57. Strategic action, for instance, might lead to a model in which political actors chose the scientific interpretation of the greenhouse effect which serves their goals. Norm-regulated action as an analytical concept might focus on the impact of the effective norms guiding the relations among states in the emerging response to the greenhouse effect. Finally, dramaturgic action might stress the production process of science and the reference to science in public policy-making as a drama which serves to create and stabilise identities of the participants in the interaction. In this model, politicians are no more free to chose the interpretation they prefer. The more interesting question, in any case, is how they know what they prefer.

58. See also Lukes, *The Rationality of Norms*, p. 8.

## 2. *Cultural Theory and the Construction of Reality*

The strategic model of action is the basis of rational choice theory. This model assumes that actors attempt to achieve their goals optimally within given rules and on the basis of given preferences. In recent years, there have been attempts to make preference change endogenous to rational choice theory. It has been argued above that this is possible only to a limited extent<sup>59</sup> because rational choice theory cannot leave the limits set by its concept of action. Preferences that have to do with self-interest of an isolated individual can probably be explained as the outcome of previous interactions. The same is true for the emergence and obedience of certain norms. Values, it has been said, have to be accepted by rational choice theory as given (if they are not “generic” values).

The decision situation which is in the centre of rational choice theory does, however, not allow for decisions about socially shared values or about the dramaturgic elements of action. The full definition of the situation which takes into account these elements remains outside the scope of rational choice theory and the underlying model of strategic action.

“In fact, contrary to a widespread belief, decision theory does not apply to decision making in general, but only to choice situations of a rather special type. The decision of decision theory is a choice that *must* be made in the situation immediately confronting the decision maker, taking into consideration the probable consequences of each possible course of action in the *present* situation. Future benefits, for example, must be defined in terms of the way they are assessed today, even though there is no reason to assume that this will coincide with the assessment of those benefits in the future.”<sup>60</sup>

These criteria apply to some cases but certainly not to all. Empirically, this leads to a neglect of cases where rational choice theory simply does not fit.

There are thus two criticisms of rational choice theory which are important for the present study: First, rational choice theory can only explain

59. See pp. 10 seq.

60. Majone, *Evidence, Argument, and Persuasion in the Policy-Process*, p. 16 (emphasis in the original). Majone uses the term “decision theory” synonymously with “rational choice theory”.

preferences that remain within its own limits; others have to be accepted without further inquiry. Second, the emergence of preferences remains obscure. How do actors know what they know, for instance, what their interests are? All three other concepts of action allow for preferences of all kinds to be the *result* of social interaction and not only the starting point. The emergence and change of preferences can thus be in the centre of the attention.

This latter point is the endeavour of a theoretical branch which figures under the heading of "cultural theory"<sup>61</sup> in the Anglo-Saxon area. Cultural theory has strong roots in anthropology<sup>62</sup>. Its central theoretical assumption is that "social relations are sustained by generating preferences that in turn reproduce those social relations."<sup>63</sup> In this case, the question is not how actors operate on the basis of their preferences and within a given set of institutional, legal, technical, etc. constraints, but how preferences are constructed by an *interaction* of the actor and its environment. Even needs and resources, cultural theory claims, are socially constructed<sup>64</sup>. It thus attempts to do away with all objectivist temptations of rational choice theory.

Cultural theory sees the actor not as an atomistic egoist but as embedded in a social order which he cannot escape. Social institutions in this view create preferences of individuals; individuals can also dispose of cognitive maps through which they perceive and interpret reality. This interpretation can, however, never be an "objective" one. On the contrary, "all is bias"<sup>65</sup>.

61. "Culture", as it is used in this context, does not have anything to do with "culture" in the sense of artistic production or entertainment, nor with the research on "political culture" or with "Kulturkritik".

62. And in particular in the work of Mary Douglas. For the most important works in this field see Douglas/Wildavsky, *Risk and Culture*; Thompson/Ellis/Wildavsky, *Cultural Theory* and Thompson/Schwarz, *Divided We Stand*. A short overview is Douglas, *A Typology of Cultures*. For a (generally positive) commentary on cultural theory see Jann, *Vier Kulturtypen, die alles erklären?*. An easily readable introduction is Wuthnow et al., *Cultural Analysis*.

63. See Thompson/Ellis/Wildavsky, *Cultural Theory*, p. 66.

64. See Thompson/Ellis/Wildavsky, *Cultural Theory*, p. 39. See also Katzenstein, *Analyzing Change in International Politics*, p. 20.

65. Thompson/Schwarz, *Divided We Stand*, p. 61.

The second central element of cultural theory consists in the claim that there is no infinite number of “biases”, of world views or ways of life, as they are sometimes called but that instead the ways actors perceive and interpret the world can be reduced to some general models. At least, actors refer to these few basic world views in different ways. These world views correspond to basic ways of organising a society or to fundamental “steering principles”<sup>66</sup>. They are no individual categories. “Cultural theory does not ask about people’s private beliefs. It asks what theories about the world emerge as guiding principles in a particular form of society.”<sup>67</sup>

The notion of “rationality” as it is used in cultural theory is thus different from the one used by Habermas in his *Theory of Communicative Action*. In Habermas’ terminology, different rationalities correspond to different properties of human action. The category of “communicative action” tries to enclose all those properties in one comprehensive concept. Habermas discusses his categories of action (and of rationality) on an abstract basis: Conceptualisations of action are analytical devices for the analysis of society. Cultural theory, on the contrary, constructs its concepts of rationality inductively from social reality. They are not analytical devices for looking at social reality but *products* of each type of organising principle<sup>68</sup>.

The conclusion drawn from Habermas’ theoretical elaboration is that different rationalities exist on the basis of different types of action which determine the definition of a situation and which are thus logically prior to preferences. Communication about these different rationalities is possible. Cultural theory comes to similar results from inductive analysis. Different

66. These four fundamental organising principles stem from a four-fold matrix with the two axes “equality/inequality” and “competition/no competition”. I do not share this rigid conception which seems to stem more from a desire for intellectual parsimony than from substantive reasoning. In any case, the search for “basic” elements of social life resembles the search for quarks in nuclear physics. Even for cultural theorists, these basic “ways of life” hardly ever occur in pure form but are usually combined in a multitude of ways. These combinations and packages are the empirical focus of the present study. Whether they consist of “last” elements, is neglected here. The important argument is that different actors can follow different rationalities.

67. Douglas/Wildavsky, *Risk and Culture*, p. 89.

68. It is understood that these concepts are ideal types. In addition, there can be combinations of organising principles.

“ways of life” carry their own rationalities. Ways of life are the basis of preferences. They are the product of societal organisation. Different actors may follow different ways of life, and hence, these ways of life (or combinations of them) can encounter each other in an interaction. Both lines of reasoning open the possibility of an analysis on what happens *before* actors have constructed their preferences.

### *3. Towards a Constructivist Perspective*

The argumentation until now has led to the result that the actor does not optimise his behaviour in relation to the opportunities and constraints of an objective world but on the basis of his subjective view of the world. This does not imply that there is no “objective” world or that it remains forever unknown to the actor. It only means that action is based on actor’s perception of reality. Whether this perception is “correct” or not, or whether there is a possibility or not to establish standards to assess the correctness of this perception is irrelevant in this context. Actors thus *construct* the reality upon which they act. Such an orientation could still be shared by a strongly cognitive version of rational-choice theory. The different types of modified rational-choice theory, namely the concepts of “bounded rationality” and of “framing” go in this direction by introducing a subjective element in the conditions for utility maximising. However, they remain tied to the premises of methodological individualism: everything that counts for determining action has to be a property of the individual. Cognitive capabilities and limitations, or the way decision situations are framed are relevant only to the degree they are found in the individual. Even this type of modified rational choice theory is concerned only with *substance* of the construction of the world, in other words not with the process of construction but with its final result. Mechanisms for influencing the individual’s cognitions can be singled out but remain within the individual.

The approach developed here goes further. Instead of the perspective of the (individual) construction of social reality, it adopts the premise of the *social*



construction of reality<sup>69</sup>. Instead of asking what actors know (and how this influences their action), the constructivist approach asks how actors know what they know (or what they think they know)<sup>70</sup>. Knowledge and the process of its social creation turns into the centre of analysis<sup>71</sup>. The social-construction-of-reality<sup>72</sup> perspective thus makes two important claims. First, actors' knowledge about the world is not arbitrary but pre-structured in a historic process. Language is an essential medium of this structuration. These structures are independent of experience; they acquire an existence of their own which cannot be reduced to individual properties<sup>73</sup>. Second, knowledge is intersubjective, i.e. socially shared<sup>74</sup>.

In this perspective, knowledge intervenes between the individual and society, between personal identity and the structure of society. Society is a permanent process of the externalisation of knowledge, its objectivation and its internalisation by the individual. Knowledge, this argument says, is first a product of individuals but then becomes part of the structure of society (and thus "leaves" the individual). This individually produced societal knowledge in turn regulates individual behaviour<sup>75</sup>.

A constructivist analysis thus consists in two steps. In the first, it has to show how individuals produce societal knowledge. The notion of societal

69. Recently, this line of thinking has even found its way into American international relations theory; see Wendt, *Anarchy is What States Make of It*.

70. This is the central question of constructivism; see Watzlawick, *Die erfundene Wirklichkeit* and *Einführung in den Konstruktivismus*.

71. The use of the term "knowledge" is rather confusing in the different sections of literature. For a discussion of the role of knowledge with regard to environmental policy-making, see pp. 96 seq.

72. The classic book of this line of thinking is Berger/Luckmann, *The Social Construction of Reality*. Berger and Luckmann heavily rely on the work of Alfred Schütz, Edmund Husserl and George Herbert Mead; see Schütz, *Der sinnhafte Aufbau der sozialen Welt* and *ibid.*, *Collected Papers*, 3 Vols.; Mead, *Mind, Self, and Society* and Husserl, *Ideen zu einer reinen Phänomenologie*.

73. "I apprehend the reality of everyday life as an ordered reality. Its phenomena are prearranged in patterns that seem to be independent of my apprehension of them and that impose themselves upon the latter." Berger/Luckmann, *The Social Construction of Reality*, p. 21.

74. See Berger/Luckmann, *The Social Construction of Reality*, p. 22.

75. See Berger/Luckmann, *The Social Construction of Reality*, pp. 127 seq. I do not attempt to discuss or criticise this concept. Its purpose is merely to show a basic explanatory strategy of this line of thinking insofar as it is important for the present study.

knowledge does not imply that society as a whole possesses the entire stock of knowledge of humanity. On the contrary, knowledge is unevenly distributed in society. It is therefore necessary to explain which type or set of knowledge is distributed in which parts of society and whether regularities can be observed in this respect. The link between the organisation of society and the organisation of knowledge in society is the subject of cultural theory. Four basic forms of societal organisation, it argues, lead to four basic types of knowledge. This part of the explanation will be neglected in the present study.

The second part of an explanatory strategy on the basis of a constructivist perspective is to show how this knowledge regulates individual or group behaviour<sup>76</sup>. This is the focus of the present study. The theoretical approach has important consequences for the empirical study. If actors internalise a specific type of knowledge about society or parts of it, there exists the possibility of different actors internalising different sets of knowledge. As a consequence, the possibility of multiple realities arises which are, however, not mere individual properties but social phenomena.

A caveat about this constructivist perspective seems appropriate here. Constructivism does not deny the existence of a reality outside the observing actor. It is also neither anti-empirical nor merely concerned with mental processes. The crucial point lies in the grip on reality:

“Erkennende Systeme sind wirkliche (empirische, das heißt beobachtbare) Systeme in einer wirklichen Welt. Sie könnten ohne Welt gar nicht existieren und auch nichts erkennen. Die Welt ist ihnen also nur kognitiv zugänglich.”<sup>77</sup>

Such an approach does not dissuade from empirical studies but simply gives them another guiding question. It asks how actors (or systems, in

76. I deliberately refrain from using the term “knowledge application” because it easily creates the association of knowledge as a set of data linked by some rules that have to be mechanically applied to a certain social situation and in particular that this application is a process that can be intentionally controlled. But see Holzner/Marx, *Knowledge Application*.

77. Luhmann, *Soziologische Aufklärung*, Vol. 5, p. 41. Münch, *Die Struktur der Moderne*, pp. 24-25, distinguishes “constructivism” in the sense used above from “radical constructivism” which has given up any relationship with empirical reality and focuses only on the internal consistency of reality constructions.

Luhmann's terminology) perceive reality and what consequences this has for their action in this reality.

For the purpose of the present study, a constructivist perspective allows a supplement to the initial decision model of rational choice theory. Whereas rational-choice theory focuses on goal achievement, the approach used here insists on goal setting, in other words on why actors want what they want instead of how they get what they want<sup>78</sup>. The consequences go, however, beyond a mere division of labour between the two theoretical concepts. What seems to be a conflict between different interests might also or even exclusively involve a conflict between different interpretations of facts and different world views. This does not have to lead to a total relativism of decision-making<sup>79</sup>. On the contrary, preferences can be systematically analysed without either deducing them from "objective" facts or simply giving up any theoretical explanation and looking for them empirically.

Preferences can be seen as stemming from different conceptions of reality. Conflicts may thus involve not merely different interests but different ways of creating these interests. Rational-choice theory cannot deal with this problem. If a completely relativistic view of the decision-making process is to be avoided, the organisation of knowledge in society becomes an important issue. If it can be shown that knowledge does not consist of an unlimited number of information units linked by an unlimited number of rules but can on the contrary be organised in specific ways<sup>80</sup>, the notion of knowledge becomes more operational for empirical analysis. Conflicts might then involve different sets of knowledge. The elaboration of a tool for the analysis of the organisation and use of knowledge is the task of the following chapter.

78. See Wildavsky, *Choosing Preferences by Constructing Institutions*.

79. As it is, for instance, conceptualised in the "garbage can" model of organisational choice, see Cohen/March/Olsen, *A Garbage Can Model of Organizational Choice*.

80. Though not necessarily in four, as cultural theory endeavours to do.

## C. Frames

Knowledge, it has been argued until this point, is in some way important for actors' calculation of their interest and the choice of strategies. Along these lines, a growing but rather disparate body of literature has tried in recent years to shed light on the role of ideas in politics. In this literature, the central theme has been that interests do not alone determine political decisions or the development of a policy but that ideas, concepts, ideologies, belief systems and the like play a sometimes decisive role<sup>81</sup>. However, the underlying theoretical assumptions and conclusions of this field of research remained somewhat unconnected. This chapter proposes the concept of "frames" as an analytical tool for the analysis of the role of cognitive structures as the basis for action. The aim of this chapter is to clarify the concept of frames and to prepare its use in the subsequent analysis<sup>82</sup>.

### 1. A Constructivist Conception of Frames

At the end of the preceding chapter, it has been said that preferences and interests are social constructions. They are constructed through the intermediary of knowledge (in a very broad sense) of the world. This knowledge, the present argument says, is itself organised and structured and thus subject to more than a mere empirical study. If there are structures and regularities in actors' construction of the world, there is the possibility of drawing systematic conclusions from these patterns to the behaviour of actors.

81. From different conceptual angles, this is the theme of the predominantly American literature on the "political power of (economic) ideas"; see e.g. Hall, *The Political Power of Economic Ideas*; Kingdon, *Agendas, Alternatives, and Public Policies*; Stein, *Presidential Economics*; Boskin, *Reagan and the Economy*; Gardner, *Sterling-Dollar Diplomacy in Current Perspective*; Maier, *The Politics of Productivity* and Majone, *Evidence, Argument and Persuasion in the Policy Process*.
82. It may be necessary to distinguish this approach from the branch of research dealing with the "belief systems" or "cognitive maps" of political elites, such as Putnam, *The Beliefs of Politicians*; Axelrod, *Structure of Decision*, or Bonham/Shapiro, *Thought and Action in Foreign Policy*. In the first place, frames are collective instead of individual constructs. Second, the research on political elites does not foresee the possibility of "action frames" (see below), i.e. of the explicit promotion of a specific world view but focuses on the interpretation of reality and its impact on decisions.

It is claimed here that such regularities indeed exist. They will be called "frames" in the ensuing text. The idea that knowledge about the world is organised in some form goes back to the German research branch which figured under the heading of "sociology of knowledge" in the twenties and thirties of this century<sup>83</sup>. In recent years, attention shifted from looking at the way knowledge is organised in the mind of the individual to the consequences of this knowledge organisation for action<sup>84</sup>.

Erving Goffman has developed an entire "frame analysis" which centres on the structures that shape and form social interaction and communication<sup>85</sup>. His concept of framing refers, however, more to the structure of the social situation than to structures of knowledge. Eder defines frames as "stable patterns of experiencing and perceiving the world"<sup>86</sup>. Martin Rein conceives them as

"... a way of selecting, organizing, interpreting and making sense of a complex reality so as to provide guideposts for knowing, analyzing, persuading and acting. A frame is a perspective from which an amorphous, ill-defined problematic situation can be made sense of and acted upon."<sup>87</sup>

In my understanding, frames have the purpose to make sense of any kind of social situation. They are the cognitive tool used by the actor to select, group and interpret events, facts, symbols, etc. In the language of systems theory, one could say that they constitute the cognitive filter used by the system to reduce environmental complexity. As systems by definition have a lower internal complexity than their environment, there must be some mechanism to perform this reduction of environmental complexity. This mechanism is a pre-condition that systems can react to events in their environment. Frames allow to select some significant events out of the stream of events in the

83. See Mannheim, *Ideologie und Utopie*; id., *Konservatismus*; id., *Wissenssoziologie* and Schütz, *Der sinnhafte Aufbau der sozialen Welt*. An easy readable introduction into this area of research is Dant, *Knowledge, Ideology and Discourse*.

84. Similar concepts, although in the context of policy analysis, figure under the label of "belief systems"; see Sabatier, *Knowledge, Policy-Oriented Learning, and Policy Change*, or "theories"; see Majone, *Policies as Theories*.

85. See Goffman, *Frame Analysis*.

86. Eder, *Framing and Communicating Environmental Action*, p. 4.

87. Rein, *Frame-Reflective Policy Discourse*, p. 2.

environment of a system. Frames as systemic filters to reduce environmental complexity are closely related to constructivism. It is the frames which determine how we know what we know. Insisting on the importance of frames does not mean to analyse in detail what is perceived by the system (or by the actor). It only means to analyse systematic features of this perception. The (re-)construction of reality works in specific ways which can be systematically described. In Goffman's formulation, the attention of the analyst is directed towards the camera and not to what the camera records<sup>88</sup>.

Framing directly leads to the assumption that there are different possible views of the world which are equally possible and that these views create multiple realities<sup>89</sup>. There have been several attempts to bring some regularity in the number of possible realities and reduce them to some fundamental categories. Goffman, for instance, lists some basic frames without claiming to be exhaustive and Schütz has tried to give some constitutive rules for his concept of "life-world". Cultural theory claims to have identified four basic "ways of life"<sup>90</sup>. In all these attempts, "frames", "ways of life", etc. have different meanings and different theoretical implications. The approach chosen here is different. Instead of attempting to identify a small number of basic frames (and the corresponding constructions of reality), I will argue that it is more fruitful to stipulate basic elements of a frame which can be found in each frame but to differing degrees<sup>91</sup> (see pp. 38 seq.).

The concept of frames does not necessarily lead to discourse analysis as a research method although it seems to be particularly useful in this field<sup>92</sup>. Frames do not have to be made explicit by actors; it is on the contrary more likely that most actors are at best partially aware of them. Frames are referents for action; action is developed in this framework and justified by

88. See Goffman, *Frame Analysis*, p. 2.

89. See Schütz, *On Multiple Realities*.

90. See Jann, *Vier Kulturtypen, die alles erklären?*

91. Such a proceeding reminds a bit of the attempts in modern physics to look for "last" and "fundamental" parts of the atom, a search which has led to ever deeper layers of "fundamental" structures until present.

92. See for instance Gamson/Modigliani, *Media Discourse and Public Opinion on Nuclear Power*; Eder, *Framing and Communicating Environmental Action*.

reference to it. Frames are thus the basis of the interests which rational actors pursue. This is not an argument against the use of frames in discourse analysis but one that diminishes the role of communication which usually plays a central role in discourse analysis<sup>93</sup>. Frames, as the term is used here, are important for the understanding of the behaviour of all types of actors, not only of media actors or of public communication. The concept might equally well apply to the analysis of the policy-process<sup>94</sup>. Different frames in this view lead to the adoption of different policy measures.

Frames can be looked at from two angles and regarded as interpretative and as action frames<sup>95</sup>. *Interpretative frames* are concerned with different ways of seeing and interpreting the world. This perspective looks at the world which actors construct. *Action frames* are devices for orienting and organising action. This latter view looks at the consequences of actors' construction of the world for their action. This distinction will be further explained in the next two sections. This does not mean that there are different frames, one for interpreting the world and another one for acting.

93. It must be made clear at this point what discourse analysis is. The word "discourse" has been used in an inflationary manner in many very different disciplines in the last decade or so. Frequently, it simply denotes that a particular attention of the analyst is directed towards text, be it written or oral, and not to actions, laws, data, etc. The implicit (and often explicit) assumption is that this text has something to do with "reality" and that looking at texts is more fruitful than looking at that "reality". This general attitude goes again back to the Wittgensteinian tradition that we can only relate to reality via language and that thus, the analysis of linguistic structures and strategies is the only way to have meaningful information about this reality.

In a more narrow sense, the term is used by van Dijk, *Handbook of Discourse Analysis*; id., *News as Discourse* and id., *News Analysis*. Van Dijk argues that the semantic structures of texts are related to the strategies of actors producing these texts. This technique is mostly applied to news in attempt to replace "classic" content analysis by a more qualitative approach. It convincingly shows that implicit meanings are communicated under the surface structure and meaning of a news text. It can probably even show how an event is transformed into text, in other words how social reality is transformed into textual reality. It is much less successful in demonstrating how "text" influences "context", i.e. it does not show how what is communicated influences reality.

94. See Rein, *Frame-Reflective Policy Discourse*.

95. This distinction is taken from Eder, *Framing and Communicating Environmental Action*. Contrary to Eder, I will use the term "interpretative frames" instead of "cognitive frames" in order to avoid confusion with the cognitive element of the interpretative frame (see below). The distinction reflects the broader differentiation between "maps of behaviour", which is characteristic for earlier works of cultural and cognitive studies, and "maps for behaviour", which is more recent in this domain; see Eisenstadt, *Culture and Social Structure*, pp. 6-7.

Frames are the link between the system and its environment. The different aspects of framing relate to different directions of information flows: interpretative frames shape the incoming information, action frames the outcome. It is claimed, however, that interpretation is logically prior to action.

## 2. Interpretative Frames

In order to get a notion of how and by which structures actors perceive reality, it is useful to relate these perceptions to three basic aspects of action. All action has a cognitive, a normative and a symbolic aspect<sup>96</sup>. All information from the environment of a system is filtered by a making a reference, at least in principle, to these three components. These components are not frames in themselves but only components or elements of interpretative frames. They constitute the cognitive structure<sup>97</sup> which shapes the actor's image of the world.

The idea that perceptions, but also expectations, have two sides, namely a normative and a cognitive one, is not new<sup>98</sup>. In this context, following the preceding discussion of the different aspects of human action, a third component is added, namely the symbolic one<sup>99</sup>. The underlying concept can also be expressed differently: in assessing an event, actors use cognitive, normative and symbolic criteria. By referring to these criteria, they attach meaning to the event.

96. This is closely related to the discussion of the basic types of action discussed in the previous chapter.

> 97. It shall again be said that the use of the word "cognitive" here refers to different things: first to the overall structure which is responsible for the actor's cognition (and which will be called "interpretative" in order to avoid misunderstandings, although this probably suggests a more active process than intended), and second the cognitive aspect in the narrow sense, i.e. in the meaning of reference to facts which are or are not.

98. For the distinction between normative and cognitive elements (in this case of expectations) see Galtung, *Expectations and Interaction Processes* and Luhmann, *Rechtssoziologie*, p. 42.

99. In this regard, I depart from an earlier attempt to conceptualise frames; see Jachtenfuchs/Huber, *Institutional Learning in the European Community* and Jachtenfuchs et al., *Umweltpolitik in der Europäischen Gemeinschaft*.



The *cognitive* aspect of interpretative frames relates to the facticity of the world. The criterion of assessing information is its truth. In other words, this aspect tells the actor how the world is. It is thus referring to the real or objective world in the Habermasian sense. New incoming information can contradict old information. In this case, it must be decided which of the two informations about reality is true (or more exact). In modern societies, this function is fulfilled by science. The information that is considered to be wrong in this case has to be replaced by the information considered to be true. The cognitive part of an interpretative frame thus can be falsified. A simple form of cognitive statements is an claim of the sort that A exists. A more elaborate form are cause-effect relationships: A is because of B. This should not be misunderstood that cognitive interpretations had to be measured against some kind of "objective" truth. It merely states that *for the actor*, something is the case. A central problem, the discussion of which will be taken up in Part II of the present study, is the problem of *conflicting* cognitive evidence and the role of science<sup>100</sup>.

The *normative* aspect of interpretative frames links the actor with the social world. It addresses the question of how things ought to be and assess the incoming information along the criteria of the Good or the Bad. An important feature of normative interpretations is the possibility of *counterfactual stabilisation* which means that they can exist despite the cognitive insight that things are not as they should be. This is an important difference to cognitive interpretations.

It appears, however, that a limitation of the elements of interpretative frames to merely two, namely cognitive and normative, is too narrow as such a concept could, for instance, not deal with the dramaturgic aspects of action. If actors perceive *how* an action has been carried out, they neither assess it on a cognitive basis (whether it was true or false) nor on a normative basis (whether it was good or bad). This problem can be dealt with by the introduction of the *symbolic* aspect of framing which establishes the actors' relationship with the subjective world. Symbolic interpretations

100. See pp. 96 seq.

concern the actors' relationship with himself. The symbolic aspects of framing thus contain a reflexive element referring to personal identity<sup>101</sup>.

Interpretative frames, according to the argumentation of this section, serve to perceive reality by assessing events according to three criteria, namely their normative, cognitive and symbolic dimension. These elements are not considered frames in themselves but are merely parts of frames that rarely gain exclusive importance, even not in specialised sub-systems of society.

### *3. Action Frames*

Interpretative frames can explain how actors perceive and construct reality by referring to three basic elements, namely to the objective, the social and the subjective world. However, actors do not only perceive reality and construct their own meaning of it but also act on the basis of this perception. Frames thus also have the purpose to choose, justify and present action strategies. They influence action because all action is related to the world view of an actor. This aspect of frames is called "action frames". One could also say that whereas interpretative frames cover the input dimension of system perceiving reality, action frames concern the output dimension, i.e. how a system acts upon its environment.

Action frames consist of "packages" containing the three basic elements of a frame as described in the previous section. These packages must be able not only to interpret new events and attach meaning to them according to the prevailing frame but also allow for the selection of strategies and the co-ordination of action towards these events within this frame. The frame of "socialism", for instance, contains as its cognitive part certain analyses and expectations about economic behaviour (e.g. the increasing "monopolisation" of capital), a normative reference to the exploitation of workers by capitalists and a symbolic component in the form of the identity of its

101. These remarks are admittedly very abstract. For an application to the subject of this study, see pp. 102 seq. on the role of risk in environmental policy and in particular pp. 119 seq. on the basic frames of EC environmental policy.

workers whose material needs are fulfilled and which are free from alienation at work<sup>102</sup>.

> An systematic inability of a frame to provide for appropriate reactions to new events may lead to an erosion of this frame, i.e. either to its change or to its replacement by a new one which is better able to deal with these events<sup>103</sup>. Such a change of frame must not be misunderstood in a rationalistic manner: Actors do not consciously choose the frame which fits their interests better like a man changes his suit. Actors' interests are constructed on the basis of the frame. Hence, if the frame changes, interests change, too.

Action frames are not only simply existing in the minds of actors but are also *communicated*. It would probably go too far to declare that frames are contained in any action including the shooting of a bullet fired in a war. However, it is claimed that in the field of public policy in particular, actions have to be justified. This is always done in the form of communication, i.e. in verbal or written statements<sup>104</sup>. Frames thus communicated can remain largely implicit or even unknown to the actor. It is also possible, however, that they are made more explicit and even become subject of actively promoted change.

Frames can be distinguished at different levels of society, from the individual, the group, a party to the state, international organisations, and groups of nations or cultures. Insofar as the different levels of society interact, frames also interact with each other. Some frames used on a micro level or in a particular debate fit better to large background than frames of society which necessarily exist only in a rather vague manner. "Self help" as a principle of social policy, for instance, fits better to a general frame of

102. A similar example is Islam. It does not only consist in religious movement trying to restore a good but lost past (see Kepel, *La revanche de Dieu* and Garaudy, *Intégrismes*). A major component is the role of Islam to solve the problem of personal identity in modern society; see Ayubi, *Political Islam*.

103. This is true for interpretative frames as well.

104. Rejecting a criticism of Keohane, *Neoliberal Institutionalism*, p. 8, this does not imply that for a complete explanation of action, it is sufficient to analyse texts while neglecting what is actually done. It only means that the frames underlying this action can be detected in texts. For a fuller discussion of methodological questions, see pp. 111 seq.

“market economy” favouring individualistic values than to a frame of “socialism” with a strong insistence on solidarity and state intervention. This phenomenon of *cultural resonance*<sup>105</sup> explains the chances of a frame to reach a wider public. It also links frame developments in one policy field to broader phenomena in society. “Internalisation of environmental costs” as a frame of environmental policy, for instance, has much better chances of getting accepted in a general framework of “economic liberalism” than an environmental frame of “nature first”.

This leads to the concept of *frame competition*. When different collective actors have different frames concerning an issue, these frames conflict with each other. Conflicting frames transport conflicting ideas, interests and problem definitions<sup>106</sup>. Frame competition occurs within an institutional and legal context. These institutional/legal structures are on the one hand the result of general frames on societal organisation. As such, they transport and reproduce a specific, “embedded” social order. They also regulate the ways in which a competition between different frames can take place. Thus, institutional structures also influence the outcome of the process of frame competition<sup>107</sup>. Frame competition is a social or political process which has to do with power, resources and constraints, not an intellectual debate on ideas. It occurs in different arenas<sup>108</sup>. Important arenas are the public arena<sup>109</sup>, the media, political arenas, such as Parliament, government, international negotiations, and private<sup>110</sup> or semi-private ones such as autonomous regulatory bodies, business or interest

105. See Gamson/Modigliani, *Media Discourse and Public Opinion on Nuclear Power*, p. 5.

106. See Gusfield, *The Culture of Public Problems*.

107. On the relationship between institutions and frames, see in more detail pp. 66 seq.

108. The arena concept has been introduced into political analysis already in the 1950s by Harold Lasswell. The basic argument is that in different arenas different political processes occur. As a result, the choice of the arena changes the policy process and the outcome of the process.

109. The public is not the same as the media. For the idea of a debating public as a source of societal change see the pioneering work of Habermas, *Strukturwandel der Öffentlichkeit* and a continuation along these lines by Eder, *Geschichte als Lernprozeß?*.

110. “Private” is used here without individualistic meaning but as opposed to “public” in the sense of “state”.

group fora. This study mainly deals with frame competition in institutional arenas and only occasionally with the public or the media.

Frame competition is partly unintentional, meaning that actors pursue their strategies without reflecting about the underlying frame and without being aware that by pursuing their strategy, they also promote their frame. However, a certain way of seeing and interpreting reality can also be actively promoted by an actor in order to achieve a profound change of other actors' behaviour by changing its underlying interpretative basis. Frames are thus not exclusively hidden behind the visible action but also part of the interaction process.

Frame competition is the struggle between differing problem definitions, the latter being the basis for the emergence of interests and preferences. In a political system, the struggle among competing frames is a struggle for power, the power to define a situation authoritatively for all participants in the system and thus pre-structure the way interests can be articulated, claims be made and policy decisions be taken.

Frame competition may lead to the victory of one frame over competing ones. This can either happen in an argumentative process in which in the end, all participants agree to the new frame or, for instance in an institutional arena, by a simple vote. In this case, however, the frames that have lost the battle do not cease to exist. Actors sharing this frame are likely to continue to revise decisions on the basis of their cognitive, normative and symbolic interpretations of the world. They might try to change later votes by changing the underlying basis for the calculation of interests. In consensual decision-making processes, argumentative processes are more important because here, agreement has to be reached by definition. One of the reasons why consensual decisions tend to be more stable than majority decisions is that not only everybody agreed but also that everybody thought it right to agree (provided the agreement was not the result of mere pressure).

While frame competition is structured and influenced by the institutional/legal framework, the latter can also be influenced by the evolution of frames. Institutions, it has been said, reflect frames which were prevailing at the time of their installation. They are, to paraphrase

Gusfield, “frames frozen in time”<sup>111</sup>. Institutions are, however, no static entities which can be regarded as constants in the analysis. Their internal structure or their functioning changes over time, and this change can often be explained by a change of frame of those working with or within the respective institutions. Institutions do not have a “logic” which stems from their structure and which is independent of the context<sup>111</sup>. On the contrary, their influence on behaviour is in turn dependent on the actors that constitute them. If this is the case, actors can even deliberately choose a strategy of changing the way people reflect about institutions (to use Berger’s and Luckmann’s words) or (in my own terminology) to change the frame of actors relating to these institutions. Such a change, as it affects the way institutions are constructed, in a very basic way affects institutions themselves. It is more difficult to achieve than mere procedural changes but it is more profound and, probably, more difficult to direct<sup>112</sup>.

Actors can thus also try to change frames about institutions as a part of their strategy to pursue their goals. They can also actively promote change of frames relating to the issue area they are concerned with. Already by acting, actors contribute to the process of frame competition as they communicate the frame with their action. In addition, they frequently try to explicitly promote a certain frame which fits well to their interests<sup>113</sup>. Promoting a frame and promoting a specific policy measure on the basis of that frame are often closely connected. This is the case because a particular policy measure often does not make sense in another universe of thinking which leads to another definition of the problem at stake. A debate on a policy measure is thus frequently a debate on the definition of the problem,

111. See the remark of Berger/Luckmann, *The Social Construction of Reality*, p. 60: “It follows that great care is required in any statements one makes about the ‘logic’ of institutions. The logic does not reside in the institutions and their external functionalities, but in the way these are treated in reflection about them. Put differently, reflective consciousness superimposes the quality of logic on the institutional order.”
112. See also Majone, *Evidence, Argument, and Persuasion in the Policy-Process*, pp. 95 seq.
113. This does not contradict the statement that frames are the basis of the construction of interests. On the contrary, sponsors of a frame want their *adversaries* to change their positions, in other words, they want to convince them that their own way of perceiving a problem is preferable. If the sponsors of a frame succeeded in doing so, they would also change their adversaries’ interests.

i.e. on the frame applicable to the situation. If only the part of the debate which deals with the policy measure is regarded, this sometimes reminds of a dialogue of the deaf. People seem to propose incompatible solutions for different people and address themselves to a different audience. This phenomenon can be better understood if the action frame shared by each actor is analysed in its normative, cognitive and symbolic component.

<sup>7</sup> People or organisations advocating a frame refer to *collective* values rather than individual ones. Promoting exclusively individual values would diminish their chances of being shared by others while the purpose of promoting a frame is precisely this. The probability of a successful promotion of a frame increases with its ability to resonate with more general societal frames. Frame promotion therefore relies heavily on symbols or simple ideas. This chapter has argued that frames can be a tool for pursuing a constructivist analysis of action. They allow to inquire into the causes for different problem definitions and to shift this inquiry into the centre of the analysis. Logically, frames are located prior to interests. The main purpose of this chapter has been to define the concept of “frames” and to illustrate its content in very basic terms. A methodology for analysing frames will be proposed at the beginning of the empirical analysis in Part III<sup>114</sup>. Processes of frame change have only on a very general basis been discussed in this chapter. The next chapter will tackle this question in more depth by introducing the notion of “learning”.

## D. Learning

If interests, preferences or utilities are constructed on the basis of world views or frames which are not merely individualistic categories but at the same time social (or collective) constructs, a change of these world views is likely to have important consequences for actors' behaviour. A change of a frame amounts to a reinterpretation of the world and can (but does not have to) lead to a recalculation of strategies and interests. The process of change can be captured by using the notion of “learning”. Learning, in this perspective, is not merely one mode of a change of preferences as compared

114. See pp. 111 seq.

to others. Learning is not equal to a change of preferences. Whether the world view of an actor changes is one question; whether this entails new preferences is another which has to be answered by empirical analysis. In particular, learning is not the same as a different outcome in a decision making process or a game. If actors behave differently, they do not necessarily have learned something.

The introduction of the concept of learning poses three important questions which will be dealt with subsequently. The first is the question about the substance of learning, in other words about what is learned. This question can be captured in the analysis of two basic approaches to learning which are labelled "simple" and "complex" learning in this context. The second question asks about who learns. In the literature, this is reflected in concepts of individual learning and of collective learning, the latter being an attempt to think of a type of learning which is more than the sum of individual learning. Finally, the third question is about the conditions for learning on the one hand and structures that inhibit or prevent learning on the other. As it is not at the centre of the empirical study, it will only be briefly discussed here.

### *1. Simple and Complex Learning*

When asking about the substance of learning, two broad categories are distinguished in the literature. These categories are not mere classifications but have conceptual implications for the process of learning and the consequences of learning processes. Most authors in this regard distinguish between "simple" and "complex" learning, "single-loop" and "double-loop" learning, "normal" and "meta-level" learning or simply oppose "adaptation" to "learning"<sup>115</sup>. Within certain margins, these different distinctions all relate to the same phenomenon. They will be discussed below using the terminology of simple and complex learning.

115. The distinction simple-complex is used by Nye, *Nuclear Learning*; single-loop and double-loop learning are introduced by Argyris/Schön, *Organizational Learning*; normal and meta-level learning appears in Hedberg, *How Organizations Learn and Unlearn* and the opposition between adaptation and learning is from Ernst Haas, *When Knowledge is Power*.



### a) Simple Learning

The concept of simple learning has frequently been used in organisation research and in policy analysis, often without distinguishing it from complex learning. This idea of learning is most frequently based on a stimulus-response concept or a trial-and-error model. In addition, organisations can also learn by imitating others' behaviour. In this case, a stimulus-response mechanism is not necessarily involved.

The stimulus-response model is frequently linked to an equilibrium concept where the organisation has to maintain its stability in a changing environment.

"... members of the organization respond to changes in the internal and external environments of the organization by detecting errors which they then correct so as to maintain the central features of [the organization]."<sup>116</sup>

Organisational learning portrayed in this fashion is primarily concerned with detecting and repairing errors.

"Organizational learning involves the detection and correction of error. When the error detected and corrected permits the organization to carry its present policies or achieve its present objectives, then that error-detection-and-correction process is single-loop learning. Single-loop learning is like a thermostat that learns when it is too hot or too cold and turns the heat on or off. The thermostat can perform this task because it can receive information (the temperature of the room) and take corrective action."<sup>117</sup>

The continuous process of error detection and correction is sometimes portrayed as a cycle (see Figure 1)<sup>118</sup>. Errors are not detected by pure hazard but in an intentional process of inquiry. Thus, not every change of

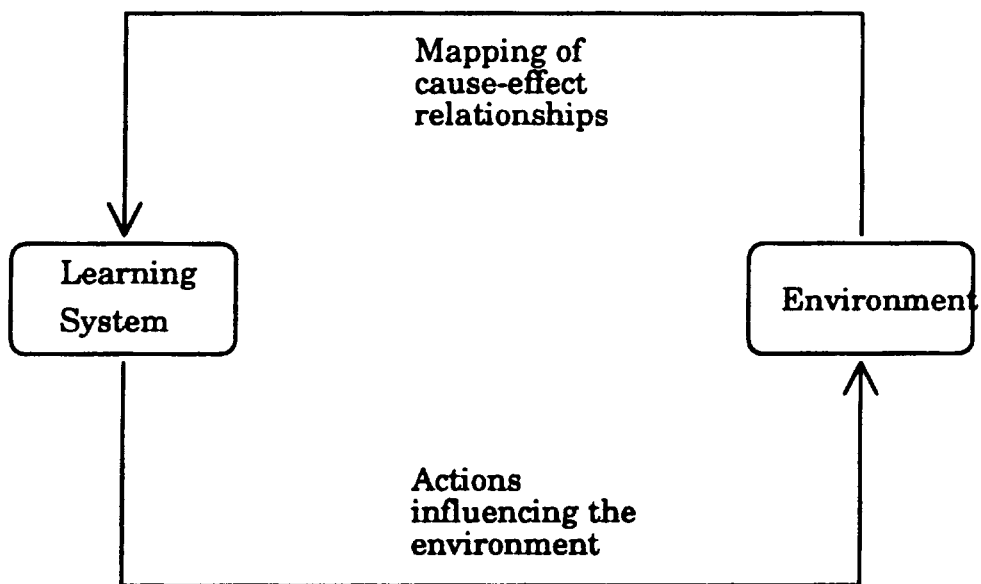
116. Argyris/Schön, *Organizational Learning*, p. 18; see also March/Olsen, *The New Institutionalism*, p. 745.

117. Argyris/Schön, *Organizational Learning*, pp. 2-3 (emphasis omitted).

118. "A complete learning cycle is one in which individual cognitions and preferences affect individual actions, which affect organizational choices, which affect environmental responses, which affect individual cognitions and preferences"; March, *Decisions and Organizations*, p. 13.

behaviour is called “learning”. Instead, members of the organisation have to carry out an *inquiry* through which they discover sources of error, invent new strategies and evaluate and generalise the results. Conflicts between divergent views must be solved by inquiry, not by compromise or by imposing one solution upon the others<sup>119</sup>. Learning through coercion or power is thus impossible.

*Figure 1: The Learning Cycle*



*Source: Hedberg, How Organizations Learn and Unlearn, p. 5*

A similar concept has been adopted in policy-analysis. The idea of the policy-cycle itself which has frequently a monitoring and evaluation phase at its end easily lends itself to the introduction of a feedback element. The evaluation of a previous policy, it is stipulated, should have consequences for the implementation of that policy or for the design of a new policy. These consequences can be called learning. The aim of this literature is a normative one: policy-makers shall draw lessons from past experience and these lessons shall improve the policy<sup>120</sup>. A lesson is an “action-oriented

119. See Argyris/Schön, *Organizational Learning*, pp. 22-23.

120. See e.g. Morone/Woodhouse, *Averting Catastrophe*, ch. 8.

conclusion about a programme or programmes in operation elsewhere” and “focuses upon specific programmes that governments have or may adopt.”<sup>121</sup> In most cases, the motivation for lesson-drawing (or learning) is dissatisfaction with the results of a policy.

This notion of lesson-drawing used in policy-analysis is similar to the learning concept frequently used in organisational research. It addresses the means of action which can be altered as a consequence of new information. It does not deal with the goals of the organisation. In other words, learning consists in using different instruments to attain a given goal. Learning as a cause of changed behaviour is attributed to an active process of inquiry, sometimes to imitation of others' behaviour in order to distinguish it from power as a source of behavioural change<sup>122</sup>.

The notion of “simple learning” as it was briefly characterised here, is often efficiency-oriented. In this case, learning has not taken place when organisations or policy-makers behave differently as compared to an earlier point in time but only if their performance is in one way or another *better* compared to the previous state of affairs. Actors learn to correct old behaviour which is not appropriate or not efficient enough to cope with changed circumstances. Learning in this perspective is needed for optimising the adaptation of a system (e.g. an organisation) to changes in its environment or for policies designed to achieve certain ends. Behind these constructions is a problem-solving perspective. The main problem for organisations is survival in a changing environment. For policies, it is given by the circumstances. In both cases, however, the problem itself is not put into question. Frequently, this is associated with the idea that a given problem has an optimal solution which can be discovered by inquiry. The better the organisation or the policy-maker approach this solution, the more they have learned.

This notion of learning also implies certain strategies. As inquiry is the distinctive quality for a type of learning which is mainly concerned with the

121. Rose, *What is Lesson-Drawing*, p. 7. Rose insists that lesson-drawing is more than evaluation of a programme in its own context but requires comparison with other, similar programmes.

122. See also Nye, *Nuclear Learning*, p. 380.

means to achieve a given end, improved possibilities for inquiry are assumed to lead to improved learning capacities and learning results, i.e. to the selection of better means to achieve the organisational or policy goals. The result of an inquiry is more or better information. Increasing the cognitive abilities of the organisation, spending more for research, improving procedures for disseminating results of research and, in general, making more knowledge available for the decision-makers are standard recommendations of the literature focusing on this type of learning.

Learning understood in this way is a rather simple concept with clear relationships between causes, effects and means<sup>123</sup>. Within the terms of rational-choice theory, talking about learning in this perspective does not make much sense. What is at stake here is in reality normal optimising behaviour of a rational actor. At best, this actor is characterised by information processing constraints, limited cognitive capabilities, limited resources for information gathering, and so on.

From the characterisation that simple learning focuses on the means to achieve given goals, it follows that a change of goals could also be possible through learning. This is the distinctive feature of the concept of "complex learning".

#### b) Complex Learning

The idea that learning may occur on different levels and that behavioural learning which affects the means actors choose to achieve their ends is only one layer of learning and indeed the most superficial one, is found rather frequently in the literature. Another type of learning which will be called "complex learning" in this study, is related to the "belief systems"<sup>124</sup> of

123. No mention is made in this context of writings that mention learning exclusively as a metaphor (e.g. "learning from history") in the sense that an actor has previously acted wrongly and now has "learned" to do it the right way. This use of the word inevitably assesses learning in the light of the analyst's ideals and values.

124. See Sabatier, *Knowledge, Policy-Oriented Learning, and Policy Change*.

actors, their myths, theories<sup>125</sup>, paradigms, goals, etc. This type of learning can occur when conflicts exist among goals; it leads to new priorities and trade-offs<sup>126</sup>. In a study on learning of international organisations, Ernst Haas defines it as follows:

“By ‘learning’ I mean the process by which consensual knowledge is used to specify causal relationships in new ways so that the result affects the content of public policy. Learning in and by an international organization implies that the organization’s members are induced to question earlier beliefs about the appropriateness of ends of action and to think about the selection of new ones ...”<sup>127</sup>

Similarly, Argyris and Schön identify what they call “double-loop learning” when “error is detected and corrected in ways that involve the modification of an organisation’s underlying norms, policies and objectives”<sup>128</sup>. In the same way, Deutsch defines learning as

“the ability of any political decision system to invent and carry out fundamentally new policies to meet new conditions ... related to its ability to combine items of information into new patterns.”<sup>129</sup>

These norms, policies and objectives are bound together in “theories of action” which are the cognitive basis of all deliberate action from the part of the organisation. These theories of action may be divided into those that can be inferred from their observable behaviour (“theories-in-use”) and those which the organisations announce to the world (“espoused theories”)<sup>130</sup>. These theories may be valid or invalid, but they guide behaviour. Some authors have preferred the label “myths” for these “theories” in order to

125. For a conceptualization of policy change in analogy to the succession of “research programmes” (Lakatos), see Majone, *Policies as Theories* and id., *Research Programs and Action Programs*.

126. See Nye, *Nuclear Learning*, p. 380.

127. E. Haas, *When Knowledge is Power*, pp. 23-24. For a critique of Haas’ conception of learning, see footnote 134, p. 53.

128. Argyris/Schön, *Organizational Learning*, p. 3. “We will give the name ‘double-loop’ learning to those sorts of organizational inquiry which resolve incompatible organizational norms by setting new priorities and weightings of norms, or by restructuring the norms themselves together with associated strategies and assumptions.” (ibid., p. 24).

129. Deutsch, *The Nerves of Government*, p. 163.

130. See Argyris/Schön, *Organizational Learning*, p. 10-11.

stress their multiple origin not only from observation of reality but a variety of sources up to sheer fantasy<sup>131</sup>.

In the terminology of this study, the myths, cause-effect relationships, theories of action, etc. that have been identified as the subject to change in the case of complex learning have been called frames. *Complex learning, in this conceptual framework, corresponds to a change of frames*. It is important, however, in particular with respect to the problem-solving background of some organisation theories, to retain a wide concept of frames if learning processes shall be analysed in a comprehensive way and not from the outset be restricted by the use of a narrow definition of frame<sup>132</sup>. A frame should encompass all three dimensions enumerated in the preceding chapter, i.e. the cognitive, the normative and the symbolic one. Both organisation theory and policy analysis are strongly rooted in rational choice theory, at in their mainstream versions and have a certain tendency to neglect "irrational" aspects of frames. The problem-solving tendency of this section of research often concentrates on references to the objective world (i.e. to the cognitive aspects). As a consequence, theories of action, world views or cause-effect relationships are subsumed under the category of "knowledge". Knowledge thus becomes a very broad notion, encompassing not only knowledge about means to achieve given ends, but also knowledge about goals. Still, this view of knowledge is characterised by reductionism as it almost exclusively focuses on factual knowledge<sup>133</sup>. While it is certainly legitimate to concentrate on learning processes with

131. See Hedberg, *How Organizations Learn and Unlearn*, p. 12.

132. Mann, *Environmental Learning*, introduces the notion of "paradigmatic learning" which corresponds to my use of "complex learning". He is also close to the ideas of cultural theorists about four basic ways (or "paradigms") of conceptualising the environment (*ibid.*, p. 304). However, in his concept these four paradigms are *goals* to be achieved by the "process of reducing uncertainty of all kinds: scientific, economic, administrative and political. It is a process of trial and error, or an effort at falsification of stated propositions" (p. 336), in other words, by simple learning. What is gained conceptually in the beginning is thus lost at the end. See also Sand, *Lessons Learned in Global Environmental Governance*.

133. This is particularly true for the recent debate about the role of epistemic communities in international politics and in policy-making. For a criticism, see footnote 156, page 61. See also pp. 96 seq. for a discussion of the role of knowledge in environmental policy.

respect to factual knowledge, this must not create the impression that there is no learning beside the change of factual knowledge<sup>134</sup>.

Also in the perspective of complex learning, learning is triggered by dissatisfaction and the resulting inquiry. Again, a learning cycle can be stipulated<sup>135</sup>. The cycle is in principle the same as in the case of simple learning but merely has another object (namely the underlying beliefs, norms and values instead of the means). The perspective is still one of a homeostatic system-environment equilibrium. Dissatisfaction and sources of change emerge in the environment and have to be processed by the system.

New frames as a result of a learning process change the way actors think and calculate their strategies. Two points are important in this respect. New frames do not directly follow from institutional structures<sup>136</sup> and they do

134. Despite considerable theoretical effort, some writers have never given up the enlightenment attitude that the education of mankind will lead to peace, that rationality and knowledge are closely related and that rationality is brought by modern science, which is often seen as incarnated by natural science. From earlier proponents of this view, for instance David Mitrany, *A Working Peace System*, a line can be drawn to present discussions of knowledge and international regimes. This line of thinking in international relations theory is frequently labelled "functionalism", an approach which has few in common with the sociological functionalism of Merton, Parsons or Luhmann. A particularly striking case is Ernst Haas, who has never in his work given up the idea of opposing non-political, technical experts with political decision-makers. In his model, only the former bring peace and progress, whereas the latter are responsible for power, struggle and war. The notion of learning, which occupies a prominent place in his work from the early *The Uniting of Europe*, and *Beyond the Nation State* over his work on cognitive factors and international regimes (*Why Collaborate?*, *Words Can Hurt You*) to his late *When Knowledge is Power* is always linked to non-political experts. Haas never assumes idealistic motivations of his actors but instead constructs processes by which expert knowledge leads to ("incremental") progress behind the back of political actors. His actors cannot avoid to learn in the long run. Haas, in the fifties as in the nineties, is convinced that "... as scientific knowledge becomes common knowledge and as technological innovation is linked to institutional tinkering, the very mode of scientific inquiry infects the way political actors think. Science, in short, influences the way politics is done." (E. Haas, *When Knowledge is Power*, p. 11). International co-operation is possible and can be furthered by international organisations because "... the language of modern science is creating a transideological and transcultural signification system." (*ibid.*, p. 46). See also E. Haas et al., *Scientists and World Order*. Technical knowledge can transcend "prevailing lines of ideological cleavage"; E. Haas, *Why Collaborate?*, pp. 367-368.

135. See Figure 1, p. 48

136. A discussion of the role of institutions for guiding behaviour in general and for the relationship between institutions and frames in particular can be found on pp. 66 seq.

not automatically lead to behavioural changes. Learning seen as a frame change becomes thus an intervening variable. Empirically, this opens two paths of study, that is, the inquiry into reasons and modalities of learning (i.e. why and how actors learn) and the analysis of the effects of learning in terms of outcomes.

> Complex learning (which will be referred to as “learning” in the following text) allows the introduction of another dimension of learning. *Reflexivity* is the ability of the system to think about itself, about its own rules and its functioning<sup>137</sup>. Reflexive learning, then, is the ability to learn how to learn. The notion appears in the literature under different labels, such as deuterolearning<sup>138</sup>, second-order learning or, in a somewhat different context, as “frame-reflective policy-discourse”<sup>139</sup>. It is the central category of Eder’s conceptualisation of societal learning<sup>140</sup>. Reflexive learning leaves the concept of a system’s adaptation to its environment. In the case of reflexive learning, the adaptation process itself is subject to intentional change.

## 2. Individual and Collective Learning

The second important question in a conceptualisation of learning processes  
> is the inquiry about those who learn. On a basic level, the answer to this problem is very easy: only individuals can learn. The fact that individuals are able to learn is undisputed and a considerable part of research on learning is research on individual learning. Individual learning is unproblematic as a concept. What is interesting in this context are ways and patterns of the learning process. The question becomes more  
> troublesome if it is put in a different way: Can collective actors learn, and under what conditions is such collective learning possible? If an affirmative

137. In some recent sociological theorising, reflexivity is given the status of a central category of modern society; see e.g. Beck, *Risikogesellschaft*.

138. The term, introduced by Gregory Bateson, is taken up by Argyris/Schön, *Organizational Learning*, who define deuterolearning or second-order learning as “learning about the detection and correction of errors in first-order performance” (ibid., p. 86).

139. See Rein, *Frame-Reflective Policy Discourse*.

140. See Eder, *Geschichte als Lernprozeß?*, pp. 28 and 38.



answer is given, it must be shown in what collective learning consists and its mechanisms must be singled out.

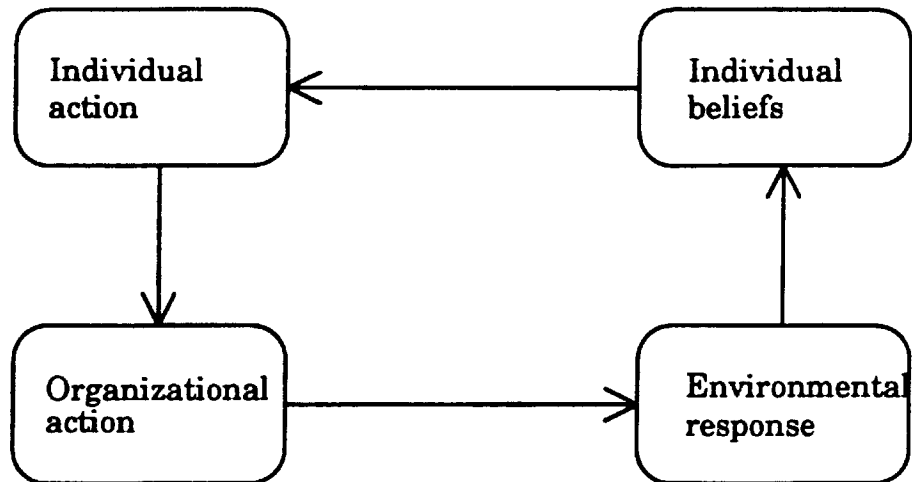
Methodological individualism simply denies the possibility of collective learning. In this view, capabilities and properties can only be attributed to the individual; hence, only the individual is able to learn. It must be noted, however, that this view is not the result of an empirical inquiry or even of deductive reasoning but corresponds to the *definition* of methodological individualism. A second claim is more demanding. As only individuals can learn, it says, the processes and mechanisms of learning can only be attributed to the individual. Learning is not only learning of an individual but also an individual process.

Despite its name, organisation theory argues on these grounds. Organisational learning might suggest that the members of the organisation have to learn something if the organisation as such is to learn. In fact, organisation theory has mostly avoided to tackle the question of collective learning explicitly and only tacitly resorted to a model of the carriers of learning. There are basically two solutions, both of which remain within the realms of methodological individualism. The first is to do as if the organisation was an entity. As such, it could act and learn<sup>141</sup>. A consequence of this procedure is, however, that processes inside the organisation remain outside the scope of the analysis if the analogy with the individual is not fetched too far.

A more frequently found solution is to declare that within organisations, only individuals learn. On the basis of their learning (or lack of learning), they act as agents of the organisation but this organisational action is entirely motivated by individual action and can be explained in terms of individualistic categories. Figure 2 illustrates this process.

141. See Cyert/March, *A Behavioral Theory of the Firm*, p. 99. The notion of the "corporate actor", introduced by Coleman, *Power and the Structure of Society*, follows the same line of reasoning.

*Figure 2: An Individualistic Explanation of Organisational Action*



*Source: Hedberg, How Organizations Learn and Unlearn, p. 3*

The same strategy of explanation has been applied to learning of governments. Again, it is only individuals who learn. Those who learn are either the heads of the organisation or their advisors<sup>142</sup> who are supposed to shape the thinking and action of their superiors. In short, organisational learning is seen as the learning of the leaders of the organisation. Such an approach is easily combined with results of psychological research stipulating that certain *personal* characteristics enhance or prevent learning<sup>143</sup>.

If learning of the organisation is equated with learning of its leaders, a continuity of behaviour despite a change of leadership can hardly be explained. Equating organisations with their leaders seems to contradict an

142. See Etheredge, *Can Governments Learn?*, p. 66 who states that he "... will be concerned primarily with identifying individual learning by the president and senior policy officers." The president mentioned in the quotation is the president of the United States; learning of the US government is thus reduced to the learning of some key actors.

143. Etheredge, for instance, has as a central explanatory category the "hardball politics practitioner" whose specific psychic structure determines the perception of reality and its actions and reactions; see Etheredge, *Can Governments Learn?*, pp. 147-157. In this perspective, the technical rationality of the political process is only a facade and indeed, President Kennedy, the subject of Etheredge's study, "... did not live in a world of decision but only past way there, in a world of compelling upward ambition and ideals." (*ibid.*, pp. 161-162).

insight of administrative research since Max Weber, namely the relative stability and inalterability of formal bureaucratic organisations. A solution to this problem is the assumption of a kind of institutional *memory* which makes the knowledge of an organisation available to all its members, present or future. This institutional memory is usually portrayed as the accumulation of procedures, legal rules, informal norms, archives, habits, etc. on which the organisation draws for acting.

In this perspective, an organisation can know more but also less than its members. In an extreme case, an organisation may be unable to learn (i.e. to add to its organisational memory) what every member knows. Thus, "organizational learning is not merely individual learning, yet organizations learn only through the experience and actions of individuals."<sup>144</sup> How to embed the discoveries of the learning agents into institutional memory thus becomes the central problem of organisational theory.

Still, reducing learning processes to individuals remains unsatisfactory. At least, there should be a mechanism explaining learning in a collective context. Such a mechanism could be conform to the premise of methodological individualism that learning can only be learning of individuals. It would contradict the assumption that learning is an individual *process*. If organisational learning happens through the learning of individuals, the question arises why and how agents acting from their *individual* images and maps (frames) should contribute to the *organisation's* theories-in-use (frames). There must at least be a mechanism which socialises individuals in the organisation.

A theory of learning of individuals in a collective<sup>145</sup> (group, organisation, administration, or society) can explain how individuals learn things that have to do with their societal or organisational affiliation. It also does not have to rely on an implicit model of a teacher according to which first some distinguished individuals learn (because of their particular intelligence,

144. Argyris/Schön, *Organizational Learning*, p. 9. Later, the authors confirm: "Organizational learning occurs when individuals, acting from their images and maps, detect a match or mismatch of outcome to expectation which confirms or disconfirms organizational theory-in-use." (ibid., p. 19).

145. Such a theory is proposed by Miller, *Kollektive Lernprozesse*, in particular in the last chapter entitled "Kollektive Lernprozesse und Moral", ibid., pp. 207-443.

their privileged access to information, their prominent role in the organisation, etc.) while the others follow later in a sort of “trickle down” process. No kind of “leadership” by privileged individuals is needed for learning<sup>146</sup>. This perspective assumes already an interplay not only among several individuals but between the individual and society (or another group *as group*). Along these lines, Habermas writes

“Die Lernmechanismen wird man zunächst auf der psychologischen Ebene suchen müssen. Wenn das mit Hilfe der kognitivistischen Entwicklungspsychologie gelingt, bedarf es weiterer empirischer Annahmen, die soziologisch erklären können, wie individuelle Lernvorgänge in den kollektiv zugänglichen Wissensvorrat einer Gesellschaft Eingang finden. Individuell erworbene Lernfähigkeiten und Informationen müssen zunächst in Weltbildern latent verfügbar sein, bevor sie sozial folgenreich genutzt, d. h. in Lernvorgänge der Gesellschaft umgesetzt werden können. Da die kognitive Entwicklung des Einzelnen unter sozialen Randbedingungen stattfindet, besteht zwischen gesellschaftlichen und individuellen Lernvorgängen ein Kreisprozeß.”<sup>147</sup>

Habermas does not propose a model of the transformation of individual learning into societal learning. He does not explain how “world views” emerge<sup>148</sup>. Concerning the step from latent collective “world views” to individual learning, Habermas adopts a socialisation hypothesis: some individuals learn from these world views and transmit their knowledge to

146. As it is the case in models equating collective learning with the learning of the leaders of the collective.
147. Habermas, *Zur Rekonstruktion des Historischen Materialismus*, p. 36. Habermas explicitly denies the possibility of a learning of society as such: “Gesellschaften ‘lernen’ nur im übertragenen Sinne.” (ibid.). The reason given is an evolutionary one: Whereas a primacy of socially shaped mental structures (“gesellschaftliche Bewußtseinsstrukturen”) can be assumed in the case of a child which is first of all socialised in the family, this is not the case with the origins of modern society in archaic society. This type of society, as it is the primary society, can only change through a first push of individual learning which has consequences for society (ibid.). Thus, in the beginning was individual learning.
148. If the analyst sticks to individualistic categories, this leads to the assumption of a myriad of individual learning processes which can still not explain the emergence of intersubjectively shared interpretative frames or world views; see e.g. Vasquez, *A Learning Theory of the American Anti-Vietnam War Movement*. At this point, Miller’s theory of collective learning starts; see Miller, *Kollektive Lernprozesse*, p. 220.

other individuals<sup>149</sup>. Again, such a perspective is unable to conceptualise macro-level learning.

In the case of an administration, some special problems emerge which even do not appear if no intermediary level between the individual and society is assumed. In public administrations (or other organisations, e.g. firms) resorting to individualistic categories of learning is unsatisfactory for still another reason. In administrations, it is not unreasonable to assume that individuals act only as agents of the administration and not at all in an exercise of their own individuality. They follow bureaucratic procedures and prescriptions and contribute to the administration's stock of knowledge only within the framework of these procedures<sup>150</sup>. In this case, administrative learning is possible without individual learning. Individuals may even in private oppose the lessons learned by the administration. On the other hand, individuals or groups within the administration might also try to change the administration's frames and thus contribute to its learning.

There may be, however, unintended consequences of individual learning which create a societal stock of knowledge not reducible to individual processes and knowledge. If *interaction* becomes the unit of analysis instead of the single individual, this interaction can have individual as well as collective effects. Looking at interactions means looking at situations; it does not automatically mean looking at the interactions of individuals. It also applies to situations in which the individual refers to the world, e.g. in the case of a judge facing the law. This construction allows to speak of true collective learning.

If collective learning is possible, it is useful to distinguish three levels on which learning can occur. The *organisational* level is the closest to the individual. Here, learning can be identified, as it has been discussed on the previous pages, in the form of frame shifts. More remote is the *institutional*

149. This is the "Oberlehrermodel" (Klaus Eder).

150. This may be the Weberian ideal type of bureaucracy which has to be supplemented for contemporary analysis; see for instance Aberbach et al., *Bureaucrats and Politicians*; Crozier, *Le phénomène bureaucratique*; Jaques, *A General Theory of Bureaucracy*; Timsit, *Théorie de l'administration* and Peters, *The Politics of Bureaucracy*. For a systematic treatment of the argument, the existence of such an ideal type can be assumed.

level. The institutional level, which in the context of this study encompasses political institutions, is not only the place where collective actors are guided in their action by different frames and where learning processes can be identified in the form of frame shifts. On this level, institutional rules influence the selection and change of frames<sup>151</sup>. There may either be a competition of different frames in the form of different actors pursuing their interests and concepts in a stable institutional setting which determines the rules of the game, i.e. which restricts the conditions for frame competition and selection and that is, for learning processes. Or, these institutional rules themselves may change. To give a simple example, unanimity decision-making can be replaced by majority voting, parliamentarism may be replaced by neocorporatist modes of decision-making. Such a change of institutional rules has obviously implications for the encounter of different frames. Concepts of institutional settings can, however, be themselves regarded as frames. Thus, new institutional rules must be legitimated in the light of existing procedures.

The process in which institutional rules are discussed can remain within the institutions at stake. However, in the last resort, legitimating an institutional setting necessitates references to a moral order which gives indications of how normative (moral) conflicts about a "good order" can be solved. This is the third level where learning can occur, the level of *public discourse*<sup>152</sup>. Learning on the societal level is a deep and fundamental change and thus a slow and time-consuming process. Except in cases of extreme crisis (e.g. after the Second World War), the time scales in question are in the order of decades. Learning on the level of society changes the idea a society has about itself. The subject of this study is not societal learning in the form of a changing public discourse but institutional learning<sup>153</sup>.

151. On the role of institutions, see pp. 66 seq.

152. A famous study on the emergence of a new type of public order (which has also implications for institutions) is Habermas, *Strukturwandel der Öffentlichkeit*. In this tradition, Eder, *Geschichte als Lernprozeß?*, sees this restructuration of the moral order of society as a learning process.

153. "Institutional learning" is used in the following text primarily in the sense of "learning at the institutional level". The conditions and processes of institutional learning, i.e. its distinguishing features, are the subject of the study. In any case, the three-layer model of collective learning has been introduced here in an abstract way merely to illustrate the basic elements of a collective learning process.

### 3. Sources of Learning

Models of learning processes or more general theories of organisations frequently adopt a system-environment perspective. The organisation or the institution is the system which is faced with a changing environment. In this constellation, the system has to adapt in order to remain able to perform its functions, and in the last resort to secure its survival. Behind this construction is the perspective of sociological evolutionary theory. However, sociological evolutionism fails in the last resort because the parallel between social and biological systems is limited. The main difference<sup>154</sup> between biological and social systems is the latter's ability of self-reflection. The processes between the system and its environment can themselves become the subject of reflection and of intentional action from the part of the system. The development within the system is thus to a certain extent *decoupled* from the development of the environment, in other words, internal and external evolution do not necessarily evolve in parallel. As a consequence of this view, the internal affairs of a system cannot anymore be explained exclusively with reference to the environment. The internal status of a system is not solely the function of its adaptation to the environment. On the contrary, the internal evolution can to a large extent or even exclusively follow its own logic. It can be considerably enhanced by learning processes independent from the external evolution.

Still, the internal evolution of a system, be it a small organisation, a large institution, or society as a whole, can advance at unequal pace. There is no reason to fall back to individualistic categories and to assume that all members of an organisation should learn the same. Within organisations or institutions, learning processes can be advanced by individuals, by groups of individuals, or by specific units defined by their function in the organisation. It is certainly possible that learning in an institution is helped by "invisible colleges"<sup>155</sup> or "epistemic communities"<sup>156</sup> but they are not the only source of learning.

154. For a more extensive discussion of sociological evolutionary theory see Eder, *Geschichte als Lernprozeß?*, pp. 19 seq.

155. See Crane, *Invisible Colleges*.

It seems more promising to look at *structural* possibilities for learning processes instead of trying to identify specific groups as carriers of new insights and promoters of learning<sup>157</sup>. Such a proceeding can avoid unduly privileging certain groups at the expense of others and can look at the conditions for learning processes instead of seeing learning as a result of the activities of knowledge lobbyists. Structural conditions for learning means questioning the role of institutions for the selection, transformation and impact of frames, which is the subject of the next chapter.

When the conditions for learning processes are in the centre of attention, there might also be conditions which prevent learning. To discuss

156. See Holzner/Marx, *Knowledge Application*, p. 108. This concept has been taken up in international relations theory by P. Haas, *Saving the Mediterranean*, pp. 55-56 and by E. Haas, *When Knowledge is Power*, p. 41. See also P. Haas, *Do Regimes Matter?* and id., *Introduction: Epistemic Communities and International Policy Coordination*. A small group of scholars even claims that epistemic communities could be the basis of a "reflective research programme" in international relations theory as opposed to mainstream rational-choice based thinking; see the special edition of the journal *International Organization* edited by P. Haas, *Knowledge, Power, and International Policy Coordination* and in particular the conclusion, Adler/Haas, *Conclusion: Epistemic Communities, World Order, and the Creation of a Reflective Research Programme*. Reducing knowledge more or less to natural scientific concepts of knowledge and diffusion of knowledge to its propagation by one particular type of actor, namely epistemic communities, seems to close the field of inquiry instead of opening it. The discussion also suffers from a disadvantage of mainly inductive reasoning. The concept of epistemic communities has originally been introduced in international relations theory for the analysis of international environmental co-operation, a field in which natural scientific knowledge undeniably plays an important role. Once defined in this specific context, the transfer to other fields of inquiry showed the necessity to leave the narrow conceptual scope without, however, being able to leave it completely. If this were done, the entire concept had to be given up in favour of a much broader notion of knowledge and without the unnecessary focus on epistemic communities. For the necessity to supplement inductive analysis with deductive theorising see also Scharpf, *Verhandlungssysteme, Verteilungskonflikte und Pathologien der politischen Steuerung*, pp. 62-63. Another reason for the insistence on expert groups might be an ideological bias towards technical problem-solving in the tradition of the old "functionalist" thinking in the tradition of David Mitrany. See also on this aspect the remarks on Ernst Haas, footnote 134, p. 53.
157. In Eder's study on the German path to modernity, *associations* play a decisive role. However, the focus of the study is not on these associations but on the structural possibilities for their existence, and the impediments to their existence and their organisation as a result of societal developments; in other words, "das moderne Assoziationswesen" and not "die modernen Assoziationen"; see Eder, *Geschichte als Lernprozeß?*, pp. 11-12.



occurrences of a *systematic* prevention of learning processes is the task of the next section.

#### 4. *Pathological Learning*

Whereas in some cases, be they related to institutional/legal structures, to problem structures or to discursive patterns, opportunities for learning processes may be increased, there is also the possibility of a systematic restriction or complete inhibition of learning. These situations are referred to as “pathological learning” or “learning pathologies”. Learning pathologies are to be distinguished from *system pathologies*<sup>158</sup>. System pathologies refer to an insufficient problem-solving capacity of a system. Speaking of the problem-solving capacity establishes a link with the environment of the system, as the problems exist in the environment of the system. System pathologies are thus dependent on the environment. An example would be the inability to influence demographic processes or to fight unemployment. System pathologies exist for “objective” reasons (lack of money, labour force, ideas, etc.). *Steering pathologies* refer to the internal inability of a political system to achieve its goals and to implement the necessary means for reasons other than objective ones<sup>159</sup>.

Finally, in the case of *learning pathologies*, the change of interpretative patterns of the system is blocked. To paraphrase Scharpf’s definition of steering pathologies, learning pathologies designate the inability of a system to know certain things, to want them or to see them as objectively attainable. In the terminology used here, a change of frames is prevented

158. See Eder, *Geschichte als Lernprozeß?*, p. 32.

159. Scharpf defines steering pathologies (“Steuerungspathologien”) as follows: “Unterstellt wird damit zwar nicht die Omnipotenz der Politik, also die Möglichkeit einer effektiven politischen Wahl zwischen mehreren Gesellschaftszuständen, die sich im Grad ihrer Wünschbarkeit (oder relativen Unerwünschtheit) noch signifikant voneinander unterscheiden. Die Rede ist deshalb nicht von exogen bestimmtem Nicht-Können, sondern von endogenen — aber nicht unüberwindlichen — Schwierigkeiten der Politik, das Gewünschte, Gewußte und objektiv Erreichbare auch zu tun — also gewissermaßen von einer ‘Willensschwäche’ des Handlungssystems.” Scharpf, *Verhandlungssysteme, Verteilungskonflikte und Pathologien der politischen Steuerung*, pp. 63-64. Scharpf talks about the inability of a system to do what it wants, knows and can objectively achieve.

and old frames still determine the system's action. Another possibility of a learning pathology is that the system, in the course of its internal evolution, has developed frames that create conflicts with the environment.

Three types of pathological learning processes can be distinguished: authoritarian, ideological and regressive<sup>160</sup>. In the case of *authoritarian learning*, collective learning is prevented. This means for the individual:

“In dieser Form eines autoritären Lernens werden kollektive Lernprozesse im wesentlichen auf den individuellen Lernprozeß einer Autorität reduziert, und sie können über den eventuell bereits abgeschlossenen Lernprozeß dieser Autorität nicht mehr hinausgelangen”<sup>161</sup>.

For collective actors, the individual authority can be replaced by a collective one, e.g. by the state, a legal doctrine, religion or a certain frame. In the case of authoritarian learning, the learning of the collective actor cannot go beyond the limits set by this authority. Solutions to problems can only be conceived within this framework and no new problem definitions beyond this framework be invented.

*Ideological learning* is close to this notion. Whereas in the case of authoritarian learning, all learning that is not matched by the authority is prevented, ideological learning is interrupted in specific cases.

“Während im Falle des autoritären Lernens die möglichen Ergebnisse eines individuellen Lern- und Erkenntnisprozesses von vornherein bereits feststehen ... können im Falle des ideologischen Lernens innovative Erkenntnisse nur noch innerhalb bestimmter Problembereiche (vornehmlich im Bereich des naturwissenschaftlichen Denkens) entwickelt werden. Hinsichtlich anderer Problembereiche (vornehmlich im Bereich des politisch-moralischen Denkens) sollen zwar auch neue Einsichten gefunden werden, denn im Unterschied zum autoritären Lernen gibt es für das ideologische Lernen keine durch *eine* Autorität allein verbürgten unumstößlichen Gewißheiten. Aber für das

160. The classification is taken from Miller, *Kollektive Lernprozesse*, pp. 428-440, who has developed them in the framework of his theory of learning in a collective. Eder, *Geschichte als Lernprozeß?*, pp. 30-35 and 57-63, has tried to apply it to the historical development of a society.

161. Miller, *Kollektive Lernprozesse*, p. 432 (emphasis omitted).

ideologische Lernen steht von vornherein fest, daß bestimmte Antworten auf politisch-moralische Fragen falsch sein müssen.”<sup>162</sup>

In order to save the ideology (i.e. one specific frame), certain answers must not be given and certain questions must not be asked. At this point, learning is interrupted, not by a concrete person or institution, but by the logic of the situation characterised by ideology. Certain arguments, in ideological learning, are systematically excluded from discourse.

The most fundamental form of pathological learning is *regressive learning*. It is characterised by a fear of any discourse; the individual sticks to its own beliefs<sup>163</sup>. Even the principle that certain facts or ideas are true or false is invalidated. Under these conditions, no argumentative interaction is possible anymore.

These categories of pathological learning focus on how learning processes are prevented from the outset. They do not deal with the question of how knowledge once assembled can be “unlearned”, i.e. discarded<sup>164</sup>. Other theorists have also inquired about the reasons why learning “fails” or why it does not take place at all. These reasons can broadly be put under the heading of the argument that a lack of communication prevents learning among the members of an organisation<sup>165</sup>.

The discussion on learning pathologies has been given for systematic reasons but has little importance for the empirical analysis and will thus be discontinued here. The notion of learning elaborated in this chapter has conceptualised learning as a change of (interpretative) frames. How this change of frames, in other words, this learning process, is related to institutions will be discussed in the next chapter.

162. Miller, *Kollektive Lernprozesse*, pp. 433-434 (emphasis in the original).

163. See Miller, *Kollektive Lernprozesse*, pp. 434-439

164. See Hedberg, *How Organizations Learn and Unlearn*, pp. 18-20, for a more detailed discussion of related concepts.

165. See Argyris/Schön, *Organizational Learning*, pp. 108-109 and for an ideal learning model *ibid.*, chapter VI.

## E. The Role of Institutions

Until this point, it has been argued that interests are constructed with reference to collectively shared interpretative frames and that action on the basis of these interests is promoted by action frames. Interests, thus, do not directly influence outcomes but only through the intermediary of frames. Still, this implies the assumption that action is carried out in a space free of social organisation with the exception of frames. However, action always takes place in a social structure. Among social theorists, the discussion on the relationship between action and structure has been intense and sometimes confusing<sup>166</sup>. For the purpose of the present study, it is, however, not necessary to argue along these very general lines. As the ultimate aim of this introductory part is merely to lay the conceptual basis for the empirical study of Part III, the notion of structure is confined to "institutional structure", although the latter term is used in a rather broad sense. In the following pages, I will first try to set out my notion of institutions and of institutional explanations and second, to discuss the relationship between institutions and frames.

### 1. *Notions of Institutions and Institutional Explanations*

In political science and in particular in international relations theory, institutional explanations<sup>167</sup> occupy a prominent place<sup>168</sup> in recent years.

166. See, for instance, Giddens, *Central Problems in Social Theory*. In the field of international relations theory, see in particular Wendt, *The Agent-Structure Problem* and Wendt/Duvall, *Institutions and International Order*.

167. For the distinction between an "institutional theory" as a *theory* about institutions and an "institutional approach" as a *method* see von Beyme, *Die politischen Theorien der Gegenwart*, pp. 70 seq. and id., *Institutionentheorie in der neueren Politikwissenschaft*. On the distinction between theory and method in general see Luhmann, *Soziologische Aufklärung*, Vol. 1, pp. 31 seq. (chapter on "Funktionale Methode und Systemtheorie").

168. See e.g. March/Olson, *The New Institutionalism* and id., *Rediscovering Institutions*; Katzenstein, *Analyzing Change in International Politics*; id., *Der neue Institutionalismus und internationale Regime*; Keohane, *International Institutions and State Power*; Keck, *Der neue Institutionalismus in der Theorie der Internationalen Politik*; Zürn, *Interessen und Institutionen*; Göhler et al., *Die Rationalität politischer Institutionen*; Göhler, *Grundfragen der Theorie politischer Institutionen* and Göhler et al., *Politische Institutionen im gesellschaftlichen Umbruch*.

Still, a widely accepted definition or usage is lacking<sup>169</sup>. One commonly used distinction is the one between social and political institutions. The term "social institution" (or the usage of the term in sociology) is applied in a rather broad sense, encompassing sometimes all kinds of patterned behaviour. Thus, the family, Christmas, or democracy are institutions. In one of his early works, before he lost institutions somewhat out of sight, Niklas Luhmann defines institutions as follows:

"Institutionen sind zeitlich, sachlich und sozial generalisierte Verhaltenserwartungen und bilden als solche die Struktur sozialer Systeme."<sup>170</sup>

In this definition, "institution" and "structure" become indistinguishable. The important aspect of such a definition for this study is that the notion of "institution" is not limited to *formal* institutions or organisations.

International relations theory has also adopted a wide notion of institutions<sup>171</sup> along with its traditional but in recent years somewhat neglected concern with formal international organisations<sup>172</sup>. Oran Young in particular has tried to introduce the notion of social institutions into international relations theory in general and into regime theory in particular<sup>173</sup>. International regimes, commonly defined as "sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations"<sup>174</sup> can also be regarded as social institutions.

169. A striking illustration is provided by the review of an overwhelming amount of literature by Göhler/Schmalz-Bruns, *Perspektiven der Theorie politischer Institutionen*.

170. Luhmann, *Grundrechte als Institution*, p. 13.

171. See e.g. Zürn, *Interessen und Institutionen*, pp. 140-150.

172. See the review article of Kratochwil/Ruggie, *International Organization: A State of the Art*.

173. See e.g. Young, *Regime Dynamics*; id. *The Politics of International Regime Formation* and id., *International Regimes: Toward a New Theory of Institutions*. For a commentary on Oran Young, see Gehring, *Dynamic International Regimes*, pp. 46 seq.

174. Krasner, *Structural Causes and Regime Consequences*, p. 2. This is the standard definitions of international regimes, developed at a two conferences in 1982. Despite frequent criticism, it is still the basis of the debate on international regimes.

> Whereas the notion of “social institution” comprises all types of patterned interaction stabilised by mutual expectations, the notion of “political institution” is more narrow. Political institutions are usually organisations<sup>175</sup>. Political institutions, in the classic sense, are empty shells. They have to be supplemented with rules and procedures according to which they operate and on the basis of which they relate to each other. These rules and procedures are usually contained in mostly written legal form but may also exist as informal rules, i.e. as social institutions. The norm of “reciprocity”, for instance, is such a social institution<sup>176</sup>. In this usage, law is also a social institution<sup>177</sup>.

↪ “Institutions” will be used in this study to design not only classical political institutions in the narrower sense but also their corollary of social institutions relating to them. The term thus comprises also legal or procedural rules (such as unanimity decision-making) and even commonly accepted informal behavioural norms, e.g. the norm to resort to voting only after all attempts to come to a consensus decision have been exhausted which characterises the EC Council. Such a usage is very close to the notion of structure and insofar, institutions are regarded in this context as a complex structure in which political processes take place. This institutional structure, it is repeated, does not merely consist of organisations (in the case of the European Community, the Council of Ministers, the Commission, the European Parliament, and so on) and their relations with each other but also of written rules (Community law) and of informal norms.

The institutional structure defined in this way is by no means inert or unchangeable. On the contrary, changes in the institutional structure have important consequences for the selection and change of actors’ frames of action and thus for learning processes. Institutional change, understood in the broad sense described above, may also be a part of actors’ strategies and a part of their action frames. Given the strong degree of institutionalisation in the European Community, the effects of this institutionalisation and of changes in it on the frames held by actors and on their actions are an

175. See Göhler, *Soziale Institutionen — Politische Institutionen*, p. 17.

176. See e.g. Keohane, *Reciprocity in International Relations*.

177. See e.g. Luhmann, *Rechtssoziologie*. As classic study the role of institutionalization in law is id., *Legitimation durch Verfahren*.

important aspect of this study. A general discussion of the relationship between frames and institutions is given in the next section.

## *2. Institutions and Frames*

In the previous paragraph, it has been said that institutions are not unchangeable. They can even become the target of strategies of institutional change. They are no solid buildings of order in a chaotic social world but objects of the political process itself. There is no doubt that institutions also influence outcomes. This is no deterministic influence: institutions constitute potentials for action as well as restrictions of the political process without determining it<sup>178</sup>. It is important to keep in mind that institutions are not exclusively restrictions for action but that they are also enabling action which would not be carried out without the institution or be carried out in a different form.

If actors' behaviour can be analysed in terms of interpretative and of action frames, as it has been argued in the previous chapters, it is important to analyse the mutual relationship of institutions and frames. Institutions, a first guess would be, favour certain frames and discourage others; on the other hand, a change of the institutional structure would be a difficult and long-term but also profound way of promoting certain frames. These frames could thus become embedded in an institutional structure.

The constraining role of institutions for actors' strategies and frames has been subject of some well-known pieces of scholarly work although the terminology and the theoretical framework sometimes largely differ from the one proposed here. In a comparative study on the success of neoconservative government ideologies in the USA, Great Britain and Germany, Gerhard Lehmbruch writes:

“Ich werde im folgenden zu zeigen versuchen, daß das Erfolgsmaß strategischer Führung, wie es hier beobachtet werden kann, davon abhängt, wie weit bestimmte Wertvorstellungen einerseits von institutionellen Chancen begünstigt werden, andererseits auf

178. See Scharpf, *Vom Fug und Unfug institutioneller Erklärungen*, p. 274.

institutionelle Restriktionen stoßen, die sie nur in begrenztem Maße — oder gar nicht — zu verändern in der Lage sind. Unter 'Strategie' verstehe ich in diesem Zusammenhang eine grundsätzliche Entscheidung darüber, welche langfristigen Ziele eine Organisation, eine Regierung, eine Partei verfolgt, und welches ihre grundlegenden Selektionsregeln für die Auswahl von Handlungsalternativen sind. Im konkreten Fall ist 'Ordnungspolitik', hier im Sinne des marktwirtschaftlichen Regelsystems, das Strategieziel."<sup>179</sup>

In the terminology used here, "Ordnungspolitik" would be an action frame as it is not only a strategy used by rational actors to pursue their goals but a set of interrelated propositions for making sense of the world and interpreting it in this light<sup>180</sup>. Lehbruch comes to the conclusion that the institutional setting in Germany, its "co-operative federalism" is responsible for the less sweeping success of neoconservative thinking in this country, despite the political orientations of the government, and that this institutional structure makes a frame shift (or a change of the economic strategy, to remain in his terminology) unlikely in Germany<sup>181</sup>.

➤ It is thus possible to argue that certain institutional structures favour certain frames and discourage others<sup>182</sup>. For instance, a command-and-control approach in environmental policy is probably favoured by a strongly hierarchical structure in which the means exist to implement such an approach. Again, it is necessary to keep in mind that according to the concept of "frames", a general approach to environmental policy is not

179. Lehbruch, *Wirtschaftspolitische Strategiewechsel und institutionelle Verknüpfung von Staat und Gesellschaft*, p. 224. See also Lehbruch et al., *Institutionelle Bedingungen ordnungspolitischen Strategiewechsels*.

180. This is my interpretation of "Ordnungspolitik", not Lehbruch's. The change from Keynesianism to Monetarism (this is what Lehbruch has in mind when he talks about "Ordnungspolitik") is an excellent example for such a change of frames. For an analysis of the spread of Keynesianism, see Hall, *The Political Power of Economic Ideas*.

181. See Lehbruch, *Wirtschaftspolitische Strategiewechsel und institutionelle Verknüpfung von Staat und Gesellschaft*, p. 233. Lehbruch understands "institutions" not only in the sense of "political institutions" but as mutually stabilised expectations of action ("wechselseitig stabilisierte Handlungserwartungen") (ibid., p. 234).

182. The fact that institutions may not only constrain behaviour but also create possibilities is emphasised by Wendt/Duvall, *Institutions and International Order*, p. 67.



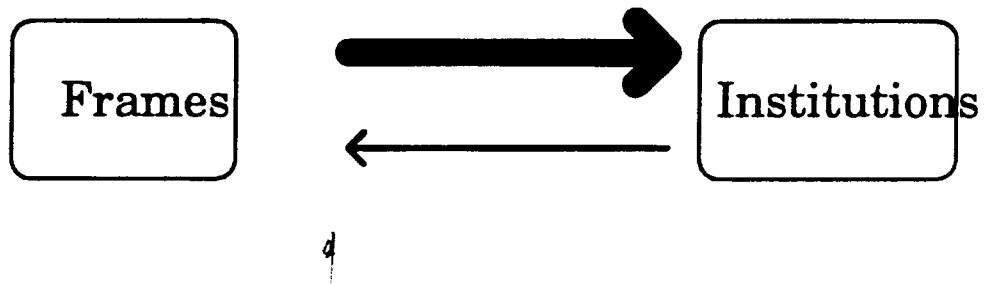
merely one strategy among several others that can be chosen to achieve a given goal, which in this case would be environmental protection. A command-and-control approach is instead a system of interpretations which gives meaning to scientific facts and offers a framework for defining action strategies, including the goal to be achieved. Indeed, empirical analysis points to the existence of different “regulatory styles” in different countries<sup>183</sup>. Whereas the analysis of frame-selection and frame-shift in the European Community’s greenhouse policy will be carried out in Part III, this section will be limited to clarifying the relationship between institutional change and frame change in general.

The most important distinction seems to be the one between the level on which frames exist, and more precisely whether they exist on the level of a policy or on the level of society<sup>184</sup>. Some frames relate to the organisation of society or, in analogy, of a transnational setting like the European Community. Examples include different views of state-citizen relationships, different conceptions of democracy or competing models of the relationship between state and market. Changes of societal frames are usually very slow but can on the other hand fundamentally change the structure and functioning of institutions. Institutions, in this view, reflect basic ideas about the organisation of society<sup>185</sup>. They are, to paraphrase Gusfield, frames frozen in time<sup>186</sup>. Frame-shift on the level of the society, that is, societal learning, is a process which proceeds usually in decades<sup>187</sup>. Still,

183. The concept of regulatory styles is not identical with the notion of frames used here. The existence of different regulatory styles can, however, be interpreted as indicating the existence of different frames for environmental regulation; see Vogel, *National Styles of Regulation*. On the link between policy styles and cultural theory, see Jann, *Vier Kulturtypen, die alles erklären?*, p. 362 and Feick/Jann, ‘*Nations matter*’ — *Vom Eklektizismus zur Integration in der vergleichenden Policy-Forschung?*.
184. The typology of three levels of collective learning, introduced for systematic reasons (see pp. 59 seq.), cuts across this classification which is the basis of the empirical analysis.
185. See (in a different terminology) Young, *The Effectiveness of International Institutions*, p. 192 and Schmalz-Bruns, *Neo-Institutionalismus*, p. 320.
186. Gusfield, *The Culture of Public Problems*, talks about structure as “process frozen in time” (p. 10).
187. Eder’s study on societal learning in Germany is an illustrative example: it extends over a century; see Eder, *Geschichte als Lernprozeß?*. For Modelski, *Is World Politics Evolutionary Learning?*, learning proceeds in “long cycles” of decades and even centuries.

this is not to deny that frames are in any case prior to institutions in the long run. Certain institutional features may further the development of new ideas about the organisation of society. Graphically, the relationship between frames and institutions in this case could be modelled as follows:

*Figure 3: Societal Frames and Institutions*

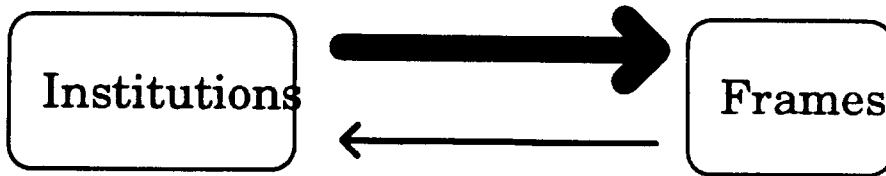


These few remarks about societal frame-shift and changes of institutions were merely destined to make clear the difference between this type of frame-shift — which is not dealt with in this study — and the one interesting in this context. In this study, I will only occasionally deal with effects of ideas on the organisation of the European Community as a whole, namely in cases where they obtain a particular importance for the development of the policy field of the greenhouse effect.

The most interesting case for the empirical study is the relationship between institutions and policy-specific frames. In this perspective, it is assumed that the institutional structure remains more or less stable or is at least not subject to fundamental change. Institutions thus serve as a filter for the selection of frames<sup>188</sup>. In this case, the relationship between institutional structure and (policy) frame can be portrayed graphically as follows:

188. This is also the perspective used by Lehbruch's studies on neoconservative thinking and the structure of the state quoted above, see footnote 179, page 70.

Figure 4: Institutions and Policy Frames



The hypothesis is thus that a particular type of institutional structure favours certain policy frames and discourages others. If it is true, however, that the institutional structure can be explained in terms of an (overall) frame, the statement above can be reformulated. It also implies that specific frames in a policy field can be explained with respect to general frames. This does not merely mean that concepts and ideologies on a higher and on a lower level of abstraction and of political organisation are in relation with each other. However, it draws the attention to the fact that procedures, laws, and all kinds of institutional arrangements are not “neutral” but already incorporate specific ideas, concepts and interests<sup>189</sup>. Institutions are thus not “policy-neutral” but direct frames and the policies built on them in specific directions.

On the other hand, actors can put forward action frames which include concepts of institutional change in order to promote specific policy goals<sup>190</sup>. As a matter of the level of political action, these changes are, however, not likely to affect the institutional structure of the political system as such but will mostly be confined to small-scale changes in procedures or other institutional arrangements. This is the relationship illustrated by the thin arrow in Figure 4. Institutional changes on a small scale can happen either unintentionally as a by-product of a change in policy after the successful promotion of one frame by an actor or a group of actors. It can also occur as the result of a deliberate strategy of institutional change. Institutional change as a strategy for promoting a specific frame is likely to result in a profound anchoring of this frame in the institutional structure of the organisation, the government or the administration (if it is successful) but it

189. See Berger/Luckmann, *The Social Construction of Reality*, p. 60.

190. See Majone, *Evidence, Argument and Persuasion in the Policy Process*, pp. 95 seq.

is also less precise as it concerns only the framework and the rules which decide about the selection of certain policies but not about on the substantive content of the policy itself.

> These remarks may suffice here to support a central thesis of the argumentation: Frames are the basis of institutional structures but in turn depend on them, according to the level of abstraction and of societal organisation: a change of societal frames may lead to a change of the institutional structure of the political system. The institutional structure of a political system, in turn, is responsible for the selection of some policy-relevant frames and the discharge of others. At this point, all elements for an outline of my concept of institutional learning are present.

## F. Summary

The preceding part has argued that the emergence of preferences or interests of actors cannot be explained within rational choice theory. The reason for this is the conception of action and of rationality adopted by rational choice theory. In this concept of strategic (or teleological) action, the actor refers to one world external to him. Whereas traditional concepts of rational choice theory assume "hyperrationality" of the actor, i.e. unlimited information capacities in order to calculate his strategies to reach his goals, more recent approaches start from the hypothesis that the choices of the rational actor are constrained in several ways. These constraints, however, put limitations on the actor's capacity to develop strategies to reach his goals; they do not explain the emergence of his preferences and interests.

> Only the broadening of the concept of action and the resulting notion of rationality creates the conditions which allow to speak about multiple realities, none of which can claim priority over the others. Those multiple realities are not regarded as limited representations of one objective reality which is intelligible only to the extent of the information processing capacities of the actor but as being on equal footing. Reality, in this perspective, is always constructed and only accessible to the actor via interpretation. None of these interpretations is better or worse than any other. In contrast to claim of the Anglo-American "cultural theory" to have identified four basic world views upon which any interpretation of the world

relies, this study has chosen a more open approach, requiring the construction of the world by reference to three different elements which correspond to three basic concepts of action, namely the cognitive, the normative and the symbolic element. There is no limited number of basic world views; instead, an unlimited number of world views that may exist can always be divided into the three components mentioned above.

The analytical tool of this constructivist perspective are "frames". Frames are stable patterns of perceiving and experiencing the world. The preferences of actors depend on those basic world views and may change if the respective world view changes. Whereas the preceding concept of frames, which is called "interpretative frames" in the study, allows to link actors' preferences to specific world views (i.e. interpretative frames), the concept of frames allows to go one step further from frames of action to frames for action. Those "action frames" are actively promoted by actors to present their interpretation of the world either in order to define their proper identity in this world or to make their interpretation of reality the prevailing one and thus profoundly change the way other actors calculate their preferences.

The concept of frames also permits to develop a notion of "learning" which is not confined to metaphorical uses like "learning from history" or "doing better". The concept of "complex learning" as opposed to "simple learning" which results from a selective review of literature on the theme can be applied to a change of interpretative frames. As a result, learning is reserved for changes in the way actors interpret the world instead of being applied to any behavioural change meeting some normative criteria. Equating complex learning with the change of interpretative frames introduces the normative and the symbolic elements of the frame into the definition of learning and thus avoids the pitfall of restricting learning processes to the improvement of the actor's cognitive abilities.

The notion of frames also permits a concept of collective learning instead of having to resort to individualistic explanations. Organisations or institutions do not only learn because some prominent individuals learn, such as the head of the organisation or its senior advisors. Instead, collective and corporate actors learn to the degree they change the frame(s) underlying their action. In this concept, it is possible to abstract completely

from the learning of individuals within the organisation. No transmission mechanism is necessary to explain why individual learning becomes collective learning (to the degree that collective learning is not dismissed altogether as a non-term). At the same time, it is not necessary to reduce an organisation to its leader(s). If the notion of collective learning on the basis of frames allows to speak of organisational learning in a way beyond individual categories, this is also true for learning at the level of institutions and even more at the level of public discourse, i.e. at the level of society as such. The same remark applies to learning in a specific policy area. This sub-category is the field of inquiry of the present study. Collective learning allows to speak of knowledge and changes of knowledge shared by members of a policy community and the patterns and mechanisms this knowledge has on the preferences and the behaviour of actors.

The relationship between frames and institutions is only relevant for the present study in order to allow a basic distinction in the level of framing.

Changes of *societal* frames, that is, societal learning, may change the institutional structure of society and thus embed the respective frame in this structure. Such a change is a deep but also time-consuming process which may extent over decades. *Policy-specific* frames, the subject of the present study, do not change the institutional structure of society but depend on it. In this case, the task of the analyst is to specify the institutional conditions leading to the adoption, change or decline of specific frames, in other words, the institutional conditions for policy-specific learning processes.

This first part has served the purpose to develop and explain the basic conceptual notions and explanatory strategies used in this study. Given the fact that the concepts used here are not very common in the bulk of research dealing with the European Community and international relations and can only sparsely be found in research on environmental policy, they were discussed in some length. In the following part, the fundamental features of the most important group of actors for the study (the European Community) and the policy field in question (environmental policy) will be discussed.

## II. Issue Framing and the European Community

The part has the purpose of making the transition from the theoretical considerations of Part I to the empirical analysis of Part III. As the subject of the empirical study is the framing of the greenhouse effect in the European Community, it is appropriate to single out some distinctive features of the European Community and of the greenhouse effect which are important for the process of frame selection and frame change. The following pages do not, therefore, make an attempt to deal with these questions in a comprehensive manner nor to say something fundamentally new about these issues. Their only purpose is to draw the boundaries for the empirical analysis. Research on the European Community in a specific policy field sometimes suffers from one of the two following shortfalls: Either the analyst is a specialist in a policy field (or another field of inquiry, such as interest groups or political parties) and does not reflect about the specific conditions and qualities of the European Community in this field. In this case, the EC is sometimes portrayed as an international organisation, sometimes as a state, depending on whether the analyst has an international relations or a domestic politics background. Both views, if applied uncritically, can be quite misleading. Or, in the case of the second shortfall, the analyst adopts a perspective of integration theory without considering the particular features of the policy-field at stake<sup>1</sup>. The purpose of the following pages is to avoid both extremes as far as possible while acknowledging the difficulties of acquiring a profound knowledge on both the research on European integration as well as on environmental policy-making.

### A. Specific Features of the European Community

Without entering the fruitless debate about the nature of the EC as an international or a domestic system, it is claimed here that the development of the EC cannot be adequately understood by resorting only to

1. See the similar remarks of Kohler-Koch, *Interessen und Integration*, p. 82, with regard to research on the role of interest groups in the EC.

international relations theory<sup>2</sup>. This is even more true for the analysis of a single policy field<sup>3</sup>. The European Community possesses a number of features which are usually found in domestic and not in international contexts<sup>4</sup>. The features with a particular interest for the present study are its comprehensive scope, the existence of a highly complex hierarchical legal system, an enormous density of interaction and the existence of a directly elected parliament. These particular features create the context for the international element of the European Community, namely the negotiations of states in the EC Council<sup>5</sup>. They transform these negotiations to an extent which not found in "normal" international organisations. Negotiation analysis, which is essentially a derivative of game theory<sup>6</sup>, is only applicable with important caveats to this situation. Regarding Council negotiations as a drama and an exchange of arguments is instead the path which will be pursued here.

### *1. Characteristics of a Domestic Political System*

The properties analysed in the following section are distinctive features of the EC system as compared to standard international regimes or international organisations. They are presented in this context in order to show that international relations theory which is mainly concerned with the

2. This is the implicit claim of recent broadly neorealist pieces on integration theory; see Moravcsik, *Negotiating the Single European Act*; Keohane/Hoffmann, *Institutional Change in Europe in the 1980s*; Sandholtz/Zysman, *1992: Recasting the European Bargain*; Garrett, *International Cooperation and Institutional Choice*.
3. See Schumann, *EG-Forschung und Policy-Analyse*.
4. In any case, it is doubtful whether the strict separation of domestic and international politics as two arenas characterised respectively as vertically and horizontally organised is still a useful distinction, if it has ever been one at all; see in particular Scharpf, *Die Handlungsfähigkeit des Staates* and Bellers, *Nationale und internationale Steuerungsfähigkeit*, p. 613. The same point, from the perspective of international relations theory, is made by Czempiel, *Der Stand der Wissenschaft von den Internationalen Beziehungen*, p. 254 and Walker, *Realism, Change, and International Political Theory*, p. 82. From the point of view of systems theory, see Luhmann, *Soziologische Aufklärung 2*, pp. 51-71 ("Die Weltgesellschaft").
5. The emphasis is on "states", not on "negotiations". Decision-making by negotiation is also found in the domestic context; see Benz et al., *Horizontale Politikverflechtung* and Scharpf, *Die Handlungsfähigkeit des Staates*.
6. See Sebenius, *Challenging Conventional Explanations of International Cooperation*, p. 350 (footnote 89).



relationships of states either at the level of the international system as a whole or in specific issue areas, has at least to be supplemented in order to be useful for the analysis of political processes in the European Community. The second purpose of briefly listing these characteristics is to show their relevance for framing processes in the EC. The process of framing and shifting frames in the EC, it is argued, cannot adequately be understood when the inquiry is limited to a single policy field while leaving this context out of view.

#### a) Comprehensive Scope

The European Community does not only deal with one single issue — for instance, refugees — nor is it competent for one policy field — e.g. international finance — but it deals or could deal in principle with all policy fields. In other words, the EC is not a functional or sector-specific organisation but a regional integration organisation whose aim is not merely to contribute to the management of clearly defined problems (which are dealt with by international regimes or international organisations) but explicitly to contribute to the progressive intermingling of the political systems of its member states and, in the last resort, of its societies<sup>7</sup>. This finality of a progressive integration must not be forgotten even when the subject of analysis is only a specific policy-field, seemingly unrelated to the grand issues of national identities versus supranational state. This element becomes particularly influential with regard to the discussion of the subsidiarity principle and its impact on environmental policy.

The European Community can in principle deal with virtually all subjects but it has to justify its action with reference to an explicit permission to deal with the task at stake. In legal terms, it has to give a “legal basis” to every

7. The analysis of this process has been the theme of the integration theory of the sixties and early seventies; see E. Haas, *The Uniting of Europe*; Lindberg/Scheingold, *Europe's Would-Be Polity*; Lindberg/Scheingold, *Regional Integration Theory*. The far-reaching finality of the EC is already mentioned in the preamble of the EEC-Treaty which has as its first aim “to lay the foundations of an ever closer union among the peoples of Europe” (emphasis added).

formal act<sup>8</sup> it adopts. If new actions enter a field not yet covered by primary or secondary Community legislation<sup>9</sup>, this scope enlargement corresponds to a progress of integration. The covering of new policy fields by Community legislation is not only in itself a scope enlargement of the EC but can serve as the basis of further transfers of competencies because such a measure, once adopted, can become the legal basis for other measures in this field. Therefore, any measure, huge or small, has in principle to do with the question of integration as such and should not a priori be separated from this issue.

A second important consequence of the comprehensive scope of the EC is the great potential for linkages among different policy fields. Linkages can have opposing effects on problem-solving. On the one hand, they open up the possibility for package deals, i.e. the nesting together of several problematic issues. This technique is often used in international negotiations<sup>10</sup>, and a very common one in the EC<sup>11</sup>. Package deals are generally believed to help coming to a decision despite a blockade in one (or several) of the issues at stake. A participant opposing one particular decision might give in when this appears to be the only way to achieve a decision on another field where he is particularly interested in. On the other hand, linking too many issues together entails the risk of an overly complex mixture which impedes even partial solution by its very complexity. Another possibility is that one participant in the negotiations tries to link progress in a remote area to progress in the area of his interest<sup>12</sup>. These linkages are all deliberate ones.

8. Formal acts are "regulations", "directives" and "decisions", as enumerated in Art. 189 of the EEC Treaty. If not otherwise indicated, articles quoted refer to the EEC Treaty.
9. "Primary Community" legislation designates the treaties establishing the European Communities and the acts modifying them, such as the Single European Act or the acts of accession of new member states; "secondary legislation" are all legal acts adopted on this basis.
10. See e.g. E. Haas, *Why Collaborate?*
11. See e.g. H. Wallace, *Negotiation, Conflict and Compromise*; id., *Making Multilateral Negotiations Work* and id., *Negotiation and Coalition Formation in the European Community*.
12. A well-known example is the British veto to the agricultural prices in the beginning of the 1980s. At that time, Britain was not at all opposed to these prices as such but wanted to exert pressure on his partners with respect to its claims to get a refund of its contributions to the Community budget.

Their purpose is to enhance the chances of agreement, although the success of such an enterprise is by no means secured.

Issue linkage can also occur as the unintended result of the comprehensive scope of the EC coupled with its dense legal system (see below). Whereas an issue-specific international organisation can only deal with matters falling into its rather narrowly defined competencies, the EC is able to tackle most kinds of subjects as they emerge. In most cases, the internal division of competencies among different Councils of Ministers<sup>13</sup> is merely a matter of administrative division of labour and not one of institutional change. Therefore, it is easier to link different policy fields and more likely that complex linkages emerge. The adoption of policies in one field may have consequences in another policy field either politically (for instance, when strong environmental standards are only adopted on the condition that compensation in the form of infrastructure subsidies is paid) or legally (e.g. the standard conflict between environmental protection norms and the free circulation of goods).

Risks and opportunities of issue linkage and package deals are the subject of an intense discussion in international relations theory, integration research and in the literature on negotiation. This discussion shall not be continued here. What is important for the present study is to keep in mind that due to its comprehensive scope, issue linkage is very frequent in the EC. This has important consequences for the framing of an issue<sup>14</sup>. If several policy fields are linked, the frames shared by actors in these policy

13. Whereas the EEC Treaty mentions only one Council as the organ representing the member states, the Council in fact meets in different compositions reflecting the competencies for the respective policy field in the member states. In the following text, I will use an abbreviated terminology for referring to this proceeding. When I talk, for instance, of the "Energy Council", this refers to the national ministers dealing with energy matters in the context of the EC. The German representative in this Energy Council, for instance, is its minister for the economy. Legally, the terms "Energy Council" or "Environment Council" refer to the "Council" as it is mentioned in the EEC Treaty. Each Council can take legally binding decisions only for its field of competencies. In some cases, thus, several Councils have to meet either jointly or separately in order to take a decision in a policy field. This is also the case with respect to the greenhouse effect, where the Energy, the Environment and the "EcoFin" Council (Ministers for the Economy and/or Finance) possess the main competencies.

14. A "policy" is the wider notion and may consist of several "issues".

fields are also related in one way or another. The relationship of these frames can be analysed. The greenhouse effect, for instance, should not be treated exclusively as an environmental problem and an occurrence of environmental policy frames only. At least, the policy towards the greenhouse effect includes elements of energy and of fiscal policy besides environmental policy. These frames may exist side by side. They can, however, also mutually influence each other.

Besides this horizontal linkage of frames in different policy fields, a vertical linkage can also exist. When a policy has institutional consequences, the policy-specific frames come into contact with general institutional frames. This effect is a general phenomenon but due to the comprehensive scope of the EC and its explicit political finality it is much more likely to occur in this context than in the context of an international regime.

#### b) A Hierarchical Legal System

A second distinctive feature of the EC system as compared to an international regime or other instances of international co-operation is the existence of a hierarchical legal system. Again, this theme will be discussed only insofar it relates to the topic of the present study. EC law has acquired the status of a distinctive legal system as compared to general international law. It is characterised by several peculiarities which make it resemble a domestic legal system<sup>15</sup> and which influence the emergence and selection of frames. EC law as it exists today has to a considerable extent been developed by the jurisprudence of the European Court of Justice<sup>16</sup>.

15. For this reason, it is possible to compare the EC with a developed federation like the US; see for instance Rehlinger/Stewart, *Environmental Protection Policy*.

16. In part, fundamental doctrines of this jurisprudence are still being contested either juridically or politically, but see Schwarze, *Die Befolgung von Vorabentscheidungen des Europäischen Gerichtshofs durch deutsche Gerichte* and id., *The Role of the European Court of Justice in the Interpretation of Uniform Law Among the Member States of the European Community*. As the purpose of this section is not, however, to give a sophisticated up-to-date discussion on the jurisprudence of the ECJ but only to discuss its major features in relation to frame selection and frame change in a particular case, this discussion can be neglected here. In their broad lines, the doctrines presented above are generally accepted by jurisprudence, legal writers and member state practice. For a well-documented and comprehensive treatment of the

The two most important doctrines are those relating to supremacy and on direct effects<sup>17</sup>. The *supremacy* doctrine, developed in the 1960s and extended and restated since then despite considerable criticism<sup>18</sup>, states that Community law is superior to national law in the same area. This applies not only to Treaty provisions but also to secondary legislation. Concretely spoken, this means that the adoption of a Community legal measure in a specific field invalidates existing national measures to the extent that they relate to the same subject. Indirectly, it also prevents member states from adopting legislation in a field once covered by Community legislation ("pre-emption"). In this case, a policy is developed from the outset at the Community level.

The doctrine of *direct effects*, also developed by the ECJ in the 1960s, states that Community law which is not immediately applicable by its very nature (such as regulations and, in some cases, decisions) can nevertheless be enforced under certain conditions. This implies legal rights for citizens or juridical persons. In practice, such a doctrine creates a strong pressure towards the legal implementation of Community measures. One form of Community legislation is the "regulation" which is directly binding in its entirety. A regulation is thus equivalent to a national law with all the rights and obligations this entails. Another common form of Community legislation is the "directive", a text which is binding in its substance but not in its form. This means that it has to be transposed into national law by the EC member states. Usually, a deadline for implementation is attached to each directive. Whereas in international law, a state can still choose not to ratify a treaty after it has signed it and thus prevent its application on its territory, this possibility is much smaller under the direct effects doctrine. Should a state not implement such a directive for whatever reasons, a citizen or an enterprise have the possibility to start legal procedures in

"institutional" jurisprudence of the ECJ and its political consequences see Rasmussen, *On Law and Policy in the European Court of Justice*.

17. They are the essence of what Joseph Weiler has called "legal supranationalism" as compared to the "decisional intergouvernementalism" of the EC; see Weiler, *The Community System: the Dual Character of Supranationalism*; id., *Community, Member States, and European Integration* and id., *Il sistema comunitario europeo*.
18. See on this point Ludet/Stotz, *Die neue Rechtsprechung des französischen Conseil d'Etat zum Vorrang völkerrechtlicher Verträge*.

order to obtain their right, despite the fact that the directive has not yet been transposed.

A further characteristic which limits the international relations character of the EC is the strong involvement of the individual citizen, as well as of other juridical persons. One of the indicators for this is the emergence of an EC administrative law<sup>19</sup>. Through the development of an informal complaint procedure, interested private parties can give hints to the Commission about the non-implementation of EC law or the violation of existing rules. The Commission, charged by the EEC Treaty with the supervision of Community law (Art. 155)<sup>20</sup> is then free to start formal or informal procedures to ensure the implementation of the respective provision.

- > These features, which were presented only very briefly, result in a fundamental change of the bargaining process in the Council. Bargaining in the EC takes place in the shadow of a highly differentiated legal system with implementing mechanisms that are very strong compared to standards of international law. When agreeing to a proposal on the negotiating table, states are aware of these mechanisms.
- > The legal order of the EC gives a particular weight to the EC Commission. It is the only party which can formally make proposals for a Council decision. Thus, the states meeting in the Council are unable to decide without a text submitted by the Commission. Practically, the Commission frequently submits proposals which are requested by one or several members of the Council but it does so because of long-term considerations on the fate of its own proposals and not because it would be legally obliged to do so. At the same time, the Commission occupies the role of a mediator which it can carry out with a large margin of manoeuvre because of its right to modify or withdraw its proposals at any time. As a consequence, the Commission has a much stronger position in all stages of the policy process than a normal secretariat of an international organisation. In fact, the Commission is the

19. See Schwarze, *Europäisches Verwaltungsrecht*.

20. See Audretsch, *Supervision in European Community Law*.

thirteenth member of the Council. Therefore, the frames put forward by the Commission during the policy-making process are of particular importance.

On a more general level, law is an indicator of integration as well as its instrument<sup>21</sup>. The strong legalisation of EC politics, the existence of a full-fledged judicial system on which actors frequently rely<sup>22</sup> fundamentally distinguishes the EC's internal relations from those of international affairs in general. Conflicts on substance frequently turn into legal conflicts, and many substantive issues have a constitutional element which is again subject to judicial proceedings. This is particularly so because progress of integration in the last resort is embedded in legal rules. When it was said in the previous section that due to the political finality of the EC substantive issues frequently have an institutional component, this fact becomes even more important in the light of the nature of the legal system of the EC: In this context, any little progress towards integration is conserved in a legal system and protected by strong procedural rules. The resistance to such steps is thus even bigger than it would be in a legal system with weaker implementation mechanisms and with a less pronounced hierarchical structure<sup>23</sup>.

### c) Density of Interaction

Another characteristic of the European Community which makes it distinct from classic forms of international co-operation and which is important in this context is the intensity of interactions taking place not only among the EC member states but also among the national bureaucracies and the Commission. A strong and intense interaction among the bureaucracies of

21. See Capelletti et al., *Integration Through Law*. See also Cerhexe, *Le droit européen* and Kapteyn/Verloren van Themaat, *Introduction to the Law of the European Communities*.

22. Whereas the International Court of Justice has delivered some fifty judgements in its entire existence, the jurisprudence of the European Court of Justice occupies several meters of bookshelves. The SEA has therefore established a "Court of First Instance" in order to relieve the ECJ of some of its workload.

23. See Siedentopf/Ziller, *Making European Policies Work*.

the EC governments and the Commission<sup>24</sup> is also an indicator for their strong mutual influence and probably for the existence of distinct styles and traditions of policy-making which are characteristic of the EC. For the analysis of frame selection and frame change in the EC, this tradition is important for several reasons.

> The political process of the EC is characterised by a continuous swap of proposals from the national to the European level and backwards. This process entails a transformation of the original proposal, whatever its origin was. Despite a loss in decision-making efficiency, it is a main reason for the acceptance of decisions once agreed<sup>25</sup>.

> The argument that the intense and continuous flow of proposals between the national and the European level changes the nature of these proposals can be extended to frames. A strong and continuous interaction among the EC bureaucracies eases the diffusion of ideas among the bureaucratic units concerned<sup>26</sup>. Arguing that the density of interaction makes a difference, also implies that a socialisation of the involved actors is likely to happen. Slowly but steadily, administrators and administrations accommodate to new ways of thinking, develop an understanding for positions other than the national ones and in the last resort change their own ways of thinking. This effect is the reason why diplomats are usually only allowed to stay for a few years in one and the same country. In the EC, it exists on a considerably larger scale. Interaction exists not only among a small group of diplomats working in the respective embassies but on a much broader level.

A considerable number of "national experts" are sent from domestic administrations to the EC Commission for a few years. By agreeing to this procedure, both the EC and the national administrations hope to exert a

24. See in the tradition of Karl Deutsch e.g. Wessels, *Administrative Interaction* and W. Wallace, *Introduction: The Dynamics of European Integration*, p. 9. See also Puchala, *International Transactions and Regional Integration*; Lindberg, *Political Integration as a Multidimensional Phenomenon* and Pag, *The Relations Between the Commission and National Bureaucracies*.

25. Puchala, *Fiscal Harmonization in the European Communities*, p. 10, even considers this cumbersome and inefficient "reverberation", as he calls it, the main reason for the stability of the EC.

kt. 26. For Rose, *What is Lesson-Drawing?*, p. 17, international institutions are one of the main sources for the cross-national diffusion of ideas in policy-making.



certain conceptual influence, the national administrations on the Commission and the Commission on the national administration. Whose views finally prevail or whether it makes sense at all to think in winner-loser terms in this regard instead of a mutual socialisation is unclear in the scarce literature on the subject<sup>27</sup>.

Another mechanism for the diffusion of ideas and the mutual socialisation of administrators is the existence of highly developed administrative procedures in all phases of the policy cycle bringing together civil servants from the Commission and from national administrations in a huge number of committees. These committees exist in the preparatory phase (advisory committees), in the decision-making phase (Council working groups) and in the implementation phase ("comitology")<sup>28</sup>. Frequently, the same persons appear in more than one type of committee in a specific field.

The strong and continuous interaction of civil servants and politicians in the EC system leads to the slow emergence to a distinctive tradition of policy-making which includes specific instruments and regulatory techniques. On the whole, the EC has developed a specific style of environmental policy-making which cannot be explained merely in terms of the combination of different national styles, interests and policies<sup>29</sup>. In the making of this policy, there are frequent conflicts stemming not so much from different concrete interests in the problem at stake but more from different ways of conceptualising a problem<sup>30</sup>. Concepts once adopted in EC policy may in turn influence national policy concepts.

27. See Chiavarini Azzi, *Les experts nationaux: chevaux de Troie ou partenaires indispensables* and other contributions in Jamar/Wessels, *Community Bureaucracy at the Crossroads*, in particular pp. 39-123.

28. Due to the considerable difficulties in obtaining information on the multitude of committees existing in EC policy-making, few has been written from a social science perspective on the institution of committees as such. More frequent are occasional references to specific committees in case studies; see e.g. Burkhard-Reich/Schumann, *Agrarverbände in der EG*, pp. 38-61. The same statement applies to the "Committee of Permanent Representatives"; see Hayes-Renshaw et al., *The Permanent Representations* and Hayes, *The Role of COREPER*. For a recent rather broad treatment see Bach, *Eine leise Revolution durch Verwaltungsverfahren?*. An anecdotal but interesting account of an insider is Donat, *Brüsseler Machenschaften*.

29. See Mazey/Richardson, *EC Policy-Making: An Emerging European Policy Style*.

30. A famous example in the field of environmental policy is the yearlong quarrel between the United Kingdom and the other member states on the choice of effluent

- > The purpose of this section was to support the argument that the EC is a particularly important case of an international institution promoting the diffusion of ideas (or frames). The main reason for this is the strong and institutionalised interaction between national and EC administrations. This interaction allows to see the policy-making process in the EC as a permanent process of argument and counter-argument. Contrary to standard intergovernmental organisation, the EC has over time developed a distinctive policy style of its own which is different from the twelve national ones. This style has a strong impact on national policy styles. For the same reason, the introduction of new concepts in EC policy-making is likely to meet strong resistance, at least from governments with strongly developed administrative cultures.

#### d) The Existence of a Parliament

- > In many analyses of EC policy-making, the European Parliament is bluntly neglected<sup>31</sup>. The European Parliament does not possess any competencies in the respective field, it is said, hence, it is unimportant. This seemingly legalistic attitude, which often neglects the complex web of formal or informal legal procedures by which the EP is integrated into the EC decision-making process<sup>32</sup> is often defended by authors with a broadly realist view of international relations. What matters in this perspective is the interplay of power and interests of states negotiating in the Council<sup>33</sup>. At the margins, the Commission has a small role and probably, some transnational corporations may appear on the scene.

The fact, however, that the European Parliament has few rights in the field of environmental, energy and fiscal policy which are the main policy fields

standards or water quality standards in the attempt to control pollution. This debate cannot be reduced to a British desire to get a permission for more pollution; see Haigh, *EEC Environmental Policy and Britain* (1984 edition), pp. 27-34.

31. See, for instance, Schneider/Werle, *Vom Regime zum korporativen Akteur*.

32. For a wide-ranging treatment of this question see Grabitz et al., *Direktwahl und Demokratisierung*.

33. See Moravcsik, *Negotiating the Single European Act*; Keohane/Hoffmann, *Institutional Change in Europe in the 1980s*; Sandholtz/Zysman, *1992: Recasting the European Bargain*; Garrett, *International Cooperation and Institutional Choice*.

- relevant for the present study, must not lead the analyst to neglect them altogether<sup>34</sup>. The obligation to consult the EP before a decision is taken is a far cry from a final parliamentary approval of a law following the example of domestic systems but it is far more than exists in other international organisations<sup>35</sup>.
- > The EP, it is argued here, has a potential for influencing the greenhouse policy of the EC which has to be found beyond formal criteria<sup>36</sup>. This potential should not a priori be excluded from the analysis. Apart from the budgetary process which is irrelevant in the present context<sup>37</sup>, package deals are an important source of influence for the EP. In principle, the EP can link a positive decision in areas in which it has a strong influence (via the so-called "co-operation procedure", Art. 149, 2 of the EEC Treaty) to a consideration of its views in areas in which it is formally only consulted. This potential influence creates a climate of diffuse reciprocity among the Council and in particular among the Commission. The parliament has
- > "chaos power" which it can use only in a relatively undirected way. Still, this power suffices to make the Commission accept a number of amendments put forward by the EP during the legislative procedure which it would formally not be obliged to accept.
- > In the institutional triangle Commission — Parliament — Council, the Commission usually tries to keep a loose alliance with the parliament against the Council. One reason for this is that both institutions consider themselves as defenders of the "European" interest against the proponents of national interests, often portrayed as "national egoism" united in the

34. In some cases of environmental policy, namely those related directly to the internal market, the EP has even the formal power to reject the Council's position according to the "co-operation procedure" of Art. 149, 2 of the EEC Treaty. The most prominent case when it has used these powers is in the negotiations on emission standards for cars; see Corcelle, *L'introduction de la 'voiture propre' en Europe*; id., *L'introduction de la 'voiture propre' en Europe: suite et fin?* and in particular id., *La 'voiture propre' en Europe: le bout du tunnel est en vue!*

35. See Isaac, *L'insertion du Parlement Européen dans le système juridictionnel*.

36. Comprehensive analyses of the functioning and influence of the EP are Grabitz et al., *Direktwahl und Demokratisierung*; Bardi, *Il parlamento della Comunità Europea*; Kirchner, *The European Parliament: Performance and Prospects* and Louis/Waelbroeck, *Le Parlement Européen dans l'évolution institutionnelle*.

37. For a comprehensive treatment see Strasser, *Les finances de l'Europe*.

Council. For the Commission, the Council is the adversary which constantly tries to modify its proposals and has the final say about them. In this situation, the EP is a welcome ally<sup>38</sup>. The EP, on the other hand, tries to exploit this interest of the Commission in order to influence the Commission's proposals. The constellation applies particularly to the relationship between the EP's environment committee and the Commission's directorate general XI which is responsible for the environment but has a weak position within the Commission administration.

The most important but also the most diffuse source of influence of the European Parliament appears, however, to be the fact that it is a place of public discussion. In the debates of the plenary, as well as in hearings on specific subject which it has the right to organise, policy-makers have to defend their choices and to justify them. In committee meetings of the EP, Commission officials are usually present when their proposals are discussed. The EP has obtained the right to have a Commissioner reply to its questions. The Commission in general justifies and defends its policy in the committee meetings, during question time and on the occasion of general debates, such as the one on the yearly work program of the Commission. On the working level in particular, debates between parliamentarians and officials are frequent. This constitutes an opportunity for an exchange of arguments about a policy. Here, Commission and Parliament are on equal footing when it is assumed that in this stage, good arguments can convince the other. Parliamentary debates are also a topic of press coverage, which differs however widely in different member states. Arguments put forward by the EP are often used by third parties to support their own views. Here, the EP profits from its legitimacy as a directly elected body.

If the EP does not have a formal last word in the EC decision-making process, it has a considerable potential for influencing it. Some of these channels remain in the realm of classic bargaining (e.g. during the budgetary procedure). An important source of influence is the production and diffusion of arguments. If arguments are important, the way the EP

38. See Noël, *Le Parlement face à la Commission*.

frames an issue may also be important. The relationship between the Commission, the Council and the Parliament is, however, not one of equal partners discussing an issue. The debate takes place in a legal and institutional context which embodies power relationships. The preceding pages have tried to show that despite the formal power of Commission and Council, the European Parliament has means available to make his arguments heard. How and whether it uses them is an empirical question.

## *2. International: States Negotiating in the Council*

During Council negotiations, the European Community most closely resembles the type of international organisation usually analysed by international relations scholars. Several recent accounts of the EC development almost exclusively concentrate on interstate bargains<sup>39</sup>. Such an emphasis seems, however, to be mainly a function of the initial premises of the analyst which from the outset privileges state actors and their negotiation. In the previous four sections it has been argued that such a view of the EC system is too narrow. Leaning towards the other extreme and neglecting the Council negotiations is no solution either. Negotiation styles and negotiation rules have important consequences for the process of issue framing in the EC. In order to analyse them properly, it is, however, necessary to take into account the background conditions under which Council negotiations take place.

In particular, it is important to avoid the trap treating the EC Council like a prototype arena for game theory, with the member states and probably the Commission as the players. The institutional setting seems to present itself for such an approach which would, however, suffer from the shortcomings of a rationalistic theory outlined in Part I of this study. Negotiation theory is often nothing more than applied game theory<sup>40</sup>. Even if restrictive assumptions of game theory are relaxed (e.g. hyper-rationality, common

39. See the literature quoted in fn. 2, p. 78.

40. A typical example is one of the classics of the discipline, see Schelling, *The Strategy of Conflict*. See also another classic, Walton/McKersie, *A Behavioral Theory of Labor Negotiations*.

knowledge of the rules of the game), this statement remains true<sup>41</sup>. Even if important studies in this tradition exist<sup>42</sup>, this path will not be pursued here. For the analysis of negotiation processes in the Council, two other aspects are important which are often neglected by game theorists, namely negotiation as a drama<sup>43</sup> and negotiation as an exchange of arguments.

Negotiations of the EC Council are highly ritualised and largely governed by informal rules of behaviour which have few in common with the idealised type of negotiations according to which people meet who are merely interested in the substantive outcome. On the contrary, the dramaturgic aspects of these negotiations occupy an important place<sup>44</sup>. This is in particular true for meetings of the European Council<sup>45</sup> (which are mostly irrelevant for the present study) but also for meetings of specialised Councils. The performance of individual ministers (i.e. member states representatives) in a Council meeting may thus also be understood as an attempt to manifest and defend a specific identity of the policy-makers in the issue at stake, both on the Community as on the domestic level. Such a view could help to understand the persistence of different — and often largely incompatible — views on specific policy instruments<sup>46</sup>. In the play put on scene during the Council meetings, there must be no losers but only

41. This is implicitly acknowledged by Sebenius, *Challenging Conventional Explanations*, pp. 348 seq. In his definition, negotiation analysis is “non-equilibrium game theory with bounded rationality and without common knowledge” or “decision analysis with a strong interactive flavor” (ibid., p. 350, footnote 89). Rather sceptical on the possibility of a formal theory of negotiations is Zartman, *Negotiations: Theory and Reality*, p. 70.
42. The most famous example is Scharpf, *The Joint-Decision Trap*.
43. The symbolic or dramatic element of Council negotiations has been taken into account by writers with a good familiarity with the EC system; see e.g. H. Wallace, *Negotiation, Conflict and Compromise* and id., *Making Multilateral Negotiations Work*. On the symbolic value of adopting legal instruments see Dehousse/Weiler, *The Legal Dimension*, pp. 244 seq.
44. EC Council meetings are often criticised in the press as “mere talk”, “symbolic politics”, etc.
45. For a humorous but deep-sighted account of an insider, see von Donat, *Das ist der Gipfel!* The same point is made by Wessels, *Der Europäische Rat* and Wessels/Bulmer, *The European Council*.
46. An example is the debate about instruments to control water pollution between the UK and the rest of the EC which later extended to air pollution; see fn. 30, p. 87. For an analysis of the problem definition of the UK in the field of air pollution, see Hajer, *Bias in Environmental Discourse*.

winners. Everybody has to get something out of the negotiating room, and this "something" does not have to be something material. The "conclusions" published at the end of a negotiation are not mere artefacts for the press, only produced in order to hide the "real" course of the negotiations. They are also intermediary results of the negotiation process and the basis for future negotiations. The many informal rules of this play (showing solidarity with the poorer member countries, showing some progress accomplished during the meeting, offering everybody something to present at home, etc.) have to be taken into account when analysing the results of negotiations.

Despite a general tendency towards the introduction of majority voting at least as a possibility<sup>47</sup>, unanimity prevails as a formal or factual decision rule<sup>48</sup>. This is also the case in the policy fields relevant for the greenhouse effect. No hegemonic power exists. In this situation, bargaining, i.e. the exchange of gains and losses in search for an agreement is one way to come to a decision. Although bargaining and decision-making<sup>49</sup> will not be neglected in the empirical analysis of Part III, *exchanging arguments* is another source of change in the other's position. In this situation, the way in which different frames held by actors fit together becomes very important. Frames or elements of frames cannot simply be traded in an exchange process. To use a crude example, liberals (in the European sense) cannot simply give up "free enterprise" in exchange for, say, more civil rights. Particular frames can, however, be combined and changed much easier if they are part (or can be made a part) of a larger universe of compatible meaning<sup>50</sup>. This process is of decisive importance for the development of the EC's greenhouse policy.

The previous pages have argued that the EC cannot simply be understood in terms of the concepts of international relations theory. Instead, it possesses several features of domestic systems which create the institutional framework for the emergence and change of frames. This is

47. See Dewost, *Le vote majoritaire*.

48. On the importance of decision rules for policy outcomes (from a game-theoretical perspective), see Scharpf, *Decision Rules, Decision Styles, and Policy Choices*.

49. See Wessels, *The EC Council: The Community's Decision-Making Center*.

50. Gamson/Modigliani, *Media Discourse and Public Opinion on Nuclear Power*, p. 5, call this the "cultural resonance" of frames.

even true with the part of the EC system that resembles most closely to other international organisations, the negotiating process in the Council. The domestic elements of the EC system as well as the specific features of the Council negotiations (no exit option, dramaturgic elements) make the exchange of arguments an important — though not the only — part of the Council negotiations. Frames are thus not only frameworks for the rationalities of the individual Council members, they are also arguments which encounter other arguments. The analysis of frames can thus be extended to intergovernmental negotiations.

## B. Specific Features of Environmental Policy

The following section deals with particular aspects of environmental policy that, as it is sometimes claimed, distinguish environmental policy from other types of policy-making<sup>51</sup>. Although I do not share this broad view but believe on the contrary that the characteristics outlined below are found in many fields of policy-making, though obviously to varying degrees, the relevance of these typical aspects of environmental policy for the present study will briefly be discussed in order to locate the concept of “framing” in relation to these standard themes of environmental policy-making.

### 1. *Environmental Policy as a Problem of Public Goods Theory*

The greenhouse effect is a global environmental problem. Global environmental problems have frequently been looked at in terms of collective goods<sup>52</sup>. Analysing global environmental problems in this way

51. See for instance P. Haas, *Saving the Mediterranean*, p. xxii, who states that “behavior in the area of the environment differs dramatically from traditional forms of international behavior”. Such a view, implicit or explicit, prevails in many analyses of environmental policy. I can only agree with the criticism of Gehring, *Dynamic International Regimes*, p. 516 (footnote 41), that Peter Haas’ analysis suffers from an epistemic misunderstanding as he does not compare different policy fields but different theoretical explanations of one policy. In general, most statements of the above-mentioned kind are not the result of a comparative analysis of different policy fields but mere a priori settings.

52. See e.g. G. Hardin, *The Tragedy of the Commons* and Wijkman, *Managing the Global Commons*. See also Prittwitz/Wolf, *Die Politik der globalen Güter*.



means adopting the basic result of collective goods theory, namely that individually rational behaviour under specific conditions leads to a collectively undesirable (or sub-optimal) result<sup>53</sup>. For the case of global climatic change this fundamental dilemma means that although everybody would profit from a stable climate instead of suffering from the negative effects of the increasing temperature, individual actors (states) have strong incentives to choose a behaviour which even increases the greenhouse effect. Collective goods theory offers hypotheses under which conditions a collective good is likely to be provided either by a single (hegemonic) actor or by some actors out of a larger group<sup>54</sup>.

Conceptualising the greenhouse effect as a problem of collective action can give important insights into difficulties of co-operation and into the likelihood of certain strategies chosen by actors. Yet, posing the problem in terms of collective action implies an important choice: It assumes that the actors refer to the same problem, i.e. that they are in the same game. At present, the debate is not only about how to solve the problem of the greenhouse effect but at least to the same extent about what the problem is. Adopting a collective choice perspective risks adopting one particular problem definition, implicitly defining it as the "objective" or "true" one and assessing other actors' responses in these terms. In fact, other actors may have other frameworks of rationality. Their version of the collective goods problem, if there is any in their world, may be entirely different.

The theory of collective action is not able to explain why actors which cannot make any substantive contribution to the provision of a collective good still adopt a policy in this respect<sup>55</sup>. From a collective action perspective, it makes no sense for Denmark to adopt far-reaching and costly measures in reducing its carbon dioxide emissions. This also applies for Germany in the same context and even for the entire European Community which has only a thirteen per cent share in global carbon dioxide

53. See Olson, *The Logic of Collective Action*.

54. For a major treatment, see R. Hardin, *Collective Action*.

55. One critics argued that "structural accounts can tell us a great deal about the constraints facing policy makers, but policy making is based on creation as well as constraint"; Hall, *The Political Power of Economic Ideas*, pp. 361-362.

emissions<sup>56</sup>. Despite these incentives for non-co-operation, leading roles of small countries are a rather frequent phenomenon in international environmental negotiations.

- › In the last resort, the theory of collective action, even if applied to environmental problems of the kind dealt with here, deals with different things than the present study. Collective action theory is often good in predicting outcomes but unable to explain why actors have contributed to these outcomes. Whereas collective action theory because of its strong roots in game theory assumes fixed preferences and options for rational actions within the limits of its definition, the present study deals with the emergence of these preference and their change over time. Empirically, however, it is claimed that it does not make sense to regard the greenhouse effect as one world-wide problem of collective action. At present, players are in different games. In the analysis of the greenhouse policy of the European Community, collective action theory will thus not be used. The only form it will appear is that of one argument among others put forward by actors in the process of framing the issue.

## *2. The Role of Knowledge*

“Knowledge” is a term frequently used in the analysis and the making of environmental policy. Its uncritical use can, however, lead to biases in the analysis and to the adoption of implicit cause-effect models. In the analysis of environmental policy, “knowledge” is often used synonymously with “natural scientific knowledge”<sup>57</sup>. In the Anglo-Saxon world in particular, this notion is abbreviated to “scientific knowledge”<sup>58</sup>. According to this

56. For the different countries' contribution to carbon dioxide emissions, see Table 5 and the subsequent Figures, pp. 281 seq.

57. See e.g. List, *Umweltschutz in zwei Meeren*, pp. 14, 75, 128/29.

58. The constant use of “science” in the meaning of “natural science” may reflect the view that natural science is the only “real” science, in particular when it is used by natural scientists; see e.g. Dürr, *Problems of Environmental Cooperation in Europe*. It may also reflect the conception of a unitary science (of natural and social science) widely shared in the Anglo-Saxon world; see Giddens, *Central Problems in Social Theory*, p. 238. The German tradition, on the other hand, tends to consider natural science and social science as two separate entities with fundamentally different

- > usage, a frequent thesis is that environmental policy heavily depends on knowledge and that this fact is a distinctive feature of environmental policy. In most cases, the type of knowledge which is considered important is knowledge about the natural-scientific aspects of an environmental problem, e.g. whether a certain concentration of cadmium in drinking water causes health problems or whether and by which mechanisms rising concentrations of certain gases in the earth's atmosphere lead to an increase of the average temperature. Problems of environmental policy are then often problems of incomplete or uncertain knowledge, and a strategy to solve these problems is to increase research until clear cause-effect relationships are established on the basis of which administrators can design policies and politicians can decide. Natural scientists and the increase of natural scientific knowledge are thus in the centre of attention.
- > Often, the emergence of natural scientific knowledge is described as fundamentally different from the political process<sup>59</sup>. Whereas the building-up of scientific knowledge is technical, unpolitical, characterised by rational argument and oriented towards the criterion of truth, the political process is dominated by the struggle for power.

If environmental policy is heavily dependent upon natural scientific knowledge, natural scientists and the logic of natural scientific discovery will play a major role in it. Natural scientists, connected in "epistemic communities", change the character of policy-making. Even among states, knowledge in the above-mentioned sense becomes a source of power<sup>60</sup>. Frequently associated with this view is the old functionalist hope that problem-solving by unpolitical technicians may lead to peaceful co-operation among states<sup>61</sup>.

Without denying the importance of natural scientific data for environmental policy-making, some caveats shall be made here. Even from a constructivist perspective, it is clear that differences in natural scientific data matter.

inherent logics; see Habermas, *Zur Logik der Sozialwissenschaften*, pp. 89 seq. and Habermas, *Theorie des kommunikativen Handelns*, pp. 160 seq.

59. See Gehring, *Dynamic International Regimes*, p. 512.

60. See the title of E. Haas, *When Knowledge is Power*. See also Simonis, *Kooperation oder Konfrontation: Chancen einer globalen Klimapolitik*, pp. 32-33.

61. See the remarks on this variant of functionalism, fn. 134, p. 53.

There is, however, no pre-defined relationship between natural scientific knowledge and political action. Environmental policy action is not necessarily more likely if the natural scientific evidence on the problem to be solved becomes stronger. This view implicitly assumes that policies exist to solve the problems they are said to tackle (i.e. environmental problems) and neglects other reasons for their existence and persistence (e.g. to solve *political* problems or to manifest the identity of the policy-makers).

- > The epistemic community hypothesis reduces the interplay between natural scientific knowledge and society (or political decisions) to the influence of scientific lobbying groups on government administrations. If an epistemic community has convinced the relevant policy-makers, it has an influence on them. In order to convince policy-makers, epistemic communities have to share consensual knowledge. If knowledge is debated, it is less susceptible to have political influence. At least, it cannot serve as the constituent basis of an epistemic community. An analysis which needs persons as the carriers of knowledge limits, however, its own scope. It risks to remain restricted to the relationship between scientists and technicians on the one hand and administrators on the other<sup>62</sup>. In this perspective, problems of knowledge are problems of the lack of knowledge or an incomplete or false understanding of natural scientific facts by politicians and the lay public<sup>63</sup>. Obviously, access to national scientific knowledge can be a resource of power for political actors<sup>64</sup> but it should not be privileged too much.

- A perspective stressing the dependence of policy-makers on knowledge from the natural sciences in the way described above runs the risk of implicitly or explicitly following simple cause-effect assumptions. Scientific expertise in this perspective is more or less directly transformed into political action. A hidden assumption in this argument is that people or politicians *want* to solve the problems defined by natural scientists. If environmental problems are not solved or even tackled, one reason for this perspective is a lack of natural scientific knowledge. Hence, the solution is to accumulate more of

62. See for instance Liberatore, *EC Environmental Research and EC Environmental Policy*.

63. See on this point pp. 102 seq.

64. See e.g. Wolf, *Internationale Regime zur Verteilung globaler Ressourcen*, pp. 290 seq.

such knowledge<sup>65</sup>. The more knowledge is accumulated, the more likely it is to result in political action. There are thus two explanatory strategies available for non-action in the field of environmental policy. Either, the available stock of knowledge is declared as insufficient in retrospect: nothing has happened politically, *hence* knowledge was insufficient. Or, political or economic interests have prevented the application of the knowledge.

Such a model reflects a consensual view of scientific progress. Politics has to be based on solid scientific knowledge, and solid scientific knowledge is consensual knowledge which is achieved by the universally shared truth tests of the scientific community. Discussion and debate about natural scientific facts does not have much place in this concept<sup>66</sup>.

Another perspective is to analyse the social production of scientific knowledge. In this case, not only the selection of knowledge and its communication are political processes but already its production. In such a sociology of science, natural scientific knowledge is thus not anymore a form of unpersonal objective knowledge but a social product which has lost its privileged status in the political process<sup>67</sup>. Although the present study is not much concerned with this aspect, I share the view that natural scientists are dependent on conceptions and cognitive processes that they bring to their discipline from the social world<sup>68</sup>. In this respect, the scientific system is a social system like any other.

A more interesting perspective might be to inquire into the criteria for the selection of specific knowledge and to consider this process itself as a

65. See the criticism of this natural scientific and technical approach to environmental policy-making by Prittwitz, *Das Katastrophenparadox*.

66. Max Miller introduces his book on collective learning with two mottoes: "Alles Leben entsteht durch Streit" (Heraklit) and "Le bien est un produit de coopération" (Piaget); see Miller, *Kollektive Lernprozesse*. The above-mentioned view exclusively opts for the second motto.

67. A pioneering work is Fleck, *Entstehung und Entwicklung einer wissenschaftlichen Tatsache*. See also Ravetz, *Scientific Knowledge and Its Social Problems* and Ravetz/Funtowicz, *Post-normal Science*.

68. See Segerstråle, *The (Re)Colonialization of Science by the Life-World*, pp. 246-248.

political process<sup>69</sup>. This process cannot be captured in a simple interest-oriented model according to which politicians which pursue certain interests chose the (natural) scientific information which fits to that interest in order to justify it. The same is true for the reverse image, namely that scientists actively promote specific results in order to obtain more funding, although both mechanisms may play a role in extreme cases<sup>70</sup>. Instead, it can be analysed in terms of the fit or misfit of different frameworks of rationality. This is the perspective chosen here. It avoids taking natural scientific data as "objective" knowledge outside the political process but at the same time does not resort to ideas about politicians selecting parts of the available knowledge as a function of their already well-defined interests.

For the sake of terminological clarity, it is necessary to add some qualifications to the use of "knowledge" besides the more fundamental remarks made on the previous pages. Natural scientific knowledge, it has already been said, is an important aspect of environmental policy-making. Yet, if causes and effects of pollution are known, this is not sufficient for political action. Technical knowledge has to provide the physical means to cope with the problem. If the alternative to prohibit the polluting activity does not exist, the desired effect of pollution reduction has to be achieved by technological means. It is one thing to say that rising concentrations of carbon dioxide in the atmosphere cause a rising of average temperatures and several other undesired effects but another thing to have technologies for energy saving, miniaturisation, insulation, etc. available. Technical knowledge is different from natural scientific knowledge because contrary to the latter it is linked to economic cost-benefit calculations. Technical knowledge "as such" is meaningless in the political process, except for the case that for a given problem, no solution at all is known. Existing

69. Instead of a technical/mechanical one, as done by Holzner/Marx, *Knowledge Application*.

70. A drastic example is a report of the *Deutsche Physikalische Gesellschaft* on climate change which launched a huge public debate in Germany. The findings and interpretations of the report have been criticised even by climatologists and it was alleged that the report used grossly exaggerated figures in order to promote nuclear energy as a source of energy which does not directly contribute to the greenhouse effect; see *Der Spiegel*, 41/1992, p. 269. The findings taken from the report of the *Deutsche Physikalische Gesellschaft* have been used for a cover story of *Der Spiegel* (33/1986).

technologies all gain or loose relevance in an economic framework which is again not objectively given but consists of assumptions reflecting specific ways of seeing and interpreting the world.

This leads to the last category of knowledge which is important for the present study, namely *economic knowledge*. Economics, as a social science, is frequently neglected by authors considering natural scientific knowledge the only scientific knowledge. In this view, economic factors are introduced in the analysis not under the label of “knowledge” but under that of “interests”. A typical argument would be that a part of industry, for instance, has the “interest” of avoiding as much as possible the introduction of substances that are less damaging for the earth’s ozone layer because they are more costly than the old ones. If industry uses the cost argument for the defence of its cause, this must not be confused with a, however defined, objective cost. It is merely an argument put forward by one actor reflecting its specific interpretation of the world insofar it relates to the problem at stake. This interpretation may be entirely different in the case of other actors, such as environmentalists or government administrations.

As long as economic interpretations can be neatly associated with those actors in whose interest they are (to remain in this conceptual framework), economics can be dealt with under the heading of “interests” instead of “knowledge”. The problem becomes more tricky when different economic assessments are put forward by actors without an immediate “interest” in the problem. This is frequently the case with government bureaucracies, governmental expert bodies, economic institutes or single economists writing in scientific journals. In this case, it does not make much sense to find out the “interests” which lead a particular professor to adopt a particular economic framework. Economics is then more usefully treated as a form of *knowledge*<sup>71</sup>. Economic knowledge is particularly important for analysing the greenhouse effect as measures against the greenhouse effect have to be taken at a global or at least regional level. For the state considering these measures, different response strategies entail different costs which are highly controversial. In this sense, it is meaningless to

71. The role of controversial forms of economic knowledge is also the subject of the debate on the role of economic ideas in policy-making, see fn. 81, p. 34.

speak of the interest of a state to opt for a specific interpretation of the economics of the greenhouse effect. This is merely an ex-post rationalisation and corresponds to the attempt to explain the selection of natural scientific data by alleged interests of actors.

Considering economics as knowledge sheds light on the controversial nature of knowledge which is obscured by an exclusive reliance on natural scientific knowledge. Without opening a debate on the philosophy of science, it is submitted that the Kuhnian notion of "paradigms" which is the basis for generally accepted truth tests and validity claims in the natural sciences is not easily transferable to the social sciences. In the social sciences, "old paradigms never die; indeed, they rarely ever wither away."<sup>72</sup> Economic knowledge, thus, can be considered as competing interpretations of the world leading to different result even of cost-benefit assessments which cannot simply be reduced to the interests of the parties producing the studies. Accumulating economic knowledge or making it more accurate is thus no solution to the problem of how to decide about policy options to deal with the greenhouse effect. Again, this should not be misunderstood in the sense that economic studies were useless for policy development. It means, however, that accumulating huge numbers of economic studies does not solve the problem of deciding about the appropriate interpretative economic framework. Different and competing knowledge systems, irrespectively of the type of knowledge to which they refer, can be analysed in terms of frames. In the empirical study, the notion of "knowledge" will be used in this sense instead of restricting it from the outset to natural scientific knowledge and its specific problems.

### 3. Risk and Uncertainty

Environmental problems in general and the greenhouse effect in particular are typically considered as *risks*. Talking about risks implies talking about the future: A risk is something which has not yet happened but is expected

72. Smart, *Foucault, Sociology, and the Problem of Human Agency*, p. 123. "At best a paradigm may, as Giddens puts it, become 'comatose', awaiting reanimation at a future point in sociology's development." (ibid.). The notion of frames would thus correspond more to Lakatos' concept of "research programmes".



to do so. Whereas natural scientific knowledge about environmental damage is already subject to controversy when it is related to present damage, this controversy becomes even more pronounced — and its results more important — when the subject of inquiry is *future* damage. There are not only different ways to deal with risk but also different perspectives of analysing it. Although the present study is not mainly concerned with risk as such or with its political and societal implications<sup>73</sup>, the greenhouse effect is constantly referred to as an “environmental risk” which can be managed, avoided, perceived, or neglected<sup>74</sup>. Different concepts of risk, however, imply different analytical orientations and often different outcomes. It seems thus necessary to briefly explain the concept of risk used here and its analytical implications.

Despite the lack of a generally accepted definition of “risk”<sup>75</sup> one can broadly distinguish between a more technical and a more sociological orientation of research on risk. The former is not of interest here as such. On the basis of the preceding section about “knowledge”, it is possible to argue that even the technical branch of risk analysis produces social constructions of the risk it deals with<sup>76</sup>. According to the sociological perspective, concentrating of the traditional technical branch of risk analysis implicitly or explicitly assume a contrast between experts and the lay public or politicians in relation to risk: Whereas experts perceive risks correctly, the public, the politicians and the press are emotional and misinformed. From this assessment, it is easily concluded that “incomplete science” and “wrong” public perceptions are at the source of public resistance to the installation of large and risky technologies, such as nuclear power stations or waste incinerators<sup>77</sup>. As a consequence, more

73. See e.g. Beck, *Risikogesellschaft*; Evers/Nowotny, *Über den Umgang mit Unsicherheit*, Luhmann, *Ökologische Kommunikation* and id., *Soziologie des Risikos*.

74. Managerial perspectives are frequent in the literature on environmental policy-making; see e.g. Clark, *Managing Planet Earth*.

75. See Luhmann, *Soziologie des Risikos*, pp. 15-16 and id., *Soziologische Aufklärung*, Vol. V, p. 132.

76. See Lau, *Risikodiskurse*, pp. 418-419. An example for a technical approach to risk analysis are the recommendations of the conference on “Carbon Dioxide and Other Greenhouse Gases” which was organised by the EC Commission in 1986; see Laurmann, *Recommendations*.

77. See Wynne, *Risk Management and Hazardous Waste*, p. 6.

natural scientific research and information campaigns are the right means to bridge the information gap between technicians and the politicians asking for their expertise on the one hand, and the public and the media on the other<sup>78</sup>. The situation becomes more complicated in the case of conflicting expert evidence.

One possibility to deal with this situation is to declare that expertise A serves the interests of actor X whereas expertise B is in the interest of actor Y. Yet, this perspective supposes that actors already know what is in their interest. In the seemingly paradoxical situation in which on the one hand, decision-makers as well as the normal public are increasingly dependent on natural scientific assessment but where on the other hand, these assessments themselves become so controversial that it is not possible to rely on them anymore<sup>79</sup>, one can also leave aside the analysis of what a risk is and look at the different ways risks are perceived and conceptualised by different actors in society. In this perspective, "public perception of risks and its acceptable levels are collective constructs."<sup>80</sup> The focus of the analysis is thus moved from the risk itself to the observers of risk. In other words, risk analysis moves from first-order observation to second-order observation<sup>81</sup>.

In the perspective of the writings of cultural theorists about risk<sup>82</sup>, risk conceptions are not merely a function of the more or less well-done analysis of the "real" risk, biased by ideology, misinformation and insufficient information processing capacities. Instead, risk perceptions are also a function of different forms of society<sup>83</sup>. The basic question of risk analysis:

78. See Wynne, *Frameworks of Rationality in Risk Management*, p. 33.

79. See Eder, *Framing and Communicating Environmental Action*, p. 13.

80. Douglas/Wildavsky, *Risk and Culture*, p. 186.

81. "Der Beobachter erster Ordnung sieht, was er sieht. Der Beobachter zweiter Ordnung sieht, wie der Beobachter erster Ordnung sieht, was er sieht." Luhmann, *Soziologie des Risikos*, p. 77. For Luhmann, this is the only possibility of a sociology of risk: it should deal with the way risks are communicated in the different functional subsystems of society and not with these risks themselves; see *ibid*, p. 14

82. For a commentary on cultural theory, see pp. 27 seq.

83. See Douglas/Wildavsky, *Risk and Culture*, p. 89.

who fears what and why, is thus best answered by pointing to cultural biases as a reason for different risk perceptions<sup>84</sup>.

The present study is not about the greenhouse effect as a risk. It adopts the perspective of seeing different conceptualisations of risk as equivalent and socially constructed. However, the emphasis is not placed about the emergence of risk perceptions but on their usage. In any case, there is no "objective" definition of risk which can be found out by sophisticated technical models in the traditional sense<sup>85</sup>. Conceptualisations of risk are social constructs reflecting different factual, normative and symbolic elements. They are frames shared by different actors or actor groups. Whereas cultural theory treats risk perceptions mainly as interpretative frames in the terminology used here, the present analysis is also concerned with the usage of these frames in the shaping of the EC's policy towards the greenhouse effect, in other words, with action frames. The analytic path chosen here is not the one of an inquiry into the nature of the risk constituted by the greenhouse effect and ways and means to improve its understanding and thus to improve ways and means to manage such a risk. Instead, it focuses on the use and transformation of different ways of framing the risk of the greenhouse effect in the policy process of the European Community. As talking about "risk" means talking about the future, these different interpretations and concepts are even more important for political action than if the issues were on the interpretation of the present.

84. See Wildavsky/Drake, *Theories of Risk Perception: Who Fears What and Why*, pp. 48 seq. The authors also give a short review of standard explanations of risk perception. In other words, the political potential of the emerging "risk society" must be in terms of a theory of the emergence and distribution of risks; see Beck, *Risikogesellschaft*, p. 31. Niklas Luhmann who relies heavily on the writings of Mary Douglas and Aaron Wildavsky in his own sociology of risk, completely neglects this critical dimension of cultural theory.
85. And there is also no direct way from data on the state of the environment to the perception of environmental danger; see Hagstotz/Kösters, *Bestimmungsfaktoren subjektiver Umweltbelastung*. But see Strübel, *Nationale Interessen und europäische Politikformulierung in der Umweltpolitik*, pp. 278 seq.

#### 4. Summary

Some global environmental problems, such as the depletion of the ozone layer and the greenhouse effect, are often portrayed as problems of the supply of collective goods<sup>86</sup>. Collective goods theory, however, though able to give guideposts for assessing the results of action, does not inquire about the reasons for the emergence of these results. It suggests different questions than the ones asked here. Therefore, collective goods theory has been dismissed as an explanatory tool for the present study. It will merely be considered as one line of argumentation used by actors in the policy process.

Another feature commonly associated with environmental policy is the dependence of policy-makers on knowledge. In many cases, however, the notion of knowledge is reduced to technical or natural scientific knowledge. Knowledge, however, is not an unproblematic set of facts and causal links between them. Instead, even natural scientific knowledge represents different interpretations of the world, or different frames in the terminology chosen here. This is even more pronounced in the case of economic knowledge.

Finally, environmental problems in general and the greenhouse effect in particular are perceived and dealt with as risks. The conceptualisation of risk has fundamentally changed in the scientific and even in the political debate. Risk increases the weight of the future in the political process and enlarges the importance of different interpretative and action frames. When dealing with risk, different realities are at stake; there is no more one single reality in which different actors pursue their strategies on the basis of their interests.

86. See for instance Oberthür, *Die Zerstörung der stratosphärischen Ozonschicht* for the ozone layer and id., *Die internationale Zusammenarbeit zum Schutz des Weltklimas* for the greenhouse effect.

### III. Framing the Greenhouse Effect in the European Community

#### A. Introduction

The preceding analysis has prepared the theoretical ground for the empirical analysis of frame shifts in the European Community. The task of the empirical study in this part is the analysis of the political process leading to the adoption of the European Community's strategy to fight the greenhouse effect. "Political process", however, is not equated with "decision-making process" and a focus on actors trying to pursue their interests. Instead, while actors remain in the centre of attention, the political process at stake is analysed in terms of frames, their emergence, encounter and change. The development of the EC's greenhouse policy is thus a process in which actors develop their views on the issue and act in accordance with these views. This process resembles more closely a process of arguing than one of bargaining.

The following part analyses how the greenhouse effect was framed by the central actors of the EC system and attempts to understand the behaviour of these actors in terms of their framing of the greenhouse effect. Despite some resemblance with concepts used in discourse-analysis, the present study is *not* a study about the EC "discourse" on the greenhouse effect. It is not solely about texts but also about reality<sup>1</sup>. Frames are not mere

1. The notion of "discourse" has become fashionable in recent years. Frequently, it is used merely as a metaphor to designate anything that has been said by an actor or anything that has been said about a topic (e.g. the "human rights discourse", the "disarmament discourse"). A much more elaborate form of discourse analysis is applied to issues where texts are the main object of inquiry (i.e. to the media). Here, interesting tools are available to reconstruct the way reality is represented in texts; see in particular the work of van Dijk, *News as Discourse*, id., *News Analysis* and id., *Structure of News in the Press*. Theories and methods are much less clear about how texts influence reality, despite the claim that discourse analysis can work in both directions, see van Dijk, *News as Discourse*, p. 30, and in contrast the careful conclusion of Gamson/Modigliani, *Media Discourse and Public Opinion on Nuclear Power*, pp. 32-36. The concept of frames used here treats texts only as tools for the identification of interpretative and action frames. For a more thorough discussion of methodological issues see pp. 111 seq. The concept of "discourse" will not be used in this study.

rhetorical representations of reality but have two aspects: they serve as filters for actors which they need in order to make sense of the world (interpretative frames) and as frameworks of rationality guiding their action, even to the extent that they are actively promoted (action frames). The process of the framing of the greenhouse effect can be regarded as a debate about what the problem at stake is. Only the definition of the problem and the agreement on this definition allows to think about options for action. Only when options for action are clearly available, it makes sense to talk about the interests of the parties concerned<sup>2</sup>.

The definition of the problem is not a mere academic exercise. On the contrary: a shift in the problem-definition may lead not only to a different assessment of interests and preferences but also to shifts in actor constellations. If the problem is one of limiting the emissions of a specific air pollutant, for instance, natural scientific research on the causes and the effects of that pollutant is an appropriate instrument. In this situation, some actors might fear the costs of a policy of emission control and insist that further research be pursued with the allegation that the natural scientific basis was not solid enough to justify large-scale expenditure. If the problem becomes one of energy policy, traditions, actor groups and concepts *from this field* may lead to very different assessments of what is in the interest of a country, an enterprise or of the EC Commission.

Problem definitions are thus the basis of a policy. They determine which actors are involved in the policy development or concerned by it and they determine, once agreed upon, what the preferences of the diverse actors are in the policy process. If a problem definition changes, preferences also change. Hence, approaches relying on fixed and clear preferences are applicable in the case of a well-established policy or when the problem at stake is seen by participants in similar terms.

Problem definitions are structured by frames. These frames, a basic argument of this study claims, are not dependent on whatever "objective"

2. Indeed, one might even go one step further and question, accordance with Charles Lindblom, the assumption that "fixed or variable, preferences, wants, needs, and interests are discoverable to a degree that warrants searching for them", Lindblom, *Inquiry and Change*, p. 18.

patterns but instead on the institutional context of the process of framing and their resonance with broader frames. The way issues are framed (i.e. how a problem is defined) is already important for present issues. It is even more important for issues becoming problematic only in the future, if at all. In other words, framing is particularly important in the case of *risk*. Risk entails the question of how actors conceptualise their future<sup>3</sup>. The very nature of the future creates a necessity of a debate on the nature of this future and on ways to deal with it. There can be no "objective" knowledge of the future, even in natural scientific models. Models, in the natural as well as in the social sciences, always incorporate parts of social reality in the form of assumptions<sup>4</sup>. Thus, decision-making under "uncertainty", a common term in environmental policy-making<sup>5</sup>, always implies an increased importance of views about the future at stake.

The greenhouse effect is a particularly striking example of a risk, with potentially enormous consequences for the environment, the economy and a wide range of other fields including the possibility of the disappearance of some states<sup>6</sup>. Despite an increasing consensus that the earth's average temperature is going to rise, immense uncertainties prevail with regard to the possible effects of the greenhouse effect<sup>7</sup>. These uncertainties are not the subject of this study but only how actors refer to them and use them in the framing process.

3. This is the central argument of Luhmann's sociology of risk; see Luhmann, *Soziologie des Risikos*, p. 6.
4. See Segerstråle, *The (Re)Colonialization of Science by the Life-World*.
5. Although the discussion of this argument is beyond the scope of the present study, it seems to me that environmental policy is by no means so unique concerning this feature as students of environmental policy-making claim. The "risk-society" is not restricted to environmental policy but a general phenomenon.
6. Namely the small island states which have organised themselves as a group in the climate negotiations.
7. The factual background of the greenhouse effect has been described many times, most authoritatively in the reports of the Intergovernmental Panel on Climate Change, *Climate Change: The IPCC 1990 and 1992 Assessments* and in the reports of the German Bundestag's commission of inquiry on the protection of the atmosphere, see Enquete-Kommission "Schutz der Erdatmosphäre", *1. Zwischenbericht der Enquete-Kommission des Bundestages zum Schutz der Erdatmosphäre*, id., *Schutz der Erde. Eine Bestandsaufnahme mit Vorschlägen zu einer neuen Energiepolitik* and id., *Klimaänderung gefährdet globale Entwicklung*.

The empirical analysis deals with the emergence of the European Community's policy towards the greenhouse effect between 1986, when the European Parliament presented a first major report on the issue, and mid-1992, when a convention on climatic change was signed at the Rio Summit. Before 1986, the greenhouse effect had not been on the EC agenda, despite some minor research programs on atmospheric research. During these six years, the policy developed rapidly and led to the adoption of a comprehensive package of policy measures upon which the Council had not yet formally decided at the time of writing. However, this is no great harm since the interest of the study is not to follow in detail the legislative history of a specific proposal from its first draft until its final adoption. In particular, the aim of the analysis is not to trace the history of the proposed tax on carbon-dioxide and energy, although this policy instrument occupies a particularly important place in the debate.

Instead, the policy process is analysed in terms of a frame shift from what as ideal types can be labelled "classic environmental policy" to "sustainability". This frame shift is by no means complete, generally acknowledged or irreversible. Frames do not *determine* policy-instruments: a "sustainability" frame does not *automatically* lead to a tax on carbon dioxide (inversely, if a specific policy-measure is not adopted, this does not invalidate the frame to which it corresponds more closely).

A different view of the greenhouse effect, i.e. the above-mentioned frame shift, has been actively promoted by the Commission. The Commission is not regarded as a monolith in this analysis. On the contrary, internally it experienced a frame shift similar the one it later actively sponsored. The relationship of individual departments ("directorate-generals") within the Commission can also be analysed in terms of frames. The new sustainability frame allowed new coalitions among directorate generals and was accompanied by a change in the general orientations of the Commission's view of EC environmental policy.

The emergence and the transformations of the frames with regard to the greenhouse effect does not take place in a vacuum. On the contrary, it happened in a very specific institutional context. The institutional structure in which the Commission, the Council and the European Parliament acted, biased the debate and particularly furthered specific sub-sets of the EC



greenhouse policy, in particular the "environmental leadership" concept. On the whole, furthered by the Commission with the help of its institutional position in the EC system, Commission and member states in the years from 1986 to 1992 approximated their views and, in the sustainability frame, found a possible area of agreement. In fact, a rather coherent EC greenhouse policy has emerged to which all participants can agree. However, the sustainability frame has had not only a consensus-building effect but also excluded those participants from the debate which did not share it, in particular the European Parliament which had initially set the pace.

Only late in this process, clear positions in favour or against certain actions emerged. In the initial phase, participants were divided about the nature of the subject. How they came to a collectively valid definition on the basis of which they could start bargaining is the topic of the study.

## B. A Methodology for Frame Analysis

This section will discuss concrete ways to analyse frames and methods to identify them. Frames are properties of actors<sup>8</sup>. They use them to structure and perceive reality and to orient their action. Each actor has its own frame for interpreting reality and acting upon it. This does not imply the existence of a myriad of independent and unique frames, one for each actor in the social world. Actors, be they individuals or "corporate actors"<sup>9</sup> like institutions or organisations, do not create frames in a way completely isolated from other actors. On the contrary, frames are created in interaction with society. Therefore, a changing proportion of an actor's frame with regard to a specific issue will be socially shared, e.g. exist among

8. But they are not merely individualistic categories in the sense of the debate on the "cognitive maps" of actors; see Axelrod, *Structure of Decision* or Putnam, *The Beliefs of Politicians*.
9. The term has been coined by Coleman, *Power and the Structure of Society*. See also Mayntz, *Corporate Actors in Public Policy* and Schneider/Werle, *Vom Regime zum korporativen Akteur*. The notion of the "corporate actor", in fact adapted from the legal notion of a "legal personality" is particularly important for rational choice theory as it allows to speak of preferences at an aggregate level without having to explain the preferences of a collective actor by the preferences of its individual members.

members of the same class, group, policy-making community, etc. Actor's frames in a particular policy-field thus contain references to generally available knowledge in the policy-field. This can be specific interpretations of crucial facts (like the toxic effects of mercury), standard explanations (e.g. cause-effect chains), value commitments (e.g. to market economy), general principles (like the polluter-pays principle) and the like. In a policy-field, an actor selects elements of his frame from a variety of options in his environment. In many cases, these elements are different views of one problem or different strategies for solving it. Pollution, for instance, can be regarded as a problem created by industrial actors, and in the last resort by the inherent contradictions of a capitalist economy, it can be regarded as a problem of the state who has to regulate it in the interest of the citizens and the economy, or it can be regarded as a problem of the consumption habits and the personal responsibility of the individual citizen. When making decisions, policy-makers have to rely on frames, i.e. on pre-existing ideas, to establish meaningful relationships between facts which can lead to action<sup>10</sup>. Different frames may thus lead to different policy tools<sup>11</sup>.

Different views of a problem may be irreconcilable at a point in a debate but this does not necessarily have to be so. In particular, one should be very careful in considering frames or elements of frames as *logically* (or "objectively") irreconcilable or opposed. Only a few things are logically opposed: for instance, I cannot at the same time be in the room and not be in the room. In politics, claims that two frames (ideas, concepts, values) were irreconcilable (and would forever remain so) are at best partisan interpretations in the political game. "Capitalism" and "communism" are two different concepts but do not preclude the possibility of different organising principles (e.g. the "Third Way") as such. Still, this might be the case *politically*. On a less fundamental level, this also applies to policy-specific concepts. A command-and-control approach in environmental policy is generally regarded as requiring a strong degree of regulation, whereas economic instruments in environmental policy have been since long praised

10. See Majone, *Cross-National Sources of Regulatory Policymaking*, p. 79. In fact, this argument is a variation of the well-known remark of Keynes that even the most pragmatic practitioner was the slave of some defunct economist.
11. See Schneider/Ingram, *Behavioral Assumption of Policy Tools*, p. 526.

by the proponents of deregulation (most prominently by the OECD)<sup>12</sup>. In this study, these two approaches figure prominently under two different frames. Yet, this is a matter of fact and not a matter of logic. Both approaches could be combined and/or modified, if the relevant actors wished to do so or if a more general frame change occurred. This operation would give new meaning to the two approaches now considered as opposed

The preceding paragraph has also had the task of preparing the discussion of what frames are *not*. Frames are not "merely" ideas, and the analysis of a frame shift is not the analysis of a conceptual change in the framework of a history of ideas. The latter could be done by looking at textbooks of environmental policy-making or, if the empirical element was stronger, by including programmatic speeches or texts into the analysis. All this will be done in the following study but from a different theoretical standpoint. The analysis of frames is not the analysis of ideas for their own sake. Hence, the discovery of inconsistencies, contradictions or any other kind of flaws is not the purpose of frame analysis. The logical consistency of a frame is unimportant in this context. Furthermore, in this study different frames are neither assessed in their normative quality nor in their problem-solving capacity. I do not claim, for instance, that "sustainability" is morally superior to "classic environmental policy" because of its references to the need to achieve "intergenerational equity" or that it offers better possibilities to prevent the greenhouse effect than "classic environmental policy". The analysis of frames as it is understood in the context of this study is always related to action. It tries to understand action by understanding the references to its underlying frameworks of rationality.

The perspective is a constructivist one<sup>13</sup>, that is, reality and action are related through frames. Reality must be perceived and interpreted in order to lead to action. Even if one might speculate about events or facts that do not need interpretation and unambiguously lead to action, this is not the

12. See *Economic Instruments for Environmental Protection*. For a controversial discussion of the use of economic instruments see *Ökonomische Instrumente der Umweltpolitik: neuer Weg oder Sackgasse?* A discussion on the appropriateness of economic instruments for the EC is contained in Wicke/Huckestein, *Umwelt Europa — der Ausbau zur ökologischen Marktwirtschaft*.

13. See more generally pp. 30 seq.

case for most cases of environmental policy-making, be it domestic or international. Facts are meaningless as such, even if they are expressed in the form of allegedly exact natural scientific knowledge<sup>14</sup>. The interesting theme for social scientific analysis is not whether the concentration of carbon dioxide (CO<sub>2</sub>) will most likely rise by forty, fifty or sixty per cent in the next century or whether it will fall or whether the best response to this rise is the reform of energy policies, transport policies or other measures<sup>15</sup>. Political science as a part of social science asks what consequences this has for the behaviour of political actors. These consequences depend on the perception of natural scientific or other facts and on how they are related to existing frames. There is thus no way to conclude from whatever kind of "objective" indicators to interaction results<sup>16</sup>.

The empirical study will involve two basic frames, namely "classic environmental policy" and "sustainability". Frames of other policy fields, such as energy policy, will be dealt with when they become important in the study. In the next section, "classic environmental policy" and "sustainability" will be presented as ideal types. This does not mean that any environmental policy measure necessarily has to be associated to one of these two poles, nor that they are opposed and mutually excluding each other<sup>17</sup>.

14. On the notion of knowledge, see pp. 96 seq.

15. In this direction; see Grubb, *Energy Policies and the Greenhouse Effect, Vol. I* and Grubb et al., *Energy Policies and the Greenhouse Effect, Vol. II*.

16. But this is precisely what Zürn does in his situation-structural approach when he discusses "interest indicators" as a method for finding actors' preferences; see Zürn, *Interessen und Institutionen*, pp. 243 seq. The temptation to resort to "objective" data is great as it relieves the analyst from more labour-intensive methods (which Zürn also discusses) but the price is high and the main argument in favour — that this method is less subjective than studying sources — is dubious. Such a method seems to be the fruit of the seemingly irresistible desire for "parsimony" in game-theoretical approaches which is too easily ready to sacrifice empirical questions for the elegance of the model. A constructivist approach is not per se incompatible with game theory (leaving aside other, more fundamental doubts on rationalistic approaches as such). It is, however, incompatible with short-circuited conclusions from reality to interests and action.

17. Frames are not equivalents of Kuhnian paradigms. If analogies to the theory of science are drawn, the parallel to frames in this field are Lakatos' research programs. For an application of this idea to policy analysis see Majone, *Policies as Theories* and id., *Research Programs and Action Programs*.

The fact that frames are presented here as ideal types, i.e. as constructions of the analyst, is not a contradiction to the claim made above that frames are properties of actors. The frames presented here are abstractions from the ones used by actors more or less consciously, in other words, they are > heuristic devices. As those frames are not the private creation of actors but generally shared in the field of environmental policy, they can be portrayed by resorting to standard scholarly works or textbooks of environmental policy-making. The later empirical analysis has the task to find out to what extent these frames are used by actors.

The level of abstraction chosen for the analysis of framing is a very high one: Environmental policy-making is captured in terms of just two basic concepts. Obviously, such a view is a very sweeping one and an undue reduction of the complexity of environmental policy. However, these are practical instead of theoretical problems<sup>18</sup>. The choice of the level of framing and the ideal-typical frames are to a certain degree at the discretion of the analyst and should correspond to the basic research questions. In any case, frames may be subdivided into different categories in order to meet the need for further differentiation.

After the two basic frames have been presented as ideal-types, their emergence, use, change and effect for the different actors in the EC system will be analysed. Frames as interpretative and action devices of actors will > be identified basically by using the available documentation<sup>19</sup>. The Official Journal of the EC, proposals and studies published by the Commission, articles and speeches by representatives of the respective organisations, as well as parliamentary reports and debates are important sources. In this respect, the Community tradition to preface every major legislative proposal with an explanatory memorandum setting out the professed reasons for its

18. Scholars working with this concept have indeed made different choices: Eder, *Framing and Communicating Environmental Action*, distinguishes between three frames (the conservationist, the ecological and the fundamentalist package). In the field of nuclear energy Gamson and Modigliani, *Media Discourse and Public Opinion on Nuclear Power*, distinguish between seven basic "packages". See also Rayner, *A Cultural Perspective on the Structure and Implementation of Global Environmental Agreements*, distinguishing between three basic political cultures and view of nature corresponding to those of cultural theory.

19. Hence, the method is similar to Zürn's "Kritisches Quellenstudium"; see Zürn, *Interessen und Institutionen*, pp. 240 seq.

submission and its content is of great help. As the guiding question is to analyse the emergence as well as the impact of frames, the analysis cannot be restricted to the interpretation of texts but has to be related to events, in concrete terms to the negotiation process and the legislative activity of the EC in the field of the greenhouse effect. Apart from relying on these sources, the reconstruction of the policy history of the greenhouse effect in the EC will be done mainly by resorting to *Agence Europe*, a daily news agency specialised in EC affairs and to *Europe Environment*, a fortnightly news service specialised in EC environmental policy. As the negotiations of the Council are not public and press reports about Council meetings are often erratic and not detailed enough (if existing at all), *Agence Europe* in particular is an invaluable tool for reconstructing a specific policy history.

This also applies to internal decision-making processes in the Commission. Although fervently pro-European and pro-Commission, *Agence Europe*, if read critically, is a reliable and valuable source of debates within the Commission. This information has as far as possible been cross-checked by national press reports. Internal documents of the Commission are also used but no central piece of argumentation is based solely upon them. They merely serve as further pieces in the puzzle. The only section where information that is not generally available plays a large role is the analysis of the frame-shift within the Commission's different directorate-generals<sup>20</sup>. This part unavoidably relies heavily on internal documents, interviews and my general experience during a five-months traineeship at the Commission's Forward Studies Unit.

The methodology thus consists in looking at what actors say when explaining and justifying their action and linking it to what they do when negotiating and choosing specific policy instruments. An underlying assumption is that actors in general do not deliberately lie. Explanatory texts are not mere propaganda under which "real" motives have to be discovered. In this study, texts serve as indicators for the presence of certain elements of interpretative or action frames in addition to the action itself. Not every single policy measure can "as such" be related to one frame or another but has to be understood in the light of the text justifying it.

20. This applies in particular to pp. 211 seq.

Hence, the following analysis of a frame shift in the EC greenhouse policy should not be regarded as reflecting a necessary course of events. Everything could have happened differently. In particular, the new frame is not "better" than the old one, nor is it more rational or more complex. A first step in the empirical analysis is thus the description of ideal-typical frames of reference. This is the task of the next section.

### C. Ideal-Types of the Existing Frames

In order to prepare the ensuing empirical analysis, two basic frames of environmental policy will be briefly introduced here. The discussion of these frames is not intended to be a discussion and critique of patterns of environmental policy-making but instead a typology of frames used in the empirical analysis. For the purpose of this study, it seems useful to distinguish between two basic frames, namely *classic environmental policy* and *sustainability*<sup>21</sup>. Both cover a rather narrow scope, insofar as they merely refer to policy-making. In a broader perspective which addresses the relationship of society with nature, both frames presented here as two extremes might be considered as sub-categories of a more general frame describing this relationship. Indeed, despite the fact that the emphasis is laid here on their differences, both have in common a perspective of nature as open to human intervention<sup>22</sup>. Such a perspective is already implied by the concept of policy-making which presupposes the readiness to intervene in its field of application. As radical views, such as the one denying man the right to intervene in nature, are irrelevant in policy-making, they will be neglected here.

Another caveat is more important. The two basic frames of environmental policy should not easily be associated with a dichotomy like "conservative" - "progressive" or even with a political left - right scheme. Elements of each of the environmental policy frames can have a cultural resonance with the

21. In the following text, frames are designated by italics.

22. In Eder's terminology, both are part of the *ecological* package, to be distinguished from the *conservationist* and the *fundamentalist* package which play, however, only a minor role in environmental action and none in environmental policy-making. See Eder, *Framing and Communicating Environmental Action*, pp. 18 seq.

three basic lines of Western political thought — conservatism, liberalism, socialism — but they cannot be fully and exclusively associated with any of them. There are conservative, liberal and socialist (or social-democratic) versions of *classic environmental policy*; as there are emerging conservative, liberal and socialist versions of *sustainability*. What is true for the frame as such is also true for single elements of it. A case in point are economic instruments in environmental policy as opposed to regulation<sup>23</sup>. A tax on the consumption of resources or energy is a policy instrument that fits better with the *sustainability* frame than with *classic environmental policy*. It is, however, compatible with all three basic political orientations. For conservatism, a tax is a means to correct market failure which leads to an over-consumption of environmental resources for which the entrepreneur normally does not pay. It thus obliges the entrepreneur to fulfil his responsibility towards nature with instruments conform to a market economy. This argument is also valid for the liberal: to the extent that environmental protection and clean-up is not considered to be a task of the state, a tax is the least disturbing means to guarantee some environmental protection. For the socialist, finally, an environmental tax is a means of redistribution, although not vertically from the rich to the poor but horizontally from labour-intensive to environment-intensive forms of production<sup>24</sup>.

Apart from these issue-specific frames, a systemic frame is introduced. *Integration* incorporates views of the development of the EC system as such, independent from a single policy field. The unfinished institutional

23. But see the contrary view of Lehbruch, *10 Jahre Konservatismus in der Bundesrepublik Deutschland*, p. 14.

24. This is not only a conceptual issue but also empirically visible. In Germany, for instance, the conservative government has long resisted the introduction of economic instruments and instead relied on extensive regulation. Instead, ecological taxation has programmatically been taken up by the social democrats. The major proponent of an ecological tax reform, Ernst Ulrich von Weizsäcker, is politically associated with the social democrats. See his *Regulatory Reform and the Environment. The Case for Environmental Taxes*. The "social-democratic" aspect of eco-taxes is redistribution, and not the lowering of taxes on labour. Similar views have been voiced within the EC Commission; see e.g. Wright, *EC Environmental Policy*, who proposed to tax "bads" (e.g. pollution) instead of "goods" (e.g. labour or capital). Wright was a member of the Commission's Forward Studies Unit. For more details about the debate on *sustainability* within the Commission, see pp. 211 seq.



structure of the EC gives this frame a huge importance in any policy decision with institutional consequences in the broadest sense.

### 1. *Classic Environmental Policy*

Using the term “classic environmental policy” implies a crude simplification of existing concepts of environmental policy-making. For instance, the first four environmental action programs of the EC, covering a period of twenty years during which a considerable programmatic change has occurred, all fall under this heading<sup>25</sup>. Still, this simplification seems justified as the purpose of this study is not to analyse subtle programmatic changes in environmental policy making but a shift of a framework of rationality. This shift can be captured by the shift from *classic environmental policy* to *sustainability*.

The major distinctive feature of *classic environmental policy* is the separation of the environment and the economy. For the political system, environmental problems only rather lately became a matter of concern as a by-product of economic activity. This corresponds to the development of economic theory. During the development of economic theory, environmental goods have been progressively banned from theory as factors of production<sup>26</sup>. Increasingly, environmental damage was treated by the prevailing neo-classical school as “externality” and hence as irrelevant for the theory<sup>27</sup>. Environmental policy developed only slowly as an exercise of reparation. The major actor in this respect was the state who had either to clean-up environmental damage himself (e.g. waste, sewage) or adopt regulations shifting this burden onto others. Reparation was later replaced by prevention as a major orientation of *classic environmental policy* but this programmatic change did not entail a different role of the state and of economic agents (enterprises, households, consumers).

25. These four action programs have been a mixture of strategy paper and shopping list of desirable legislation in which the EC outlined its environmental policy for a period of four to five years; see OJ C 112, p. 1, 20.12.73 (first AP), OJ C 139, p. 1, 13.6.77 (second AP), OJ C 46, p. 1, 17.2.83 (third AP), and OJ C 328, p. 1, 7.12.87 (fourth AP).

26. See Immler, *Natur in der ökonomischen Theorie* id., *Vom Wert der Natur*.

In this view, economic agents either use free goods (such as air) or procure them at market prices which are also considered “true” prices insofar as they reflect the relative scarcity of the good in question. Pollution and waste are by-products of economic activity for which the enterprise has to pay a fee to the state for his share in the clean-up costs. Environmental clean-up or pollution prevention is thus a task for the state like any other public infrastructure (roads, telecommunications, etc.). “Environmental costs” are only those arising for the installation and maintenance of cleaning or treatment facilities. The polluter-pays-principle, adopted by the OECD already twenty years ago<sup>28</sup>, has always been interpreted in this way. Any other effects of economic activity, e.g. disappearance of species, impairment to human health, the remaining pollution of water, air or soil after treatment, etc. cannot (and shall not) be measured economically and enter neither the cost-benefit calculations of enterprises nor the macroeconomic accounts of the state.

In this view, environmental problems are connected to damage. Two basic requirements exist for the occurrence of damage: It has to be attributed to a concrete physical or legal person, and it has to be established on the basis of clear cause-effect relationships. These two requirements lead to a strong reliance on natural scientific knowledge. Natural sciences have to produce evidence for damage which alone can justify action by the state. The contrary is also true: if no clear link between an activity and damage can be proven, action is not justified or justified only on a small scale. This is a widely accepted framing of the greenhouse effect. As the greenhouse effect is still surrounded with high natural-scientific uncertainties, the policy process — in this view — is not likely to yield policies with substantial political or economic costs. Unless these uncertainties are considerably reduced — or even only if there is evidence of the effects of global warming —, a substantial political reaction is unlikely, nationally as well as internationally<sup>29</sup>.

27. See Binswanger, *Ökologisch orientierte Wirtschaftswissenschaft*.

28. See *OECD and the Environment*, pp. 24-27.

29. This is the assessment of an influential article by Skolnicoff, *The Policy Gridlock of Global Warming*, p. 78.

The requirement of scientific evidence has been alleviated by the emergence of the precautionary principle according to which action is due on the basis of possible damage. The precautionary principle is thus an attempt to deal with environmental risk.

Environmental policy proceeded (and still proceeds) largely by standard-setting. In order to avoid individual impairments, tolerable levels of pollution had to be found with the aid of natural scientific research<sup>30</sup>. Standards prohibit pollution beyond a certain level and create legal or financial consequences for trespassing but they also allow pollution below this level. With the increasing development of environmental legislation, standards require a well-developed administrative apparatus for their continuous elaboration, implementation and updating. Implementation problems became more pronounced<sup>31</sup> and a general criticism of "over-regulation" attacked also the increasingly dense field of environmental legislation<sup>32</sup>. It is important to stress that the attacks on EC environmental legislation because of its implementation problems do not reflect a "natural" proneness of command-and-control approaches to implementation deficits<sup>33</sup>. This relationship exists only from the point of view of a different frame (*sustainability*).

30. See Majone, *The Uncertain Logic of Standard-Setting*.

31. For the case of EC environmental law, see the yearly reports of the Commission on the implementation of EC law; e.g. *Neunter Jahresbericht über die Kontrolle der Anwendung des Gemeinschaftsrechts*, COM (92) 136, 27.5.92, pp. 64 seq. and Krämer, *Du contrôle de l'application des directives communautaires en matière d'environnement*. The most comprehensive treatment of the application of EC law is Audretsch, *Supervision in European Community Law*.

32. An authoritative treatment of EC environmental law is Rehbinder/Stewart, *Environmental Protection Policy*. For an analysis of the legal situation after the entry into force of the Single European Act, see Scheuing, *Umweltschutz auf Grundlage der Einheitlichen Europäischen Akte* and Krämer, *The Single European Act and Environmental Protection*; id., *Umwelt*; and id., *EEC Treaty and Environmental Protection*.

33. Liberatore, *Problems of Transnational Policymaking*, pp. 298 seq., even stresses that the increasing use of economic instruments in EC environmental policy would amount to "re-regulation" instead of the intended deregulation. Research on implementation has raised fundamental doubts about the possibility to come to general conclusions about implementation problems; see Maynts, *Implementation politischer Programme II*, p. 9. See also Siedentopf/Ziller, *Making European Policies Work* and Taylor et al., *EC Environmental Policy and the Control of Water Pollution*.

Classic environmental policy with its separation of the economy and the environment thus has consequences for the actors which are important in the policy-process. Standard-setting enhances the role of lawyers but also of natural scientists. Environmental policy, in this frame, is the task of the administration. In the EC, the liberalisation of economic transactions has led to an increase of the role of central administrations, i.e. of EC-wide regulation. In this respect, classic environmental policy fits well with supranational integration as a frame of integration<sup>34</sup>. Administrators set limitations for economic agents but do not fundamentally interfere into their sphere. Environmental protection policy is restricted to correcting manifest negative effects of the functioning of the market.

## 2. Sustainability

The frame of sustainability<sup>35</sup>, on the other hand, regards the environment and the economy as an inseparable entity<sup>36</sup>. More exactly, it stipulates the inclusion of the environment into economic thinking. It has thus a different cognitive basis than classic environmental policy. Environmental damage is not considered as an externality to economic activity and hence to economic theory but is part of an inclusive theoretical framework. Environmental economists<sup>37</sup> have tried to reintroduce environmental factors into economic theory.

34. A typology of the framing of integration is given on pp. 126 seq.

35. Sustainability, made popular by the report of the Brundtland-Commission, includes a North-South dimension which will be neglected in this context; see World Commission on Environment and Development, *Our Common Future*. For a brief account of the conceptual change of international environmental policy, see Koester, *From Stockholm to Brundtland*. In this study, "sustainability" refers to my concept of one ideal-type of environmental policy-making, not to the meaning of the term in the discussion initiated by the Brundtland-report and preceding and following the Rio-Summit.

36. This view is entering policy papers; see e.g. MacNeill et al., *Beyond Interdependence. The Meshing of the Worlds's Economy and the Earth's Ecology. A Report to the Trilateral Commission* and Mitglieder des Europäischen Umweltbüros, *EG-Binnenmarkt und Umwelt*.

37. The literature is vast. An early treatment is Siebert, *Ökonomische Theorie der Umwelt*. For a recent treatment, see Hampicke, *Ökologische Ökonomie* and Baumol/Oates, *The Theory of Environmental Policy*.

In this view, pollution is not an unavoidable malfunction of the market mechanism which can only be corrected by state intervention. Instead, pollution and environmental degradation are the result of a distortion of market mechanisms which finds its ultimate ground in the distortion of economic theory and of the political and economic framework built on it. In a *sustainability* perspective, market forces can in principle deal with environmental problems, provided that they are not prevented from doing so. The solution to environmental problems is not less market and more state intervention, as in the case of *classic environmental policy*, but more market. The state has a role in this context because it has to provide the regulatory framework for the proper working of market forces.

The key to environmental economics, like to any other economics, is pricing. In the prevailing economic framework, according to *sustainability*, prices do not reflect environmental scarcity and environmental effects. Hence, pricing has to be corrected and the environment must be "properly" valued. On the other hand, environmental degradation and over-consumption of resources can be explained by pricing distortions, such as subsidies or administratively regulated (low) prices<sup>38</sup>. The invisible hand of the market mechanism is thus judged capable of assuring a balance between exploitation and use of resources, necessary for any kind of economic activity, and the protection of nature. In a market economy, the price mechanism regulates the equilibrium between supply and demand of a good. In principle, this is not a matter for norms, laws or societal intervention. The same is true for the relationship between society and nature: it becomes a matter of the price mechanism which by definition finds the right balance between the use of nature and economic activity<sup>39</sup>.

As a consequence of this change of the theoretical framework, the cost-benefit calculations of enterprises as well as of the state change. In the *sustainability* framework, an activity should become less profitable if it

38. See, for instance, the case studies contained in Pearce et al., *Sustainable Development: Economics and Environment in the Third World*.

39. This idea is not new; see e.g. Schneider/Sprenger, *Mehr Umweltschutz für weniger Geld*. The book contains the papers of a workshop on the use of economic instruments in environmental protection held in 1983 which was sponsored by the EC Commission.

uses large quantities of depletable resources or if it discharges huge amounts of pollutants. The same is true for the macro-economic level. If a state uses up its "environmental capital stock" (which is not accounted for in the normal economic accounts), it reduces its wealth instead of increasing it<sup>40</sup>.

- 7 The required change of the economic framework has to take place not only in economic theory but also in economic practice. This is the task of the state. When prices do not tell the ecological truth, they have to be corrected with the aid of the state. The central instrument for this correction are taxes. In fact, as the traditional economic framework does not reflect ecological costs by treating them as externalities, prices in the traditional framework are systematically too low. To change this situation, a tax has to be added to "normal" prices in order to reflect ecological costs.
- > Economic instruments are thus a central tool in the sustainability framework. Sophisticated proposals exist in economic theory as well as in the political arena<sup>41</sup>. For *sustainability*, the use of the term "environmental policy" makes much less sense than in the framework of *classic environmental policy*, because the economy and the environment are seen as a unity. Environmental policy has only a place as a residual category in order to prevent effects which society does not desire.
- > In the sustainability framework, many previously normative or environmental problems are transformed into economic ones. One example is the principle of "intergenerational equity"<sup>42</sup> which is primarily a normative requirement according to which present human activity must not

40. Studies in this framework have been taken out to demonstrate that countries destroying their rain forests do not have high growth rates calculated in the traditional economic framework but on the contrary suffer heavy economic losses. The intention of these studies is an appeal to the self-interest of these countries to save their rain forests instead of demanding protection measures which can be ethically justified but remain vain in the face of underdevelopment and poverty; see for instance Pearce et al., *Sustainable Development: Economics and Environment in the Third World*.

41. See in particular, *Economic Instruments for Environmental Protection*.

42. See e.g. Sikora/Barry, *Obligations to Future Generations*; Birnbacher, *Verantwortung für zukünftige Generationen*; Brown Weiss, *In Fairness to Future Generations and What Obligations Does Our Generation Owe to the Next?*. See also Höhne, *Natur — Gesellschaft — Kultur*, p. 35.

unduly restrict the options available for future generations (for instance, by completely destroying all rain forests including their genetic potential). Intergenerational equity must be achieved by the price mechanism.

These last remarks indicate also a shift with regard to the central actors of *sustainability* as compared to *classic environmental policy*. Whereas in the latter framework, lawyers and natural scientists are the most important actors, economists become central for *sustainability*. Natural scientists remain important but their knowledge has to be transformed by economists. Clear cause-effect relationships are thus less important because uncertainty can be reflected in a higher or lower price, discount rate, etc.<sup>43</sup>. *Sustainability* thus puts a certain emphasis on market-based decentralisation and by this virtue fits well to *member state dominance* as the frame of integration.

*Sustainability* is a frame which is actively promoted by certain actors. Its market-orientation makes it resonate with conservative thinking<sup>44</sup> but it is not restricted to conservative parties, organisations or governments. Among the promoters of similar views are the OECD which has a long tradition of favouring economic approaches to environmental problems, some economists and environmentalists<sup>45</sup>, but also non-governmental organisations<sup>46</sup> and, to a limited degree, the *Financial Times* newspaper. The following table shall illustrate the basic elements of the two frames.

43. This section is an ideal-typical presentation of the *sustainability* frame; a discussion of the enormous practical and theoretical problems of a valuation of the environment (if this is possible at all) is not appropriate here.
44. This is probably the explanation for the success of one particular writer, David Pearce, in the programmatic of British environmental policy; see *This Common Inheritance. Britain's Environmental Strategy*.
45. Well-known works are Pearce/Markandya/Barbier, *Blueprint for a Green Economy*; Pearce/Turner, *Economics of Natural Resources and the Environment*; Baumol/Oates, *The Theory of Environmental Policy*; Wicke, *Die ökologischen Milliarden*; id., *Umweltökonomie* and von Weizsäcker, *Erdpolitik*. See also id., *Sustainability: A Task for the North*.
46. For instance the World Resources Institute.

*Table 1: Ideal-Typical Frames of Environmental Policy*

	Classic Environmental Policy	Sustainability
Definition of Problem	harmful externalities	depletion of environmental capital stock
assumptions on the economy and the environment	separation	integration
Primary Actors	state	state, enterprises, public
Goals/Values	healthy environment	intergenerational equity
Type of Knowledge	natural scientific	economic
Means	command-and-control	economic instruments (pricing)
Attitude Towards Economic Growth	moderate: use surplus to pay reparation radical: growth destroys environment	sustainable growth possible

### *3. Integration Frames*

The second set of frames which is relevant for the analysis of the EC's greenhouse policy does not address the environment as a policy field but the functioning of the EC system as such. It is, however, important to consider that policy instruments are not only chosen with reference to the policy field in which they are applied but also with reference to the institutional framework in which they operate. This relationship gains weight if the



institutional framework itself is still changing and policy decisions are likely to have consequences for the polity<sup>47</sup>.

Frames on integration encompass different views on the EC system. In a simplification, which is sufficiently exact for the present purpose, one could distinguish between *supranational integration* and *member state dominance* as two opposing ways of framing integration<sup>48</sup>. Only those features of these frames which are relevant for the case study will be discussed here.

The frames of integration thus concern the functioning of the EC system. Integration as such is a generally shared goal among the participants in the EC system which are considered here, i.e. among Commission, Council/member states, and the European Parliament: nobody favours disintegration. Whereas the Commission and the European Parliament are generally adopting a view of *supranational integration*, in which they are often supported by the Benelux countries, the other member states, and in particular the large ones, tend more towards *member states dominance*.

*Supranational integration* is first and foremost a normative frame with strong symbolic elements. The European Community, according to this frame, has the aim of developing an "ever closer union" among the peoples of its member states. This aim has to be achieved by economic co-operation and an increasing political component. The political component in particular is debated. The fierce debate between the advocates of the United States of Europe and the proponents of "l'Europe des patries" in the 1960s has vanished but re-emerges in the debate about the concrete meaning of "European Union" which is now the generally agreed goal. These grand debates find their echo in many institutional questions, small or large. The right of legal standing of the European Parliament before the European

47. For an application of this argument to the field of regulatory policy-making, see Joerges, *Paradoxes of Deregulatory Strategies at Community Level*.

48. In the context of integration theory, this view is certainly under-complex but it suffices for the analysis of a particular policy field; see also the scale proposed for the measurement of integration by Lindberg/Scheingold, *Europe's Would-Be Polity*, pp. 65-100; and Lindberg, *Political Integration as a Multidimensional Phenomenon*, pp. 68 seq. In addition, the distinction appears under different labels (e.g. integration vs. co-operation, "Europe supranationale" vs. "l'Europe des patries") in the entire history of the EC; see Lutton, *Les équilibres mouvants du système institutionnelle de la Communauté économique européenne*.

Court of Justice, for instance, is judged differently according to the respective integration frame. In *supranational integration*, such a right makes sense as it would make the EC resemble more a fully-fledged state possessing a parliament with full rights, whereas in *member states dominance*, democratic control is exerted via the democratically elected governments of the member states and does not have to be circumvented by the European Parliament. This is also true for policy instruments: means and institutions of state authority, such as police, taxation, or criminal jurisdiction are also a matter for EC competence in the interpretation of *supranational integration* but should be left out of EC competence according to *member state dominance*.

A particularly important field in this respect is external relations. External relations are, however, also of high symbolic importance. External relations reproduce images of the state. According to common diplomatic practice, only states can act internationally. Transferring competencies to a supranational organisation like the EC means changing the image of the state in the view of the outside world. The decision of whether a particular measure in the field of external relations is a matter for Community or for member state competence is thus a matter of identity for the Community as well as for the member states. This question is not settled once and for all but continuously repeated in numerous single policy decision. The response is shaped by the different integration frames.

- 7 In the debate on the greenhouse effect, the idea of “environmental leadership” was launched. Environmental leadership is a strongly integrationist principle as it includes not only a uniform external policy of the EC in this field but implicitly challenges the United States, the ideal and competitor for many proponents of the *supranational integration* view. “Leadership” is a symbolic concept which is at least as important for the identity of the EC as for the development of its environmental policy.

The unity of the legal system and the uniformity of rules are an important symbolic element of *supranational integration*. Differentiation, i.e. applying different rules for different countries, is seen as a threat to integration and as such rejected. Within *member state dominance*, it is accepted much more easily as it reflects the legitimate rights and interests of states which are not to be subordinated to uniform government. Different frames of

integration are also reflected in the recent debate about “subsidiarity”<sup>49</sup>. On the surface, the subsidiarity principle refers to the optimal institutional level for problem-solving. On a deeper level, however, different conceptions of subsidiarity reflect different frames of integration<sup>50</sup>.

*Table 2: Frames of Integration*

	Supranational Integration	Member State Dominance
Definition of Problem	European identity	functional problems
Institutional level of problem-solving	high	low
Goal	multinational polity	special type of international organisation
Values	solidarity, common identity	national sovereignty
Policy Instruments	uniform, hierarchical law	framework rules, recommendations

The frame of *supranational integration* also includes an element of distributive justice. According to this principle, which is basically uncontroversial, decisions valid for all twelve member states have to balance the costs and benefits for different member states either in the decision itself or in other decisions. In practice, a very important manifestation of this principle is the requirement that a North-South balance be achieved. Southern (= poorer) member states, according to this principle, agree to measures which put burdens upon them that they would normally not accept, provided that they obtain compensation elsewhere. As this redistributive element is to a large degree performed through the

49. See Wilke/Wallace, *Subsidiarity* and Müller-Brandeck-Bocquet, *Ein föderalistisches Europa?*.

50. See Jachtenfuchs, *Die EG nach Maastricht*.

supranational structural funds, it is much less acceptable within the frame of *member state dominance*.

In the following analysis, policy measures are not only assessed in terms of their relationship to the two frames of environmental policy but also in terms of their relevance for integration. It is claimed that if a policy measure has important consequences in the integration frame, its adoption and its shape may be decided on the basis of the integration frame instead of the environmental policy frames<sup>51</sup>.

#### D. Orientation

The greenhouse effect<sup>52</sup> emerged only slowly on the political agenda of the EC institutions. Since the beginning of the 1980s, related topics such as climatological research, energy saving or international environmental policy were dealt with by the EC in a more or less systematic way. Although these activities took place within the logic of the respective policy field and were only loosely connected, the specific way they developed constitutes the background for their later link with the issue of the greenhouse effect. Hence, environmental research, energy policy and international environmental policy must be analysed in order to understand why the debate on the greenhouse effect, once it was perceived under this label, developed in the way it actually did. In other words, the frames used in other policy fields prepared the way the greenhouse effect was dealt with.

51. This is not to say that "polity determines policy" to paraphrase Theodore Lowi. It is only claimed that the criterion for the decision changes but not what outcome the decision will have.

> || 52. As the topic of the present study is the framing of the greenhouse effect and not its "true" nature, no description of the greenhouse effect will be given here. Authoritative accounts have been made by the Intergovernmental Panel on Climate Change, *Climate Change: The IPCC 1990 and 1992 Assessments* and the reports of the German Bundestag's commission of inquiry on the protection of the atmosphere, see Enquete-Kommission "Schutz der Erdatmosphäre", *1. Zwischenbericht der Enquete-Kommission des Bundestages zum Schutz der Erdatmosphäre*, id., *Schutz der Erde. Eine Bestandsaufnahme mit Vorschlägen zu einer neuen Energiepolitik* and id., *Klimaänderung gefährdet globale Entwicklung*. There are numerous easy-readable introductions, see e.g. Graßl, *Der zusätzliche Treibhauseffekt und das Klima*; Graßl/Klingholz, *Wir Klimamacher*; Gaber/Natsch, *Gute Argumente: Klima*;

This section analyses the pre-history of the greenhouse effect in the EC up till the Commission's communication on "The Greenhouse Effect and the Community"<sup>53</sup> which for the first time addresses the issue not only in terms of a problem but also endeavours to conceive a strategy for action. It is restricted to those events and frames in the respective policy fields which later became important for the development of the greenhouse issue. Occasionally, it also deals with non-events and frames which were not shared by actors in order to explain the later greenhouse policy.

### 1. Climatological Research

A standard argument in the *classic environmental policy* frame as well as in other (often rather technical) fields of policy-making is that natural scientific research was necessary to establish a solid factual basis on which policy-makers can develop their options and strategies. The more exact this factual basis, the better or the more appropriate the policy can be. The fact that already in 1981, a first climatological research programme<sup>54</sup> was adopted by the Council in the framework of the third environmental research programme (ERP) could thus indicate that already at that time, climate change was perceived as a problem and technical advice for seeking a solution to this problem was sought<sup>55</sup>. Although the first Commission proposal finds strong wordings for the importance of possible climatic

Samuel, *L'effet de serre*. Comprehensive policy studies are Grubb et al., *Energy Policies and the Greenhouse Effect* and Leggett, *Global Warming*.

53. COM (88) 656, 16.11.88.

54. OJ L 101, 11.4.81, p. 1. This programme has in fact reorganised the activities launched by its short-lived predecessor, reprinted in OJ L 12, 17.1.80, p. 24. For an overview of the somewhat confusing succession of EC research programmes related to climate and the budget allocated to them, see Table 8, page 287. In general, it is useful to distinguish between three layers of research programmes which have been introduced successively. *Sectoral programmes* (e.g. on climatology or on renewable energies) are the most concrete level. They may contain several sub-sections. These programmes were later grouped together in *specific programmes* (e.g. on the environment or on microelectronics). Finally, since 1984 EC research policy has been organised in three successive *framework programmes* covering all fields of research. To make things even more complicated, this terminology has not been used consistently throughout the years.

55. In fact, the programme has been initiated in 1979 as a follow-up of the first World Climate Conference.

changes caused by human action<sup>56</sup>, the programme itself is concerned with basic but not with applied research. This orientation is characteristic of a large part of EC research. The proposed budget of 8 MECU for a five-year programme (which was later endorsed by the Council) dealing with a wide variety of subjects in climatology indicates that climatology was not among the EC's research priorities in the beginning of the 1980s.

In its proposal for the second climatology programme in the framework of the fourth ERP, the Commission put even more emphasis on establishing a link between environmental research and environmental policy. The former should establish the scientific basis for the latter<sup>57</sup>. The rising CO<sub>2</sub> concentrations in the atmosphere obtained more attention than in the first programme. This phenomenon was assessed as "die entscheidende Umweltfrage dieses und des nächsten Jahrhunderts"<sup>58</sup>, and the Commission proposed a considerable increase of funding for climatological research (25 MECU as compared to 8 MECU for the first programme). Both the EP and the Council opposed this increase and the Council later

56. In the preamble of its proposal, the Commission wrote: "*Die wirtschaftlichen und sozialen Strukturen des Menschen hängen weitgehend vom Klima ab. Durch ungünstige Klimaverhältnisse können vor allem so lebenswichtige Ressourcen wie Wasser und Nahrungsmittel erheblich beeinträchtigt werden. Der Mensch selbst kann durch seine Tätigkeiten und vor allem durch die Verunreinigung der Luft zu klimatischen Instabilitäten und sogar zu drastischen Klimaänderungen beitragen. Es liegt daher im Interesse der Gemeinschaft, auf eine Verbesserung der Kenntnisse im Bereich der Klimavorgänge und des Klimaverhaltens sowie der möglichen Auswirkungen von Klimaänderungen hinzuwirken, damit die europäischen Ressourcen zum Gegenstand einer sinnvollen Planung genommen werden können. Ein Forschungsprogramm der Gemeinschaft auf dem Gebiet der Klimatologie dürfte einen wesentlichen Beitrag zur Erreichung der genannten Ziele leisten*" (emphasis added); OJ C 247, 18.10.78, p. 2. The Council later endorsed this statement; see OJ L 12, 17.1.80, p. 24.
57. "Die Hauptziele der Umweltforschung der Gemeinschaft sind:  
- Schaffung einer wissenschaftlichen Grundlage für die Durchführung der Umweltpolitik der Gemeinschaft,  
- Förderung langfristiger Grundlagenforschung über wichtige Umweltprobleme,  
- Koordinierung einschlägiger einzelstaatlicher Forschungsarbeiten auf ausgewählten und geeigneten Gebieten"; OJ C 301, 25.11.85, p. 3.
58. OJ C 301, 25.11.85, p. 35.

allocated 17 MECU of a total of 75 MECU for research on climate<sup>59</sup>. Even if political attention directed towards a problem should not be measured exclusively by the amount of money spent in the respective area, 17 million ECU hardly seem appropriate to deal with the most important environmental problem of the 20th and of the 21st century.

Two conclusions can be drawn from this. In the first place, it is obvious that in 1985 and even more in 1981, the greenhouse effect was not considered as an important political problem and hardly as an important topic for fundamental natural scientific research in the Council and in the EP. Parliament, which usually tries to promote subjects which it considers apt to raise public interest and mobilisation, even proposed a cut in the money spent for climatology. Within the Commission, the assessment was largely the same. Second, the purpose of the proposed research is not its direct use in policy-making but the establishment of a certain knowledge in *areas* which are considered important for the *European Community*.

Since its beginning after the Stockholm environmental conference of 1972 and the declaration of the heads of state and of government of the EC in the same year<sup>60</sup>, EC environmental policy has been accompanied by EC environmental research<sup>61</sup>. Subsequent environmental action programmes refer to the role of research for policy-making<sup>62</sup>. While on numerous occasions the role of research for policy-making is stressed in EC documents, it is, however, hardly ever made explicit why EC environmental policy had to rely upon *EC generated* research instead of research carried out at the national level or at other international fora. Without denying the

59. See the Council decision, OJ L 159, 14.6.86, p. 32. For the EP position, see the report of N. Estgen, A 2-216/85, p. 17 and the resolution on the programme, OJ C 68, 24.3.86, p. 76. The view that environmental research should serve as a guidepost for politicians and executive bureaucracies has also been expressed in the parliamentary debate on the 4th ERP, see for instance OJ 2-355, 18.2.86, p. 34.

60. For an account of the origins of EC environmental policy, see Johnson/Corcelle, *The Environmental Policy of the European Communities*, pp. 1-10. For a more analytical treatment, see Bungarten, *Umweltpolitik in Westeuropa*. See also Briggs, *Environmental Problems and Policies in the European Community*. A more recent account, partly written by practitioners, is Gündling/Weber, *Dicke Luft in Europa*.

61. See Liberatore, *EC Environmental Research and EC Environmental Policy*.

62. In its proposal for the fourth ERP, the Commission explicitly states that "Das Umweltforschungsprogramm trug wesentlich zu den wissenschaftlichen Grundlagen verschiedener Gemeinschaftsrichtlinien bei ..."; OJ C 301, 25.11.85, p. 2.

role of the results of EC environmental research for EC environmental policy, it seems therefore more appropriate to look for other reasons for the development of (Community environmental) research than the desire to provide policy-makers with a solid factual basis.

An important reason for the emergence and strong growth of research on an EC level is the creation of a specifically European research community and a European research network, as well as the establishment of a European tradition in perceived the world-wide research competition. For this reason, the co-ordination of national research activities shall not only avoid duplication of work but also allow for scientific economies of scale. Most important is the networking function of research programmes<sup>63</sup>: virtually all of them require applicants to consists of teams coming from at least two member states. Thus, a major motivation behind the proposal and adoption of EC research programmes is *supranational integration*. In the view of the Commission, EC research furthers European integration by its very existence<sup>64</sup>. Similar references to the identity of the EC can be found in speeches and reports of the European Parliament. The EC has positive connotations because it provides an opportunity to solve problem which the nation-state is unable to solve alone. The EC, on the contrary, provides an opportunity to solve these problems in common<sup>65</sup>. *Common* problem-solving

63. See, for instance, OJ C 301, 25.11.85, p. 36.

64. See the laconic remarks in the third ERP: "Nach Artikel 2 des Vertrages ist es unter anderem Aufgabe der Gemeinschaft, eine harmonische Entwicklung des Wirtschaftslebens innerhalb der Gemeinschaft, eine beständige und ausgewogene Wirtschaftsausweitung und eine beschleunigte Hebung des Lebensstandards zu fördern. Die Umweltforschung trägt zur Erreichung dieser Ziele bei ..."; OJ L 101, 11.4.81, p. 1. This reference to article 2 of the EEC-Treaty is a standard justification for the adoption of new competencies not foreseen in the Treaty: it is hard to imagine an action which could *not*, at least in principle, contribute to the "harmonious development of economic activities, a continuous and balanced expansion, and increase in stability, and accelerated raising of the standard of living and closer relations between the States belonging to it" (art. 2 of the EEC Treaty). The meaning of this justification is that the policy in question is considered to be good for European integration, and that it is adopted for this reason.

65. See for instance the statement of the rapporteur on the 4th ERP, Nicolas Estgen (D/EPP): "Ich bin der Meinung, daß gerade die Umweltforschung als Handlungsanleitung für Politiker und Exekutive eine große, richtungsweisende Rolle spielt, unter Hinweis auf jene Probleme, die in Europa besser gemeinsam gelöst werden können!"; OJ 2-335, p. 34, 18.2.186. In the following text, parliamentarians are characterised by their nationality (before the slash) and by



and the EC as the only institution capable to solve new or large-scale problems are features of the *supranational integration* frame.

Until the entry into force of the Single European Act in 1987, neither environmental policy nor research policy were a formal competence of the European Community. Any legislative or action proposal in these fields thus had to justify not only its particular content but its very existence<sup>66</sup>. Whereas the Commission used problems to justify Community action and thus a Community competence in this field with the aim of furthering integration, the Council was generally reluctant towards the adoption of such programmes or legislative texts because their adoption was likely to justify *de facto* a permanent competence of the EC in this matter, partly at the expense of national measures. In this situation, research, and in particular fundamental research appeared likely to contribute in an unspecified way to the improvement of the living conditions in the EEC, as required by Art. 2, without interfering too much into member state competencies.

Research was also important for justifying policies in the field of the environment. In a period where environmental policy was not yet considered a well-established and legitimate policy of the EC, it had to refer to a solid basis in facts in order to justify action. Environmental policy and environmental research thus mutually justified each other: The results of environmental research could lead to policy measures whereas proposed policies demanded more research to give them a foundation in natural scientific knowledge. This relationship has even found its way into the SEA's chapter on the environment which codified the "acquis communautaire" in this field. Art. 130r, 2 states that "in preparing its action relating to the environment, the Community shall take account of ... available scientific and technical data ...".

their political orientation (after the slash). Estgen is thus a German Christian-Democrat.

66. In this case, measures had to be adopted on the basis of Art. 235 of the EEC Treaty which required that these measures had to be "necessary to attain ... one of the objectives of the Community" listed in Art. 2.

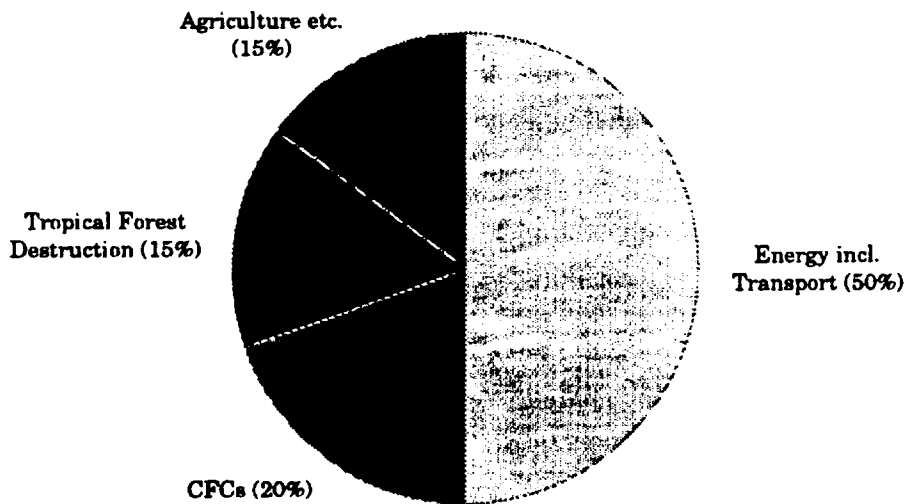
Climate problems transcend national boundaries. They are typical examples of cross-border problems which can be best dealt with in international co-operation. Hence, action in the field of climatology can be justified by the inherent features of the problem but also contribute to integration. In addition, research, as it is necessary for laying the cognitive foundations of a policy, can give additional legitimation to EC environmental policy which in the beginning of the 1980s was still in the making. By justifying a transfer of competencies to the EC level in this policy field, it also contributes to integration.

It would, however, be erroneous to attempt an explanation of the emergence of the first climatological research programme (in the 3rd ERP) and its expansion in the 4th ERP in terms of rational action. Commission civil servants preparing these proposals do not have as their first preference the furthering of integration by whatsoever means and only on the second or lower ranking the protection of the environment, high-quality research or the avoidance of duplication in research. The Council, on the other hand, does not consist of civil servants with "preventing integration" ranking first among their preferences. Such preferences could only be constructed by the scholar but not be revealed by empirical analysis. Such a distribution of preferences would very much look like an image of the institutional setting of the EC written in the 1957 Treaty of Rome with the Commission as the promoter of integration and the Council as the defender of national interests. Members of the respective policy-communities on the contrary tend to perceive themselves as problem-solvers. They are concerned and motivated by the problem at stake and not with integration or protection of sovereignty. There is no need for a master plan of integration which is constantly pursued by the Commission and opposed by the Council. This is also one of the main findings of neo-functional integration theory: integration does not happen as the result of a major institutional debate but as the outcome of a large number of "problem-solving" decisions.

## 2. Energy

In its later strategy paper<sup>67</sup>, the Commission established a firm link between its greenhouse and its energy policy. Improving energy efficiency<sup>68</sup> became the cornerstone of the Commission's greenhouse policy. This privileged position of energy policy has been justified by the crucial role of energy production and consumption in the emissions of CO<sub>2</sub> which is regarded as the main cause of the greenhouse effect.

Figure 5: Causes of the Greenhouse Effect



Source: *Enquete-Kommission "Schutz der Erdatmosphäre" des Deutschen Bundestages: Schutz der Erde. Eine Bestandsaufnahme mit Vorschlägen zu einer neuen Energiepolitik, Vol. 1, p. 45*

Indeed, as can be seen in Figure 5, energy is probably the most important single factor responsible for CO<sub>2</sub> emissions and hence for the greenhouse

67. See SEC (91) 1744, 14.10.91. The paper was entitled "A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency" (emphasis added).

68. Energy efficiency is the relationship between final energy demand and GDP. It expresses how much energy is needed to produce one unit of GDP. Improving energy efficiency means that fewer energy is needed to produce the same amount of GDP.

effect, as long as the latter is mainly attributed to CO<sub>2</sub> while other possible greenhouse gases, such as methane, are neglected.

Energy is also indirectly responsible for the CO<sub>2</sub> emissions from the transportation sector. The strong emphasis on changes in energy policy could thus be explained by the importance of this policy field for the greenhouse effect: it is here where targeted measures are likely to have the greatest effect. This statement is, however, already an interpretation and a choice. It suggests that energy *policy* is the best means to reduce energy *use* which is undeniably responsible for a huge part of CO<sub>2</sub> emissions. In fact, this interpretation of the Commission was not shared by all actors. Some member states, for instance, strongly objected to the emphasis on energy policy and demanded instead that measures in other fields, such as housing (insulation) and transport (speed limits, standards for consumption of vehicles), be also considered.

Therefore, the importance of energy consumption for the greenhouse effect cannot alone explain the strong reliance on energy policy in the Commission's strategy to fight the greenhouse effect. Another hypothesis would be to assume that the way energy policy has been conducted by the EC, and in particular by the EC Commission which prepares policy orientations and decisions, matters for the explanation of the prominent role of energy policy in the Commission's greenhouse strategy. It is thus the dynamics of EC energy policy which explains later policy choices and not considerations of optimal problem-solving. This argument will be developed in the present study. It is therefore necessary to begin with a brief analysis of the basic frames and events of EC energy policy until the mid-1980s.

*Table 3: Ideal-Typical Frames of Energy Policy*

	Supply	Conservation	Energetics
Definition of Problem	inadequate supply	energy waste	energy as cultural-social problem
Assumptions	energy growth continued (energy-economic growth linked)	energy growth slowed (energy-economic growth can be decoupled)	energy determinism, entropic limits to energy conservation, end of cheap energy
Primary Actors	energy corporations	government	public
Goal/Values	inexhaustible cheap energy no value change	near term: efficiency long term: inexhaustible supply small value change	decentralised solar based society radical value change
Risks to be Avoided	economic disruption	balance of payments, dependence, energy wars	technological accidents, resource exhaustion, climate change
Ultimate Energy Source	breeder/fusion	conservation technology, fusion	decentralised: solar, wind, biomass, conservation

*Source: adapted from Orr, U.S. Energy Policy and the Political Economy of Participation, p. 1038*

Energy policy can be analysed in terms of frames. Three basic frames may be distinguished<sup>69</sup>. They involve different “primary actors” which are crucial for the policy field, different goals and values, different risks to be

69. See Table 3, p. 139, and Thompson, *Among the Energy Tribes*.

avoided and different rankings of these risks and different ideas about the “optimal” energy source:

- *supply* considers that the energy demand of economic actors must be met. Energy, in this view, is vital for the economy, and a secure supply of sufficient quantities of cheap energy is essential for economic growth
- *conservation* sees energy as a limited resource because of the depletion of natural resources (oil, coal, etc.) and/or the pollution stemming from power generation. Therefore, energy use by the economy has to be restricted
- *energetics* regards energy generation, distribution and consumption as a cultural and social phenomenon. Energy policy is not a matter for specialists finding the right “energy mix” or a classic task of the state by putting limits to energy consumption but a political matter depending and involving political and economic organisation, values and beliefs.

EC energy policy, to the degree it exists at all<sup>70</sup>, can be characterised by the *supply* perspective. Energy policy, not foreseen in the EEC Treaty, became a matter for the EC as a reaction to the 1973/74 oil crisis which led to sharp price increases and thus challenged the prevailing supply frame. Secure supply of energy at low prices without disruptions, the professed ends of the energy policies of the member states<sup>71</sup>, seemed endangered. Within the *supply* frame, the problem was the drastic price increase for energy and the possibility of being cut off from oil supply. Three basic strategies to cope with the oil crisis were envisaged in a Council resolution dealing with the

70. See the critical account of Daintith/Hancher *Energy Strategy in Europe* and Daintith/Williams, *The Legal Integration of Energy Markets*; see also Black, *Plus ça change, plus c'est la même chose: Nine Governments in Search of a Common Energy Policy*.

71. Stated by the 1972 Paris summit of the EC heads of state and of government, which declared that the aim of energy policy was to provide for “eine sichere und dauerhafte Versorgung unter zufriedenstellenden wirtschaftlichen Bedingungen”; quoted in OJ C 153, 9.7.75, p. 1. The supply frame has remained a constant feature of EC energy policy. In 1986, the Council declared: “Die gesicherte und auf befriedigender wirtschaftlicher Grundlage beruhende Verfügbarkeit von Energie in ausreichenden Mengen ist nach wie vor eine unerläßliche Voraussetzung für die weitere Verfolgung der wirtschaftlichen und sozialen Ziele der Gemeinschaft und der Mitgliedstaaten”; OJ C 241, 25.9.86, p. 1.

energy policy of the Community after the oil crisis, although with different priorities. Firstly, energy saving could in principle reduce the dependence from outside energy supply but — within the *supply* frame — had the disadvantage of impairing economic growth<sup>72</sup>. Activities in this sector were therefore marginal. Still, the Council in 1974 decided on a first action programme on rational energy use. This action programme endorsed the Commission's activities in the field of research which were not considered a threat to vital areas of national energy security and thus became the small-scale predecessor of later programmes<sup>73</sup>.

More compatible with the *supply* frame were activities to reduce the dependence on oil imports from the Middle East by returning to domestic sources of primary energy. i.e. to coal and to (North Sea) oil and, as the third possible strategy, by a massive increase in the use of nuclear energy<sup>74</sup>. Although at the time, the Commission in particular was fervently pro-nuclear<sup>75</sup>, nuclear energy was contested even in the aftermath of the oil crisis<sup>76</sup>.

Despite frequent references to common action faced with an external threat, EC energy policy remained largely restricted to a loose co-ordination of member state action. Energy policy was perceived by the member states as too vital an issue as to leave it to any kind of international organisation<sup>77</sup>. The resolutions passed on a new energy policy strategy of the Community or on energy policy goals mainly set indicative aggregate targets for all

72. See the wording of the resolution, demanding a "Senkung der Wachstumsrate des innergemeinschaftlichen Verbrauchs durch Maßnahmen zur rationellen Energieverwendung und zur Energieeinsparung, ohne daß hierdurch die Ziele der wirtschaftlichen und sozialen Entwicklung beeinträchtigt werden"; OJ C 153, 9.7.75, p. 1 (emphasis added). Besides, the object of reduction was not the total energy consumption but merely its growth rate. For a similar statement, see the Council resolution reprinted in OJ C 153, 9.7.75, p. 9.

73. See OJ C 153, 9.7.75, p. 5.

74. See the energy policy guidelines of the Council, reprinted in OJ C 153, 9.7.75, p. 3.

75. See for instance Commission estimation of the future role of nuclear energy, quoted in OJ C 153, 9.7.75, p. 4.

76. Objecting to the development of nuclear power, the Netherlands and Denmark had made a reservation on an indent in the Council resolution on the Community's new energy policy strategy; see OJ C 153, 9.7.75, p. 1.

77. This is also true for attempts to establish an International Energy Agency with far-reaching competencies, see e.g. Keohane, *After Hegemony*, pp. 217 seq.

member states but left all concrete decisions to the member states<sup>78</sup>. The first major revision of the EEC Treaty, the Single European Act of 1986, did not contain any item on energy policy among the new competencies of the EC<sup>79</sup>.

Summing up, EC energy policy until the late 1980s can be characterised by a prevailing *supply* frame. Despite a rhetoric of common problem solving, a *Community* energy policy properly spoken hardly existed but remained characterised by *member state dominance*. Switches to domestic energy resources (most prominently North Sea oil and gas) remained a matter of national policy. The Community was most active in the field of energy-related research. Here, the emphasis was clearly on nuclear energy. Energy saving, which is not a fully valid option in the *supply* frame, was only promoted by small scale research programmes<sup>80</sup>. Hence, from a Commission point of view, EC energy policy was not successful. The Community still seemed unprepared for a new energy crisis because its member states refused the only means to avoid the consequences of such a new crisis, namely common action, in other words: *supranational integration*.

78. The resolutions mentioned above reflect this tension. After stressing the need for a common energy policy and before giving Community targets for future energy demand, one of them stresses: "Jeder Mitgliedstaat sollte in der Lage sein, entsprechend den ihm eigenen Möglichkeiten und Zwängen zur Verwirklichung dieser Ziele beizutragen"; OJ C 153, 9.7.75, p. 3. More than ten years later, the Council stated: "Im Bereich der Energiepolitik ist es Aufgabe der Mitgliedstaaten, das Spiel der Marktkräfte sicherzustellen"; OJ C 241, 25.9.86, p. 1.
79. Instead, the conference adopting the SEA added a declaration confirming that "the Community's activities in the sphere of the environment may not interfere with national policies regarding the exploitation of energy resources". In the Maastricht Treaty, adopted five years later, the energy policy competencies foreseen in the earlier Luxembourg and Dutch drafts (reprinted in *Europe Documents*, No. 1722/23, 5.7.91 and *ibid.*, No. 1746/47, 20.11.92 respectively) were finally deleted.
80. See the reports of the green German MEP Undine Bloch von Blottnitz, A 2-63/86 of 17.6.86 and A 2-249/87 of 9.12.87 as well as the EP-debate on the subject (OJ 2-360, 19.1.88, pp. 120-125) criticising the preference of the Commission for large-scale energy generation and the relative neglect of energy saving and renewable energy sources.



### 3. *The Emergence of the Greenhouse Issue*

Apart from occasional references in EP-Debates, the greenhouse effect emerged as a political issue (apart from being a research topic) in the EC with the submission of a report on the issue by James Fitzsimons (Ireland) in 1986. Until this point, the Commission had dealt with the greenhouse effect exclusively as a topic for research. While the fourth environmental research programme, adopted only a few months before<sup>81</sup>, had insisted on the existing uncertainties in the natural sciences and thus entirely remained within a *classic environmental policy* frame according to which natural science has to produce the cognitive basis for political action, the Fitzsimons-report has a somewhat different emphasis. While referring at length to the results of natural scientific studies on the greenhouse effect published in the last decade, the report also dealt with possible economic and societal impacts of the greenhouse effect and possible policy measures on the basis of the existing natural scientific information and with regard to possible consequences of the greenhouse effect. With some exaggeration, the Fitzsimons-report can be regarded as being inspired by the “precautionary principle” according to which environmental policy measures are justified even by the risk of environmental danger, despite remaining natural scientific uncertainties. Such an approach is consistent with *classic environmental policy* but triggers action more quickly.

The report comes to the conclusion that present natural scientific knowledge, represented by American and German studies as well as by publications arising from the EC’s climatological research programme, confirm the existence of a greenhouse effect which is serious enough to justify some political action on this basis, despite remaining uncertainties<sup>82</sup>. The resolution adopted on the basis of the report also refers to the “growing scientific certainty” that the earth’s average temperature was rising as a result of increasing CO<sub>2</sub> concentrations and of propellants<sup>83</sup>. The

81. See the overview of EC environmental research programmes, p. 287.

82. Fitzsimons explicitly minimises the role of knowledge by stating that “it is becoming apparent that political leaders will use the uncertainties of the issue as a pretext for doing nothing as long as scientists are unable to make precise forecasts”; A 2-68/86, 27.6.86, p. 7.

83. See OJ C 255; 13.10.86, p. 272. Propellants, i.e. chlorofluorocarbons (CFCs), are generally believed to be responsible for a considerable portion of the greenhouse

responsibility for these carbon dioxide emissions is put on fossil-fuel burning, intensive farming, industrial activities and deforestation. Hence, major fields for Community action are agricultural, industrial and energy policy. Energy policy is singled out by pointing to the "automatic benefit to be gained from large-scale energy-saving and rational use of energy"<sup>84</sup>. The strategy to cope with the greenhouse effect proposed by the report and by the resolution relies on three pillars: energy saving, reforestation (in the Community as well as world-wide) and development policy measures to stop tropical forest destruction<sup>85</sup>. The countries of the Northern hemisphere, the report says, are responsible for the major part of the greenhouse effect and hence have the responsibility to help Third World countries, for instance with transferring technology. This argument is put forward in terms of moral responsibility and not in terms of self-interest as it has been frequently used in the discussions preceding the UN conference on environment and development (UNCED).

Beside the relationship of natural scientific knowledge and political action which the report answered by pushing the uncertainty argument aside, the document contains considerations on the effects of global warming on the economy, although these remained vague and addressed the issue of (geographical) winners and losers from the greenhouse effect.

This report was a first departure from pure natural scientific research in the emerging greenhouse policy of the EC. This approach, implicitly based on the precautionary principle, is the first EC document which contains a political assessment of the greenhouse effect instead of natural scientific

effect; see Table 4, p. 280. Since the end of the 1970s, however, they have been dealt with politically as a separate issue, namely the framework of the protection of the ozone layer. The short-term danger to the ozone layer dominated the development of this policy-field and put long-term considerations such as the greenhouse effect in the background. For this reason, CFCs will not be regarded as an issue in the field of greenhouse policy. For a treatment of EC policy towards the issue, see Jachtenfuchs, *The European Community and the Protection of the Ozone Layer*. For a comprehensive analysis of the negotiations leading to the establishment of the global ozone regime, see Gehring, *Dynamic International Regimes*, chapters 4-6 and Benedick, *Ozone Diplomacy*.

84. OJ C 255, 13.10.86, p. 273.

85. See also the statement of the rapporteur during the debate, OJ 2-342, 12.9.86, pp. 323-324.

and technical solutions<sup>86</sup>. During the debate on the report, Commissioner Pfeiffer gave the Commission's view on the topic. Pfeiffer's statement was entirely concerned with the problems of climatology. His presentation was characterised by the remaining deficiencies of climate modelling. He emphasised the remaining uncertainties of those models and stressed that these uncertainties justified prudence, in particular with regard to short-term action. Consequently, Pfeiffer's first priority was the intensification of research with the aim of using the knowledge generated by it "als eine sichere Grundlage für Maßnahmen zur Gegensteuerung"<sup>87</sup>.

The Commission remained on the path described by Pfeiffer. In November 1986, its directorate-general for research (DG XII) organised a symposium on "CO<sub>2</sub> and other greenhouse gases: climatic and associated impacts" in Brussels<sup>88</sup>. The conference was organised in the framework of the climatology research programme in order to present the results of research and stimulate scientific contacts. Natural science was at the centre of the proceedings. Only as a conclusion, the some 60 European and US scientists adopted the recommendation that the dialogue between scientists and policy-makers should be intensified and institutionalised<sup>89</sup>.

In January 1988, Commissioner Narjes addressed the European Parliament on the issue of EC climatic research, stating that extrapolations of present CO<sub>2</sub> emission data suggested a possible increase of emissions from 5 billion tons in 1974 to 19 billion tons in 2025. From these data, he drew the conclusion that further in-depth research was necessary while

86. But compare the statement of the conservative MEP Nicolas Estgen during the debate on the Fitzsimons-report who affirms: "Allgemein ist man der Ansicht, daß die Wissenschaft und die Technik, die häufig die Ursache von Umweltschäden sind, die Fehler, die sie begangen haben, auch wieder beheben können"; OJ 2-342, 12.9.86, p. 323.

87. OJ 2-342, 12.9.86, p. 326. The proposed increase in research seemed to be a lip service, as the Council had adopted a four-year climatology programme only a few months before.

88. The proceedings of the conference have been published; see Fantechi/Ghazi, *Carbon Dioxide and Other Greenhouse Gases*.

89. See *Agence Europe*, No. 4388, 15.-16.9.86, p. 16 and Laurmann, *Recommendations*, para. 7. (p. 271).

acknowledging that present Community research programmes did not provide for massive research on CO<sub>2</sub> emissions<sup>90</sup>.

The Fourth Environmental Action Programme (EAP) of the Community, ultimately adopted in December 1987, reflects the prevailing frame of *classic environmental policy*<sup>91</sup>. The 4th EAP, covering the period from 1987 to 1992, mentions the greenhouse effect only in relation to climatological research. No mention is made of social scientific research on the greenhouse effect, e.g. in the form of economic analyses, or of policy analysis in the wider sense<sup>92</sup>. The programme devotes a large amount of attention to the protection of tropical forests. The climatic impact of tropical forest destruction is, however, mentioned only once, the economic and environmental consequences for the countries concerned remaining predominant<sup>93</sup>.

#### 4. Summary

- > It appears that the first phase of EC policy towards the greenhouse effect can be characterised by the term "orientation". Some actors tried to put the issue on the political agenda but their actions were rather isolated. In this initial phase, the Commission maintained a restrictive position, initiating solely natural science research on climate change but not at all addressing the economic or political consequences of the increasing CO<sub>2</sub> concentrations in the atmosphere, let alone measures to tackle these effects. Statements from the Commission in this time were fully in line with a frame of *classic environmental policy* by pointing to the need of technical knowledge as a basis for action. This exclusive reliance on natural scientific and technical research could also help, in the view of the Commission, to establish its own

90. See *Agence Europe*, No. 4708, 27.1.88, p. 10.

> // 91. Action programmes in the field of the environment are no legally binding documents but a mixture of programmatic statements, the setting of priority areas for action and a shopping list of desirable legislation and other measures. A comparison of the now five action programmes adopted since 1973 allows to have a rather exact view of the programmatic development of EC environmental policy over the last twenty years and of changes in the frames of environmental policy-making.

92. See OJ C 328, 7.12.87, p. 35.

93. *Ibid.*, pp. 37-38.

competence and a European Community tradition in this field, as compared to a national one. The predominant concerns for *supranational integration* on the part of the Commission fitted well to the *classic environmental policy* frame, as well as to a line of thinking which considers natural science as the only real science.

Energy policy was dominated by a *supply* frame in which the secure and continuous supply of cheap energy for the economy is the first priority. Occasional references to energy policy as a crucial field of action for measures against the greenhouse effect, made in particular by the European Parliament, were a challenge to this frame and were rebuffed. On the other hand, energy policy remained largely in the hands of the EC member states, leaving to the Commission only studies and the proposal of indicative targets for energy use. Since the beginning of the 1970s, the Commission tried in vain to establish a common energy policy but even two oil crises and strong appeals to common action as a means to face an external threat, typical for the *supranational integration* frame, did not change *member state dominance* in this field.

The European Parliament started a slight departure from the *classic environmental policy* frame by pointing to the "automatic benefits" of some action, in particular large-scale energy saving. By doing so, it introduces a broader calculation of costs and benefits of environmental policy: environmental policy (action against the greenhouse effect) puts costs on economic agents or on the state but these costs have to be assessed not merely in terms of their environmental effects as in *classic environmental policy*, but also with respect to benefits in other policy fields. Such a calculation is a different way of balancing advantages and disadvantages of policy measures. In *classic environmental policy*, policy measures in general are considered to create only costs, environmental benefits (e.g. the maintenance of genetic diversity) being outside the scope of economic calculation. These costs must be justified, and this can only be done on the basis of solid natural scientific knowledge.

In 1988, some elements of the later policy package were already present, though not yet linked. Others, which were later put off the agenda, were also dealt with. Energy policy is appearing as a central issue but meeting strong resistance from the proponents of *supply*. Energy saving is identified

as a strategy for a greenhouse policy. Environmental research is dominated by *classic environmental policy* thinking. The first political document on the greenhouse effect has been put forward by the European Parliament, whereas Commission and Council neglect the issue because of lacking scientific evidence. The situation at the end of the first phase is thus a confrontation of different views which are beginning to be linked.

### E. Clearing up the Issue

Whereas until 1988, the greenhouse effect was mainly a topic for natural scientific research in the EC, the Commission in November 1988 published a large report setting out its view of the nature of the greenhouse effect and proposing orientations for action. With the submission of this report, the greenhouse effect became a political problem in the EC which required reaction. The debate initiated by this report, together with an intense international discussion on the greenhouse effect, in October 1990 led to a Council decision on the stabilisation of the EC's CO<sub>2</sub> emissions by the year 2000. Partly independent from the debate on the greenhouse effect, partly stimulated by it, new frames emerged in some policy fields whereas in others, slow frame changes started. In the field of energy, although still dominated by the *supply* frame, a slow movement towards *conservation* and *energetics* started. In parallel, a general programmatic discussion on the relationship between economics and the environment indicated a move towards the *sustainability* frame and prepared the conceptual ground for the later proposal of a tax on CO<sub>2</sub>. The strong growth of international environmental diplomacy, in particular with respect to the greenhouse effect, led to the emergence of the concept of "environmental leadership" which linked environmental policy with *supranational integration*. Finally, a slow erosion of the *classic environmental policy* frame started with respect to the role of knowledge, putting exact natural scientific knowledge as a basis for policy somewhat out of the political attention.

### 1. *The Development of the Greenhouse Strategy*

As a reaction to the findings of the international conference on "The Changing Atmosphere: Implications for Global Security", held in Toronto in June 1988<sup>94</sup>, the Commission set up an "interservice group"<sup>95</sup> to make a first political assessment of the greenhouse effect. When announcing the establishment of the group to the press, the Commissioner at that time responsible for the environment, Stanley Clinton Davis, said that there was not doubt that the earth was getting warmer and that there were prospects of far-reaching changes in climate and sea levels over the forthcoming decades. He also declared that the Community had a key role to play in the field. A response would involve industry, energy, agriculture, forestry and development policies of the EC<sup>96</sup>. The Toronto conference had thus changed the cognitive basis for Community policy: whereas only shortly before, the Commission had referred to the remaining uncertainties with regard to climate changes<sup>97</sup>, this assessment had changed now. The change was not inspired from the environmental research programme of the Community which was supposed to lay the scientific basis for EC environmental policy but is an indication that one of the tasks of the Toronto conference, namely to establish a minimum scientific consensus on the nature and consequences of the greenhouse effect had been fulfilled<sup>98</sup>.

94. The final statement of the conference is reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 367-372. The greenhouse policy of the European Community is embedded into a parallel global policy process. This process will be dealt with only in so far as it relates directly to the framing of the greenhouse effect in the EC. For an analysis of the global greenhouse policy process, see Lipschutz, *Bargaining Among Nations*; Kaiser et al., *Internationale Klimapolitik*; Oberthür, *Die internationale Zusammenarbeit zum Schutz des Weltklimas*; Fischer, *Die Klimakonvention in der internationalen Politik*; Johnson, *The Earth Summit*, pp. 59-78 and Simonis, *Kooperation oder Konfrontation*.

95. The creation of an interservice group is a procedure frequently used to study areas where large parts of the subject matter cannot be dealt with by one particular directorate-general and to prepare proposals for decisions should this be desired. The findings of interservice groups engage the directorate-generals represented in it so that these groups have the function of sorting out internal differences at a very early stage; see the Commission's *Manuel de procedure*, 1991 edition, point 8.2.

96. See *Agence Europe*, No. 4828, 20.7.88, p. 12.

97. See p. 145.

98. This technique has often and with success been used in the UN framework: given the predominance of the *classic environmental policy* frame, an institution with highly reputed experts from all regions of the world has to state a minimum

The Toronto conference also inspired some activity of the European Parliament. Whereas the Commission set out to produce a comprehensive review of natural scientific knowledge and possible policy measures, the EP took up the media debate after the Toronto conference and concentrated on possible sea-level rises as a consequences of the melting of polar ice, one of the estimated consequences of the greenhouse effect<sup>99</sup>. The topic of sea-level rise was full of allusions to the grand topic of environmental disasters in the public debate. The title of a later EP-report on the "*rapid rise in the sea level along Europe's coasts*"<sup>100</sup> indicates a feeling of urgency and threat. The danger is confirmed by several international scientific conferences quoted in the report. Faced with this danger, "it is clear that the problems ... must be tackled at a level higher than the nation states, for example by the EEC."<sup>101</sup> For the author of the EP-report, *supranational integration* is the answer to the external danger.

#### a) The Commission's Strategy Paper

The Commission's report on "The Greenhouse Effect and the Community"<sup>102</sup> was more concerned with stock-taking than with ringing alarm-bells. A large part of the report is devoted to the state of knowledge in natural sciences. Most references to natural scientific results refer to

consensus on the state of natural scientific knowledge which is to be endorsed by national delegates. This authoritative set of natural scientific knowledge is thus the lowest common denominator but can hardly be put in doubt by policy-makers but only be criticised scientifically. With regard to the greenhouse effect, this function has been performed by the Intergovernmental Panel on Climate Change, *The 1990 and 1992 IPCC Assessments*. On the shaping of a cognitive consensus in global environmental regimes see Gehring, *Dynamic International Regimes*, ch. 12.

99. A small public hearing was organised in September 1988 by MEP François Roelants du Vivier (B/Rainbow), a well-known environmental activist in EC circles focusing exclusively on sea-level rise as a consequence of global warming; see *Agence Europe*, No. 4842, 1.9.88, pp. 6-7.
100. A 2-87/89, 14.4.89 (emphasis added). At the time, a rise of the sea level was expected to occur within 50 or 100 years.
101. *Ibid.*, p. 13. See also the resolution adopted on the basis of the report, OJ C 158, 26.6.89, p. 330.
102. COM (88) 656, 16.11.88. Quotations given in the next pages refer to this document if not indicated otherwise.



international consensus-building conferences<sup>103</sup>. It seems therefore that one of the main tasks of the interservice group was to establish a solid factual basis of causes, effects and consequences of climate change in order to avoid subsequent proposals being rejected by some countries claiming that the state of knowledge was not sufficiently developed for the adoption of costly measures<sup>104</sup>.

After the statement of a cognitive consensus on the natural scientific aspects of the greenhouse effect, the Commission report reviews possible actions. Here, the Commission only quoted the far-reaching policy proposals of the Toronto conference at length without endorsing them. The Toronto conference had demanded, for instance, a 20 per cent reduction of CO<sub>2</sub> emissions by the year 2005 as compared to 1988 levels. In the section reviewing possible EC action, the report is much more cautious. For the Commission, the reduction of greenhouse gases "does not seem at this stage a realistic objective but could be a very long term goal" (p. 44). Even stabilisation of greenhouse gas emissions is only a long-term goal (but not a very-long term goal). Taking up a standard argument of the climate change debate, the Commission insists that measures must be co-ordinated at the international level (p. 40). Much attention is devoted to further research and here again mostly to natural sciences research (climate modelling, effects on particular geographic areas). A considerably shorter section deals with the consequences of implementing measures, in particular with the question which economic sectors should have to bear which share of possible measures and with the costs of these measures. In this regard, a first research activity outside the field of climatology is mentioned (p. 44 and Annex).

The report for the first time lists proposals for preventive action, i.e. action to be undertaken in the case of a *risk* of environmental hazard. These proposals mainly deal with energy policy, more concretely with improving

103. Six pages of the sixty-pages report (without annexes) are exclusively devoted to the results of the Toronto conference.

104. At the time of the publication of the report, Commission experts stressed the enormous costs of protective measures against the consequences of the greenhouse effect which they considered to be politically unacceptable given present uncertainties about the precise extent of the greenhouse effect; see *Agence Europe*, No. 4842, 1.9.88, p. 6-7.

energy efficiency, thus taking up an old theme of EC energy policy, and with changing the share of different raw materials for energy generation (“fuel switching”). On the basis of the conclusions of the Toronto conference, which had also recommended energy efficiency as a central strategy to fight the greenhouse effect, the Commission report put energy policy in the centre of its own emerging strategy. The wording indicates that the authors were well aware of the conflict potential of this proposed link<sup>105</sup>.

Other fields of preventive action are the conservation of forests (including assistance to developing countries) and reforestation. Some space is also devoted to other greenhouse gases such as CFCs, methane and nitrous oxides. Taxation of products causing emissions of these gases is mentioned as a possible complement to technological abatement measures (p. 48).

The “conclusions of the Commission” (pp. 51-54) prepare the ground for the climate change policy of the EC in the following years. The report already contains the main elements of a Community policy in this field. Within the prevailing *classic environmental policy frame*, its most important function is to state a cognitive consensus about the features of the greenhouse effect relating to the natural sciences. On the basis of the findings of several international scientific conferences, the Commission acknowledges the existence of the greenhouse effect, despite some remaining uncertainties about its precise consequences and extent. Energy policy, again corresponding to the recommendations of the Toronto conference, is put into the centre of the emerging strategy. The research proposed by the report is only partially devoted to natural scientific research in order to have a better understanding of the physical reality of the greenhouse effect. Much of the research to be initiated was instead directed at preparing decisions, in particular a policy-options study programme (p. 51).

105. “Any policy decision aiming at reducing CO<sub>2</sub> emissions in the energy sector should be carefully examined taking fully into account the specific objectives and constraints existing at international, community and national level in this sector. On the other hand, any future decision in the field of energy policy should take into account the problem of potential climate changes linked to the greenhouse effect”; COM (88) 656, p. 46. On the link between energy and environmental policy, see pp. 162 seq.

The Commission conclusions also set out a first outline of a strategy to deal with the problem at stake. Central elements of the later strategy paper<sup>106</sup> are already mentioned. Energy efficiency is a top priority, and in this field the Commission already enters into an engagement to take action instead of merely studying option. It is underlined that action in this field is justified independently of uncertainties on some aspects of the greenhouse effect (p. 53). This is the first appearance of the later "no-regret strategy"<sup>107</sup>. The greenhouse effect thus serves as a justification for relaunching older policies for achieving energy efficiency and the other goals of EC energy policy which had been considered unsuccessful so far. Tax incentives are also mentioned but only in a rather general way and do not occupy the prominent place given to them later.

At this point, the Commission is still analysing the greenhouse effect and proposing its first tentative strategy in terms of *classic environmental policy*. According to this frame, policy towards the greenhouse effect is only justified if it is clear what the greenhouse effect is and what its consequences for the environment are. A risk of (possibly enormous) damage can justify action even on the basis of some remaining uncertainties (always with regard to the natural sciences). This is the normative requirement of the precautionary principle, adopted by the Single European Act (Art. 130r, 2). In order to propose action according to the precautionary principle, there must be a certain agreement about the nature of the risk at stake, in other words, a common problem definition at least in natural scientific terms. The task of the Commission's report was the promotion of this common problem definition.

The cognitive aspects of the problem definition may not, however, be reduced to natural scientific knowledge. Knowing that a risk exists is not sufficient for justifying action in environmental policy. After this first step has been accomplished, a second step is carried out in *classic environmental policy*: a cost-benefit assessment of the possible action or the lack of action (Art. 130r, 3, iii of the EEC Treaty). Economics belongs to the cognitive part

106. See *A Community Strategy to Limit Carbon Dioxide Emissions*, SEC (91) 1744, 14.10.91, and pp. 195 seq.

107. See p. 159.

of the problem definition. The notion of damage, which is at the basis of environmental policy, is often defined in economic terms<sup>108</sup> as damage to property rights. When there is no damage in these terms, there is frequently no political problem. Hence, it becomes more difficult to mobilise action for tackling this problem<sup>109</sup>. To obtain a mandate for assessing these costs and thus extending the cognitive part of the problem definition was thus the second major task of the Commission's report.

By and large, the report contains the main elements of a strategy to combat the greenhouse effect. What is lacking is their mutual relationship and the political package linking certain important elements. The proposal for a Council resolution which was attached to the report and which the Council adopted a few months later, acknowledged the reality of the greenhouse effect and in principle agreed to the need of adopting response measures "irrespective of remaining uncertainties on some scientific aspects of the greenhouse effect"<sup>110</sup>. The Council also accepted the desirability for Community action, which was not self-evident but had to be explicitly established. The Council had thus accepted the natural scientific part of the problem-definition as presented by the Commission on the basis of the international consensus-building process in this field. On the basis of this common understanding, the Commission obtained a mandate to assess not only the environmental but also the socio-economic impact of the greenhouse effect<sup>111</sup>. To this end, the Commission should launch a "substantial" policy-options study programme, dealing among more technical and natural scientific elements with different policies and their consequences in different societal fields<sup>112</sup>. By adopting this resolution, the Council in fact shifted its emphasis from natural sciences to policy studies

108. Important exceptions are human health and the extinction of species.

109. The destruction of biodiversity by the burning of rain forests is a typical case. This destruction is rather safely established in terms of natural science. As there is, however, no measurable damage to private or public property, protest has to rely on moral arguments, such as the rights of future generations or on future economic damage, e.g. with regard to the production of medical drugs with the aid of genetic material found only in tropical forests.

110. OJ C 183, 20.7.89, p. 4.

111. See *ibid.*, p. 5 (point 7).

112. The programme should comprise the "analysis of environmental, economic, industrial, energy, social, agricultural and institutional implications of possible measures and technologies"; *ibid.*, point 8.

and in particular to economics. Climatology was still pursued in the EC research programmes, even with a considerably increased funding<sup>113</sup>, but remained of secondary importance once the natural scientific aspects of the problem had been agreed upon by Council and Commission, although with some hesitation. Still, the argumentation rests entirely within the *classic environmental policy* frame: the first step is to reach agreement about the natural scientific basis of the problem, the second to find out what different paths of action (or non-action) would cost, and the third to decide on policy measures the basis of the first two sets of information which form the cognitive part of the problem definition. In *classic environmental policy*, this order has to be maintained: without solidly established natural scientific facts, action can only be justified on the basis of the precautionary principle. In this perspective, any measure which is adopted on the basis of insufficient or uncertain knowledge bears risks and costs (but hardly any use) and is thus unlikely to be adopted. The Council resolution on the greenhouse effect must therefore be considered as a substantial progress in the *policy development*, although it was probably weak in meeting *environmental* needs. During the meeting, France, the Netherlands, Luxembourg, Germany, Denmark and Belgium had a statement entered into the Council minutes expressing their regret that no policy measures had been adopted<sup>114</sup>. The opponents as well as the proponents of further measures both acted on the basis of *classic environmental policy*; their differences are a matter of degree, not of principle. Whereas the Northern member states consider the state of natural scientific knowledge to be sufficient to adopt at least an indicative goal for CO<sub>2</sub> emissions (be it because of insight, domestic pressure or for other reasons), the South (including the UK) did not consider the scientific evidence sufficient. The disagreement over the natural scientific problem-definition was thus only sorted out in the wording of the resolution, not in substance. It does not matter in this context whether some countries used the lack of scientific

113. The EPOCH programme, adopted in 1989, was given twice as much funding as its predecessor, the climatology part of the fourth ERP; see Table 8, p. 287.

114. The statement read: "The French delegation regrets that the Council could not agree on the minimum objectives for the most rapid stabilisation of gas emissions producing the greenhouse effect, in particular of CO<sub>2</sub>, before later studies give the precise volume and reduction means to be used"; *Agence Europe*, No. 5032, 9.6.89, pp. 7-8. The other five countries joined this statement.

knowledge as an "excuse"; it is important that this argument can be used at all and indeed played a role in the Council negotiations. The reason is the *classic environmental policy* frame shared by *all* participants.

#### b) The Council Conclusions on Climate Change Policy

The Commission strategy paper on the Greenhouse Effect and the Community had opened a debate in between Commission and Council on ends and means of a Community climate change policy. The *desirability* of such a policy had already been acknowledged in the first Council resolution on the greenhouse effect<sup>115</sup>. This general agreement to launch a Community policy towards the greenhouse effect had been justified with the emerging world-wide consensus on the existence and extent of the greenhouse effect. This understanding was still limited to the natural scientific side of the problem definition and did not extend either to its economic aspects nor to the policy fields which were mostly concerned. Energy efficiency had been proposed as an important strategy to deal with the increase in CO<sub>2</sub> concentrations in the atmosphere but only in very broad terms. The debate after the submission of the Commission's first strategy paper therefore consisted mainly in finding a common problem definition in terms of policy, i.e. in identifying the policy fields which were responsible for the greenhouse effect and which offered opportunities for action. The search for a more operational problem definition was spurred by international events, in particular by the Second World Climate conference held in Geneva in November 1990.

The next step of Community climate change policy was marked by the unanimous conclusions of the Council the day before the opening of the Second World Climate conference. These conclusions for the first time contain a concrete policy goal: the stabilisation of the EC's CO<sub>2</sub> emissions by the year 2000. Natural scientific debates about the scope of the greenhouse effect have vanished. Instead, three other fields have emerged in the meantime and shaped the Council conclusions of October 1990 to a differing degree. These three fields, which continued to be the main themes of the EC

115. See OJ C 183, 20.7.89, p. 4.

greenhouse policy until the UN conference on environment and development in June 1992, i.e. until the end of the period dealt with in the present study, concern a policy field (energy), a policy instrument related to a programmatic change in EC environmental policy (the CO<sub>2</sub> tax) and a concept involving the identity of the EC (environmental leadership). The emergence of these three elements of the future EC greenhouse policy will be analysed in the next three sections. How they are reflected in the second important document of EC greenhouse policy, the Council conclusions on climate change policy, will be briefly analysed here in order to allow a comparison with the Commission's first strategy paper.

In its introductory part, the Council conclusions on climate change policy<sup>116</sup> "fully support" the "authoritative scientific view" of the Intergovernmental Panel on Climate Change on the existence of the greenhouse effect. In addition, the Council declares that the "absence at present of full understanding of the complexity of the scientific inter-connections involved should not be used as a reason for postponing measures to combat climate change." (para. 1). This paragraph reinforces the formulations used in the Council resolution on the Commission's strategy paper in even stronger words. From this point onwards, natural scientific arguments do not play any important role in the formulation of the EC's greenhouse policy any more. They become a device of foreign policy, intended to show other countries, and in particular the United States, that the EC endorses the IPCC's findings without further questioning and is ready to take policy measures on the basis of this assessment. Still, this indicates the presence of the *classic environmental policy* frame, but here and in future documents, references to the IPCC assessment of the greenhouse effect become a ritual. They are still necessary to justify action but the debate has now turned away from the justification of action to the choice of the type of action.

Although the document lists energy, agriculture, industry, transport and forestry among the sectors contributing to the greenhouse effect, it privileges energy policy from the outset on the basis of the argument that

116. Council Press Release No. 9482/90, reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 266-268. For convenience, references are made to the numbered paragraphs of this document. If not otherwise indicated, references made in the following pages refer to this document.

energy production and use was the largest anthropogenic (i.e. human-made) cause of the greenhouse effect<sup>117</sup>. The particular role of energy policy is emphasised by the fact that this declaration, as well as later documents on the greenhouse effect, have been adopted by joint meetings of the Energy and the Environment Council<sup>118</sup>. In the negotiations preceding the conclusions of the joint Energy/Environment Council, the Energy Council had always been more reluctant to agree to policy measures in the field of the greenhouse effect than the Environment Council<sup>119</sup>, resisting active measures to limit energy consumption on the basis of the prevailing *supply* frame. The Council conclusions of October 1990 say on the subject:

“The revision of energy and transport policies to curb global carbon dioxide released into the atmosphere should be one of the priority targets of the world. Community and international energy policy must be adjusted to this new task. *At the same time, those energy-policy goals which remain valid must be maintained, such as sufficient and secure supply of energy in order to assure employment and economic growth*” (para. 3; emphasis added).

While acknowledging the need to take active policy measures in the field of energy, and thus indicating the move towards a new frame of energy policy which sees energy in its socio-economic context (*energetics*), the paragraph also restates the central elements of the *supply* frame: energy must be supplied in “sufficient” quantities, therefore, supply should not be restricted but can be expected to grow. The reference to secure supply, on the other hand, can be in conflict with the first goal: the larger the EC’s energy consumption, the more it is likely to be dependent on outside energy supply (mainly Middle East oil and Russian gas) the more insecure energy supply is. Even within the *supply* frame, measures to reduce energy consumption may contribute to one of its basic elements, namely the secure supply of energy. More important for the policy development is, however, another link. Energy policy on the basis of the *supply* frame, it is stated, guarantees employment and economic growth. This symbolic link of energy policy with

117. For an overview of greenhouse gases and sector-specific emissions, see Table 6, p. 285. See also Figure 5, p. 137, and the subsequent remarks.

118. See the remarks in fn. 13, p. 81, on the designation of different Councils.

119. See pp. 162 seq.



a liberal market economy (and indirectly with general welfare) reflects the old contradiction of economics and the environment: environmental policy measures may be deemed necessary but they impede economic growth and *reduce* the overall welfare. It might be necessary to take measures in the field of energy policy to fight the greenhouse effect, this argument says, but these measures are likely to cost jobs. The same argument is valid in the *classic environmental policy* frame. As a consequence, the natural scientific reality of the greenhouse effect being acknowledged, the debate now shifts to the economics of the greenhouse effect, in other words, to the question of the costs and benefits of different policy measures.

This has also consequences for the strategies of different actors. The Commission, who had strongly promoted the decision to stabilise CO<sub>2</sub> emissions by the year 2000, had to support the argument that a policy of energy efficiency, the main tool of its greenhouse policy, was not hampering economic growth. Therefore, the Commission had introduced the idea of adopting so-called “no-regret” measures during the preparations of the Council meeting. The concept of no-regret measures, endorsed by the Council (para. 9), attempts to avoid controversial cost-benefit debates by arguing that some policies are profitable for member states in any case, irrespectively of the greenhouse effect and without incurring high costs. The main example for a no-regret measure is energy efficiency.

Hesitating member states as well as industrial lobbyists on the contrary could be expected to claim the contrary. This cost-benefit debate was one of the reasons why the Commission slowly moved towards the *sustainability* frame which allowed for a totally different assessment of costs and benefits and later actively promoted this frame.

The fact that the Energy/Environment Council had at least not rejected the possibility of a tax on CO<sub>2</sub> or on energy opened the possibility for the later debate on *sustainability* and the internalisation of environmental costs by the producers of pollution and waste<sup>120</sup>. The debates on the Commission

120. The Council conclusions say that “Economic and fiscal instruments, e.g. taxes or charges, may play an important role in achieving structural changes in the energy sector aimed at limiting or reducing CO<sub>2</sub> and other GHGs emissions in the most efficient manner” (para. 11). The last words of this phrase indicate again that the

idea of proposing such a tax<sup>121</sup> had been so controversial that the mere mentioning of the tax is already a success for the Commission. The debate on the tax, hardly reflected in the Council conclusions, became the major issue in the field in the coming years and went in parallel with the slow shift of the Commission and at least some member states towards the *sustainability* frame.

Finally, the Council also accepted the concept of “environmental leadership” according to which the EC should actively seek the adoption of a global convention on climate change including protocols setting targets for the limitation and possibly reduction of greenhouse gas emissions<sup>122</sup>. This concept had again been proposed and promoted by the Commission in order to exploit the apparent weakness of the United States which were extremely reluctant in their international greenhouse policy, insisting that remaining scientific uncertainties did not justify costly policy measures<sup>123</sup>. Although it was not given any concrete content except that “the EC and Member States should seek to persuade all industrialised countries to set ... stabilisation targets ...” (para. 13), the leadership concept had an external as well as an external dimension which influenced the greenhouse debate in the years to come because it linked this debate with the role of the EC in international affairs in particular and with integration in general. Externally, it created a self-imposed obligation to conduct policies which could be understood by other countries as constituting leadership. The commitment to stabilise CO<sub>2</sub> emissions by the year 2000 was a first step in this direction but at the time of its adoption remained a mere commitment without implementation. The public endorsement of “environmental leadership”, which was an implicit challenge to the United States, thus increased the internal pressure to adopt these implementing measures, whatever form they might have. By linking greenhouse policy and integration, the policy debate left the field of specialised environmental or energy policies and concerned the identity of

debate had already begun to shift towards economic efficiency and consequences of policy measures to combat the greenhouse effect.

121. See pp. 170 seq.

122. “The EC and its Member States should *take a leading role* in the SWCC” (para. 13, emphasis added). “SWCC” is the Second World Climate Conference.

123. For an account of the US position, see Grubb et al., *Energy Policies and the Greenhouse Effect*, Vol. II, pp. 233 seq.

the EC and its member states. Therefore, even those member states which were reluctant to agree to an increase in supranational powers would suffer a loss of status if the leadership concept to which they had subscribed was to fail.

Still, the Council was far from unanimous on the degree and meaning of "environmental leadership". The opposing positions were represented by Germany and Denmark on the one hand, the UK and Spain on the other. Germany and Denmark asked for far-going conclusions in accordance with the *Environmental Imperative Declaration* of the Dublin European Council of June 1990<sup>124</sup>. Both countries argued that the EC should send out a clear message concerning the actions they are willing to take in order to put pressure on other industrialised countries, notably the US and Japan, and that therefore the Council should agree on specific figures, in particular with regard to the stabilisation or reduction of CO<sub>2</sub> emissions.

Whereas Denmark and Germany thus argued for a kind of environmental unilateralism, the UK and Spain had strong reservations on the topic. The UK considered the stabilisation carbon dioxide emissions by 2000 with the reference year 1990 as too early and had proposed the year 2005 instead, arguing that coal consumption on its territory was very high whereas other countries could more easily switch to gas or nuclear power<sup>125</sup>. Spain did not object to a decision on stabilising or reducing emissions as such but insisted that the EC had to accompany this commitment by a declaration guaranteeing possibilities for countries with slower economic development to continue fast growth which would also imply rising CO<sub>2</sub> emissions. In other words, Spain made a plea for internal differentiation with additional emission allowances for economically backward countries (such as Spain). Spain supported its argument by pointing out that at present, per capita CO<sub>2</sub> emissions on its territory represented only 30 per cent of the German emissions<sup>126</sup>. The UK joined this position by introducing the argument that an "equitable sharing of the burden" must be guaranteed<sup>127</sup>. The

124. See pp. 182 seq.

125. See Table 7, p. 286, for data on the structure of energy supply in the EC member states.

126. For the per capita emissions of CO<sub>2</sub>, see Table 5, page 281, and Figure 8, p. 284.

127. See *Agence Europe*, No. 5359, 27.10.90, p. 11.

Community thus faces internally the same North-South divide as the entire globe, where developed countries are urged to shoulder a larger part of the burden in order to allow continued economic growth for those still being in their economic development. In addition, the burden-sharing argument contains a strong appeal to Community solidarity and thus opens the debate on the degree and the patterns of burden-sharing which is closely related to the differing positions resulting from *supranational integration* and *member state dominance* respectively.

→ The conclusions of the joint Energy/Environment Council of October 1990 mark the end of the debate on the Commission's communication "The Greenhouse Effect and the Community"<sup>128</sup>. Since this time, the debate was not anymore about the nature of the greenhouse effect in terms of natural sciences but about the economic aspects of abatement measures. In terms of environmental policy, *classic environmental policy* was still dominant but the possibilities for a change towards *sustainability* were already present. In the field of energy policy, a conflict existed: the *supply* frame was explicitly restated but at the same time, the intervention into energy markets which is an indication for *energetics* was also considered as an important policy. With the affirmation of the "environmental leadership" idea, the EC's greenhouse policy (and not only the Commission's) became linked to *supranational integration*.

The following four sections will analyse in more detail the developments in four crucial sectors. Particular emphasis is laid upon how the conception of the different policy fields or instruments changed with respect to the greenhouse effect. The main intention of this analysis is to show how the evolution in the conceptualisations of these four central sectors shaped the evolving EC greenhouse policy.

## 2. Energy Policy

The on-going debate on the greenhouse effect increasingly influenced the energy debate. Energy saving, the main strategy against the greenhouse

128. COM (88) 656.

effect, seemed to be a chance of relaunching EC energy policy which in the past had merely consisted in the co-ordination of national policies. As EC energy policy had been as response to the oil crises of the 1970s, the low oil prices in the 1980s had diminished the incentives for common action in this field. By the end of the 1980s, energy consumption in the EC was rising again and energy efficiency was only marginally improving. It appeared as if the EC was to miss its energy policy aims for 1995 which it had set itself in 1986, in particular the goal of achieving a twenty per cent improvement in energy efficiency<sup>129</sup>.

On the other hand, the acid rain debate and the adoption of the directive on large combustion plants<sup>130</sup> which put huge costs on the power generating industry as well as the debate on the greenhouse effect had turned the attention towards the environmental aspects of energy policy. Within the Commission, the environment directorate-general (DG XI) had made to one of its priorities the integration of environmental protection requirements into the Community's other policies, required by the Single European Act of 1987<sup>131</sup>. In collaboration with DG XVII, responsible for energy, it was planned to present a communication on "Environment and Energy" to the Council<sup>132</sup>.

This communication, originally announced for July 1989, led to a split within the Commission on the subject of nuclear energy and on energy saving<sup>133</sup>. It became quickly clear that the differences existing within the Commission made it impossible to present a document with a factual and an

129. See OJ C 241, 25.9.86, p. 3.

130. See OJ L 336, 7.12.88 and Bennet, *The EC Large Combustion Plant Directive*.

131. See Art. 130r, 2.

132. Commission "communications" often have the purpose to take stock of a particular policy field and discuss possible policy measures. Often, they serve as a reference point for Community policy-making in the subsequent years. The publication of a communication on a particular topic frequently also indicates an expected disagreement with the Council on the topic in question which does not make it advisable to present immediately concrete legislative proposals. The third function of such a communication is the creation of a consensus *within* the Commission in order to avoid permanent clashes of the different directorate generals on the topic. This function has been very important in the case of the communication on Energy and the Environment. Because of their programmatic role, Commission communications are a particularly useful source for the analysis of issue framing.

133. The content of a first draft is summarised in *Agence Europe*, No. 5061, 20.7.89, p. 11.

operational part, as originally intended. The most controversial points were the possible introduction of fiscal instruments aimed at the eventual creation of new taxes based on the environmental impact of various energy sources<sup>134</sup> and nuclear energy which was by far the most controversial issue. Environmentalists feared that nuclear energy, one of the hopes of the EC in the 1970s to reduce its dependence on oil but under considerable criticism in the meantime, would re-emerge as a solution to the greenhouse problem on the basis of the argument that nuclear energy does not emit CO<sub>2</sub><sup>135</sup>. Only after a considerable delay, the Commission was finally able to publish the communication, which still refused to adopt a position on different sources of energy in terms of their environmental consequences or to give any recommendation to member state authorities<sup>136</sup>. This dissent within the Commission can be understood in terms of frames, with DG XVII promoting the traditional *supply* frame and DG XI arguing for a moderate *energetics* frame including elements of *conservation*.

The views of DG XVII can best be understood by looking at public statements of the Energy Commissioner<sup>137</sup>, Antonio Cardoso e Cunha. On

134. Fiscal instruments have a fundamentally different value depending on the frame by which they are regarded. Whereas conflicting frames on the environment and on energy are analysed below, the debate on fiscal instruments is treated in more detail on pp. 170 seq.
135. The European Environmental Bureau (EEB), an association of environmental organisations in the EC, made the fight against the increased use of nuclear energy as a means to fight the greenhouse effect to one of the priorities of its campaigns. In these campaigns, energy efficiency was always presented as a cheaper, more efficient and less controversial way of reducing CO<sub>2</sub> emissions; see for instance *Agence Europe*, No. 5063, 24.-25.7.89, p. 12.
136. It is indeed impressive to read a thirty-page long document on energy and the environment without finding any hint on the consequences of this analysis for the choice of different energy sources. Instead, the Commission bluntly declared in the first paragraph of the communication: "This document does not aim at influencing or judging the national investment programmes in the energy sector, but wants, without prejudging future energy choices, to discuss in an objective manner the interface between energy and environment"; *Energy and the Environment*, COM (89) 369, 8.2.90, p. 3. Several similar formulas can be found in the text. The document is thus an — involuntary — indication for the theses that no policy follows from "objective facts" and that these facts are meaningless without an interpretation.
137. Whereas in national ministries, one minister is the political head of one particular ministry, this is not the case in the EC. Commissioners are usually responsible for more than one subject matter and for more than one directorate general. Formally, the Commission as a collegiate instead of the single Commissioner is responsible for all its decisions. For convenience, however, the terms "Energy Commissioner" or

the occasion of the presentation of a Commission study on "Energy in the year 2010", Cardoso e Cunha declared that energy consumption was increasing in the EC (and throughout the world) due to the democratic foundation of economic activity and the search for greater economic and social cohesion in the framework of the Single European Act. To translate this statement into common language: the less developed countries of the Community need more energy to achieve economic growth and the Community must help them to this end. Despite a lip-service to energy efficiency and increasing environmental protection in the energy sector, the Commissioner declared himself opposed to any idea of maintaining energy consumption at the lowest possible level, thus making himself the advocate of the southern member states of the Community, in particular of Spain and Portugal, the latter being his home country<sup>138</sup>.

Commissioner Cardoso e Cunha was in favour of nuclear energy and thought that it was the only realistic option to combat the greenhouse effect<sup>139</sup>. He considered that renewable energy sources could not satisfy more than 4 per cent of EC energy needs<sup>140</sup>. Speaking on the World Energy Conference, he stressed that a reduction of energy consumption was unrealistic given the general economic growth patterns and the regional disparities in the EC which needed economic development requiring increased energy consumption. He added that reducing energy consumption might also be considered as "immoral" since it would slow down or prevent

"Environment Commissioner" will be used although they are strictly spoken incorrect.

138. See *Agence Europe*, No. 5102, 2.-3.10.89, p. 13.

139. The debate on the role of nuclear energy in the fight against the greenhouse effect is an old one and still unresolved. See already the statements of the Toronto conference, reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 367 seq. The EC has, however, at an early stage decided not to open Pandora's box and concentrate on other measures. Still, the nuclear debate remains present but skims under the surface. Whereas the first EC documents on energy policy in the mid-1970s were full of hope in nuclear energy, the Council conclusions on the greenhouse effect adopted in October 1990 do not even mention it explicitly but only under the cover of "safe zero CO<sub>2</sub> emission technologies", adding that these should in particular comprise renewable energies; see Churchill/Freestone, *International Law and Global Climate Change*, p. 267 (para. 9d).

140. This figure remained the same throughout the years, see also the commentary of Undine Bloch von Blotnitz (D/Rainbow) that the constant assessment of renewable energy sources as merely a long-term option was a self-fulfilling prophecy; EP-Doc. A 2-63/86, 17.6.86, para. 10.

development in the Third World<sup>141</sup>. Industrialised countries which have not paid much attention to the environmental consequences of their growth cannot demand this. Thus, Cardoso e Cunha literally repeated a standard Third World argument within the EC. In the same speech, he considered that the EC's dependency on outside energy would not fall rapidly<sup>142</sup>.

Cardoso e Cunha's statements could be interpreted as if he was defending the interests of his home county. Nowever, these interests exist only within the *supply* frame. If this frame changed, the perception by different actors of their interests would also change. The rejection of certain policy measures depends thus on ways of perceiving and interpreting the world instead of the balancing of different interests<sup>143</sup>.

These few extracts from Cardoso e Cunha's public speeches are typical statements of the *supply* perspective: Energy is not only necessary in order to maintain economic activity but the supply of energy will create economic growth. Increasing the supply of energy and keeping its price low is thus a valid policy of economic development: energy supply creates progress. In this dominance of a perspective of economic development and progress, another aim of EC energy policy, namely the reduction of the dependence from outside imports, hardly has a place. To a certain degree, it can be met by the increased use of nuclear energy (as it was believed in the 1970s). Keeping energy consumption "artificially" below the "needs" of economic actors, would indeed, in the *supply* perspective, prevent economic growth and a rising of the standard of living. For this reason, fiscal instruments,

141. See the statement of the same argument, namely that the standard of living was coupled to energy consumption (a cognitive statement) and that raising living standards required raising energy consumption (a hypothesis) which was legitimate (a normative statement), by a speaker of the socialist group in the EP; see OJ 2-360, 19.1.88, p. 121.

142. See *Agence Europe*, No. 5124, 2.-3.11.89, p. 11.

143. From a very different theoretical perspective (rational choice) and with reference to Swedish energy policy, the same point is made by Carlsnaes, *Energy Vulnerability and National Security*: "... policies of demand restraint are not easily imposed on an energy industry by an energy bureaucracy whose members have traditionally thought of policy exclusively in terms of increasing supply rather than reducing growth rates. In other words, it requires a considerable change in familiar ways of thinking on the part of two of the most central policy actors on the Swedish energy arena" (p. 38). His "ways of thinking" closely correspond to the notion of "frames" used here.



such as a tax on CO<sub>2</sub> emissions, were categorically rejected. They would also violate the principle of economic and social cohesion which is one of the central principles of *supranational integration*.

Despite this extreme *supply* perspective put forward by the Commissioner for Energy, the *energetics* frame put forward by DG XI can also be found in the final version of the communication on “Energy and the Environment”<sup>144</sup>. Several formulations point in this direction. The executive summary preceding the document states that “it is essential to define a policy which can face future energy demand without necessarily growing supply capacities”<sup>145</sup>. The introductory part entitled “the global challenge” (as so many documents on the subject) even suspects that after the security of supply perspective had dominated EC energy policy in the 1970s, this concern might in the 1990s be replaced by environmental constraints (p. 6). By referring to the report of the Brundtland Commission<sup>146</sup>, the paper goes on stating that “present energy consumption trends and policies cannot continue and that the concept of ‘sustainable development’ needs to be accepted and followed” (ibid.). The only area where an agreement with the traditional *supply* frame represented by DG XVII seemed possible was — again — energy efficiency which was declared as the “cornerstone of integration of the environmental dimension into energy policy” (p. 18). To support this argument, economic studies were quoted which came to the result that the same amount of additional energy supply could be obtained cheaper by investing in energy saving than in energy production. Again, a direct attack on the *supply* frame followed: “shifting emphasis in energy planning from expanding supply to improving the efficiency of end-use is therefore a central element for consideration” (ibid.).

144. As the Commissioner for the Environment does not have competencies in the field of energy, there are hardly any public statements in this direction which could be regarded as an undue interferences in the competencies of another DG. The attribution of the views associated with the *energetics* frame in the final communication has been cross-checked by interviews with Commission officials. The fundamental difference of views between DG XI and DG XVII is also remarked by study of a consultancy group, stating that the major problem of EC environmental policy was the ideological separation of the two DGs (and the corresponding policies); see Collier et al., *Integrating the Environment with Community Energy Policy*.

145. COM (89) 369, p. 3. If not indicated otherwise, references in the following text refer to this document.

146. See World Commission on Environment and Development, *Our Common Future*.

This attack was justified with reference to the Council resolution on the energy policy goals for 1995 which had stated that energy efficiency in the EC had to increase by 20 per cent<sup>147</sup>.

In extremely prudent terms, the Communication even approached the hotly debated issue of taxes on energy and on CO<sub>2</sub>. Higher energy prices, which would hinder economic development according to the *supply* frame, would further a more rational use of energy and a larger market share of renewable energy sources (p. 20). In this context, the idea of a CO<sub>2</sub> tax is mentioned, although not in concrete terms due to the resistance of DG XVII but in very evasive terms (“... in the longer term ...”, “... in the global context ...” such a tax “... could not be excluded ...”; p. 21).

The distinctive feature between the *supply* and the *energetics* frame is the possibility for active intervention in the energy markets in order to achieve goals other than those of energy policy which are possible according to the second frame. The link between both, which appeared also in the communication on energy and the environment and which is constantly and prominently mentioned in the documents relating to the greenhouse effect, is energy saving. For the *energetics* frame, shared by DG XI, energy saving contributes to a reduction of pollution without the need to install expensive end-of-pipe filter technologies, all other factors being equal (cognitive dimension). It is also in line with the moral imperative of respecting the right of future generations by avoiding a depletion of energy resources, in particular of oil and by minimising the shift of pollution consequences into the future whereas the benefits are yielded at present (normative dimension). Symbolically, it allows to associate energy saving with progress and the use of advanced technology. In the *supply* frame, on the contrary, progress is associated with the *use* of energy. The higher the consumption of energy, the higher the level of (economic) development. Proponents of the *energetics* frame have tried to exploit the notion of energy security, characteristic for *conservation*, which is also important in the *supply* frame. Within the *supply* frame, energy security can be achieved by diversification of the sources of energy as well as geographically, by promoting domestic sources of energy and, in the last resort, by military means, although the

147. See OJ C 241, 25.9.86, p. 3.

EC does not have the latter at its disposal. Within the *supply* frame, there is an inherent tension between the goals of meeting energy demand and achieving energy security: A high energy demand which is to be expected (and positive) in this frame is likely to compromise the goal of energy security. Energy saving could help to better achieve this goal and is thus also linked to an increase in security. For this reason, the major initiatives proposed in the document on energy and the environment concerned energy saving<sup>148</sup>.

However, this tension does not only characterise the differences between the two respective directorate generals of the Commission but also the views of the respective Councils. The Energy Council, in its conclusions on the Commission communication on energy and the environment

“... recognised that whilst there are still uncertainties on some scientific aspects of the greenhouse issue, CO<sub>2</sub> emissions will continue to grow in the absence of alternative policy decisions, especially in the energy sector but also in other areas, and that the greenhouse effect may in the long term become the main constraint on fossil energy use; welcomed the Commission’s work programme on the evaluation of the options to reduce CO<sub>2</sub> emissions and indicated its willingness to collaborate closely with the Commission in the subsequent development and implementation of the part of the programme relating to energy policy ...”<sup>149</sup>

It also declared that “nuclear energy contributes to the limiting of polluting emissions arising from the use of fossil fuels”<sup>150</sup>. While acknowledging the

148. See COM (89) 369, pp. 28-29. One of these initiatives is the THERMIE programme (“European Technologies for Energy Management”). Its explanatory memorandum is full of references to technological progress, e.g.: “In the past, technology has played a major role in improving the energy situation, in strengthening security of supply and reducing energy costs. To insure against the uncertainty of the future, and to underpin the achievements of the Internal Market, it is vital that energy technologies continue to play a central role”, COM (89) 121, 22.3.89, para. 7. The Council regulation adopting the programme also stresses the “key role” of technology for “meeting the ecological challenge”, in particular the “threat of climate change”. In addition, the promotion of energy technology is expected to contribute to “economic and social cohesion”, i.e. to the development of the less developed regions of the EC, and thus contribute to integration; see OJ L 185, 17.7.90, p. 1 (all quotations from this page).

149. Conclusions of the Energy Council of 21.5.90, reprinted in *Europe Documents*, No. 1621, 1.6.1990, paras. 4 and 5.

150. *Ibid.*, para. 9.

existence of the greenhouse effect in terms of natural science and declaring that something must be done, these conclusions do not contain any concrete engagement. Only in the long term, the greenhouse effect could become the main constraint to fossil energy use. This constraint can be tackled, within the *supply* frame, by increasing use of nuclear energy. Although the Council conclusions merely repeat the calls for increased energy efficiency which were a standard topic of EC energy policy for the preceding fifteen years, they did not contain any strong statement of the *supply* frame anymore. Given the tradition of EC energy policy, this fact indicates a change in the Council's positions.

After the debate on the communication on energy and the environment, the greenhouse effect was also firmly on the Energy Council's agenda. Within the Commission, the *energetics* frame put forward by DG XI had found its way in the Communication, although the *supply* frame of DG XVII remained present. In the Council conclusion on the topic, the *supply* frame is weaker, though still dominant and *energetics* does not play any visible role.

### 3. *Economic Instruments*

The most controversial policy measure in the discussion on the greenhouse effect has been the proposal of a tax on CO<sub>2</sub> or on energy in order to achieve energy saving and thus a reduction of CO<sub>2</sub> emissions. After the first Council resolution on the "Greenhouse Effect and the Community"<sup>151</sup>, the Commission had considered a tax on carbon dioxide as one possible measure<sup>152</sup>. The tax discussion is more than a debate on a specific policy proposal among others. It is embedded in a broader discussion on the reorientation of EC environmental policy. The tax proposal and the place it occupied in this debate is thus an indicator of a frame shift from *classic environmental policy* to *sustainability* within the Commission and partly also in the Council. However, the tax proposal is not the frame, and EC

151. See OJ C 183, 20.7.89, p. 3.

152. Made public at a press conference of the Environment Commissioner Carlo Ripa di Meana, see *Agence Europe*, No. 5010, 8.-9.5.89, pp. 6-7.

environmental policy may move towards *sustainability* without the adoption of a CO<sub>2</sub> tax<sup>153</sup>. The CO<sub>2</sub> tax, the discussion about economic instruments in environmental protection and emergence of the *sustainability* frame are closely linked. The CO<sub>2</sub> tax is the first major policy instrument which has been justified on the basis of *sustainability*, and the debate on economic instruments in environmental protection, which is a predecessor and a component of the sustainability debate, has from the outset taken place with regard to the possible introduction of a CO<sub>2</sub> tax.

The discussion of the relationship between the economy and the environment and the subsequent attempt to introduce economic and fiscal instruments for environmental protection can be traced back to the report of the report of the task force on the environment and the internal market. This report was originally intended as a counterweight to the Cecchini-report on the benefits of the Internal Market programme which had been published in 1988. The Cecchini report, although very successful in providing economic arguments in favour of the Internal Market, had frequently been criticised as following a narrow-minded growth ideology without taking into account the effects of increased economic growth stimulated by the completion of the internal market on the environment. This report, which had never gained the popularity of Cecchini-report, is one of the first EC documents arguing on the basis of a *sustainability* frame. It is often cited in later programmatic statements of EC environmental policy and constitutes a sort of reference text for the frame shift towards *sustainability*. Its arguments reflect a line of thinking known as "environmental economics" which considerably influenced the programmatic thinking of the Commission, culminating in the Fifth Action Programme. The basic concept of the voluminous report can be best given in a quotation:

"The Task Force stressed that the environment should be considered as a positive force and a necessary condition for economic development. A 'traditional' view of the environment and its management is that environment is a problem; it costs money to maintain environmental

> 153. This is in fact what happened. The Fifth Environmental Action Programme proposed by the Commission for the period from 1992 until 2000, entitled "Towards Sustainability", COM (92) 23, Vol. II, 3.4.92, was presented while the tax has not been adopted. On the frame shift embodied and attempted by the Fifth Action Programme, see pp. 244 seq.

quality, and this expenditure acts as a 'drag' on economic development. A more positive view is now emerging, in which a high quality environment is seen as a very important element in attracting tourists, in providing a quality of life which attracts talented people and capital, and in providing conditions conducive to the success of certain environmentally sensitive sectors of industry. Countries which have taken the lead in improving their environment have tended to lead also in the development, production and sale of environmental equipment and management systems."<sup>154</sup>

The task force report argues for a different cognition of the relationship between the environment and the economy as compared to *classic environmental policy*. Attention is directed from economic losses by costly environmental protection measures to economic gains by environmental industries, a healthy environment, etc.<sup>155</sup> Implicitly, natural science becomes less important in this context. When strong environmental policies and economic success go hand in hand, a active environmental policy is recommended for economic self-interest, independently of the removal of the latest weak link in the natural scientific causal chain. Symbolically, the Task Force Report tries to move the notion of "progress" from unconditional economic growth (exemplified in the Cecchini report) to sustainable growth which respects environmental considerations.

The task force report did not contain the proposal of a tax on CO<sub>2</sub>. This idea has been carefully introduced by the Commission into the debate and then systematically promoted by Environment Commissioner Ripa di Meana on several occasions. The different forms of these proposals make it clear that they were not concepts worked out in detail but public statements with the aim of testing the acceptance of such an instrument<sup>156</sup>. Ripa di Meana's

154. Task Force "Environment and the Internal Market", "1992" — *The Environmental Dimension*, p. VIII.

155. Comparative research carried out by political scientists comes to similar results; see Jänicke, *Conditions for Environmental Policy Success*.

156. Beside the press conference mentioned in footnote 152, there was also a short-lived proposal on the introduction of an import levy on tropical woods in order to fight deforestation, one of the main sources of the greenhouse effect; see *Agence Europe*, No. 5024, 29.-30.5.89, p. 11. This proposal has not been included in the later tropical forest strategy of the Commission, see *The Conservation of Tropical Forest: The Role of the Community*, COM (89) 410, 2.8.89, pp. 15-18. Similar statements were given by Ripa di Meana on the Fifth World Environment Day, see *Agence Europe*, No.

insistence led to a first Council discussion on a CO<sub>2</sub> tax and on economic instruments in environmental protection which requested a report on these instruments from a group of independent experts from the member states<sup>157</sup>.

The debate on economic instruments launched by DG XI and Commissioner Ripa di Meana took up a broader debate which had existed in the OECD for several years and which had resulted in a study and policy review of the organisation on the role of economic instruments in environmental policy<sup>158</sup> in 1989. As all twelve EC member states are also members of the OECD, there is a quick penetration of ideas developed in the OECD framework to EC policies. OECD documents are often quoted as a reference in EC policy proposals. The fact that the debate was also taking place in an organisation in which the EC's main trading partners, the USA and Japan, are members, might be responsible for the taking up of the debate by the Council. In fact, the years 1989 and 1990 witnessed a long series of international conferences on global environmental problems and addressed the relationship between the environment and the economy in terms of the "sustainable growth" debate, launched by the WCED in 1987. The Paris Economic Summit of 1989 (the "Summit of the Arch"), for instance, was to a large degree devoted to questions of global environmental policy. Among other points, it stressed the role of pricing, taxes and levies for environmental protection<sup>159</sup>. The ministerial declaration of the Bergen conference on sustainable development in the ECE region repeated the call for increased use of economic instruments in environmental protection in its chapter on "The Economics of Sustainability" and mentioned energy policy as a particularly important field of action<sup>160</sup>.

5031, p. 14, and before the Environment Council of September 1989, see *Agence Europe*, No. 5095, 22.9.89, p. 10.

157. See *Agence Europe*, No. 5146, 6.12.89, pp. 11-12

158. See *Economic Instruments for Environmental Protection*.

159. *Economic Declaration of the Paris Economic Summit*, para. 37. Extracts reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 327-330.

160. The declaration recommended to "make more extensive use of economic instruments in conjunction with a balanced mix of regulatory approaches in order to increase efficiency of environmental protection, of the use of natural resources and of energy consumption. ... Such actions would make prices, particularly those related to energy, reflect environmental costs and benefits more fully, and thus send market

As the first EC body, the European Council in Dublin 1990 took up the themes of those international conferences in its "Environmental Imperative Declaration". This declaration, adopted by the heads of state and of government of the EC, is a basic programmatic outline of future EC environmental policy. On the topic of economic instruments, it reads:

"... the traditional 'command and control' approach should now be supplemented, where appropriate, by economic and fiscal measures ..."161

The declaration of the Dublin summit was used by Ripa di Meana to publish a Communication to the *Commission* in order to convince his colleagues of the newly emerging approach within DG XI. This document contains clear references to the *sustainability* frame<sup>162</sup>. Large parts of it are devoted to the discussion of economic and fiscal instruments for environmental protection. It thus appears that the new orientations of Community environmental policy mainly concern new *instruments* of environmental policy. Although the paper addresses different environmental problems, the greenhouse effect occupies a central role. It is used as a justification for the need of increased Community action in the environmental field and identified as a main application for new policy instruments. The section on policy instruments underlines the weaknesses of regulatory measures, characteristic for *classic environmental policy*. These measures are "static" and rigid, delay technological progress, involve administrative costs, and "excessive regulatory intervention and bureaucracy may inhibit the dynamism of undertakings" (p. 4).

On the other hand, the "use of economic and fiscal instruments provides a more flexible and dynamic approach" (*ibid.*). Still, these instruments alone are not considered to be sufficient but only a mix of both (p. 5). Economic

signals and provide incentives"; *Ministerial Declaration on Sustainable Development in the ECE Region*, UN-Doc. A/CONF. 151/PC/10, para. 13c, reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 344-355.

161. *Environmental Imperative Declaration*, reprinted in *Europe Documents*, No. 1632/1633, 29.6.90, pp. 10-12.

162. See *Orientations de la politique pour l'environnement suite au sommet de Dublin*, SEC (90) 1776, 18.9.90. If not otherwise indicated, references are made to this document.



and fiscal instruments are linked to the greenhouse effect where they are considered to be decisive<sup>163</sup>.

The increased use of economic and fiscal instruments was also recommended by the expert group created by the Environment Council of November 1989. The report of the group makes clear the link of *sustainability* and market economy:

“Der Marktmechanismus ist Voraussetzung für das Funktionieren ökonomischer Instrumente in der Umweltpolitik. Wenn die Umweltressourcen richtig bewertet werden, können die Umweltnutzungskosten bei privaten wirtschaftlichen Entscheidungen voll berücksichtigt werden. Dies bedeutet, daß Umweltressourcen in Mengen genutzt werden, die nachhaltiges Wirtschaften ermöglichen, vorausgesetzt, daß die Preise ihrer Knappheit entsprechen und die nicht erneuerbaren Ressourcen angemessen bewertet werden. Durch ökonomische und steuerliche Instrumente soll erreicht werden, daß Umweltkosten, die bislang von den Marktmechanismen als externe Kosten behandelt werden, als interne Kosten berücksichtigt und daß die derzeitigen Marktpreise geändert werden.”<sup>164</sup>

The report recommended the use of economic and fiscal instruments for dealing with the greenhouse effect and with energy consumption without, however, directly advocating a tax<sup>165</sup>. On another occasion, the report recommended that environmental taxes should be “fiscally neutral”, i.e. they should not increase the overall tax burden<sup>166</sup>.

On the basis of these reports, the Environment Council held a meeting on the use of economic instruments in environmental protection in September 1990, a month before the Council meeting which should decide about the EC's CO<sub>2</sub> stabilisation target. The ministers discussed a paper which the

163. “There is no doubt at all that it would be impossible to overcome certain environmental problems of a global nature, e.g., the greenhouse effect, without having recourse to these instruments”; SEC (90) 1776, p. 7 (emphasis added).

164. *Bericht der Arbeitsgruppe von Experten der Mitgliedstaaten über den Einsatz ökonomischer und steuerlicher Instrumente in der EG-Umweltpolitik*, XI/185/90-DE Rev., 5.9.90, p. 8.

165. *Ibid.*, pp. 13-15.

166. *Ibid.*, p. 7. The reason for this recommendation is clear. Industry has in the past resisted the introduction of economic instruments because it feared an increase in taxes; see *ibid.*, p. 3.

Italian presidency had prepared on the basis of the above-mentioned report of the expert group. Although no understanding on the concrete use of these instruments emerged, an agreement in principle on their usefulness and desirability was achieved. The greenhouse effect was frequently mentioned as a possible field of application, and environmental taxes which were fiscally neutral were considered to be particularly interesting<sup>167</sup>. The conclusions of the president stressed that the aim of "sustainable development" could only be reached by supplementing the present command-and-control approach of environmental policy with economic and fiscal instruments.

Thus, a broad though diffuse acceptance of economic and fiscal instruments in general and a tax on CO<sub>2</sub> in particular had emerged within the Commission but also within the Council. Although in prudent formulations, even the joint Energy/Environment Council of October 1990 which decided on the stabilisation of CO<sub>2</sub> emissions in the EC declared that they "may play an important role" in the EC's greenhouse policy<sup>168</sup>. It appears that the introduction of the CO<sub>2</sub> tax in the Community policy debate is one of the rare cases of a political strategy developed by a Commissioner who did not consider himself as a kind of top-bureaucrat preparing Council meetings but carefully trying to find some own profile by taking up an issue which was "in the air".

This might at least partly be due to the personality of Ripa di Meana who at the time of his appointment had been regarded by many environmentalists as a weak personality in the strong Delors team. Prior to this post, Carlo Ripa di Meana, an Italian national, had been responsible for the "Europe of the Citizens", a notoriously unsuccessful effort to give the technocratic EC a better standing among citizens. He was responsible for a directorate general within the Commission with a low reputation and had the image of somebody who enjoyed life at the expense of his professional activities. When he replaced Stanley Clinton Davis (UK) in 1989, this was seen as a sign that Commission President Delors and the member states did not

167. See *Compte rendu succinct de la réunion informelle des ministres de l'environnement*, SI (90) 700, 25.9.90, Annex II, p. 3.

168. Council conclusions of 29.10.90, reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 266 seq., para. 11.

attach great value to the environmental policy of the EC. In addition, he was only given this portfolio whereas most of his colleagues are responsible for more than one field. In retrospective, this seems on the contrary to have strengthened Ripa di Meana's position as it allowed him to concentrate on one single policy field and thus to behave more like a "normal" government minister. In addition, he was probably decided to use his public relation capabilities in order to promote his own career in a policy field which was undervalued in the Commission but very popular among European citizens according to the opinion polls<sup>169</sup>.

Ripa di Meana had the gift to take up the popular greenhouse issue and make it a Community theme. By doing this, he linked popular feelings that much more should be done in environmental protection with the desire of the Commission to do something concrete and positive for the citizens instead of being in the press because of agricultural marathons or simply as a mega-bureaucracy threatening national identities. The proposal to protect tropical forests also joined a popular desire. The idea of a CO<sub>2</sub> tax still had another component: it linked the fight against the greenhouse effect to progress in the integration process as a Community-wide tax or equivalent of it would constitute a major new element in the institutional structure of the Community. Such a tax would increase the role of Community institutions and from the outset prevent single countries trying out their own strategies with the risk of hampering the internal market to be realised until the end of 1992.

#### *4. External Relations*

The way the Commission — and later the Council — defined the greenhouse issue as a political problem was not only shaped by frames in the field of environmental and energy policy but to a considerable extent by an emerging concept of the Community's role in international environmental policy. The internal (i.e. in the EC) framing of the greenhouse issue was influenced by the emerging concept of "environmental leadership" which

169. See *Die Europäer und ihre Umwelt* 1983; 1986 and *Les Européens et l'environnement en 1988*.

does not only concern the field of (international) environmental policy but the identity of the EC as an actor in international politics. Leadership is a term usually associated with power politics: Only powerful states have the capacity to provide leadership. Usually, leadership has been demanded from the United States which possessed the economic and military capabilities to exert it. The other states of the Western Alliance, small or powerful, often had no choice but to follow the leadership of the US<sup>170</sup>.

In the military field, this situation had for decades been the subject of a debate between proponents of a close alliance with the US (and a almost unconditional acceptance of their leadership) and those of a stronger assertion of European identity (France in particular)<sup>171</sup>. Whereas in the military field, the US position has basically remained uncontested (and the EC does not possess any significant competencies), the situation is different in the economic field. As the Community possesses exclusive competencies in the field of trade policy (Art. 113-116), the EC can act on equal footing with the US and Japan, for instance in the GATT. The Commission has constantly furthered the idea of three main trade blocs in the world<sup>172</sup>. Still, the trade sector is a case for partnership (or confrontation), not for leadership.

Whereas the EC in the trade sector is also formally accepted by states, the situation is different in other fields, such as the environment<sup>173</sup>. Here, international negotiations on the substance of a possible agreement are paralleled with negotiations on the rights and responsibilities of the EC in the respective agreement. The EC, stressing its unique character as a supranational organisation and the formal competencies it possesses, wants

170. Critics have, however, argued for long that the EC attempted to become a "real" superpower; see Galtung, *The European Community: A Superpower in the Making*, id., *Europe in the Making* and Weiner, *Zwischen Freihandelszone und Weltmacht*.

171. This is not the place to give a profound analysis of the history of transatlantic relations; for an overview see Alfred Grosser, *Les Occidentaux*. The only purpose of these remarks is to sketch the context for the development of the environmental leadership concept.

172. One indication of the Commission's attempt to promote a European identity is its way to present statistics. In these statistics, the EC appears as the world's largest trade power, the biggest donor of development aid, etc.

173. See the article by the former EC Commissioner for the environment; Clinton Davis, *International Affairs and the Environment*.

to be treated as a state and not as any other international organisation having only an observer status in international negotiations<sup>174</sup>. States, on the other hand, in most cases refuse to accept the EC as an equal partner independent of its member states<sup>175</sup>. The status of the EC in international negotiations and agreements is thus an aim in itself for the negotiators of the EC<sup>176</sup>. A strategy for achieving a higher status in international agreements would be to take far-going positions on substantive issues. The more actively and constructively the EC contributes to the negotiations, the easier it would be to become accepted by states. A "leading" position on substantive issues would thus allow to increase the EC's status in the international system. It is also a compensation for the EC's inferiority compared to the US in the military field.

The opportunity for the development of the "environmental leadership" concept was provided by a series of international conferences devoted to the greenhouse effect taking place in 1989 and 1990. These conferences have to be seen on the background of the negotiations of another important global environmental problem, the protection of the ozone layer. During the 1980s, the EC had constantly been accused by the United States of blocking any progress in these negotiations. In 1989, the EC and the US had changed sides. Now the EC was pressing for quicker progress in the ozone

174. There are also practical reasons for this quest: observers do not have the right to make proposals or to intervene in the negotiations except at the explicit request of the participating states. There is an extensive legal literature on the question of the EC's external representation and its powers, see for instance O'Keeffe/Schermers, *Mixed Agreements*. With particular emphasis on the environmental dimension, see Temple Lang, *The Ozone Layer Convention*; Nollkaemper, *The European Community and International Environmental Co-operation*; Mastellone, *The External Relations of the E.E.C. in the Field of Environmental Protection*; Leenen, *Participation of the EEC in International Environmental Agreements*. On the political aspects, see Clinton Davis, *International Affairs and the Environment*; Haigh, *The European Community and International Environmental Policy* and Jachtenfuchs, *EC Foreign Environmental Policy and Eastern Europe*.

175. As a result, in order to avoid any special treatment of the EC which would give it a special enhanced status, major international agreements contain a clause for "regional economic integration organisations". The only such organisation signing and ratifying the respective convention is the EC. See, for instance, art. 22 of the Climate Convention.

176. In the negotiations on the Montreal Protocol, the terms of the EC's participation were the most controversial point in the end; see Jachtenfuchs, *The European Community and the Protection of the Ozone Layer*.

negotiations<sup>177</sup> and the US was dragging behind. A similar situation existed in the beginning negotiations on the greenhouse effect.

One of the first political (instead of scientific-technical) conferences on the greenhouse effect took place in The Hague in March 1989 and was organised by France, the Netherlands, and Norway. Within the EC, a fierce quarrel about the participation at the conference had emerged. Neither the US nor the USSR, both main producers of greenhouse gases<sup>178</sup>, had been invited, probably out of a French desire to make a genuine European effort in this field<sup>179</sup>. Some EC member states and the Commission had not been invited either. Arguing that the conference might also deal with matters where Community competencies were involved, the Commission obtained the commitment from the participating member states not to take any decisions at the conference<sup>180</sup>. Whereas it was only able to prevent member states from acting alone in the field of international environmental policy at the conference of The Hague, the Commission confirmed its determination to be actively involved in the field in a speech given by Commission President Jacques Delors two months later<sup>181</sup>.

In the field of tropical forest protection, the Commission tried to elaborate a comprehensive strategy which should become one of the "cornerstones" of its strategy against the greenhouse effect<sup>182</sup>. In defending the initial rather far-reaching strategy which included import quotas and a levy on tropical timber, Environment Commissioner Ripa di Meana said that the European Community should give a signal by unilaterally adopting these measures

177. Mainly because its industry was now able to produce substances which were less harmful for the ozone layer; see Gehring, *Dynamic International Regimes*, ch. 5; Lang, *Diplomatie zwischen Ökonomie und Ökologie* and Benedick, *Ozone Diplomacy*.

178. See Table 5, page 281, and Figure 8, p. 284.

179. The conference was one of the events to celebrate the 200th anniversary of the French revolution. In France, there was a much more intensive press coverage of the conference than, for instance, in the UK or in Germany. Particularly revealing is the coverage of *Le Monde* which usually does not have international environmental policy as a priority area of its reports.

180. See *Agence Europe*, No. 4937, 3.3.89, p. 5. The declaration of the conference is reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 318-319.

181. Large extracts of the speech are reprinted in *Agence Europe*, No. 5014, 13.5.89, p. 13.

182. Announced by Environment Commissioner Ripa di Meana, see *Agence Europe*, No. 5010, 8.-9.5.89, pp. 6-7.

instead of waiting for its trade partners<sup>183</sup>. However, the ambitious tropical forest strategy the Commission had envisaged did not survive the Council. Despite strong pressure of the European Parliament<sup>184</sup>, the Council, itself deeply divided over the issue<sup>185</sup>, rejected the most original proposals from the Commission and obliged it to publish a tropical forest strategy which could not meet the original ambitions of "giving a signal" or "adopting unilateral measures"<sup>186</sup>.

After the failure of the tropical forests strategy, Ripa di Meana's attention shifted back towards the meetings directly dealing with climate change. A first occasion was the Noordwijk Conference on Atmospheric Pollution and Climatic Change, held in November 1989 in the Netherlands<sup>187</sup>. On this occasion, the US and Japan refused to make any commitment to stabilise CO<sub>2</sub> emissions<sup>188</sup>.

The EC attacks on the US grew stronger at the occasion of the White House conference on climatic change organised by US President Bush in mid-April 1990. Before the conference, Ripa di Meana announced the principles for the Commission's policy which constituted the basis for the attacks on George Bush by underlining the differences between the US and the Commission position. After confirming the position already taken by the Council in 1989 that natural scientific knowledge confirmed the existence of the greenhouse effect and was sufficient to justify action<sup>189</sup>, he declared that measures taken in the short and medium term against the greenhouse effect were believed by the Commission to have minimum, if not negligible

183. See *Agence Europe*, No. 5031, 8.6.89, p. 14.

184. See the reports of Hemmo Muntingh (Soc./NL), A2-394/88, A3-181/90 and A3-24/92.

185. Several Council meetings were devoted to the discussion of the draft tropical forest strategy; see *Agence Europe*, No. 5035, 14.6.89, p. 13; No. 5092, 18.-19.9.89, p. 11 and No. 5095, 22.9.89, p. 10 which also reprints the full text of the Council conclusions.

186. The final strategy is contained in *The Conservation of Tropical Forest: The Role of the Community*, COM (89) 410, 2.8.89.

187. At this occasion, the Dutch minister of the environment was eager to stress that this conference had nothing to do with the environmental summit in The Hague in March 1989; see *Agence Europe*, No. 5088, 13.9.89, p. 15.

188. See *Agence Europe*, No. 5127, 8.11.89, p. 12. The conclusions of the conference are reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 334-340.

189. See OJ C 183, 20.7.89, p. 4.

costs and that there would be even positive spill-overs to the economy<sup>190</sup>. In addition, the Commission was of the opinion that industrialised countries had to make a commitment to reduce greenhouse gases in order to show their willingness to act to developing countries and therefore, it proposed that industrialised countries should agree on a stabilisation of CO<sub>2</sub> emissions by the year 2000, to be codified in a supplementary protocol on CO<sub>2</sub> emissions to the framework convention on climate change<sup>191</sup>.

By several European ministers, the conference was seen as a media event primarily organised to show President Bush's will to be regarded as a "President of the environment" without the US being ready to make concessions in the area of carbon dioxide reductions. France in particular had protested against the organisation of the conference<sup>192</sup>. After the end of the conference, Ripa di Meana used strong wordings to describe its failure. The inflexible US position allowed the Community to show its unity by pointing out the differences between the minimum EC consensus and the US position<sup>193</sup>. At the Bergen conference on sustainable development in the ECE region, taking place in May 1990, Ripa di Meana continued his attacks on the US position using expressions which were unusually violent for an EC Commissioner<sup>194</sup>.

The form of Ripa di Meana's activity might have been unusual for diplomatic usage; the underlying principle of environmental leadership was, however, explicitly endorsed by the European Council of June 1990. On this occasion, the European Council adopted the "Environmental Imperative Declaration", a programmatic document which was aimed at orienting the EC's environmental policy in the coming years. As programmatic texts of this kind are not too frequent in the European Council's practice, they acquire a special importance. The "Environmental Imperative Declaration"

190. These statements are based on the first economic studies on the greenhouse effect which pushed natural scientific studies in the background during this phase; see pp. 185 seq.

191. See *Agence Europe*, No. 5236, 18.4.90, p. 7.

192. *Ibid.*

193. See *Agence Europe*, No. 5238, 20.4.90, pp. 9-10.

194. See *Agence Europe*, No. 5254, 14.-15.5.90, p. 14.



of the heads of state and of government adopted the “environmental leadership” concept with the following words:

“There is ... an increasing acceptance of a *wider responsibility*, as one of the foremost regional groupings in the world, to *play a leading role* in promoting concerted and effective action at global level, working with other industrialised countries, and assisting developing countries to overcome their special difficulties. The Community’s credibility and effectiveness at this wider level depends in large measure on the ability to adopt progressive environmental measures for implementation and enforcement by its Member States. The internal and external dimensions of Community environment policy are therefore inextricably linked.”<sup>195</sup>

As the EC is “one of the foremost regional groupings in the world”, it must play a leading role in global environmental policy. If this leadership role is to be credible, the declaration goes on, it must adopt strong environmental standards internally. Thus, the leadership concept also increases the pressure on member states internally. In a section entitled “Global Issues”, the declaration goes on:

“The Community and its Member States have a *special responsibility* to encourage and participate in international action to combat global environmental problems. *Their capacity to provide leadership in this sphere is enormous*. The Community must use more effectively its position of moral, economic and political authority to advance international efforts to solve global problems and to promote sustainable development and respect for the global commons.”<sup>196</sup>

Addressing the greenhouse effect directly, the heads of state and of government went on saying:

“We call on the Commission to expedite its proposals for concrete action and, in particular, measures relating to carbon dioxide emissions, with a view to *establishing a strong Community position* in preparation for the Second World Climate Conference. The Community and its Member

195. *Environmental Imperative Declaration*, reprinted in *Europe Documents*, No. 1632/1633, 29.6.90, pp. 10-12 (emphasis added).

196. *Ibid.* (emphasis added).

*States will take all possible steps to promote the early adoption of a Climate Convention and associated protocols ...*<sup>197</sup>

The “Environmental Imperative Declaration” is in fact a continuation and extension of the declaration on the environment, adopted by the European Council in Rhodes in December 1988. At this time already, the heads of state and of government had declared:

“In the wider international context, the Community and the Member States are determined to *play a leading role* in the action needed to protect the world’s environment and will continue to strive for an effective international response, particularly to such global problems as depletion of the ozone layer, the greenhouse effect and the ever-growing threats to the natural environment, thus contributing to a better quality of life for all the peoples of the world.”<sup>198</sup>

The continuous discussion on a possible environmental leadership of the EC had gained a certain momentum and was publicly accepted by the European Council in Dublin. Public declaration of the kind made by Commissioner Ripa di Meana and by the European Council also increased the pressure on the EC to keep its deeds in line with its words<sup>199</sup>. The self-imposed pressure to play a leading role in international environmental affairs has also increased the pressure on the negotiations of the joint Energy/Environment Council of 29 October 1990, shortly before the opening of the Second World Climate Conference, which adopted the decision to stabilise CO<sub>2</sub> emissions by the year 2000. Again, the conclusions of the Council stress that the EC should play a leading role in the conference<sup>200</sup>.

The concept of environmental leadership links environmental policy (based on whatever frame) to the identity of the EC. “Leadership” has strong

197. *Ibid.* (emphasis added).

198. Reprinted in *Agence Europe*, No. 4907, 4.12.88, p. 5 (emphasis added).

199. In September 1988, for instance, the European Environmental Bureau had urged the EC to play a “leading role” with regard to atmospheric protection; see *Agence Europe*, No. 4850, 12.-13.9.88, p. 15. It repeated this call for the preparation of the UN conference on sustainable development in Bergen (May 1990) and for the UN conference on environment and development in Brazil (June 1992); see *Agence Europe*, No. 5082, 4.-5.9.89, pp. 9-10.

200. See Conclusions of the Energy/Environment Council of 29.10.90, reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 266-268, para. 13.

normative elements about the requested behaviour of the organisation exerting it. In the respective texts, terms like “(moral) responsibility” are often used. The concept implies that if it wants to lead, the EC must adopt a strong internal environmental policy. “Leadership” also restricts the margin for adopting positions at international conferences. These positions must be maximum positions in terms of environmental protection and cannot easily be balanced with cost-benefit calculations of the *classic environmental policy* frame. Cognitively, the concept is easy to falsify: If other states adopt stricter climate policies or if they (for instance, the US) impose their positions on the EC, the latter does not lead. Due to the strong symbolic element in the leadership concept, its failure involves the EC as such, the Commission as well as the member states. It would amount to a defeat for within *supranational integration* as well as within *member state dominance*, as differences about the degree of integration are meaningless for the external world. “Leadership” applies a vague vision of a new world order beyond US hegemony and a liberation from American dominance in any single policy field. If the EC cannot provide leadership in a policy field where the US position is extremely defensive and under pressure, it is unlikely to be able to do so elsewhere. The concept of leadership also challenges the traditional view of states as the principal actors in the international system: it would be the only case where an international organisation (although of a special type) was able to set the pace for states, thus confirm the independent legal and political personality of the EC as a corporate actor and underline the claim that its real place is at the side of states, and not at the side of international organisations. Again, a failure of the policy of leadership would confirm the traditional view. By successfully linking the greenhouse effect and the leadership idea, Ripa di Meana involved the symbolic status of the Community into the debate on a specific policy field. The greenhouse effect was thus not only a matter of environmental policy but of integration.

##### *5. The Changing Role of Knowledge*

In the period between the publication of the first Commission communication on the greenhouse effect and the Council decision to stabilise CO<sub>2</sub> emissions by the year 2000, the role and the type of

knowledge relevant for the policy-making process underwent a fundamental change. On the basis of its perception of the greenhouse effect and the emerging policy to deal with it, the Commission (and the Council which later adopted its proposals) changed the orientation of greenhouse-relevant research from natural sciences to economics and technological research. The standard phrase of any Community environmental research programme, the statement that environmental research should serve as a basis for environmental policy-making, only applies to the degree that there must be strong evidence for the phenomena known under the label "greenhouse effect" in order to serve as a basis for action. Any further research conducted in the framework of the EC's climatology programmes broadened and confirmed the initial knowledge about the greenhouse effect without altering the pace of policy development. Economic research, on the contrary, became increasingly important and supplied the arguments used by the Commission to conceive and defend its strategy. The increased role of economic research announces the growth of the *sustainability* frame, at least among the Commission services. Finally, even the climatology research programmes find themselves integrated in an environmental research programme containing research projects which are introduced on the basis of *sustainability*.

In its communication on "The Greenhouse Effect and the Community", the Commission comes to the result that natural scientific data show the existence of large-scale human-induced climatic changes, i.e. the greenhouse effect<sup>201</sup>. As if to contradict the claim of its own research programmes to serve as a guide for policy, virtually all data mentioned in the report come from US sources<sup>202</sup>, although the draft Council resolution included in the document praises the role of Community environmental research programmes. All subsequent Council resolutions on the subject confirm the view that natural scientific knowledge is sufficient to justify action<sup>203</sup>. In *classic environmental policy*, this statement and restatement of

201. See COM (88) 656, annexed draft Council resolution on the greenhouse effect and the Community.

202. I owe this observation to Michael Huber.

203. The Council resolution on the greenhouse effect and the Community states that "available scientific data ... show that the composition of the atmosphere is being significantly modified and ... this could bring about, by the so-called 'greenhouse

a shared natural scientific knowledge is necessary to justify policy activity. An authoritative scientific view of the natural scientific aspects of the greenhouse effect did, however, not emerge from the EC's environmental research programmes but from the Intergovernmental Panel on Climate Change which had been created to establish a world-wide consensus on this matter. After it had delivered its interim report in 1990, before the Second World Climate Conference, its views were simply endorsed by the Energy/Environment Council<sup>204</sup>.

From this point at the latest, natural scientific knowledge became less important for policy-making. The substantial increase in funding for climatology, now under the new name "EPOCH", adopted by the Council in 1989<sup>205</sup>, is not a sign for the increased need of policy-makers for natural scientific advice but an indication that the EC research policy community obtained larger funding for on-going programmes by stressing their political importance. EPOCH is not destined to produce directly policy-relevant results but is meant as a long-term investment. Its concrete projects resemble closely those of its predecessor, with a slight emphasis towards research on the impacts of increasing CO<sub>2</sub> concentrations<sup>206</sup>. Although the

effect', climatic modifications having a serious impact on the environment, on human beings and their activities"; therefore, "a response should be made without further delay, irrespective of remaining uncertainties on some scientific aspects of the greenhouse effect"; OJ C 183, 20.7.89, p. 4. The Dublin European Council in June 1990 omits any reference to uncertainty and stresses: "Recent scientific assessments show that man-made emissions *are* substantially increasing the atmospheric concentrations of greenhouse gases and that a business-as-usual approach *will* lead to additional global warming in the decades to come"; *Europe Documents*, No. 1632/1633, 29.6.90, p. 11 (emphasis added). The joint Energy/Environment Council in October 1990 simply endorses the "authoritative scientific view" of the IPCC and adds that the "absence at present of full understanding of the complexity of the scientific inter-connections involved should not be used as a reason for postponing measures to combat climate change"; Council conclusions on climate change policy, reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 266-268, para. 1.

204. See *IPCC First Assessment Report: Overview 31 August 1990*, reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 280-294.
205. EPOCH means "European Programme on Climatology and Natural Hazards". See the Commission proposal COM (88) 632, 21.11.88 and the Council decision endorsing it, OJ L 359, 8.12.89, p. 9. For an overview of EC climatology programmes, see Table 8, p. 287.
206. Compare the 4th ERP, OJ L 159, 14.6.86, pp. 34-35 with EPOCH, OJ L 359, 8.12.89, pp. 12-14.

standard justification of EC environmental research is also given in introduction of the programme<sup>207</sup>, another function is at least as important. This function is the maintenance and strengthening of a *European* research community in the area<sup>208</sup> by funding the continuation of the research already begun ten years ago and integrating it into the parallel world-wide research co-ordination on the same topic ("global change programmes")<sup>209</sup>. Climate modelling requires powerful computers and advanced mathematical models<sup>210</sup>. It is therefore by itself a contribution to the strengthening of European competitiveness<sup>211</sup>. Climatology is thus linked to high technology and modernisation.

> EPOCH can be regarded as an intermediary between the fourth and the fifth environmental research programme. It is basically a continuation along the lines of the fourth ERP with increased funding. The research conducted here still reflects the frame of *classic environmental policy*. The fifth environmental research programme is, however, marked by the change to *sustainability*. Although it contains again a section on climatology (now labelled "participation in global change programmes") with a substantially increased funding as compared to EPOCH, it contains for the first time a section on "socio-economic environmental research"<sup>212</sup>. Although the task of

207. The aims of the programme are, among others: "... für die Umweltpolitik der Gemeinschaft wissenschaftliche und technische Abstützung zu liefern, und zwar mit Schwerpunkt auf vorbeugenden und voranschauenden Maßnahmen ..."; COM (88) 632, p. 2. Similar view were expressed in the European Parliament; see A 2-4/89/B, 20.3.89, p. 7 (Report Rinsche) and the debate on the programmes, OJ 3-381, 10.10.89, p. 27.

208. Two of the three aims of the programme concern the increase of scientific productivity and quality and the strengthening of the "economic and social cohesion of the Community", see COM (88) 632, p. 2. The latter aim "ist nicht das unbedeutendste"; *ibid.*, p. 9.

209. *Ibid.*, p. 8.

210. Under the heading "anthropogenic climate change", the 5th ERP explicitly says: "... dafür sollen Supercomputer und moderne Computer-Vernetzungstechniken eingesetzt werden"; OJ L 192, 16.7.91, p. 32.

211. See the preamble of the second framework programme on research and technological development, of which climatology is a part; OJ L 302, 24.10.87, p. 1.

212. As in the fifth ERP, research programmes have again been reorganised, the comparison of funding is not easy as not everything now figuring under the heading of global change programmes is climatology in the narrow sense. Even if this is taken into account, the increase in funding is considerable; see Table 8, p. 287. The part on socio-economic environmental research obtained 15,7 MECU out of a total of

the subprogramme is "eine verbesserte Einsicht in rechtliche, ökonomische, soziale, ethische und gesundheitspolitische Aspekte der Umweltpolitik"<sup>213</sup>, it is heavily biased towards environmental economics and thus reflects the trend within the Commission to reconceptualise the relationship between the economy and the environment<sup>214</sup>. The programme part on socio-economic environmental research indicates the frame shift towards *sustainability*; it did not cause it as it was adopted only in mid-1991 whereas the Commission had already begun to reconceptualised its environmental policy in this way more than a year earlier.

It confirms, however, the shift of emphasis towards economic research and economic knowledge which had begun after the Council resolution on the Community and the greenhouse effect had requested the Commission to study policy options for dealing with the issue. With the growing emphasis on energy policy as the central policy field for measures against the greenhouse effect, part of this research had been carried out in the framework of energy-related research programmes instead of the environmental ones. The JOULE programme on non-nuclear energies and rational use of energy, adopted in April 1989, did not only fund technological research but also the development of economic energy-environment models<sup>215</sup>. Within this programme, the first studies on the economic effects of a CO<sub>2</sub> tax and on the cost-effectiveness of different measures to reduce CO<sub>2</sub> emissions appeared<sup>216</sup>.

261,4 MECU, see OJ L 192, 16.7.91, p. 35. The Commission proposal is contained in COM (90) 158, 28.5.90.

213. *Ibid.*, p. 34. Still, the "relative lack of emphasis and resources devoted to the humanities and social sciences" in the programme has been deplored by the European Environmental Bureau, *The Opinion of the EEB and the CRE Concerning the Community's Framework Programme for Research 1990-1994*, p. 2.

214. This bias becomes clearer after a look into the information the Commission send to applicants for the programme; see *R&D Programme in the Field of the Environment 1991 - 1994. Workprogramme*, XII/177/91-EN, 1991. At a conference discussing research priorities of the planned programme, organised by DG XII (research) of the Commission in June 1990, where I had the opportunity to participate, the debates almost entirely focused on environmental economics.

215. See OJ L 98, 11.4.89, p. 15. The JOULE programme obtained a funding of 122 MECU (*ibid.*, p. 14), its successor more than 155 MECU; OJ L 257, 14.9.91, p. 38.

216. See *La hausse des taxes sur l'énergie en vue de réduire les émissions de CO<sub>2</sub>* and *Cost-Effectiveness Analysis of CO<sub>2</sub> Reduction Options*.

The successor of the JOULE programme was almost entirely devoted to research on technologies for CO<sub>2</sub> emission reduction and energy saving. The part on strategic analysis and modelling contains an indication that the *energetics* frame has largely inspired this research programme<sup>217</sup>.

These economic studies elaborated within the framework of the JOULE programme were immediately policy-relevant and produced the arguments for the later debate. On their basis, Environment Commissioner Ripa di Meana could argue that stabilisation of CO<sub>2</sub> emissions was not only necessary on environmental grounds but that it was also feasible without major economic costs. Thus, the earlier view that the greenhouse effect was an enormous environmental problem but that a policy against it would also create enormous costs could be challenged. Economic studies led to a reassessment of the earlier vague assumptions about the costs of a greenhouse policy. A study produced by the Commission and assembling the economic analyses of Community research programmes as well as external studies from the lively debate on CO<sub>2</sub> reduction measures in economic journals came to the result that

“The available empirical studies ... indicate the *existence of a significant emission reduction potential*, the exploitation of which would appear to offer clear (short-run) *economic benefits*. In fact, the exploitation of this emission reduction potential would in principle be profitable for private economic agents, even at *current* market prices. This potential is currently not exploited due to market failures, institutional barriers or hidden transaction costs. ... In addition to this privately profitable emission reduction potential, there is a further potential that should be exploited from the point of view of society, but that is currently not used. Thus, if market prices were to fully reflect all social (i.e. including environmental) costs, the potential for economical emission reduction measures would be even larger.”<sup>218</sup>

217. These models shall be used to assess the “... strategisch wichtigen Rolle einer *rationellen Steuerung von Energieangebot und -nachfrage ...*”, OJ L 257, 14.9.91, p. 40 (emphasis added). An active intervention into energy supply and demand is inconceivable in the *supply* frame.
218. See *The Economics of Policies to Stabilise or Reduce Greenhouse Gas Emissions*, Doc. II/335/90-EN, pp. 110-111 (emphasis in the original).



This quotation clearly reflects the *sustainability* frame. Even under traditional economic assumptions, environmental protection (in the special case of CO<sub>2</sub> emission reductions) is profitable instead of being a burden. The reason why a further emission reduction potential is not exploited is the fact that the environment is not correctly included in market transactions but excluded as an externality. A change in the underlying economic framework for assessing costs and benefits would thus even further increase the benefits of a policy of CO<sub>2</sub> emission reductions. The report argues, however, on two layers. The first layer concerns classic environmental policy (and economics): even in this framework, an emission stabilisation or reduction policy does not lead to enormous costs but to (macroeconomic) benefits. Even without far-reaching changes of the economic framework, a greenhouse policy is not an adventurous exercise. The second layer of the argumentation goes further by declaring that market failures lead to an overconsumption of an environmental good. Economic and fiscal instruments (such as a tax or a charge) are suitable means in the *sustainability* frame for internalising the social cost of fossil fuel use<sup>219</sup> to correct market failures. Thus, a CO<sub>2</sub> tax finds its justification in the emerging *sustainability* frame.

In period between the publication of the Commission's initial communication on the greenhouse effect in late 1988 and the Council decision to stabilise CO<sub>2</sub> emissions in late 1990, economic research and economic knowledge rapidly gained an important role for the development of the EC's greenhouse policy. Natural scientific research, on the contrary, although continued with increasing funding, played no visible role in the policy-making process but continued in a dynamics of its own. During 1990, a debate on the economic aspects of a policy to combat the greenhouse effect emerged which started to change the problem perception within the Commission. This debate, which had its origin in the concern of *classic environmental policy* to calculate the costs and benefits of environmental policy measures, broadened and was at the origin of a larger process which led to a shift of EC environmental policy towards the sustainability frame. Until the Council decision of October 1990, deciding on the stabilisation of CO<sub>2</sub> emissions for the EC, the debate on the economics of the greenhouse

219. See *ibid.*, p. 114.

effect only prepared the possibility for a later frame shift within the Commission. It broadened only during the elaboration of the Commission's CO<sub>2</sub> reduction strategy after the Council had taken its stabilisation decision.

## 6. Summary

During the debate on the Commission's communication on the greenhouse effect and the Community which had launched the policy-making process on the greenhouse effect in the EC leading to the decision to stabilise CO<sub>2</sub> emissions by the year 2000, the greenhouse effect was still regarded by the Council in terms of *classic environmental policy*. The Commission, however, began to move towards the *sustainability* frame.

*Sustainability* was not a strategy used by the Commission to sell a greenhouse policy on which it had already agreed. On the contrary, *sustainability* entered the Commission's environmental policy by the backdoor, at the occasion of a report on the environmental consequences of the Internal Market programme. In academic economics, a discussion on "environmental economics" had been going on already for several years. Elements of it had been taken up by the Brundtland Commission's influential report and increasingly by the work of the OECD. This line of thinking entered the Commission with the report on the environmental consequences of the internal market. It would have remained one report among many others had not the *sustainability* frame allowed new linkages with other issues and re-interpretations of old problems which offered the possibility for new solutions.

*Sustainability* seemed to offer a way out of the implementation problems of EC environmental law, *energetics*, its twin in the field of energy, allowed to give a new impetus for the stagnating and notoriously unsuccessful energy policy of the EC, and the cost-benefit calculations on the basis of *sustainability* seemed to show that even an active policy against the greenhouse effect would not involve horrendous costs but on the contrary yield economic profits.

> The slow emergence of *sustainability* is not a matter of conscious choice. There were no rational decision-makers at the top of the respective directorate-generals of the Commission searching for coalition partners to achieve their goals and a common ideology to justify this coalition. Nor was there an epistemic community constantly lobbying for its shared knowledge. The debates which contributed to the spread of sustainability — in particular the debate on the implementation of Community law — went in large part independent from the greenhouse strategy. *Sustainability* offers to reconcile the economy and the environment, to bridge the old contradiction between the old and the new way to achieve a good life. It also allows to link environmental policy to progress even for those who emphasise the importance of economic growth for achieving human welfare. *Sustainability* also resonates in a world-wide discussion on the same topic within the OECD and the UN. Within the Commission, it brings not only economics but also economists back into the debate on environmental policy.

The second important feature of the development between 1988 to 1990 was the emergence of the environmental leadership concepts and its link to the greenhouse effect. The leadership concept was deliberately promoted and put forward by Environment Commissioner Ripa di Meana in the hope to achieve more progress in the field of the greenhouse effect if this issue was linked to the role of the EC in world affairs and to background ideas of overtaking the US in a modern and future-oriented field. Contrary to *sustainability*, the quest for leadership can also be regarded as being in the self-interest of the Commission. When the European Community's status is enhanced, so is the Commission's as it represents the EC towards the outside world. The promotion of leadership can thus be understood in the decade-long tradition of attempts to make Europe "speak with one voice".

Until the end of 1990, the leadership idea was more important for the development of the EC's greenhouse policy than the *sustainability* frame. The latter, at this time, is only emerging in the Commission while the former is also shared within the Council and thus able to influence its decisions. Only after the stabilisation decision, *sustainability* became increasingly important for defining the strategy to implement the decision.

## F. Defining a Strategy

After the joint Energy/Environment Council of 29 October 1990 had adopted the target to stabilise the EC's CO<sub>2</sub> emissions by the year 2000, the Commission, given its monopoly of initiative in the institutional structure of the EC, had been given the task to present proposals how this goal could be achieved. Although the fundamental features of the Commission's definition of the greenhouse effect and the measures to tackle it resulting from this definition had already emerged during the past two years since the presentation of its communication on the greenhouse effect and the Community, the different, in part only loosely connected changes of framing in the different sectors (energy, tropical forests, external relations, economic instruments, research) had now to be tied together to a political package preparing the adoption of decisions. Given the novelty and the extent of some of the measures taken into consideration, in particular the CO<sub>2</sub> tax, the Commission had decided to present first a strategy paper listing existing and planned measures and putting them into a coherent context of a comprehensive plan to achieve the Community's stabilisation target. This strategy paper would then be discussed by the Council and be modified in the light of these discussions. This is a usual proceeding in cases of complex or new policies and allows to negotiate on a package of measures without dealing with the details of a series of proposals. The first intention of the strategy paper was, however, to achieve a consensus within the Commission on the problem definition and the resulting package of policy measures. Only in a second step, it had served as a basis for negotiations in the Council. These two phases did not happen consecutively but in parallel.

The following section analyses the development of the Commission's strategy from the Council decision on the stabilisation of CO<sub>2</sub> emissions in October 1990 until the submission of the final strategy paper to the Council in September 1991. It is divided into four parts. Whereas the first three parts focus on the development of frames in three crucial areas, namely energy, external relations and with regard to economic instruments, the last part traces the development of the Commission's strategy from a first working paper to the final document by looking at the relationship between the different elements of the problem definition and the strategy mix. As far as possible, these parts endeavour to trace the evolution of the issue in terms of the frames put forward by different directorate generals of the

Commission. These parts sometimes strongly rely on interviews with Commission officials and internal documents which cannot be quoted. Still, interviews and internal documents do not constitute essential parts of the argumentation but serve only to deepen and to illustrate the analysis of the two publicly available Commission papers from this phase<sup>220</sup>.

### 1. Energy Policy

During the time the Commission elaborated and finalised its strategy paper on measures to counteract the greenhouse effect, it presented already a proposal which later became a part of its CO<sub>2</sub> stabilisation package. At the same time, in the negotiations on the Maastricht Treaty revising the EEC Treaty, the institutionalisation of EC energy policy was for the first time considered. Whereas these two developments were characterised by a smooth move of the Commission's — and to a lesser degree the Council's — energy policy towards *energetics*, slowly giving up the dominating *supply* perspective, the third event, the Gulf crisis and the ensuing Gulf War presented a test case of how the two dominant frames of energy policy could cope with a sudden external event.

The first action the Commission proposed in order to achieve energy efficiency and to limit CO<sub>2</sub> emissions was the SAVE programme<sup>221</sup>, published in the end of November 1990, shortly after the Council decision to stabilise CO<sub>2</sub> emissions. The SAVE programme, which was called the

220. The first is the Commission working paper on *Policy Options in View of the Community's Emission Stabilisation Target*, reprinted in *Europe Documents*, No. 1681, 10.1.91 (in this chapter quoted as "*Policy Options*"). The second is *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, SEC (91) 1744, 14.10.91, reprinted — without the numerous annexes — in *Europe Documents*, No. 1743, 12.11.91. Quotation and references relate to the Commission document (in this chapter quoted as "*Community Strategy, final version*"; earlier unpublished versions of the paper are quoted with an indication of the date, e.g. "*Community Strategy, version 31.5.91*"). A later, shortened and revised, version of the *Community Strategy* has been published as *Eine Gemeinschaftsstrategie für weniger Kohlendioxidemissionen und mehr Energieeffizienz*, COM (92) 246, 1.6.92.

221. See *Proposal for a Council Decision concerning the Promotion of Energy Efficiency in the Community*, COM (90) 365, 13.11.90.

“essential core”<sup>222</sup> of the EC’s energy efficiency policy, is presented not only as a means to achieve one of the goals of EC energy policy (i.e. energy efficiency) but also as a contribution to the reduction of carbon dioxide emissions and as an industrial strategy. This latter point indicates that the formulation of the programme has been influenced by *sustainability*<sup>223</sup>.

In making concrete proposals, the programme is very careful to respect the decade-long tradition of independent national energy policies and to avoid creating resistance by proposing a too far-reaching Community measure. A very low budget for the programme compared to its place in the Commission’s emerging greenhouse strategy (35 MECU for five years<sup>224</sup>) is justified with reference to the subsidiarity principle<sup>225</sup>. In large parts, the SAVE programme is a blueprint for the energy part of the greenhouse strategy. In particular, it formally introduces the idea of a tax on energy in order to keep energy prices high. The proposal states that

“... maintaining high energy prices, even at times when the markets are relaxed, could work in favour of measures to promote energy efficiency, mobilise alternative and renewable sources and represent some sort of

222. *Ibid.*, p. 4.

223. *Ibid.*, p. 7. See also the insistence of the Commission in its strategy papers to reduce CO<sub>2</sub> emissions that the proposed measures would not only meet their environmental aims but also increase the competitiveness of the EC’s industry, see pp. 222 seq. of this chapter.

224. This amount has been upheld by the Council; see OJ L 307, 8.11.91, p. 35. The low budget has been criticised by the European Parliament as well as by the Economic and Social Committee, both institutions pointing out that it does not match the ambitions of the proposed action; see CES (91) 408, 20.3.91, p. 4 and A3-123/91, 6.5.91, p. 22 (first report Verwaerde) and A3-186/91, 28.6.91, p. 23 (second report Verwaerde).

225. See COM (90) 365, p. 7. The subsidiarity principle which says that action should be taken at the appropriate institutional level, is the place where debates about the institutional balance of the EC, in other words on *supranational integration vs. member state dominance*, take place. The reference to the optimal institutional level for problem-solving can in principle also justify a uniform Community tax on energy, if the problem is a global one and the Internal Market is concerned. The mentioning of the subsidiarity principle by the Commission indicates that it recognises the institutional implications of its proposal but still upholds it. On the ambiguous character of the subsidiarity-principle, see Sidjanski, *L’avenir fédéraliste de l’Europe*, pp. 302 seq.

insurance premium against the risks inherent in Europe's heavy dependence on energy imports"<sup>226</sup>.

This statement is only possible in an *energetics* frame. "Artificially high" energy prices fundamentally violate the assumptions of the *supply* frame which regards energy as a good which has to be available for the economy in sufficient quantities and at low prices. Within *supply*, high energy prices are a bad which hampers economic growth. Yet, the explanatory memorandum to the SAVE programme clearly states that the measures of the programme alone were insufficient to reach the CO<sub>2</sub> stabilisation objective and that high energy prices achieved through taxes were one of the necessary means to achieve it.

A test for the viability of the *energetics* perspective was the increase of oil prices during the Gulf crisis in 1990/1991. From a *supply* perspective, in such a situation the EC has to do all it can to lower oil prices instead of elaborating proposals for taxes increasing energy prices even further. Indeed, the proposals to intervene in the energy markets via a tax came under strong pressure both within the Commission and from member states during the Gulf crisis. According to these views, the task of Commission and Council was crisis management in order to alleviate the burden put on the EC economy by the increased oil prices. A particularly striking example of a *supply*-view in this debate has been given in the European Parliament:

"Die absolut falschen Rezepte sind es, jetzt einfach stur nach einem staatlichen Planungszentralismus zu verlangen und als allererstes zu fordern, die Energiepreise allgemein ganz drastisch durch zusätzliche Steuern zu erhöhen. Allgemeine Energiesteuererhöhungen sind der falsche Weg. Steuerungen durch Steuererhöhungen sind durchaus denkbar, sie dürfen aber nur sehr sorgfältig eingesetzt werden. Vor allen Dingen im Bereich der Industrie wird hier mit falschen Argumenten operiert. Es wird nämlich der Eindruck erweckt, die Industrie würde dann mehr Energie sparen, wenn durch eine Energiesteuer dieser Kostenfaktor unnatürlich erhöht würde.

Wenn Sie einmal die Entwicklung der europäischen energieverbrauchenden Industrie in den letzten zwanzig Jahren ansehen, dann werden Sie feststellen, daß diese Industrie immer dann

besonders viel Energie eingespart hat, wenn die Energiepreise niedrig waren, was auch logisch ist, weil dann die entsprechenden Investitionsmittel zur Verfügung standen, die beim Energiesparen einfach zwangsläufig notwendig sind<sup>227</sup>.

Within the *supply* frame, taxes on energy in general are considered an undue intervention into the functioning of energy markets whereas the release of state-owned oil reserves is allowed. This explicit intervention into the market is a characteristic of the *energetics* frame.

As during the Gulf crisis, increased only for a relatively short period, this might not be regarded as a valid test for the ability of the *energetics* frame to deal with such a situation. However, the Gulf crisis is very important because it recalls the experience of earlier oil crises with drastic price increases and economic disruptions. *Energetics* proved, however, to be resistant to the challenges by proponents of *supply*. The idea of a tax on energy and on CO<sub>2</sub> was presented *during* the Gulf crisis<sup>228</sup> and never dropped or modified as a result of it.

On the other hand, *supply* remains an important driving force of EC energy policy. The negotiations on the European Energy Charter, initiated in November 1990, are a witness for the parallel existence of *supply* and *energetics* in separated parts of energy policy. Whereas in those field of energy policy which were linked to the greenhouse effect, *energetics* increasingly influenced policy formation, the project of a trans-European energy network which is the aim of the European Energy Charter, is devoted to the traditional aims of energy policy, i.e. guaranteeing abundant supply at low prices in order to stimulate economic growth<sup>229</sup>.

227. OJ No. 3-394, 11.10.90, p. 354. The statement uses sometimes drastic wordings but these do quite well reflect the *supply* position in the debate. The fact that the speaker was a member of the conservative European Peoples Party (a German Christian democrat) contradicts the argument that taxes are a neoconservative policy instrument. Frames on specific policy issues, such as *supply* and *energetics*, do not neatly fit into a left-right scheme.

228. See the first paper of the Commission on *Policy Options in View of the Community's CO<sub>2</sub> Stabilisation Target*, presented to the Council in December 1990.

229. In a report on its views on the Energy Charter, the Commission quotes its president Delors who had declared that the central aim of energy policy was "die Gewährleistung der sicheren Energieversorgung unter Bedingungen, die die Wettbewerbsfähigkeit der Wirtschaft und das Wohlergehen unserer Bürger erhöhen



As its origin within the CSCE suggests, the project of a European Energy Charter is not only concerned with energy policy but essentially a measure of foreign policy to support Eastern Europe and the Soviet Union (and later the CIS) as well as an endeavour to contribute to peaceful co-operation by creating interdependencies. Still, it is also an effort to initiate a long-term shift of the EC's energy supply from the politically very unstable Middle East to the supposedly less unstable East of the CSCE region. Although the Energy Charter mentions environmental protection and energy efficiency as one of its objectives<sup>230</sup>, there existed a widespread feeling among observers that low energy prices brought about by the Charter could counteract all efforts of energy saving and the promotion of renewable energies<sup>231</sup>, as it has been the case within the EC as a result of the low oil prices in the second half of the 1980s.

The European Energy Charter, although still in an early stage, is an example for the slow process of frame shift. Whereas in fields which relate to environmental protection in a wider sense, *energetics* is becoming stronger, *supply* persists in the field of "pure" energy policy. This is due to the influence of environmental policy-makers promoting the *sustainability* and *energetics* frame. This frame alignment is a process of arguing. It cannot be understood in terms of "negotiations" between the respective directorate generals if the term is not stretched too far. Negotiations involve compromise by definition. Each participant has positions which he can give up according to its preferences. Argument, however, is related to truth, and there is no possibility to compromise about truth<sup>232</sup>. Thus, parts of DG XVII (energy) of the Commission were *convinced* that *energetics* was a better base for energy policy than *supply* which was not able to deal with new

und zugleich stabile Verhältnisse für die Energieproduzenten schaffen"; *Mitteilung der Kommission über eine Gesamteuropäische Energiecharta*, COM (91) 36, 14.2.91, para. 2; similarly *ibid.*, para. 6.

230. See Title I, Art. 3 of the Charter, reprinted in *Europe Documents*, No. 1754, 21.12.91.

231. See the criticism of the Economic and Social Committee, *Stellungnahme zur Mitteilung der Kommission über eine gesamteuropäische Energiecharta*, CES (91) 880, 4.7.91, para. 2.8.

232. In international environmental negotiations, politicians can compromise about limit values for certain chemicals. Natural scientists, however, cannot compromise about whether these substances cause damage or not. I owe this observation to Winfried Lang.

challenges posed by the increasing importance of environmental questions, and in particular the greenhouse effect.

The Commission's new approach in the field of energy policy also influenced the negotiations on the revision of the Treaty of Rome which were under way from the end of 1990 until December 1991, when the Maastricht Treaty was adopted. The drafts of the Luxembourg and of the Dutch presidency both included a new title for energy policy, thus proposing to give the Community formal legislative powers in the field<sup>233</sup>. Although the first priority of EC energy policy mentioned in these documents is to guarantee the supply of cheap energy (and thus seems to indicate the persistence of the *supply* frame), the "rational use of energy and the development and use of new and renewable energy sources"<sup>234</sup> as well as a high level of environmental protection are also mentioned. The negotiators from the member states thus did not adopt an *energetics* perspective in their draft but moved away from the pure *supply* frame. The wording of the draft articles allows the possibility for policies inspired by an *energetics* frame without fully endorsing it.

In the final version of the Maastricht Treaty, the chapter on energy policy has been dropped. This omission is not due to disagreement about the content of the chapter but to a general debate about the regulatory competencies of the Community. In order to make its final draft more acceptable to the countries resisting a further broad transfer of competencies to the EC level, the Dutch presidency omitted the chapters on energy policy and on some other policies contained in the earlier Luxembourg draft. The omission of energy policy indicates that after twenty years this policy field was not accepted by all member states as a Community competence<sup>235</sup>. As the reason for this omission had to do with

233. For the Luxembourg draft see *Europe Documents*, No. 1722/1723, 5.7.91 (Title XIII); for the (second) Dutch draft (the first had been withdrawn) see *ibid.*, No. 1746/1747, 20.11.91 (Title XII).

234. *Ibid.*

235. The main reason for this does not have anything to do with the subject dealt with here but with the original aim of EC energy policy, the common reaction in case of crises, which had also been proposed as one of the aims of a Community energy policy. This would amount to a strong limitation of sovereignty with which the UK, for instance, was very uneasy.

the balance of power between the Community and the member state level, and hence with an increasing strength of *member state dominance* within the Council, but not with the aims of energy policy as such, it can be concluded from the inclusion of the above-mentioned chapter on energy policy and its content in several drafts of the Maastricht Treaty that an energy policy on the basis of *energetics* was at least not rejected, although not strongly welcomed.

It thus appear as if within the Commission at least, energy policy is being increasingly framed by *energetics* and *sustainability* (with regard to its environmental aspects). Energy saving slowly moves into the centre of the Commission's efforts in the field (at least partly because energy saving, from the Commission's *supranational integration* perspective, seemed to offer an opportunity to establish a *Community* energy policy<sup>236</sup>), a tax is increasingly finding acceptance despite its flagrant violation of basic assumptions and goals of *supply* and energy saving is considered to form part of an industrial strategy (this latter point being the link to *sustainability*<sup>237</sup>).

## 2. Leadership

The concept of "environmental leadership", introduced and actively promoted by Environment Commissioner Ripa di Meana, became the basis of the Commission's proposals in the field of global environmental policy during the phase of the elaboration of the greenhouse strategy. On the one hand, it was extended from the field of climate change policy to the protection of tropical forests and to the preparation for UNCED. Although institutionally, these three policy fields are dealt with in different fora, they are closely interrelated concerning their substance. As these are the areas of the world-wide debate on *sustainability*, the leadership concept was increasingly associated with the *sustainability* frame. On the other hand, the quest for leadership was increasingly used by the Commission to justify

236. Since the beginnings of EC energy policy, the Commission had tried to establish a proper Community policy in the field apart from the co-ordination of national measures, mostly in vain; see pp. 137 seq.

237. See pp. 217 seq.

its competence in the field of global environmental policy. In other words, "leadership" became increasingly important for the institutional debate within the EC and the conflict between *supranational integration* and *member state dominance*.

In the field of the protection of tropical forests, the Council in 1989 and 1990 had had a series of highly controversial meetings on a draft strategy submitted by the Commission. Compared to intentions of the Commission, which had launched the leadership-debate in this sector, there was no substance on which the claim for leadership could be based. However, the international negotiations on the issue had been even more controversial and remained so until the holding of UNCED. As a result, the Commission could still uphold its claim for leadership in one of the policies of the UNCED process by pointing to the inaction of others<sup>238</sup>.

UNCED became increasingly the target of the Commission's leadership claim in international environmental relations. UNCED, the UN Conference on Environment and Development, to be held in Rio de Janeiro in June 1992, allowed to extend the scope of the leadership concept to development policies and to North-South relations, a field in which the EC had traditionally considered itself as being progressive and pro-Third World, mainly on the basis of its successive Lomé conventions which constitute the heart of Community development aid policy. UNCED and its preparations thus allowed to extend the EC's challenge of the United States to the field of development policy. Since 1990 at the latest, the Rio conference had bundled a series of global environmental issues (tropical forest protection, the protection of biodiversity, climate change) and the attempt, originating from the UN, to find a new conceptual basis for development policy.

In parallel to the elaboration of its greenhouse strategy, the Commission worked on a strategy for UNCED. The resulting strategy paper consists of an

238. On the Tenth World Congress on Forests in September 1991, for instance, Commission president Delors declared that the EC was the only actor who had committed substantive amounts of money (about US-\$ 250 million) to tropical forest protection; see *Agence Europe*, No. 5560, 5.9.91, p. 13 and *ibid.*, No. 5561, 6.9.91, p. 13. Yet, this did not seem convincing to an environmental NGO (the WWF) which started an intensive lobbying campaign against the EC's tropical forest policy; see *Europe Environment*, No. 372, 1.10.91, section I, p. 7 and *ibid.*, No. 376, 26.11.91, section II, p. 2.

inventory of past and present Community activities in the fields dealt with by UNCED and defined priorities of action. In the introductory part on the Community's role, it does not only repeat its claim for a leading role of the EC at the conference but even declares that EC leadership could be "a crucial element for the success of the conference"<sup>239</sup>. Further below, the Commission repeats:

"It is clear that the Community is ready and able to assume a leading role on the side of the developed countries, and could act as one of the principal interlocutors of the developing countries"<sup>240</sup>.

The idea conveyed here is the North-South dialogue, with the Community leading the North, i.e. basically the United States and Japan. This claim is hardly supported by concrete evidence. The Scandinavian countries, for instance, have since long devoted a larger share of their GDP to development aid than the EC countries. Japan, on the other hand, has a tradition of giving few environmental aid. In any case, it does not make much sense to compare the development aid policies of different countries or groups of countries in order to find out the "best" development aid policy. What is important is the claim made here. In its "Common Platform" for UNCED, the Commission calls upon the member states to adopt the leadership concept and to take decisions on this basis. The "Common Platform" itself is in fact nothing but a negotiation mandate which the Commission has to obtain from the Council in any international negotiation where Community competencies may be involved, although an immensely long one. It does not contain fundamentally new or far-reaching initiatives. The only area where the EC actually considered *policies* underlining a leadership role, e.g. unilateral moves, is climate change policy<sup>241</sup>. The leadership idea thus serves to state the EC's *role* in the UNCED process and less to constitute a summary assessment of the EC's proposals for the conference. Its purpose is highly symbolic one. It presents the EC as constructive, responsible, underlines its solidarity with the South, and

239. EC Commission, *A Common Platform: Guidelines for the Community for UNCED 1992*, p. 3, reprinted in *Europe Environment*, No. 376, 26.11.91, section V.

240. *Ibid.*

241. This issue is discussed in the section on the Commission's CO<sub>2</sub> reduction strategy; see pp. 224 seq.

compares this image with the United States which defend their national interests without regarding the legitimate needs of the Third World.

“Leadership” in international environmental and development affairs is also apt to present the same image of the EC internally, in particular in the Northern member states which are generally more critical towards EC environmental policy which is supposed to lower existing high domestic standards.

“Leadership” is also a strategy with legal and institutional consequences. In the Commission’s concept, the Community exerts leadership, and not the member states. As a consequence, the Commission’s status is likely to be enhanced as a co-ordinator and spokesman of the EC. The Commission would prepare and defend the Community’s policies in the exercise of its leadership role. More importantly, the claim for environmental leadership supports the Commission’s attempt to establish a general Community competence for global environmental policy in the negotiations for the Maastricht Treaty. Leadership is thus an attempt by the Commission to change the institutional balance in favour of the Community level in a particular field. In short, the leadership concept is a result of the *supranational integration* frame.

In international environmental relations, the Community only possesses competencies when it has enacted legislation in the respective field or when the Council decides that a field should be regulated by Community action. Usually, the Council is very reluctant to agree to such a transfer of competencies because the competence for Community action thus created is permanent and may be confirmed and extended by the jurisprudence of the European Court of Justice. The Commission often claims at least some Community competence with the argument that this was necessary to avoid distortions of the internal market or impacts on other fields of Community law. In addition, the subsidiarity principle in the field of the environment (see below) had embodied the assumption that the Community does not have to conclude international environmental agreements unless for special reasons. In sum, the more international agreements the *Community* concludes, the more the decision-making power is shifted to the European level. The right to conclude international agreements thus strengthens the image of the EC according to *supranational integration*. In recent years, a

pragmatic solution has been invented: in order to avoid a time-consuming debate about the competence issue, the Community and the member states conclude so-called "mixed agreements"<sup>242</sup>.

Besides the legal/institutional balance, international environmental agreements (like any other international agreements) involve the issue of the EC's external representation. The person and the institution representing the European Community (in the spheres of its competence) on international conferences receive the prestige to speak for a major power. In addition, diplomacy and international representation are seen by states as the manifestations of external sovereignty which are not to be given to any international organisation<sup>243</sup>. Therefore, the external representation of the EC has been a field of permanent struggle between the member states and the Commission since the 1960s<sup>244</sup>. Again, pragmatic solutions have been found over the years<sup>245</sup> but the issue is still open for change. In line with his concept of environmental leadership which implies Community representation in international fora by the Commission, Environment Commissioner Ripa di Meana, during the preparations of the Rio conference, had strongly pushed for EC decisions in the field of climate change policy in order to have something in his hands when representing the EC in Rio. He threatened not to go to Rio if the Council should not adopt measures within the CO<sub>2</sub> stabilisation strategy and, unsatisfied with the results of the preparations, did indeed not go to Rio. In this case, Ripa di Meana played the role of a "real" minister with political responsibility for his subject, as opposed to his Commission colleagues which mostly consider

242. The legal problems of the external relations of the EC are an immensely complicated matter which show how deep-rooted differences on the basis of different frames are transformed into different legal positions; see the literature quoted in footnote 174, p. 179.

243. Many countries, for instance, have "representations" or "permanent representations" to the EC; "embassies", although their function is exactly the same, remain reserved for relations between states.

244. The most fervent criticism of the EC Commission's legitimacy came from the French president de Gaulle; see Gerbet, *La construction de l'Europe*, pp. 271 seq.

245. For instance the "délégation bicéphale", with the Council presidency and the Commission both representing the Community.

themselves as top civil servants which without the right to refuse to go to a conference<sup>246</sup>.

“Leadership” includes the Commission’s claim that the Community in general is the appropriate level for dealing with global environmental problems and that it should be given a legal competence in this area. This claim is not self-evident and would constitute, if agreed, a little step of integration achieved by the Commission. It has also to be seen in the light of the discussion on the subsidiarity principle taking place during the Maastricht negotiations. The subsidiarity principle which is conceived as a counterweight to the seemingly irresistible trend of transferring competencies to the Community level, had already existed in the Single European Act — exclusively in the field of the environment<sup>247</sup>. “Leadership” is thus an attempt to achieve a cognitive agreement that global environmental problems are by definition a field in which the objectives of EC environmental policy can be better attained at Community level. In this case, the Community should act (normative dimension).

During the negotiations of the Maastricht Treaty, the Commission could convince the member states of this aspect of the leadership concept. The new Treaty adds a fourth goal to the previous three aims of EC environmental policy, namely

“promoting measures at international level to deal with regional or worldwide environmental problems”<sup>248</sup>.

246. Legally, Ripa di Meana’s behaviour does not make sense as it is not him who is politically responsible for EC environmental policy but the entire Commission. As he was not politically responsible for the EC’s position in Rio, he cannot draw political consequences from this position — in a purely legal logic at least.

247. Art. 130r, 4 of the EEC-Treaty as amended by the SEA reads: “The Community shall take action relating to the environment to the extent to which the objectives ... can be attained better at Community level than at the level of the individual Member State”. The generalised subsidiarity principle of the Maastricht Treaty (Art. 3b) reads: “In areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community”.

248. Art. 130r, 1 of the Maastricht Treaty.



In this formulation, the Community has the formal competence to deal with global environmental problems (such as the greenhouse effect or the destruction of the ozone layer) as well as with regional problems (such as acid rain). As a result, the Commission does not have to fight anymore for the right to negotiate international environmental agreements provided it can convince the Council that they are of a global or regional nature (which is beyond doubt in the field of the greenhouse effect).

In sum, leadership has been strongly promoted by the Commission during the preparation of its greenhouse strategy. This has led to the codification of a Community competence in the field of global environmental problems and thus furthered integration. Before the negotiations on its greenhouse strategy, the promotion of leadership has strongly linked the expansion of *sustainability* and the adoption of measures against the greenhouse effect with the status of the EC in the world, and thus with *supranational integration*.

### 3. *The Tax Debate in the Commission*

- > After the decision in principle to stabilise the EC's CO<sub>2</sub> emissions by the year 2000 had been taken by the Energy/Environment Council in October 1990, the debate shifted from *whether* this should be done to *how* it could be achieved. In the following year, the proposal of a tax on CO<sub>2</sub> or on energy became the central and most controversial element of the Commission's strategy. This section attempts to explain the choice of a CO<sub>2</sub>/energy tax in terms of environmental and integration frames. A large part of this section is devoted to the analysis of the tax debate among the different departments of the Commission in order to show how the link between *sustainability* and *supranational integration* contributed to the inclusion of the tax in the final Commission proposal<sup>249</sup>.

249. This part relies heavily on interviews with Commission officials, my experience during a traineeship at the Commission's Forward Studies Unit from October 1990 to February 1991 and on discussions with members of the *Global Warming Policy Analysis Group* at the European University Institute.

a) Response Strategies and the Choice of the Tax

In the international discussions on policy responses to the greenhouse effect, a variety of measures of the most diverse kind have been discussed. The reduction of CO<sub>2</sub> emissions can in principle be achieved by technical solutions, regulatory measures, incentives, programmes, voluntary agreements, economic instruments like taxes, charges, or tradable emission rights and by all kinds of combinations among those measures. Although its strategy contains some of these elements, the Commission has increasingly concentrated its activities on the subject of a CO<sub>2</sub> or energy tax<sup>250</sup>. Compared to the findings of the German Bundestag's commission of inquiry on the protection of the atmosphere<sup>251</sup> and of the plans of the German federal government<sup>252</sup> to reduce CO<sub>2</sub> emissions by 25 to 30 per cent until 2005, this seems to be a rather narrow focus whereas the German approach, although going far beyond the Community target, is based on a very broad range of measures without relying so heavily on the use of a tax.

Whereas it is possible to argue that according to the subsidiarity principle (and also for simpler reasons, e.g. lack of personal resources) the EC Commission has decided not to prescribe CO<sub>2</sub> reduction policies in detail, the focus on a CO<sub>2</sub> or energy tax may at least in part be explained by the political character of such a tax: it favours integration as it would be the first Community tax; if a Community tax is to be accepted by the member

250. In the final version of the strategy, the importance of the tax is even specified in quantitative terms: it is supposed to contribute 41 per cent to the CO<sub>2</sub> stabilisation target; see *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, SEC (91) 1744, p. 19.
251. The Bundestag's commission of inquiry concentrated on technical options and on the natural scientific aspects of the greenhouse effect, see Enquete-Kommission "Schutz der Erdatmosphäre", 1. Zwischenbericht der Enquete-Kommission des Bundestages zum Schutz der Erdatmosphäre, id., *Schutz der Erde. Eine Bestandsaufnahme mit Vorschlägen zu einer neuen Energiepolitik* and id., *Klimaänderung gefährdet globale Entwicklung*. See also Bundesminister für Umwelt, *Vergleichende Analyse der in den Berichten der Enquete-Kommission "Vorsorge zum Schutz der Erdatmosphäre" und in den Beschlüssen der Bundesregierung ausgewiesenen CO<sub>2</sub>-Minderungspotentiale und Maßnahmen*.
252. See Bundesminister für Umwelt, *Bericht der Bundesregierung an die Kommission der Europäischen Gemeinschaften über das nationale Programm zur Reduzierung der energiebedingten CO<sub>2</sub>-Emissionen*; id., *Beschluß der Bundesregierung vom 7. November 1990 zur Reduzierung der CO<sub>2</sub>-Emissionen in der Bundesrepublik Deutschland bis zum Jahr 2005*.

states at all, it is most likely to be a “green” tax. In addition, it corresponds to the strong liberal market ideology prevailing in the Commission and the rather wide-spread criticism that the command-and-control approach of *classic environmental policy* and DG XI as its proponent have led to little improvement of the actual situation of the environment but to frequent violations of Community law and to strong resistance from the member states. Economic instruments, it is argued by the adversaries of the command-and-control approach, would achieve better results by more elegant means.

Immediately after the Council decision to stabilise CO<sub>2</sub> emissions, the Commission took up the idea of some kind of environmental tax, propagated by Environment Commissioner Ripa di Meana in the preceding years. In mid-December 1990, the Commission requested Ripa di Meana to prepare guidelines to be submitted to the Environment Council on 20 and 21 December with the aim of discussing first ideas of a CO<sub>2</sub> stabilisation strategy. These guidelines for the Council discussions should focus on energy saving measures. However, the Commission came to the result that in this respect, “no amount of action” in the “non fiscal area” would be sufficient<sup>253</sup>. Therefore, a tax on energy or on carbon dioxide should be mentioned at the Council meeting as one possibility to reach the Community’s stabilisation target. It was left open whether this proposed tax should be a CO<sub>2</sub> tax, an energy tax or a combination of both, but in any case, it should be “fiscally neutral”, i.e. its introduction should be compensated by a corresponding decrease of other taxes so as not to increase the overall tax burden of the economy<sup>254</sup>.

The proposal of a Community-wide introduction of a new tax, although in principle not contrary to the EEC Treaty and even envisaged some years ago in an entirely different context<sup>255</sup>, does not only constitute a major

253. *Commission conclusions on the greenhouse effect*, December 1990.

254. See *Projet de procès-verbal de la 1040ème réunion de la Commission tenue à Bruxelles*, COM (90) PV 1040, 20.12.1990, pp. 60-61.

255. The regulation of 1988 on the financing of the Community budget foresaw — in winded expressions even for diplomatic usage — the possibility of a “fifth resource” for the EC budget. One of the possibilities discussed at the time was a tax on energy; see *Beschluß des Rates vom 24. Juni 1988 über das System der Eigenmittel der Gemeinschaften*, OJ L 185, p. 24, 15.7.1988, Art. 2.

progress for European integration, even if the revenues raised by the tax remain at national level<sup>256</sup>. It could also easily be expected that the introduction of a new tax would meet strong resistance from the member states as well as from industrial lobbies because of the expected harmful consequences of such a tax on economic performance and because of losses of competitiveness. The imposition of the tax, which in the first Commission drafts was due to begin with US \$3 per barrel of oil starting in 1993 and then increasing up to \$10 per barrel in 2000, was expected to yield approximately 50 billion ECU per year throughout the EC<sup>257</sup> and thus without doubt constitutes a major interference in the economies of the member states.

The Commission had thus chosen a policy instrument which would meet strong political resistance for achieving the target of a Community-wide CO<sub>2</sub> stabilisation whereas other countries with more ambitious goals had not so strongly relied on a tax or a comparative instrument. Why the Commission adopted this risky strategy and how it came to it shall be explained in this section by arguing that the proposal of a tax is an indication of the spread of the *sustainability* frame within the Commission which allowed to reconcile the view of several departments that had been conceptually separated for long. Secondly, *sustainability* and a tax resonate with the broader frame of *deregulation*<sup>258</sup> propagated by the Commission in the framework of the Internal Market programme. Finally, the tax as such and its use for "leadership" promote *supranational integration*.

In sum, the debate within the Commission and between the Commission and member states is a debate on *sustainability* and on *supranational*

256. Tax matters belong to the core of state sovereignty. Community activity in this field is therefore closely related to the progress of integration. The only measure comparable to the proposal of a CO<sub>2</sub>/energy tax is the introduction of VAT during the 1960s; see Puchala, *Fiscal Harmonization in the European Communities*. Whereas the introduction of VAT was a restructuring of the existing turn-over tax system, although a major one, the CO<sub>2</sub>/energy tax is entirely new.

257. See SEC (91) 1744, p. 10.

258. On the concept of "cultural resonance" see Gamson/Modigliani, *Media Discourse and Public Opinion on Nuclear Power*. *Deregulation* is used here to give a label to a frame and does not relate to the debate on deregulation in the context of regulatory policy-making. Whether "deregulation" in fact leads to less regulation or just to different regulation is disputed; see Majone, *Deregulation or Re-regulation*.

*integration*. Natural scientific arguments and knowledge did not play a role anymore in this debate. The debate shifted entirely towards the perception of the economic effects of the proposed greenhouse strategy.

#### b) The Debate Among the Commission's Directorate-Generals

The main actors during the elaboration of the Commission's CO<sub>2</sub> reduction strategy were DG XI (environment) and DG XVII (energy). DG XXI (indirect taxation) became increasingly involved in the discussion on the tax without being able to influence it decisively<sup>259</sup>. DG II provided much of the economic arguments for the introduction of a tax whereas the Forward Studies Unit (CdP) strongly advocated *sustainability* and in particular the argument that the proposed CO<sub>2</sub> reduction strategy would create *advantages* for European competitiveness. Other DGs intervened only occasionally.

The link between the emerging *sustainability* frame and *supranational integration* for most DGs involved offered the opportunity to find their views or aims represented or at least seemed too strong an argument to be resisted. A new frame — *sustainability* — actively promoted by some DGs thus provided the possibility of new coalitions among the Commission departments<sup>260</sup>. This possibility should not be interpreted in a narrow rationalistic sense. The different departments are not actors maximising their utility by choosing the appropriate ideology or frame which allows them to build up the coalition that fits best their aims<sup>261</sup>. A frame is no suit; DG XI cannot simply choose *sustainability* after coming to the result that this would increase its stance within the Commission or that its aims (which depend on the respective frame) can be better achieved within the

259. See p. 289 for a list of the Commission's directorate generals.

260. Few studies exist on the EC Commission as a whole and its internal functioning which are not restricted to specific policy fields or even to individual proposals. For general treatments see Berlin, *Organisation et fonctionnement de la Commission*; Michelmann, *Organisational Effectiveness in a Multinational Bureaucracy*; Louis/Waelbroeck, *La Commission au cœur du système institutionnel*; Pouillet/Deprez, *Struktur und Macht der EG-Kommission* and Wessels, *Community Bureaucracy in a Changing Environment*.

261. This is one of the three models for the explanation of the "political power of economic ideas" described by Hall, *The Political Power of Economic Ideas*, pp. 12-13. See also Gourevitch, *Keynesian Politics: The Political Sources of Economic Policy Choices*.

new frame. Frames consist of cognitive perceptions, normative convictions and symbolic identities. Their change involves all three dimensions (although not necessarily). A new frame must have a new meaning in the light of the old frame; it must make sense if it is to be convincing. For DGs not directly concerned with the environment or economic policy as such, the new frame of *sustainability* must offer opportunities to link their own policy frames to it in a meaningful way.

- > DG XI had at the time of the negotiations already largely moved towards *sustainability*. Most prominently, sustainability played a role in the preparations for the fifth environmental action programme of the EC, which the Commission was to present in early 1992<sup>262</sup>. Contrary to earlier action programmes which had mainly consisted in a list of action proposals, the new programme also focused on means of implementing these proposals. Responding to criticism of a wide-spread implementation deficit of EC environmental law<sup>263</sup>, the Commission moved away from the traditional legalistic style of policy-making and proposed, among others, voluntary agreements with industry and economic and fiscal instruments for environmental protection<sup>264</sup>. The tax on CO<sub>2</sub> or energy as a means to fight the greenhouse effect was considered to be a test case for the introduction of economic and fiscal instruments: if this tax was adopted, others were considered much more easily acceptable.
- > Within DG XI, the tax became the synonym for the programmatic shift towards *sustainability*. *Sustainability* and the leadership concept mutually

262. The title of the action programme speaks for itself: "Towards Sustainability"; see *Vorschlag für eine Entschließung des Rates der Europäischen Gemeinschaften über ein Programm der Europäischen Gemeinschaft für Umweltpolitik und Maßnahmen im Hinblick auf eine dauerhafte und umweltgerechte Entwicklung*, COM (92) 23, Vol. I, 3.4.92.

263. Since 1983, the Commission submits yearly reports on the implementation of Community law to the European Parliament; see *Erster Jahresbericht an das Europäische Parlament über die Kontrolle der Anwendung des Gemeinschaftsrechts*, COM (84) 181, 11.4.1984, for the first report. Since 1990, Environment Commissioner Ripa di Meana had publicly recognised a particularly strong implementation deficit in the field of environmental law; see *Agence Europe*, No. 5190, 9.2.1990, p. 6 and *id.*, No. 5192, 12./13.2.1990, p. 12. See *Neunter Jahresbericht über die Kontrolle der Anwendung des Gemeinschaftsrechts*, COM (92) 136, 27.5.92 for the most recent report.

264. See COM (92) 23, Vol. II.

reinforced each other: *sustainability* (and the tax as the first important step in this direction) was the condition for leadership, and the quest for leadership created the pressure for the adoption of the tax. In addition, the Community-wide introduction of a new tax was considered as a progress in integration and presented as such within the Commission in an attempt to alleviate the expected opposition of industry-oriented directorate generals. This link between *sustainability* (the tax) and *supranational integration* is most clearly visible in a statement of Commissioner Ripa di Meana before the European Parliament where he declared on the subject of the tax proposal:

“Given ... the significant degree of institutional progress, I hope that the House will continue to support a proposal which, as well as being important for our energy systems and the environment, will contribute towards European integration and the credibility of the European Community at international level”<sup>265</sup>.

Within DG XI, *sustainability* had already been adopted before the elaboration of the Community strategy to limit CO<sub>2</sub> emissions<sup>266</sup>. It was used now as an action frame which was able to cope with several problems at a time. *Sustainability* was considered to be a concept which would allow to lessen the opposition between environmental policy-makers (DG XI) and industry and its allies within the Commission. “Common responsibility” and “partnership” became the new catchwords in this context<sup>267</sup>. The new partnership with industry made possible by *sustainability* was also underlined by the argument put forward by DG II and the Forward Studies Unit, namely that an active policy of energy saving could create benefits for industry (“first mover advantage”). *Sustainability* was also used to increase the status of EC environmental policy and indirectly of DG XI by linking it to *supranational integration*. For DG XI, thus, the new frame could cope better with perceived problems of EC environmental policy (the implementation deficit and the opposition of industry) and at the same time be used as a device for increasing the status of DG XI and the acceptance of its proposals.

265. *Debate on Environmental Taxes on Energy*, OJ 3-411, 18.11.1991, p. 46.

266. For the context of this frame shift, see pp. 170 seq.

DG XVII accepted the central role of energy saving for a CO<sub>2</sub> stabilisation strategy and used it to promote its own programmes on energy saving. This is not merely a matter of organisational self-interest but was made possible only by the previous shift towards *energetics* as a frame of energy policy. This frame shift is by far not complete; in particular, it applied less to the Energy Commissioner of the time, Cardoso e Cunha, than to DG XVII. Whereas DG XVII accepted voluntarily a tax as a means of CO<sub>2</sub> reduction and of achieving energy efficiency, the Energy Commissioner pressed for the lowering of its energy part and the increase of its carbon part<sup>268</sup>. This could be interpreted as a manifestation of a *supply* frame. Energy efficiency and a tax as a means to achieve it were considered to be an opportunity to give a new impulse to the ailing EC energy policy. This opportunity was further increased by the conceptualisation of energy policy as a policy of industrial modernisation. "Leadership" was also important for DG XVII as neither the US nor Japan, the EC's main competitors, were pursuing such a policy internally or externally. In the field of energy policy, the EC could thus underline its leadership claim by promoting energy efficiency in Third World countries. Such a policy could be presented as a measure of North-South solidarity, as it would constitute an active help for the less developed countries to fight the greenhouse effect (and at the same time a programme of industrial modernisation, as in the EC itself). *Energetics, sustainability* and "leadership" for DG XVII offered new answers and more promising action strategies to old problems and allowed to present these strategies as something which was good for the EC externally (leadership) and internally (reduction of energy dependency, industrial modernisation).

Whereas DG XI and DG XVII had collaborated on the CO<sub>2</sub> reduction strategy already for some time, DG XXI (responsible for indirect taxation) had only been included at a later stage in order to discuss concrete

267. See COM (92) 23, Vol. II, pp. 30 seq.

268. DG XI had proposed a tax with an energy component of 75 per cent (hitting all energy sources including nuclear energy but excluding renewables) and a CO<sub>2</sub> component (applied in accordance with the carbon content of fossil fuels) of only 25 percent. Such a tax structure would in the first place reduce overall energy consumption and only in the second place reduce the emissions of carbon dioxide. The 50/50 mixture finally adopted penalises fossil fuels more than nuclear energy and is a weaker incentive for energy saving. The stronger the energy component, the more the tax structure is compatible with *supply*.



modalities of a tax. DG XXI as well as the Commissioner for taxation, Christine Scrivener, opposed the tax from the outset<sup>269</sup>, claiming that DG XI and DG XVII had made a proposal of a tax which they did not really understand. Besides inter-organisational jealousy, this statement reflects traditional industrial concerns, the opposite side of *classic environmental policy*. A tax would create competitive disadvantages (a “first-mover disadvantage”) with regard to the US and Japan and should thus only be introduced if these countries adopted similar measures. In addition, energy intensive industries should be exempted from the tax for the same reason. DG XXI thus refused the leadership argument which relied heavily on the tax. On the other hand, it was not able to refuse a more general argument of *sustainability*, namely the need for a restructuration of taxation systems with the aim of increasing taxes on resource consumption (the depletion of the “environmental capital stock” in the language of environmental economics) and of lowering taxes on labour. This shows again the ability of the *sustainability* frame to bridge the opposition between “environmental” and “industrial” actors. Lowering taxes on labour and increasing them on resource consumption could in principle remove a major competitive disadvantage of European industry — its high labour costs — and at the same time exert pressure towards industrial modernisation — by favouring resource savings — and achieve environmental benefits.

The *sustainability* frame was strongly promoted by DG II (economics and finance). In addition, the conceptualisation of the greenhouse issue as a problem where economic instruments should be applied is also due to this DG<sup>270</sup>. Within the Commission, DG II is responsible for providing economic studies and expertise. It enjoys a high reputation with regard to the quality of its work and is considered to be an ally of economic interests. Contrary to DG XI, it has no particular “green” image. The arguments put forward by DG II thus enjoyed a favourable bias among industry-oriented DGs and individuals within the Commission. At least, they could not easily be dismissed as green utopianism. The studies of DG II on the economic

269. See for instance an interview by Christine Scrivener given to the Belgian daily *L’Echo*, quoted in *Europe Environment*, No. 372, 1.10.91, section I, p. 1.

270. See the study on *The Economics of Policies to Stabilise or Reduce Greenhouse Gas Emissions: The Case of CO<sub>2</sub>*, II/335/90-EN, 11.10.1990.

aspects of the greenhouse effect constituted the basis of the Commission's "no-regret" strategy, i.e. a strategy comprising measures that are considered to be beneficial in any case, regardless of the existence and degree of the greenhouse effect. DG II was thus responsible for the partial decoupling of the greenhouse strategy from natural scientific knowledge. The support for *sustainability* from DG II meant that this frame was not considered merely as a new way of selling environmental policy but was actively defended by one of the business-oriented DGs of the Commission.

A similar role was played by the Forward Studies Unit (CdP), a small group advising Commission President Delors on major policy issues and their importance for the EC. The CdP is a planning staff with the task of producing ideas and concepts, detached from day-to-day management of current affairs. From the end of 1990 onwards, when the elaboration of the Commission's greenhouse strategy had begun, the CdP worked on a major report on environment and economic development. This report was a detailed elaboration of the *sustainability* frame and a blueprint of its implication for EC policy. It strongly promoted the leadership concept. Although this report does not explicitly deal with climate change policy — which at the time of its elaboration was considered to be already on a *sustainability* path —, it strongly advocates environmental economics, for instance the consideration of natural resources as an "environmental capital stock" which is used up by economic activity without being paid for. The elaboration of *sustainability* in a report requested by the highly reputed Commission president and the involvement of CdP members in current affairs (UNCED, the fifth environmental research programme, a review of EC transport policy) considerably enhanced the spread of *sustainability* within the Commission<sup>271</sup>.

This is again partly due to the fact that, within the Commission, the CdP was not regarded as a "green" department. The report on environment and economic development was originally intended to provide arguments and knowledge about a theme which was considered important by the Commission and its president but which was not left to DG XI because of its

271. See also the views on EC environmental policy expressed by a member of the CdP at the time; Wright, *EC Environmental Policy*.

green orientation which had in the past only led to conflicts with member states about the implementation of Community law and strong protests from industry. The CdP should elaborate an outline of an alternative strategy which would allow to implement a policy reconciling the needs of business and of the environment. *Sustainability* provided this opportunity. As a result, it was promoted from both the environment directorate general and from the more business-oriented DGs, including the CdP. Whereas DG II mainly argued in favour of the macro-economic validity of the tax proposal, the CdP strongly promoted *sustainability* as an opportunity for an industrial strategy. Such a strategy could give rise to an industrial leadership of the EC. Whereas the EC, the CdP claimed, has lost the battle against the US and in particular against Japan in the field of microelectronics already, environmental and energy efficient technologies could be the source of a new wave of industrial innovation in a field where both the US and Japan were hardly present. The CdP thus closely links *sustainability* as a means for coping with the EC's environmental problems with the EC's identity in the world economy. *Sustainability* in this logic means industrial progress, a successful fight against economic decline and the defeats already suffered in other "key" sectors, it provides a basis for leadership at UNCED and new outlooks for a series of Community policies from agriculture to transport.

With the adoption and promotion of *sustainability* by DG XI as the representative of environmental interests, DG II as an ally of economic interests and the CdP as a unit dealing mainly with integration, the *sustainability* frame was not limited to the environmental policy community anymore and had a broad basis within the Commission. These actors, as well as DG XVII, were also in favour of the adoption of a CO<sub>2</sub>/energy tax as a central policy instrument within this frame. Other DGs played only a marginal role, although DG I (external affairs) supported the environmental leadership concept proposed by DG XI and the CdP which could allow to increase the EC's role in international affairs and its standing on international conferences.

The *sustainability* frame allowed the development of a common problem definition among these DGs by bridging the gap between the environment and the economy. All DGs involved could use it as the basis for an offensive strategy using the positive connotations of the environmental theme

together with the argument of industrial modernisation as a means to survive and even to lead in world-wide economic competition. The tax in this context became the instrument for achieving *sustainability* in addition to its technical role of limiting CO<sub>2</sub> emissions from fossil fuel burning. For this reason, the Commission during the elaboration of the strategy and during the later negotiations on it was willing to give it any possible shape, if this would only increase its chances for adoption. The *principle* of an environmental tax should be adopted; technical considerations, even those with large practical consequences (e.g. the modification of the carbon and the energy component) were considered to be of secondary importance<sup>272</sup>. This is also the reason why the arguments of DG XXI — which were put forward in technical terms — did not receive much attention as they could not undermine the principle of *sustainability* to which even DG XXI subscribed hesitantly.

7 c) The Debate With Member States and Industry

A tax on energy and CO<sub>2</sub> emissions which was supposed to raise about 50 billion ECU per year would rise the resistance of member states and of industry. On the basis of *classic environmental policy* they could be expected to argue that such a tax would hamper international competitiveness and economic growth. Although the Commission in its strategy to deal with the greenhouse effect also tries to convince member states and industry of its problem definition in terms of *sustainability*, it mainly relies on a more realistic strategy to have its package of measures, and in particular the tax, adopted by the Council and accepted by industry.

8 The strategy towards member states consisted in arguing that overall, the proposed tax (in combination with other measures) would not hamper economic growth. A main addressee of this argument was Spain which had taken the position that its present phase of strong economic growth and industrial restructuring in order to catch up with the industrial

272. For the same reason, the Commission also resisted any temptation, voiced in earlier statements and also in the European Parliament, to use at least part of the tax for the financing of an environmental fund.

development of the northern member states required a strong growth of energy consumption. In other words, Spain argued on the basis of *supply*. In addition, Spain demanded a “fair burden sharing”, claiming that it emitted only one third of the CO<sub>2</sub> emissions of Germany and remained also below the EC average of per capita emissions<sup>273</sup>. It thus had a “reserve” which it could still use. In order to meet this latter argument, the Commission included in its proposal a phrase stating that the EC’s structural funds (and the Cohesion Fund set up by the Maastricht Treaty) should provide assistance and compensation for countries with a low economic standard of living.

In order to meet the argument that a CO<sub>2</sub> tax would lead to inflation and economic recession, the Commission published the results of an economic study by a consulting firm (DRI) which had come to the result that a tax on energy together with the other measures of the Commission’s strategy would lead to a reduction of the GDP of eight selected EC member states of 0,06 per cent annually between 1991 and 2005. Inflation in these countries would rise by 0,29 per cent but by the same token their balance of payment would improve. This study was not based on assumptions from *sustainability* but on conventional economics. Therefore, the Commission claimed that the additional inflation and the small drop in GDP would be more than offset by additional environmental benefits, increased transport efficiency and the development of technology for energy efficiency which were not included in the economic model<sup>274</sup>. The tool to promote *sustainability* and the tax as its main instrument was thus the “no-regrets” strategy which considered these measures to be beneficial on the basis of *classic environmental policy*.

Another argument in favour of the tax was “fiscal neutrality”. It was also the basis for the studies on the macroeconomic impact of the tax. Fiscal neutrality means that the income generated by the CO<sub>2</sub>/energy tax has to be used to reduce other taxes. In other words, the proposed tax shall lead to a restructuration of tax systems but not to increased revenues for the state

273. See Table 5, p. 281.

274. See *Agence Europe*, No. 5552, 24.8.91, p. 6. The figures are also quoted in the final Commission strategy; see *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, SEC (91) 1744, 14.10.1991, p. 25.

and to heavier burdens on the economy as a whole. This is an important political argument against the claim that the proposed tax would hamper economic development in the same way as so many other environmental policy measures. Politically, it gives a certain margin to member states. By proposing that the new CO<sub>2</sub>/energy tax should be fiscally neutral, the Commission assigns the responsibility for this essential condition of its calculations to the member states. Its own tax proposal will be adopted at the Community level; the corresponding lowering of other taxes is left to the member states which are free to proceed in this direction or to use the tax as a source of additional income (as it was expected in the case of Italy, Belgium and Greece). In relation to fiscal neutrality, the Commission used the subsidiarity argument extensively: according to its interpretation, the tax must be adopted at the Community level in order to avoid distortions of competition. The subsidiarity principle which was meant to achieve a limitation of Community regulation thus serves to justify a far-reaching integrationist measure such as the tax. Fiscal compensation for the tax is left to the member states, again on the basis of the subsidiarity principle. As a result, the subsidiarity principle serves as a justification of a policy of *supranational integration*. The way the concept of fiscal neutrality was implemented in the Commission strategy was also an indication of the importance given to the principle of a Community-wide tax: the tax itself had to be adopted by compulsory Community legislation whereas the compensation in the form of fiscal neutrality was left to the member states. Whether they really followed this recommendation or used the tax for other purposes<sup>275</sup> did not matter for the Commission.

The recommendation on the fiscal neutrality of the tax could only convince member states. In fact, the Commission mostly argued on a macro-economic level when it defended its tax proposal. The *macro-economic* neutrality of the tax does, however, not preclude that *individual* industrial sectors will strongly suffer from the tax. This is even its intention: huge consumers of energy shall pay a high tax in order to have an incentive for energy saving. On the other hand, there are industries which at present knowledge cannot avoid using huge amounts of energy in the production process. In order to

275. According to the DRI study quoted above, inflation and loss of GDP would be higher if the condition of fiscal neutrality was not fulfilled.

win the support of these industries and to avoid that they could successfully lobby their respective national governments, the Commission proposed to wholly or partly exempt six energy-intensive industrial sectors from the tax unless its international competitors follow the EC example<sup>276</sup>. It thus followed one of the demands of DG XXI.

The exemption of the most energy intensive sectors from the proposed tax is a flagrant violation of the polluter-pays-principle and the principle put forward by *sustainability* that environmental costs should be internalised. It shows again the central importance of the adoption of the principle of an environmental tax, almost irrespectively of its content. The tax was the instrument to make the Council accept *sustainability* and the related concepts of environmental protection as an industrial strategy as well as the leadership concept. Within the Commission, a Community strategy inspired by a pure *sustainability* frame was not elaborated because of the resistance of some departments remaining close to *classic environmental policy*. In addition, it was not considered to be a realistic goal for being adopted by the Council. The sacrifices on the tax issue were thus not a sign of a prevalence of *classic environmental policy* but of a deliberate strategy to start policies based on *sustainability*, taking into account the expected resistance of the Council.

#### 4. From the "Policy Options" to the "Community Strategy"

##### a) The Policy Options Paper

Two months after the stabilisation decision of October 1990, the Commission presented a first working paper on "Policy Options in View of the Community's CO<sub>2</sub> Emission Stabilisation Target" to the Environment Council of 20./21. December 1990. This working paper represents a strong and optimistic *sustainability* frame. Energy policy is at the centre of the

276. See *A Community Strategy*, para. 22. The sectors in question, where energy represents between five and ten per cent of the total costs have, however, to achieve as yet unspecified environmental and energy saving targets in order to qualify for the tax exemption; see *Vorschlag für eine Richtlinie des Rates zur Einführung einer Steuer auf Kohlendioxidemissionen und Energie*, COM (92) 226, p. 15. The sectors in question are steel, chemicals, non-ferrous metals, cement, glass and pulp/paper.

strategy<sup>277</sup>. With respect to energy policy, the *supply* frame has given way to the *energetics* frame. Energy policy becomes a target of political action by the Community and is no more restricted to recommendations to member states and economic agents. The proposed measures cover a wide range from increased R & D activities (in the field of technology with only a small share devoted to basic research<sup>278</sup>) and an active programme for energy saving<sup>279</sup> to the centre-piece of the strategy, a combined tax on energy and CO<sub>2</sub>.

Whereas the parts on energy policy mainly insert existing policies into the new greenhouse strategy and reflect the slow reorientation of EC energy policy in the last years, the document is the first EC document which uses *sustainability* in order to defend and justify a new strategy. As the document expresses the Commission's conviction that "non-fiscal measures" (i.e. increased research and energy saving programmes) will not be sufficient to achieve the stabilisation target, the Commission in this document officially proposes the introduction of a tax on energy and on CO<sub>2</sub> as the "fiscal" supplement to these measures. However, not only the tax proposal but the entire strategy are presented in terms of *sustainability*. Already in the second paragraph, the Commission supports its proposed measures with the

"growing awareness, supported by converging *scientific evidence*, that they would have a positive overall impact."<sup>280</sup>

Here, "scientific evidence" is completely detached from its usual natural scientific context and refers to the results of *economic* analyses. The paper does not only claim that the proposed greenhouse strategy would do not great harm but sets out that

"the international competitiveness of European companies can also go hand in hand with the protection of the environment."<sup>281</sup>

277. Referring to the CO<sub>2</sub> stabilisation target, the paper states: "This target *can only be achieved* by lowering energy demand, improving energy efficiency, and/or changing the pattern of energy use"; *Policy Options*, para. 1 (emphasis added).

278. These measures are mainly those covered by the R & D programme in the field of non-nuclear energies, see pp. 189 seq.

279. See below, pp. 242 seq.

280. *Policy Options*, para. 2 (emphasis added).



An active environmental policy in this view creates a “first mover advantage” of European industry on the world market. “Environmental technology” becomes advanced technology and is thus associated with modernisation. The greenhouse strategy of the Commission is presented in the *Policy Options* paper as a programme of modernisation. For the Commission, there is no alternative to this modernisation. In fact, the paper does not contain different options for policy in the sense of a choice. Instead, the Commission presents a package of measures of different kinds which must be adopted together if the stabilisation target is to be reached. The tax in particular is not optional but mandatory if the stabilisation objective is not dropped altogether. The only real choice is between a higher taxation of CO<sub>2</sub> or a higher taxation of energy<sup>282</sup>.

The *Policy Options* paper does not attempt to surround a risky and far-reaching but inevitable measure (the CO<sub>2</sub>/energy tax) with some alleged benefits in order to make the inevitable less hard to adopt or to avoid the rejection of the proposed strategy because of its high costs to the economy. Instead, it conveys a new way of seeing environmental problems. In *classic environmental policy*, measures with potential losses for the economy have to be justified with the severity of the damage or the size of the risk: the greater the danger, the more society is likely to be willing to pay. *Sustainability* challenges the very notion of “loss”: Environmental protection measures can be taken and be profitable<sup>283</sup>. Modernisation does, however, not only refer to a potential for economic actors but also to the means of environmental policy. The *Policy Options* paper hardly speaks of

281. *Ibid.*, para. 4.

282. A tax on CO<sub>2</sub> (more exactly on the carbon content of fuels) hits coal the most, followed by oil and gas. As nuclear energy would not be taxed at all, a pure carbon tax would be a strong boost for nuclear power. In the long run, a pure carbon tax would heavily penalise coal and lead to a “fuel switch” to gas and nuclear energy. A pure energy tax would hit all sources of energy to the same degree and thus prevent the substitution of one energy source by another. Instead, it would work as an incentive for energy saving. The seemingly technical debate on a CO<sub>2</sub> or energy tax thus reopens the debate on nuclear energy. In order to avoid this debate, the Commission has from the outset proposed a mix of both.

283. The paper refers to the “substantial unexploited potential for an economically optimal reduction of CO<sub>2</sub> emissions” (*Policy Options*, para. 10) which had been highlighted by the Commission study on *The Economics of Policies to Stabilise or Reduce Greenhouse Gas Emissions: The Case of CO<sub>2</sub>*, II/335/90-EN, 11.10.1990.

regulation, the classic instrument of environmental policy but extensively uses terms of the market economy.

In explaining the choice of the central policy instrument, the tax, the paper states:

“Economic analysis and recent Community experience have shown the crucial importance of expectations for economic performance and efficiency, which in turn depend crucially on the clarity and timeliness of economic signals.”<sup>284</sup>

- > These are the keywords for the frame-shift in EC environmental policy. “Competitiveness of EC industry”, “correct price signals”, “internalisation of environmental costs”, and, again and again: “efficiency”, symbolise the departure from *classic environmental policy* towards *sustainability*. These references do not suggest anymore a costly environmental protection regulation which has to be adopted against the resistance of industry but remind a strategy of industrial policy designed to the EC’s competitive position in the world market and as a by-product contributing to the stabilisation of carbon dioxide emissions<sup>285</sup>.

The strong symbolic connotations of “progress” and “modernisation” contained in the *sustainability* frame as put forward by the Commission have been linked in the policy options paper to the leadership concept. The introduction of a strategy to limit CO<sub>2</sub> emissions and in particular the adoption of the tax on energy or on CO<sub>2</sub>, the paper argues, would necessitate that the Community adopts a leadership role<sup>286</sup>. “Leadership” has an internal and an external dimension. Internally, it justifies that the Community — as opposed to the member states — takes action in the field of the greenhouse effect. Although the Council had in October 1990 adopted a Community target for the stabilisation of CO<sub>2</sub> emissions, this does not

284. *Policy Options*, para. 7. Later, it goes on saying that the major advantage of a tax “would be to give the market price signals”; *ibid.*, para. 17.

285. Environmental policy as a “new industrial strategy” has indeed been discussed within the Commission and strong formulations in this respect can be found in earlier versions of the *Community Strategy*; see *Going Beyond Words: A Community Action Programme to Limit EC Carbon Dioxide Emissions*, XI/584/90, 22.11.1990, p. 2; *Community Strategy*, version 31.5.91, paras. 26-27 and pp. 217 seq.

286. See *Policy Options*, paras. 6 and 7.

automatically have legal implications in the sense that a Community *target* has to be reached by Community *policy measures*. On the contrary, a *Community target* could also be reached by the mere co-ordination of separate *national* programmes (and thus considerably diminish the role of the Commission). In other words, the fact that a policy goal (the stabilisation of CO<sub>2</sub> emissions) is to be reached by policy measures on the basis of *sustainability* does not have implications for the institutional aspects of these measures, i.e. whether they are based on *supranational integration* or on *member state dominance*.

A Community competence could be justified by the Commission by referring to possible distortions of the internal market of the EC resulting from the adoption of national policies. This is a standard justification for new Community policies and has also been used in the *Policy Options* paper<sup>287</sup>. Associating this argument with the leadership idea gives it an unusually strong symbolic element.

For the Commission, the leadership role of the Community had also to be assumed in relation to the introduction of economic instruments. A policy to limit CO<sub>2</sub> emissions requires major interventions in economic activity (which are not equal to losses), the paper argues and has therefore to be introduced carefully and gradually, if it is not to impede economic performance and efficiency. Interventions into the EC's internal market from the outset require the Community level as the appropriate institutional level. Again, the introduction of a market based strategy (i.e. an environmental policy based on *sustainability*) is associated to Community leadership. In this context, "leadership" also invokes images of the uniting of all forces for common problem-solving, in particular for huge problems such as the greenhouse effect<sup>288</sup>. United we stand to solve the world's environmental problems!

Finally, the Commission stresses the external importance of the leadership idea. The reluctance of the USA to adhere to the stabilisation objective is deplored in this regard and presented as a danger to the EC's greenhouse

287. *Ibid.*, para. 6.

288. See *ibid.*, para. 7: "A coherent Community signal would certainly have a *particularly powerful* effect in this respect" (emphasis added).

policy: due to the nature of world climate as a true collective good<sup>289</sup>, the EC by itself has only a limited influence on the maintenance of this good. Although the EC finds itself in the company of “nearly all industrialised countries” (para. 1), the “bad example” of the US might be taken by others as a pretext for non-action. “Consequently, the Community has an overwhelming interest to induce through its proper action policy changes in third countries” (para. 8): It has to take the lead of the other industrialised countries.

) In its paper on *Policy Options in View of the Community's CO<sub>2</sub> Emission Stabilisation Target*, the Commission adopted a strategy which linked *sustainability* with “leadership”. Whereas the *sustainability* frame reflects a new interpretation of environmental policy within the Commission and demands the same frame shift from the member states, “environmental leadership” links this new and far-reaching action frame to the old quest for European self assertion in world politics<sup>290</sup>. Within *sustainability*, a Community strategy to combat the greenhouse effect does not only make sense in terms of nature conservation and moral responsibility but also pays economically. *Sustainability* demands leadership of the Community, both internally and externally. On the other hand, sustainability also contributes to leadership by contributing to the modernisation of the Community's industry in the world-wide economic competition.

) *Sustainability and supranational integration*, the new action frame and the older one, are thus strongly linked in the Commission's first strategy paper. The strategy against the greenhouse effect is thus at least partly also a strategy to achieve integration, and the negotiations about the greenhouse effect in the Council are in part also negotiations about the strengthening of the Community or the assertion of member states. This link has marked the development of the Commission's own discussions until the submission of the final version of the *Community Strategy* as well as the debates in the Council.

289. On collective goods and the relationship of collective goods theory with the theoretical position put forward here, see pp. 94 seq.

290. See the remarks on pp. 177 seq.

## b) The Drafts of the Community Strategy

The first drafts of the *Community Strategy* stressed even more the mutually reinforcing nature of a CO<sub>2</sub> stabilisation policy, industrial competitiveness and environmental leadership. The political package comprising these elements is a so-called “no-regret strategy”, i.e. a strategy which serves “at the same time energy, economic and environmental goals”<sup>291</sup>. Such a strategy was supposed to achieve a “more secure” energy supply, an “improved overall environmental quality”, a “dynamic industrial strategy” and a “transport system with regard for the environment”<sup>292</sup>. The Community strategy to reduce CO<sub>2</sub> emissions is presented here as a comprehensive set of measures which only partly enter the realm of environmental policy. As the paper has been written shortly after the Gulf War, energy security is the first aim of the strategy whereas an “improved overall environmental quality” receives less attention. The argument that a CO<sub>2</sub> stabilisation policy would be a “dynamic industrial strategy” is even reinforced by pointing to the example of Germany and Japan which — according to the draft — already profit from a first mover advantage<sup>293</sup>. The necessity of an offensive industrial strategy is even further stressed by reference to the “Japanese challenge”, a favourite theme of EC technology and industrial policy. Japan has already once put in place a successful industrial strategy (in the field of microelectronics), this argument suggests, and it might start a new one in the field of the environment. In order to avoid economic inferiority in an economic sector which will be important in the future, the comprehensive strategy for stabilising CO<sub>2</sub> emissions

291. *Community Strategy*, Version 31.5.91, para. 20.

292. *Ibid.*, paras. 22-30.

293. *Ibid.*, para. 27.

contains the necessary means<sup>294</sup>. The proposed tax on energy and CO<sub>2</sub> is also presented as allowing economic reform to increase competitiveness. The revenues of the tax, the Commission recommends, should be used to lower the tax burden on labour<sup>295</sup>.

### c) The Final Community Strategy

Whereas earlier drafts of the *Community strategy* present an almost enthusiastic picture of the opportunities provided by a CO<sub>2</sub> stabilisation policy in the *sustainability* framework, the final version of the *Community strategy* which was sent to the Council contained a much more "realistic" package of reasons. The proposed action, however, remained largely unchanged. This is an indication that the Commission wanted to avoid the clash of view in the Council when an optimistic communication on the CO<sub>2</sub> stabilisation strategy, based on the *sustainability* frame, was confronted with a number of member states defining the problem in terms of *classic environmental policy* and thus having a much more negative view of its costs and benefits. In order to convince those member states, the Commission lowered its optimistic tone adopted in earlier drafts which had hardly spoken of the disadvantages of the Community strategy, or played them down as "transitory costs".

294. "An R & D that is oriented towards the development of energy efficient and environmentally benign products and processes can ensure that there is a complementarity between the CO<sub>2</sub> emission stabilisation objective, competitiveness and technological progress. The importance of this link is clearly illustrated by the decision of the Japanese government to set up, together with a number of major companies and economic organisations, a new research institute with considerable long term funding"; *ibid.*, para. 47. This paragraph also contains the organisational sources of Japanese strength, namely *common action* by government, industry and economic organisations. It is no accident that the *Community strategy* foresees collaboration and agreements with industry in order to achieve the stabilisation objective, see *ibid.*, paras. 43-46.

295. *Ibid.*, para. 75. High labour costs are often seen as a major disadvantage at least of the richer countries in the EC as compared to the US and to Japan. This argument resembles closely the proposals for an ecological tax reform put forward by one of the advocates of sustainability, Ernst Ulrich von Weizsäcker, see e.g. his *Ökologischer Strukturwandel als Antwort auf den Treibhauseffekt* and id. *Regulatory Reform and the Environment*.

2) This constitutes a change of the presentation, not of the underlying *sustainability* frame. The basic elements of the strategy as defined in the *Policy Options* paper are still present, as well as the link between *sustainability* and *supranational integration*. The EC, according to this argument, must shoulder the responsibilities stemming from its role in the world economy:

“With the completion of the Internal Market, the European Community will be the biggest economic/trading partner in the world with the potential to exercise an important level of moral, economic and political influence and authority. As such the Community owes it to both present and future generations to put its own house in order and to provide both leadership and example to developed and developing countries alike in relation to protection of the environment and the sustainable use of natural resources.”<sup>296</sup>

Given its responsibilities, the EC has “to fill a current vacuum in global foreign policy and a catalytic role in regard to the Global Climate Convention to be adopted at the UNCED Earth Summit in June 1992” (para. 4). Thus, the Commission has decided to make “leadership” one of the central arguments of its strategy.

Virtually the entire remainder of the document is devoted to economic discussions in order to refute the expected claim of the basis of *classic environmental policy* that the *Community Strategy* would involve enormous costs, hamper economic growth and endanger the position of the EC’s industry on the world markets. To this end, the principle of a no-regret strategy, i.e. to adopt measures which would not involve major overall economic costs but have benefits in other policy areas is maintained (para. 8) although the language used is much more careful, avoiding the strong wordings used in the earlier draft of the strategy which reflected much more clearly the underlying *sustainability* frame. The key arguments in favour of the tax are still strongly embedded in *classic environmental policy*. Although the tax revenue would be enormous (some 50 billion ECU per

296. *Community Strategy*, para. 4. If not otherwise indicated, all further references are made to this document. The wording is almost literally taken from the *Environmental Imperative Declaration* of the European Council of June 1990, reprinted in *Europe Documents*, No. 1632/1633, 29.6.90. pp. 10-12.

year), the Commission claims that its gradual introduction and the requirement of fiscal neutrality would lead only to a small increase in inflation (0,3 - 0,5 per cent and year) and a small reduction of economic growth (0,05 - 0,1 per cent). The economic modelling exercises on which these estimations are based do not take into account positive effects in other policy areas (para. 29). They are thus presented as conservative estimates on the basis of *classic environmental policy*. As a whole, still, the Commission claims that the "overall strategy ... can stand on its own and have positive benefits for the Community" (para. 36).

The final version of the *Community strategy* departs from earlier drafts because of the less radical exposure of the *sustainability* frame. In order to find political acceptance in the Council, it introduces three elements into the strategy: complementary national programmes, burden sharing and exemptions for energy intensive industries. The two former refer to elements of *member state dominance*, the latter is a qualification of *sustainability*. The concept of burden sharing reflects the acknowledgement that the introduction of the greenhouse strategy would create transition costs which are likely to hit most heavily the less developed countries in the EC. Burden sharing evokes a basic bargain of the EC which consists in the agreement of the less developed EC countries (Spain, Portugal, Greece, Ireland) to accept policies which put heavy burdens on them on the condition that the more advanced countries (France, the Benelux countries, Denmark, Germany and the UK) provide compensation, usually in the form of financial redistribution by the EC's structural funds<sup>297</sup>. Although the extent of burden sharing is not quantified, the Commission acknowledges its necessity and explicitly mentions the structural funds in this context<sup>298</sup>.

297. Examples are the introduction of the Internal Market from which the richer countries were expected to profit most. On this occasion, the bargain mentioned above was even included in the EEC Treaty as the principle of "economic and social cohesion", see its Title V. The same pattern is also valid for environmental policy. During the negotiations on the environmental chapter in the Maastricht Treaty, Spain in particular insisted on the setting up of an EC fund to finance environmental protection measures as a compensation for the introduction of majority voting in environmental policy. This "cohesion fund" is indeed foreseen in the Maastricht Treaty (art. 130d).

298. The introduction of burden sharing also acknowledges the failure of the earlier concept of "target sharing" which had consisted in fixing individual CO<sub>2</sub> emission targets for each country in the year 2000; see EC Commission: *Proposal for a Council Decision on the Sharing out of CO<sub>2</sub> Emissions Among Member States in*



Burden sharing invokes the idea of Community solidarity in the case of far-reaching measures and is thus a necessary ingredient of compromises in the Council. It is also in indication that the Commission did not consider its "offensive industrial strategy" of earlier drafts of the Community strategy convincing enough to argue that burden sharing (which invokes the resistance of the more developed member states which have to pay the bill) is not necessary at all because the temporary burden created by the imposition of the strategy would easily be outweighed by the benefits resulting from it.

Complementary national measures also concern integration but not in the form horizontal redistribution but in the form of the vertical balance of power between the national and the European level. Whereas the earlier drafts of the Commission's strategy had foreseen a strong Community dimension of the proposed strategy in line with *supranational integration*, leaving little space for national measures which were already considered in some member states<sup>299</sup>, the final version of the strategy explicitly acknowledged the legitimacy and necessity of these plans. By doing so, it opened up possibilities for a further differentiation of the CO<sub>2</sub> stabilisation policy in terms of measures. As a whole, however, the distinctive feature of the greenhouse strategy with regard to *supranational integration*, the claim for environmental leadership, has been maintained.

The third element introduced by the Commission in order to make its strategy acceptable in the Council is an exemption of energy-intensive industries from the proposed energy/CO<sub>2</sub> tax. This exemption is the result of the intensive lobbying campaign of industry against the proposed tax which had convinced those services of the Commission which shared the *classic environmental policy* frame. Exempting energy-intensive industries from

*Order to Achieve the CO<sub>2</sub> Stabilization Community Target by the Year 2000*, versions of 29.5.91 and of 27.6.91. This concept would have put a stricter obligation on individual member states than an overall Community target. Due to the resistance of France, Italy and the UK, it was dropped from earlier drafts; see Jachtenfuchs/Huber, *Institutional Learning in the European Community*.

299. For the German plan, see Bundesminister für Umwelt, *Bericht der Bundesregierung an die Kommission der Europäischen Gemeinschaften über das nationale Programm zur Reduzierung der energiebedingten CO<sub>2</sub>-Emissionen und anderer Treibhausgase bis zum Jahre 2005*, June 1992. Belgium, Denmark, and the Netherlands had also pledged to reduce their CO<sub>2</sub> emissions.

the proposed tax contradicts the Commission's strong programmatic statements on the internalisation of environmental costs (which are the highest in the sectors now exempted) and on the polluter-pays-principle<sup>300</sup>. These conceptual contradictions reflect the compromise nature of the Community strategy which had been debated among the Commission's services. Within the Commission, only some DGs shared the *sustainability* frame whereas those departments associated with traditional industrial policy — and thus with the complementary image of *classic environmental policy* from the point of view of economic policy —, such as the directorate general responsible for the Internal Market, resisted the wholehearted adoption of *sustainability* as the basis for the Community strategy and obtained an exemption at least in a sector considered vital by them.

As a whole, the *Community strategy* reflects a competition of frames within the Commission. In large parts, it is based on the *sustainability* frame and on a link of this frame with *supranational integration* in the form of the adoption of the environmental leadership principle. The diffusion of the *sustainability* frame in the Commission is, however, not complete. A core element of the strategy, the exemption of energy intensive industries from the proposed CO<sub>2</sub>/energy tax, reflects a persistence of the *classic environmental policy* frame as well as a desire to avoid putting forward a radical strategy in order to ease its adoption in the Council where *classic environmental policy* prevailed.

##### 5. The Commission's Problem Definition

The Commission's strategy to reduce CO<sub>2</sub> emissions has been conceived on the basis of a *sustainability* frame. Within the Commission, *sustainability* was particularly successful because it allowed new and different policies while at the same time contributing to further integration. For the Commission, *sustainability* was thus linked to *supranational integration*. The final version of the "Community Strategy" introduced elements which are characteristic for *classic environmental policy* only for tactic reasons, in

300. It should be noted, however, that energy-intensive industries were exempted from the tax but not from the any measures under the Community strategy; see *Community Strategy*, final version, para. 22.

order to ease the chances of the policy package to get accepted within the Council and by industry, and, though to a lesser degree, by the industry-oriented directorate-generals of the Commission.

*Sustainability* and the corresponding frame in the field of energy policy, *energetics*, allowed to reconceptualise some old policies and to invent new ones in a way that was able to cope with new problems (the greenhouse effect), proved to be resistant against challenges (the increase in oil prices preceding the Gulf war) and had, after all, the potential to further integration. As a result of the shift from *classic environmental policy* to *sustainability* within the Commission, the emerging strategy to deal with the greenhouse effect was to a large degree decoupled from natural scientific knowledge. At the latest since the end of 1990, natural sciences have not played any role in the process of framing the greenhouse effect or in the policy proposals based on this problem definition.

Instead, energy policy occupied a prominent place in the emerging strategy. Explaining this increased role of energy policy in terms of “issue linkage” would, however, give only a partial explanation of its prominence without being able to answer the question why it was precisely energy policy that became so important in the Commission’s strategy. A possible answer would be to point to the crucial role of energy production as a source of carbon-dioxide emissions. Any strategy to stabilise or to reduce carbon-dioxide emissions, according to this argument — which was also used by the Commission —, had to address the energy issue. However, strong reasons speak against the inclusion of energy policy into a strategy to deal with the greenhouse effect. Community energy policy had been agonising for two decades, despite strong reasons for such a policy. The turbulences on the oil markets at the time of the adoption of the Community strategy only highlighted the experiences of the past. Linking the fight against the greenhouse effect to energy policy in the way the Commission has done it in its “Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency” would thus risk the failure of the entire strategy instead of enhancing its chances of adoption. Thus, the inclusion of energy policy into the Community Strategy cannot be explained by an act of choice but by the redefinition and reconceptualisation of these policies within the Commission.

In the case of energy policy, this change offered new possibilities not only for the Commission's emerging strategy to deal with the greenhouse effect but at the same time gave new directions for energy policy by re-interpreting it in a different conceptual framework. The key for the understanding of this redefinition is the link of energy policy and *supranational integration*. The new *energetics* frame did not only provide the basis for a new energy policy but for a new *Community* energy policy. Improving energy efficiency, the central element of this strategy, was not so closely linked to the preservation of national sovereignty as earlier attempts of energy saving with the aim of reducing the EC's dependency from imported fuels had been. Whereas this policy had been conceived in a *conservation* framework of energy policy, "improving energy efficiency" as a policy goal avoided the issue of national energy security and tried to achieve similar aims by other means. In this logic, the improvement of energy efficiency did not appear as a strategy of "high politics", closely linked to national security, but as a policy of industrial modernisation which would at the same time reduce the EC's dependency from outside energy and contribute to environmental protection. In this conceptual framework, energy policy could contribute to technological modernisation, one of the professed aims of the Commission's economic policy.

A new energy policy as a policy of economic and industrial modernisation supported the idea of the European Community as a new type of international organisation or state-like entity, no more dominated by traditional concerns of foreign and security policy but instead presenting itself as a "civilian power"<sup>301</sup>. In these "modern" and "civilian" domains, the EC attempts to provide leadership. One reason why the leadership idea did not emerge in traditional areas of foreign policy is the obvious fact that the EC does not have the means to challenge the position of the United States in these areas. A more profound reason is that "environmental leadership" corresponds to the self-definition of the EC as it was conceived by the Commission. Leadership in the field of the environment is again leadership in a modern policy field. As in the UNCED process, the field in which the EC tried to apply the leadership concept externally, environment and

301. See *Zivilmacht Europa*. For a critical view of this concept, see Galtung, *The European Community: A Superpower in the Making* and id., *Europe in the Making*.

development were closely linked, leadership in the field of climate change policy was also a contribution to the North-South dialogue and a means of showing the EC's readiness to pursue a policy of co-operation and solidarity with the South. As in the field of energy policy, where *energetics* could justify new policy measures by the *Community*, "environmental leadership" resonated well with *supranational integration*.

This is also true for the proposal of a tax on carbon-dioxide and on energy use as the most important single policy measure to meet the self-imposed goal to stabilise CO<sub>2</sub> emissions of the EC by the year 2000. The tax fitted to the vision of the policy-making competencies of the EC conceived from a *supranational integration* point of view and at the same time was in accordance with the strong frame of *liberal market economy* within the Commission. At the same time, it was — at least in principle — able to help solving the implementation problems of EC environmental legislation. The tax made it possible to consider environmental problems and the fight against them from the perspective of the market economy and thus extended the general *raison d'être* of the European *Economic Community* to the field of the environment which had since its beginning been characterised by strong regulation instead of deregulation which was characteristic for the Internal Market programme. By doing so, the proposal of the tax and the emerging frame of *sustainability* for the Commission's approach to environmental policy included the more economic- and industry-oriented directorate-generals of the Commission into the policy-process and thus opened the actor space of the Commission's greenhouse policy which was not restricted to the environmental policy community anymore. Only for tactic reasons, the final strategy paper of the Commission dropped the presentation of the strategy as a policy of industrial modernisation (which had still been included in earlier drafts) and exempted energy-intensive industries under certain conditions from the proposed tax.

In the end, the debate and the problem had become an economic one. The questions asked were no more directed at the natural scientific nature of the problem. Instead, they attempted to find out which type of action was efficient to cope with the problem at stake but could at the same time be justified on other grounds (e.g. by referring to increased standards of living, to the international competitiveness of the EC's industry, to the security of

energy supply or to the enhanced international status of the EC). The reason for this frame shift is that the new frame of *sustainability* which now characterised the Commission's way of presenting the greenhouse effect did not only provide better (political) solutions to the initial problem. In addition, it allowed a better integration of the Commission's policy with two fundamental frames of the EC from the Commission's point of view, namely *liberal market economy* and in particular *supranational integration*. As a result of the link to the latter, the Commission's greenhouse policy and the tax in particular involved more than a single policy field but the identity of the Community. For the Commission, this has been a major driving force behind its proposals. In the Council, it later became a main reason for the resistance against the Commission's strategy.

### G. The Problem Definition After the "Community Strategy"

After the unanimous adoption of the "Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency" by the Commission in September 1991, the Commission had presented the greenhouse effect and the policy measures deemed necessary in order to cope with it in terms of *sustainability*. After the publication of the "Community Strategy", the Commission elaborated measures to implement the strategy paper. In addition, the strategy and the proposed measures were discussed in the

- > Council as well as by industry. The task of this section is to analyse the different problem definitions of Commission, Council, and industry. After the publication of the Commission's strategy paper, negotiations on the
- > future greenhouse policy of the EC were conducted on this basis. Instead of presenting an analysis of this process as a process of bargaining (or as a multi-level game), I will try to present this phase of the EC's greenhouse policy as a process of arguing in which different actors try to promote new
- > problem definitions viz. new action frames. The main thesis is that the Commission has adopted a new problem definition — *sustainability* — which is slowly and hesitantly being accepted by parts of the Council and by industry. This new problem definition is not limited to the greenhouse effect but extends to environmental policy-making as such. In other words, a learning process is taking place in the EC which involves a reconceptualisation of environmental policy making in general and which is

promoted by the Commission. The Commission, on the other hand, is most advanced in this learning process because of its placement in the EC's institutional structure.

A caveat is important here. The subject of this study is the process of defining and redefining the greenhouse effect in the EC system. It is not a case study on the introduction of a CO<sub>2</sub> tax. Although the plan of the introduction of a carbon/energy tax has played a most prominent role in the public debate after the publication of the "Community strategy", the tax is a policy tool adopted *on the basis* of a new problem definition and even an important means to put this problem definition into political practice but it is not the problem definition itself. The fact that the tax — at the time of the writing — has not been adopted as it was proposed by the Commission is without doubt a defeat for the latter but it does not put into question the new problem definition and the learning process going on in EC environmental policy.

### *1. The Commission: Towards Sustainability*

The first part of this section deals with the way the Commission's new problem definition of the greenhouse effect found its way into the proposals for the implementation of its strategy paper. As a whole, these proposals make important concessions to *classic environmental policy*, reflecting on the one hand the on-going debate within the Commission and on the other hand tactic moves to ease the adoption of these measures. On the other hand, *sustainability* in this phase became the basis of the Commission's approach to environmental policy as a whole and in particular to those areas which are relevant for the greenhouse effect. This is the subject of the second part of this section.

#### **a) Implementing the Greenhouse Strategy**

Due to its institutional and possible economic implications, the proposed tax on CO<sub>2</sub> emissions and on energy became the most controversial part of the

Commission's strategy<sup>302</sup>. It had been introduced by Environment Commissioner Ripa di Meana as a means to promote *sustainability* and EC leadership in global environmental affairs. The tax was conceived as the predecessor of a whole series of economic instruments for environmental protection. If the tax was accepted despite its far-reaching character on the background of the threatening greenhouse effect, DG XI was convinced, there would be no further resistance in the Council or in industry-oriented DGs of the Commission. For this reason, DG XI and DG XVII, the main proponents of the tax within the Commission, were willing to make virtually any sacrifice in the concrete shape of the tax if only the principle was adopted. The intensive lobbying of industry and the strong resistance of some member states<sup>303</sup>, as well as the resistance of industry-oriented directorate generals within the Commission, such as DG XXI and DG III, had already led to the exemption of "energy-intensive industries" from the proposed tax in the first version of the Community strategy<sup>304</sup>. From the point of view of the internalisation of external costs (i.e. from the point of view of *sustainability*), this is a flagrant contradiction as those industries which contribute most to the greenhouse effect are not forced to shoulder the costs they incur on the environment. It is instead the result of the balancing of environmental benefits and economic disadvantages which is typical for *classic environmental policy*. The fact that energy-intensive industries were exempted from the tax highlights that the DGs promoting *sustainability* had been unable to convince their colleagues that a modernisation of taxation by introducing environmental factors would also

302. The operational measures of the original strategy paper (SEC (91) 1744) are presented in an abbreviated form in *Eine Gemeinschaftsstrategie für weniger Kohlendioxidemissionen und mehr Energieeffizienz*, COM (92) 246, 1.6.92. Although the title has remained unchanged, this document is rather different from the first version which will still be described in this study as the "Community Strategy". The later document, presented shortly before the Rio conference, is the conceptual envelope for four specific proposals to implement the CO<sub>2</sub> stabilisation strategy, namely *Vorschlag für eine Rahmenrichtlinie über die Energieeffizienz (SAVE)*, COM (92) 182, *Spezifische Aktionen zur Vergrößerung des Marktanteils der erneuerbaren Energieträger (ALTENER)*, COM (92) 180, 29.6.92, *Vorschlag für eine Entscheidung des Rates über ein gemeinschaftsweites Beobachtungssystem zur Messung der Emissionen von CO<sub>2</sub> und anderen Treibhausgasen*, COM (92) 181, 1.6.92, and *Vorschlag für eine Richtlinie des Rates zur Einführung einer Steuer auf Kohlendioxidemissionen und Energie*, COM (92) 226.

303. See the next two sections for more details.

304. See SEC (91) 1744, para. 22



lead to economic modernisation (e.g. to the development of less energy-consuming technologies for the industries concerned). This part of the proposal thus reproduces the opposition between the environment and the economy which characterises *classic environmental policy*.

The concrete proposal of the tax, presented shortly before the Rio summit in June 1992, went even a step further in the direction of *classic environmental policy* by adding the "conditionality" clause to the proposal. "Conditionality" in this context means that the EC makes the introduction of the tax dependent of the introduction of measures with equivalent financial impacts by the other member states of the OECD, in particular the US and Japan. Although the possibility of a later unilateral introduction of the tax is not ruled out<sup>305</sup>, the conditionality clause invalidates the Commission's *environmental* leadership concept by making one of its core elements in fact dependent on the decision of the United States which had in the past repeatedly rejected the tax proposal. As a result, Commissioner Ripa di Meana, after having invested a lot of personal prestige into the leadership concept<sup>306</sup> and the tax proposal refused to participate in the Rio summit and eventually left his office. The EC's position at UNCED was thus considerably weakened.

305. At least not in the statements of Environment Commissioner Ripa di Meana and Energy Commissioner Cardoso e Cunha, see *Agence Europe*, No. 5729, 14.5.92, pp. 7-8. The wordings of the respective texts do not mention this possibility. The second version of the "Community Strategy" states that the introduction of the tax will "in the present state" remain dependent on the introduction of similar measures by other OECD countries; see COM (92) 246, para. 28. The tax proposal repeats this argument in its explanatory memorandum; see COM (92) 226, p. 4, and in the preamble of the draft directive as well as in its first article.

306. And also a lot of polemics which can be illustrated by the following statement which is not the only one of this kind: "The statements by President Bush, in the middle of his electoral campaign, confirming his hostility to firm commitments, tied to a binding calendar to fight against CO<sub>2</sub> emissions, are an attack to the very heart of the Rio Conference. This, more than ever today, risks turning into a simple oratory exercise, whose uselessness and vacuity will clearly not be compensated by the recently announced presence of Mr. Bush in Rio. It is therefore essential and more important than ever that the European Community confirms its commitment to stabilising CO<sub>2</sub> emissions by the year 2000 with concrete, credible and operational measures"; *Agence Europe*, No. 5697, 26.3.92, p. 7. See also *ibid.*, No. 5729, 14.5.92, pp. 7-8 and *ibid.*, No. 5734, 21.5.92, pp. 11-12, for a restatement of the leadership idea by Ripa di Meana.

According to the Commission's estimations, CO<sub>2</sub> emissions in the EC are likely to rise by twelve per cent compared to 1990 levels in the absence of any measures. "Conventional" measures (energy saving, research and technological development) are supposed to lower this projected increase by 5,5 per cent. The remaining 6,5 per cent have to be achieved by fiscal measures and national programmes complementary to the Community programmes<sup>307</sup>. National programmes, which were originally given a minor place in the Commission's strategy<sup>308</sup>, occupy a more important role as a consequence of the discussions on "subsidiarity" preceding and following the Maastricht summit of December 1991. In this respect, the Commission had to redefine its own role: although in principle competent for dealing with global environmental problems, the shift from *supranational integration* towards *member state dominance* has had its consequences. During the elaboration of its strategy, the Commission had thus to redefine its response strategy by taking the new interpretation of subsidiarity into account. This change cannot be explained from the nature of the problem (the greenhouse effect) but only with reference to the conceptualisation of European integration by the Commission on the one hand and the Council (to varying degrees) on the other. In theory, the EC's stabilisation target could be met either by exclusively relying on Community policy instruments (e.g. a tax, energy-saving programmes, etc.) or by merely fixing national targets which, if taken together, meet the overall target. The choice of either possibility and of the varying mixtures between the two extremes depends instead on the way in which the role of the European Community is seen with respect to the nation state, in other words, how integration is framed. The debate about the role and structure of the EC, reanimated by the Maastricht summit, has thus consequences for the EC's greenhouse policy. Although the Commission favours *supranational integration* which implies common problem-solving and international solidarity, it increasingly took account of the strengthening of *member state dominance* which insists on the priority of national sovereignty over supranational problem-solving.

307. See COM (92) 246, para. 16.

308. In fact, in mid-1992, there were only four national programmes; the German programme is presented in *Bericht der Bundesregierung an die Kommission der Europäischen Gemeinschaften über das nationale Programm zur Reduzierung der energiebedingten CO<sub>2</sub>-Emissionen*.

The tax proposal has met with considerable resistance both within and outside the Commission. Although those DGs of the Commission which were in favour of the tax tried to promote it in parallel with a reinterpretation of its significance (i.e. together with the *sustainability* frame) as the only means to achieve its acceptance, they only achieved an acceptance of the principle of the tax in the context of a strategy which is in large parts marked by *sustainability* but has also strong elements of *classic environmental policy*, in particular with regard to the economic consequences of the tax. With regard to the tax, the new version of the Community strategy and the tax proposal itself are transitory documents reflecting an incomplete frame shift. Therefore, the new version of the Community strategy in particular looks incoherent and even contradictory<sup>309</sup>.

With regard to energy, the *sustainability* frame is more visible in the concrete policy proposals. Energy policy had from the outset been a central element of the Commission's greenhouse strategy. In order to put it into practice, the Commission proposed two types of measures, namely the

309. Whereas the document states in line with earlier arguments on the basis of *sustainability* "Die vorgeschlagenen Maßnahmen [including the tax, M.J.] fördern eine rationellere Energienutzung und werden somit wesentliche Vorteile für die Wirtschaft der Gemeinschaft mit sich bringen, selbst wenn die positiven Auswirkungen auf die Umwelt außer Acht gelassen werden. Der Nutzen für die Wirtschaft kann noch verstärkt werden, wenn die Mitgliedstaaten ihre fiskalische Struktur durch eine Neutralisierung der Steuerbelastung insgesamt so anpassen, daß die wirtschaftliche Effizienz gesteigert wird. ... Die makro-ökonomischen Auswirkungen werden im Hinblick auf die Konjunkturentwicklung, den Arbeitsmarkt und die Inflation aller Wahrscheinlichkeit nach schwach ausfallen"; COM (92) 246, para. 19. After the statement that the proposed measures including the tax will have "significant benefits" for EC industry and almost no negative impacts on the economy, the Commission declares a few pages below: "Somit sollte klargestellt werden, daß die Gemeinschaft nicht bereit ist, sich auf das Risiko einzulassen, daß ihre Anstrengungen aufgrund mangelnder internationaler Kooperation mit den bedeutendsten industriellen Konkurrenten wirkungslos bleiben. ... Die Einführung der Steuer wird deshalb im gegenwärtigen Stadium davon abhängig gemacht, daß die anderen Mitgliedstaaten der OECD eine ähnliche Steuer bzw. Maßnahmen mit entsprechenden finanziellen Wirkungen einführen"; *ibid.*, paras. 27 and 28.

promotion of renewable energy sources<sup>310</sup> and increased energy saving. The new proposal on energy saving has been proposed in the framework of the existing SAVE programme<sup>311</sup>. Here, *supply* as the old energy policy frame has been replaced by *energetics* and elements of *conservation*.

As a result of the increasing influence of the discussion on the internalisation of environmental costs (i.e. of an element of *sustainability*), the Commission moved even further towards *energetics* by presenting a programme for the promotion of renewable energy sources (ALTENER). In its own understanding, the programme does not attempt to give subsidies to energy sources which are not profitable under market conditions for environmental reasons but endeavours to correct market failures which make these energy sources uncompetitive<sup>312</sup>.

According to *energetics*, market failures in the field of energy policy are not only to be corrected by active policies such as the ALTENER programme but also by modifications of the tax structure. Whereas the CO<sub>2</sub>/energy tax has been designed to attribute environmental costs to those who produce them, tax reductions for environmentally benign sources of energy serve the same effect and follow the same reasoning. In its proposal to reduce the rates of excise duties on motor fuels from agricultural sources, the Commission is anxious to explain this argument:

“The tax advantage proposed cannot therefore be regarded as aid to a sector in structural deficit, it being designed instead to create conditions

310. “Renewable” energy sources mainly include solar, wind and hydro-electric energy, as well as energy from “biomass”, i.e. from the transformation of agricultural products. Renewable energy sources are to be distinguished from fossil energy sources and from nuclear energy. Without insisting on technical details, it is important to keep in mind that renewable energy sources emit no or very few CO<sub>2</sub>.

311. See COM (92) 182.

312. “Jedenfalls muß bedacht werden, daß die üblichen wirtschaftlichen Vergleiche mit den fossilen Brennstoffen hinken, weil in ihnen ausschließlich die direkten Kosten berücksichtigt sind. Wenn alle betriebsfremden Kosten, die die Gesellschaft leisten muß (Schäden für Umwelt und Gesundheit, Sozillasten), berücksichtigt würden, würde die wirtschaftliche Bilanz wesentlich anders ausfallen und den verstärkten Einsatz alternativer Energiequellen fördern”; *Spezifische Aktion zur Vergrößerung des Marktanteils der erneuerbaren Energieträger - ALTENER*, COM (92) 180, 29.6.92, para. 17.

favourable to the investment necessary to enable an industry which will eventually be intrinsically viable to take off.”<sup>313</sup>

As a result of the spread of *sustainability* in the debate about the greenhouse effect, EC energy policy is to a large extent characterised by *conservation* and even *energetics* instead of the *supply* frame. This does not mean that traditional goals of energy policy, such as the security of supply, have completely vanished from the political agenda. Instead, they have become reformulated and reinterpreted in a new conceptual setting. After dropping the distinctive feature of *supply*, the requirement to meet the energy demands of the economy which were considered to be “correct” and “natural”, the new frame of *energetics* is able to integrate old goals as well as new ones. The old goal of the security of supply is thus easier to achieve if it does not mean the security of *any kind* of supply irrespective of its source. If the split among energy sources is subject to change through active government intervention (or by the EC), the security of supply can be better met by promoting domestic energy sources, such as renewables, instead of having to rely on imported fuels from unstable regions of the world.

*Energetics* also allows to achieve new goals, such as to find outlets for the surpluses of the EC’s common agricultural policy (CAP). In the course of the new CAP reform<sup>314</sup>, farmers are expected to produce lower quantities of products for human consumption in order to limit subsidies and to avoid trade conflicts within the GATT. One way to compensate them for the resulting loss of income is to produce agricultural goods for *industrial* consumption<sup>315</sup>. The frame shift from *supply* to *energetics* should thus not be misinterpreted in an idealistic way, for instance in the sense that *energetics* would be better for the environment and that policies adopted with reference to *energetics* were designed to serve environmental purposes first. However, the opposite conclusion should also be avoided, namely that the “real” reason behind the EC policy to promote the use of agricultural

313. *Proposal for a Council Directive on Excise Duties on Motor Fuels From Agricultural Sources*, COM (92) 36, 28.2.92, reprinted in *Europe Documents* No. 1768, 4.4.92, p. 3.

314. This cannot be discussed in detail here. The Commission’s reform plan is published in COM (92) 100

315. See *Biomass - A New Future?*, SEC (92) 232, 31.1.92 and Caspari/Neville-Rolfe, *The Future of European Agriculture*.

energy sources were the "agricultural lobby", in other words, interests instead of ideas.

Analysing frames does not exclude the existence of organised interests with specific goals (such as agro-industrial firms engaged in the production of agricultural fuels in an alliance with farmers' organisations searching for new income possibilities). The crucial point is that the new frame can integrate this concern much more easier than *supply*. In addition, it gives an important symbolic device to the proponents of agricultural energy sources ("bio-fuels", "bio-mass"). In this way, fuels, a source of pollution and exploitation of depletable resources, become less harmful and even contribute to the solution of a major environmental problem (the greenhouse effect). So do their producers which are often associated with overproduction and subsidies. "Bio-fuels" can exist within *supply* but they remain hopelessly uneconomic. Only the *energetics* frame includes a recalculation of economic costs and benefits and thus makes it possible to engage into a large-scale exploitation of agricultural energy.

#### b) The Programmatic Change of Environmental Policy

Within the Commission, *sustainability* has increasingly marked the strategies to deal with the greenhouse effect. For DG XI and DG XVII in particular, it became an action frame which allowed to redefine old goals and policies and add new ones which had been unsuccessful in the framework of *classic environmental policy* or even inconceivable. Whereas the proposal of a combined CO<sub>2</sub>/energy tax, originally intended as a spearhead of *sustainability*, had in reality been at least partly counterproductive in the sense that the resistance against the proposal of a tax extended to resistance against the frame behind it, *sustainability* became the basis for a fundamental programmatic shift of EC environmental policy. In other words, the learning process which had started with regard to the Commission's greenhouse policy became generalised to environmental policy-making.

This change, which had been prepared by the discussion on economic instruments in environmental policy, culminates in the Fifth Environmental Action Programme. The title of the programme, which sets

out a strategy for the EC's environmental policy up till the end of the decade, is already a programmatic statement: "Towards Sustainability". Whereas earlier environmental action programmes had mainly consisted in an inventory of environmental problems and a list of legal measures to tackle them<sup>316</sup>, the Fifth Action Programme is much more programmatic in character and puts great emphasis on laying the conceptual foundations of a new approach to environmental policy-making. The new EC environmental policy conceived on the basis of this programme shall enable the Community to take the leadership role in international environmental affairs which had originally been linked to its greenhouse policy and the carbon/energy tax<sup>317</sup>.

"Leadership" has thus been transferred from a specific issue (the greenhouse effect) to the totality of EC environmental policy. As an indication of the trend to base the EC's environmental leadership claims decreasingly on action in the international field but on the totality of its policy, the brief section of the programme on the international role of the Community is confined to a general statement of some problems of a world-wide nature, such as resource depletion, pollution and population growth. The reported urgency of those problems does not find an expression in the instruments the EC has at stake to contribute to the solution of those problems, except for a general reference to the Maastricht Treaty on the European Union which gives the EC an explicit competence to deal with global environmental problems (Art. 130r, 1)<sup>318</sup>. "Leadership" is not based any more on concrete policy measures as originally intended with the unilateral introduction of the CO<sub>2</sub>/energy tax, but could be labelled "conceptual leadership" instead.

On the other hand, virtually any aspect of the entire programme is discussed with reference to subsidiarity. Subsidiarity also finds its expression in the concept of "common responsibility" which had already appeared in the environmental imperative declaration of the Dublin

316. See the first AP, OJ C 112, 20.12.73, the second AP, OJ C 139, 13.6.77, the third AP, OJ C 46, 17.2.83 and the fourth AP, OJ C 328, 7.12.87.

317. See *Für eine dauerhafte und umweltgerechte Entwicklung*, COM (92) 23, Vol. II, 3.4.92, p. 5.

318. See COM (92) 23, Vol. II, pp. 87 seq.

European Council of June 1990<sup>319</sup>. “Common responsibility” means that problems shall as far as appropriate be tackled by the three levels of government in the EC (Community, member states, and local or regional authorities) as well as by economic enterprises and the consumer or the public. In contrast to earlier notions of “common problem solving” which had justified a shift of competencies to the highest institutional level (i.e. to the Community level) by referring to the magnitude of the problem which could not be solved by nation states alone, “common responsibility” indicates a downward shift of the preferred institutional level for problem-solving<sup>320</sup> and does not anymore automatically reserve a major role for the Community<sup>321</sup>. “Leadership” as a concept for the EC’s greenhouse policy has vanished from the part dealing with climate change<sup>322</sup>; with respect to UNCED, the EC does not attempt any more to play a leading role but merely an “active” one<sup>323</sup>. As a result of the debate on subsidiarity and the institutional level of problem solving, the Commission had considerably weakened its leadership concept and extended its scope. “Leadership” in international environmental affairs does not anymore convey the image of the Commission leading the Community alongside with the Community’s leadership role with regard to the US and Japan. In the Fifth Action Programme, “leadership” has been transformed from an active policy to a state of affairs. Instead of leading the world towards a sustainable future, the Commission now only proposes a concept of environmental policy-making which — if it is applied *internally* — will enable the Community to lead a ranking of states and organisations with regard to environmental policy-making. In terms of the framing of integration, this is an indication

319. The declaration is reprinted in *Europe Documents*, No. 1632/1633, 29.6.90. pp. 10-12. The declaration is analysed in more depth on pp. 182 seq. of this study.

320. See in particular the table on p. 81 of the programme, COM (92) 23, Vol. II. A similar table for the distribution of competencies in global environmental affairs is reprinted on p. 98. As global environmental problems are a Community competence by definition in the Maastricht Treaty, the Community’s role is more pronounced in this field than in Community-wide environmental policy measures.

321. As far as it is possible to assess the consequences of this statement at present, it is no mere rhetoric; see for instance the proposal for a Community Eco-Audit Scheme, COM (91) 459, of January 1992 and in particular the proposal for a Council directive on the limitation of carbon-dioxide emissions (see footnote 378, p. 266, and the related commentary).

322. See COM (92) 23, Vol. II, p. 90.

323. See *ibid.*, p. 99.



of a weakening of more radical positions on the basis of *supranational integration* and at the same time an attempt to avoid *member state dominance* which would in the last resort reduce the Commission's role to the one of a secretariat of an international organisation. With regard to the cognitive aspect of the frame, environmental problems are not seen anymore as almost automatically demanding a harmonised Community response. The symbolic element of common problem-solving has been transformed from the image of an alliance of nation-states under the leadership of the Commission (according to the motto "united we stand") to the common responsibility of three central groups of society, namely the state (including the EC-level), the economy (enterprises) and the citizen (as consumer or organised in non-governmental organisations). "Leadership" can thus formally be upheld, and concessions to *member state dominance* be made with a minimum loss of Community involvement in environmental policy.

Concerning the frame for environmental policy-making, the Fifth Action Programme is entirely marked by *sustainability*. The programme's main aim is to achieve the integration of environmental policy considerations into other policies of Community relevance. This demand, already formulated by the Single European Act in 1986 (art. 130r, 2), but pursued with little success in the meantime, is difficult to achieve in *classic environmental policy* which separates environmental and economic concerns, policies, and actors. However, it forms the core of *sustainability* which considers the environment and the economy as an inseparable unit. Central new elements of the programme have come from the debate on the greenhouse effect and the slow emergence of *sustainability* in this context. The overwhelming importance of climate change as *the* "environmental" problem of the coming decades is mentioned frequently in the document. Energy policy, one of the priority areas of the EC's greenhouse policy, is one of the five priority areas which shall be reformed in the direction of *sustainability*, alongside with transportation which is also gaining importance in the debate on the greenhouse effect.

Besides influencing the choice of two out of five priority areas of the new programme, the debate on the greenhouse effect has also influenced the choice of instruments and is an important reason for the emphasis on the

correction of market failures and "environmentally efficient pricing"<sup>324</sup> in the programme. Whereas the earlier environmental action programmes had almost exclusively relied on command-and-control methods (i.e. on law) to correct market failures leading to pollution and resource over-consumption, the new action programme attempts to correct market failures by "market conform" instruments such as taxes, levies, tax incentives, subsidies and environmental auditing<sup>325</sup>. A crucial element in the political feasibility of the proposed measures are costs. In the same way as it has been tried with regard to the greenhouse effect, a new "environmental" cost-benefit analysis is intended to contribute to a different assessment of advantages and disadvantages of environmental policy measures or of the reform of the five key policies enumerated in the document. "Traditional" command-and-control measures (on the basis of *classic environmental policy*) in most cases are perceived as costs in the "traditional" economic framework (a major reason for the implementation problems of EC environmental law). *Sustainability*, as it is put forward in the Fifth Action Programme, sees environmental protection as an investment necessary to maintain the long-term profitability of society. Society has to extend the market logic to the environment if it is to maintain its wealth:

"Es ist jetzt deutlich geworden, daß das heutige und zukünftige Einkommen der Gesellschaft und die dauerhafte Produktion von Waren und Dienstleistungen nicht nur vom Vorhandensein von Kapital und Arbeit, sondern auch von Naturschätzen und Umweltgütern abhängt. Werden Umwelt und Umweltpolitik nicht gebührend berücksichtigt, bewertet oder deren Kosten kalkuliert, kann es zu einem völlig irreführenden Verständnis des Vermögens, Einkommens und tatsächlichen Entwicklungspotentials einer Gesellschaft kommen."<sup>326</sup>

As a consequence, the relationship of society with nature is interpreted in analogy to the behaviour of an enterprise in the market:

324. See COM (92) 23, Vol. II, pp. 72 seq. Another important reason are the implementation problems of Community environmental law.

325. Whether these "new" instruments are more efficient or more appropriate to deal with the problem at stake, as it is claimed, is not at issue here. See, however, the critical remarks of a practitioner on another market-conform policy-instrument, namely voluntary agreements with industry; Bohne, *Recent Trends in Informal Environmental Conflict Resolution*, p. 230.

326. COM (92) 23, Vol. II, p. 104.

“Genauso wie ein gesundes Unternehmen versucht, seinen Kapitalwert zu behalten und zu erhöhen und deshalb in Anlagen investiert, die Produktion erhöht, neue Geräte kauft und die Qualität seiner Dienstleistungen verbessert, um sein langfristiges Überleben zu sichern, verlangt auch der Planet Erde bestimmte Arten von ‘Investitionen’, um ein gesundes Ökosystem zu bleiben und eine langfristige und dauerhafte wirtschaftliche Entwicklung sichern zu können. Kommende Generationen sind abhängig von den Investitionen, die wir jetzt tätigen. ... Wenn das Konzept einer dauerhaften und umweltgerechten Entwicklung glaubwürdig sein soll, muß der Nutzen im Endeffekt größer sein als die sogenannten Kosten.”<sup>327</sup>

- > The reasoning which has been briefly presented here<sup>328</sup> indicates that *sustainability* which had originally been discussed and developed in the issue area of the greenhouse effect has now become the basis for a Commission attempt to engineer a major programmatic change of EC environmental policy. It is not claimed that the debate on the greenhouse effect has been the only reason for this change; the broader international discussion initiated by the report of the Brundtland-Commission<sup>329</sup> and more specifically, the report of the task force on the environment and the internal market<sup>330</sup> have certainly played a role as well. The greenhouse effect has, however, been the first case in which the argumentation has spilled over from the theoretical discussion to practical policy-making.

This practical debate on *sustainability* in the policy-process and the elaboration of the Fifth Action Programme has also had effects on other policy areas although they remain, for the time being, restricted to the programmatic level. Thus, the Commission’s “green book” on transport and the environment endeavours to achieve a “sustainable mobility”<sup>331</sup>. The

327. *Ibid.*

328. The above analysis does not purport to be adequate to a 100-pages document which is designed to initiate a fundamental programmatic change of a policy which has existed for twenty years. Its purpose is merely to sketch how the *sustainability* frame has been generalised from the greenhouse effect to environmental policy as such.

329. See World Commission on Environment and Development, *Our Common Future*.

330. See Task Force “Environment and the Internal Market”, “1992” — *The Environmental Dimension*.

331. See *Grünbuch zu den Auswirkungen des Verkehrs auf die Umwelt*, COM (92) 46, 6.4.92.

green book on sustainable transport, which has been prepared conceptually by a report of the Forward Studies Unit<sup>332</sup>, marks a turning point in the Commission's approach to transport policy. After decades of inactivity, the approach to transport favoured by DG VII (transport) had mainly consisted in liberalising the Community transport marked in parallel to the establishment of the Internal Market programme<sup>333</sup>. In this framework, which could be characterised by *free mobility* in parallel to the *supply* frame of energy policy<sup>334</sup>, the increase of transport is seen as progress. The green book on sustainable transport acknowledges the need to direct transport instead of taking the increase of (road) transport as given. On several occasions, the greenhouse effect is mentioned as the environmental problem which requires this new approach to transport policy<sup>335</sup>. Economic instruments and the assignment of the whole array of costs (including "environmental" and "social" costs) to those causing them occupy an

332. See EC Commission, Forward Studies Unit, *Transport and the Environment*.

333. An engaged plea for a relaunching of EC transport policy is Braun-Moser, *Europäische Verkehrspolitik*.

334. Although this is not the task of the present study, transport policy could be analysed by resorting to three basic frames parallel to those of energy policy. *Free mobility* in the transport sector corresponds to *supply* in the energy sector. It considers transport as a natural consequence of economic activity. A free market economy demands unrestricted transportation possibilities according to the needs of the economy. Frequently, an increase of transport is considered to be an indicator of economic progress, just as an increase in energy consumption has been associated with economic progress. This assumption is upheld by the Commission: "Generell gilt, daß die Nachfrage nach Beförderungsleistungen im Güter- und im Personenverkehr das Ausmaß der Wirtschaftstätigkeit widerspiegelt", COM (92) 46, p. 36. In this frame, it is the task of the state to provide for the necessary infrastructure to meet the needs of transportation. In addition, and in contrast to energy policy, *free mobility* is strongly associated with the freedom of the individual and sometimes acquires the character of a de facto fundamental right. *Transport limitation* corresponds to *conservation* in energy policy. In this frame, the negative consequences of transport (accidents, pollution, costs) are of a size that requires restrictions of transportation (mostly of private cars and air traffic) because it damages nature and limits the freedom of other people which do not use cars or airplanes. This position has been put forward mostly by green parties and movements. "Renunciation" is an important strategy in this context. *Sustainable transport*, finally, corresponds to *energetics*. It attempts to find a compromise between demands for transportation stemming from the market and needs of restriction because of the limits of nature or of human needs. Whereas in *conservation*, the state has to pronounce prohibitions, its role is different in *sustainable transport*. Here, prohibitions are only a measure of last resort. Normally, the state has to develop an overall transport concept, balancing the needs and restrictions, and implement this concept without resorting to detailed regulation.

335. See COM (92) 46, pp. 1, 6, 8, 11, 15 and others.

important place. As in the case of energy policy, the new frame of *sustainable transport* allows to end the inner-organisational opposition of DG VII and DG XI with the former fighting for more and the latter for less transport. In addition, *sustainable transport* can serve as a basis for a re-launching of the ailing transport policy which is not attacked as outdated and damaging to the environment<sup>336</sup>. At the same time, transport can still be associated with modernity, progress and freedom without having to resort to appeals and demands of renunciation which are characteristic for *transport limitation*.

The idea that environmental protection is not a cost factor but can even be a competitive advantage ("first mover advantage") had first been put forward in the context of the proposed CO<sub>2</sub> tax. The tax, the Commission had argued, would in the short run indeed increase the cost burden of enterprises (and should therefore be introduced gradually) but in the medium and long term constitute an incentive for cleaner, less energy consuming, smaller etc. products which were more competitive on the world market. This argument appears now in a communication on industrial competitiveness and environmental protection which has been elaborated by DG III (internal market) in collaboration with DG XI (environment)<sup>337</sup>. Environmental policy, according to this document, can be a stimulant for industrial competitiveness<sup>338</sup>. As in the field of transport, the introduction of "clean technologies" is not only beneficial for the environment but corresponds also to the requirements of new advanced production processes<sup>339</sup>. Similarly to the formulation used in the Fifth Action

336. For an overview of criticisms from an environmentalist point of view, see Strübel, *Internationale Umweltpolitik*, pp. 153 seq.

337. See *Industrielle Wettbewerbsfähigkeit und Umweltschutz*, SEC (92) 1986, 4.11.92, p. 2: "Während die Industrie früher in den Kosten für die Einhaltung von gesetzlichen Umweltauforderungen eher ein Hindernis als einen positiven Wettbewerbsfaktor sah, setzt sich heute mehr und mehr die Erkenntnis durch, daß Umweltauforderungen beträchtliche Wettbewerbsvorteile bringen können". Page numbers in the text refer to this document.

338. *Ibid.*, p. 1. Germany and Japan are given as examples for countries which have effectively used a first-mover advantage in environmental protection; see *ibid.*, p. 2.

339. "Im derzeitigen Kontext globalen Wettbewerbs ähneln die Verfahren und die organisatorischen Voraussetzungen für die erfolgreiche Einführung sauberer Technologien häufig dem, was man gemeinhin mit dem Begriff des 'neuen Fertigungsleitbildes' ... assoziiert. Das Konzept der 'schlanken Produktion' (weniger Energie, weniger Rohstoffe, weniger Arbeit, weniger Kapital und weniger Zeit) stellt

Programme, leadership in environmental matters is only a state of affairs instead of a policy (p. 22). Technology is a core area to integrate environmental protection and industrial competitiveness. The Community instrument to achieve this aim is the forthcoming Fourth Framework Programme for research (p. 15).

The communication of industrial competitiveness and the environment is particularly important because it involves DG III which has long been considered to be a proponent of *classic environmental policy* in the sense that as few as possible environmental burdens should be put on industry. DG III is an ally of economic interests and has a strong standing within the Commission because of its responsibility for the Internal Market programme. The text of the document is again an indication that *sustainability* allows to integrate economic progress and environmental progress which are contradictory in the old frame. The communication is only a first programmatic document and uses often ambiguous wording<sup>340</sup>. With some care, however, it could be regarded as a sign that the learning process which replaces *classic environmental policy* (or its complement which could be labelled *classic economic policy*) with *sustainability* is extending to traditional industrial DGs within the Commission.

## 2. The Council: Conflicting Frames

When analysing the Council's reaction to the Commission's strategy to deal with the greenhouse effect, account must be taken of the fact that "the Council" is a legal fiction. With regard to the greenhouse effect, two specialised Councils are competent, namely the Environment and the Energy Council. Beside the different national positions, both differ considerably from each other. Whereas the Environment Council is at least partly accepting *sustainability*, this is not the case for the Energy Council. In other words, taken as a whole, sectoral differences are more pronounced

eine signifikante Verbesserung im Sinne umweltfreundlicher Herstellungsprozesse dar"; *ibid.*, p. 3.

340. See, for instance, the last paragraph: "Die tiefere Botschaft dieser Mitteilung lautet, daß alles, was für die Umwelt gut ist, auch für die Wirtschaft gut sein kann"; *ibid.*, p. 27 (emphasis added).

than national ones. At the same time, both Councils rather successfully promoted *member state dominance* as the frame guiding the institutional dimension of the policy measures to deal with the greenhouse effect.

#### a) Policy-Specific Frames

The “Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency”<sup>341</sup> was first discussed on the Environment Council of 1 October 1991. After its meeting, the Council issued the following statement:

“The Council welcomes the Communication from the Commission setting out a strategy to stabilise CO<sub>2</sub> emissions in the Community in general at 1990 levels by the year 2000. The Council recognises the great importance of the Communication as a cornerstone for the establishment of a climate change policy in the Community. The Council attaches great importance to reaching a firm position at the combined Energy/Environment Council meeting on 10 December 1991 on the instruments needed to implement the Community’s commitment to reach a stabilisation of CO<sub>2</sub> emissions by the year 2000. The Council agreed that intensive preparation work should be undertaken on the basis of the Commission’s Communication, taking into account all the various interests involved.”<sup>342</sup>

The labelling of the Commission communication as a “cornerstone” of a future climate change policy of the EC seems to indicate that there was a general agreement on the principle that a reduction of CO<sub>2</sub> emissions must also involve the Community level and that the measures necessary include a tax or other economic instruments, as it has been proposed by the Commission. The consensus among the ministers of the environment on the principle of a tax does, however, not yet cover the specific conditions and modalities of such a tax. In this respect, three different groups can be distinguished. Denmark, the Netherlands and Germany, joined by France, Belgium, and Italy, welcomed the tax in principle. Spain, Portugal and Greece did not oppose the tax as long as their demands of “burden sharing”,

341. SEC (91) 1744.

342. Reprinted in *Agence Europe*, No. 5580, 3.10.91, p. 7.

i.e. compensation for the economic costs of the tax from the richer member states in the form of increased aid through the EC structural funds, were satisfied. The UK finally, although not openly rejecting the tax, tried to prevent it by using the argument of the EC's international competitiveness, declaring that

“the United Kingdom's objective is clear: we have to reduce CO<sub>2</sub> emissions and we will need different measures to arrive at this. We believe that in the longer term, the relative price of energy should increase. A tax on energy will be appropriate, but to be effective, measures will have to be taken at international level ...”<sup>343</sup>

The statement is a good illustration of the position of more reluctant countries. The UK minister of the environment does not put into question the decision of the joint Energy/Environment Council of 29 October 1990 which had decided on the stabilisation of the EC's CO<sub>2</sub> emissions until 2000, despite the strong opposition of the UK<sup>344</sup>. He even acknowledges the need to “reduce” CO<sub>2</sub> emissions. Concerning the instruments to achieve this goal, the introduction of a tax is accepted in principle, although with caveats: the price of energy should increase only “in the long term” (by means of a tax) and such a tax should not be imposed by the EC alone but be accompanied by measures at the international level. This is a rejection of the arguments based on *sustainability*, put forward by the Commission, that the introduction of the tax would not lead to macroeconomic costs but could even be a stimulant for industrial competitiveness and new production structures. The same is true for the argument of the southern member states which demand compensation for the disadvantages caused by the imposition of the tax. In the Commission's logic, the tax in particular and ecological modernisation in general would constitute an *advantage* for backward economies<sup>345</sup>.

343. Statement of the UK minister for the environment, quoted from *Agence Europe*, No. 5579, 2.10.91, p. 9.

344. The Council conclusions are reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 266-268.

345. This has been expressed most clearly in a later document on industrial competitiveness which says about the topic of less developed regions and member states: “Der künftige wirtschaftliche Fortschritt und die Wettbewerbsfähigkeit dieser Regionen der Gemeinschaft wird in Frage gestellt, wenn es ihrer Industrie



The informal Environment Council held in Amsterdam on 11-13 October was almost exclusively devoted to climate change policy and the preparation of UNCED. At the meeting, Belgium, Germany, the Netherlands and Denmark, supported by Italy and France, strongly backed the Commission's climate change strategy<sup>346</sup>. On this occasion, an extension of the scope of the strategy was considered. The ministers discussed the possibility of EC-wide emission targets for other greenhouse gases (methane, nitrous oxide and CFCs) based on an inventory. The establishment of such an inventory was decided at the Council meeting. The inclusion of other greenhouse gases in a comprehensive strategy increases the possibility of compromises and trade-offs in the negotiations on the strategy package. An increase of CO<sub>2</sub> emissions could thus, for instance, be compensated by a corresponding reduction in CFC emissions<sup>347</sup>.

In addition, the Commission gave up its initial plans to fix national targets for each member state by Community legislation (i.e. in legally binding form). Instead, the ministers decided on a re-nationalisation of part of the strategy. National targets for the emission of greenhouse gases should be implemented by national programmes. The Commission was asked to report on these targets to the Council in order to secure that the overall Community stabilisation target was reached. Compared to the fixing of mandatory emission targets by Community legislation, the main responsibility for national targets was now in the hand of member states; the Commission had only a co-ordinating role. This re-nationalisation of the strategy was meant to secure agreement from the southern member states as well as from the UK which had not agreed to mandatory national targets<sup>348</sup>. In addition, it prepared the redefinition of the institutional

nicht gelingt, die im Umweltschutz angelegten Effizienzvorteile zu nutzen, oder wenn sie von anderen Märkten in der Gemeinschaft abgeschnitten werden, weil sie das erforderliche Leistungsniveau nicht erreichen können"; SEC (92) 1986, p. 17.

346. See *Agence Europe*, No. 5588, 14.-15.10.91, p. 8.

347. It must be borne in mind, however, that CO<sub>2</sub> is by far the most important single source of the greenhouse effect; see Table 4, p. 280, for a table on the relative contribution of different gases to the greenhouse effect.

348. In the earlier Commission proposals for "target sharing", the southern member states and Ireland had already been allowed to *increase* their CO<sub>2</sub> emissions by 15 per cent until the year 2000. This increase had to be compensated, according to these proposals, by the reduction of CO<sub>2</sub> emissions by Denmark, the Netherlands and Germany by 5 per cent whereas the remaining member states should stabilise their

dimension of policy-measures in the light of the discussion on subsidiarity and the parallel strengthening of *member state dominance* as the frame relating to integration.

Probably as a reaction to the strong resistance of industry against the planned CO<sub>2</sub>/energy tax, the Council declared its readiness to discuss the planned measures with industry. At the same time, the importance of the tax was confirmed. In addition, policy measures other than a tax were explicitly mentioned in order to allow for a package to which adherents of a tax as well as opponents could agree<sup>349</sup>. As a result of the broadening of the strategy and the bridges built for the southern member states, economic instruments in general and the CO<sub>2</sub>/energy tax in particular were accepted by the Environment Council by the end of 1991.

Whereas the Environment Council thus reluctantly accepted the Commission's strategy and the reasoning of *sustainability*, the Energy Council raised strong objections against the strategy and in particular against the tax on the basis of *classic environmental policy*. On its meeting of 29 October 1991, only Denmark had no objections against the respective Commission proposal. Germany, a fervent advocate of the tax in the Environment Council, raised not objections against the principle of a tax but disagreed with its level and the way of progressive implementation proposed by the Commission. In addition, and in common with France, it put forward the argument that only CO<sub>2</sub> emissions should be taxed as this would correspond to the polluter-pays-principle. This position implies that nuclear power — which would not be subject to a CO<sub>2</sub> tax — is a solution to the greenhouse effect. Implicitly, it is a rejection of the Commission's link between greenhouse policy and energy policy. As such, it reflects a frame of

emissions; see *Proposal for a Council Decision on the Sharing out of CO<sub>2</sub> Emissions Among Member States in Order to Achieve the CO<sub>2</sub> Stabilization Community Target by the Year 2000*, 29.5.91, p. 2. Even this had not been accepted by Spain in particular.

349. "The Ministers and the Commissioner stressed the importance of market incentives such as an energy/CO<sub>2</sub> tax. However, where even such incentives might not be enough to achieve the necessary consumer habits with regard to buying and using products, additional regulatory measures are necessary"; EC Council, *Informal Meeting of the Environment Ministers of the European Communities and the Commissioner for the Environment of the European Communities*. President's conclusions, 12.10.1991, para. 30.

*supply* with respect to energy policy: The environmental problems caused by power generation have to be cured but without interfering into the patterns of energy consumption or the level of consumption as such. Spain and Portugal (and to some extent also Italy) argued that their industrialisation might be hampered by such a tax. In this context, Spain stressed again the problem of distributive justice by pointing out that its emission level (per capita and absolute) was only a fraction of the emissions of Germany or the UK<sup>350</sup>. Spain also put forward again the argument that the United States and Japan had to take measures similar to those proposed by the Commission if the EC plans were not to lead to competitive distortions and to a dangerous increase in energy prices. Some countries preferred tax *incentives* for limiting CO<sub>2</sub> emissions and others, like France and Germany, criticised the link between encouraging energy consumption and reducing pollution.

The Council's conclusions were guided by the idea that energy was vital for economic performance and that, even under the assumption of severe environmental damage, its price could only be increased with utmost care. Therefore, the Council declared that measures to combat the greenhouse effect must not distort competition and that special attention must be paid to the EC's large energy consumers which compete on the world market<sup>351</sup>. This attitude was confirmed in the Energy Council meeting before UNCED, after it had become known that the Commission had linked the introduction of the tax to the adoption of similar measures by its main trade partners (the "conditionality" clause). A large majority of ministers were in favour of the principle of conditionality, although Germany, Denmark and the Netherlands insisted that this clause should not lead to the Community finally abandoning the project should its trading partners' reaction be negative (which was expected to be the case)<sup>352</sup>. In the Environment Council, meeting a few days later, the principle of a CO<sub>2</sub>/energy tax was restated by all participants. Germany, Denmark, the Netherlands, Italy and

350. Data on carbon-dioxide emissions for the EC member states and some other countries can be found in Table 5, p. 281.

351. See *Agence Europe*, No. 5599, 20.10.91, p. 12 and *Europe Environment*, No. 374, 14.11.91, section I, p. 1.

352. See *Agence Europe*, No. 5736, 23.5.92, p. 9.

Luxembourg challenged the conditionality clause while Spain, Greece and Portugal welcomed it<sup>353</sup>.

Although an intervention into the energy markets was not altogether rejected (which would have amounted to a complete return of *supply* as a frame of energy policy), *energetics* (i.e. the view that energy policy can be managed by the state with goals other than the exclusive security of supply) is only reluctantly being accepted. The frequent references during the Council meetings and in the final statement on the danger of competitive distortions indicate that the overwhelming majority of the Energy Council (with the sole exception of Denmark) has not accepted the Commission's reasoning of *sustainability* and conceives the relationship between the economy and the environment in terms of *classic environmental policy*.

The differences in the positions of the two Councils also show that interests or preferences cannot simply be deduced from "objective" data, such as per capita emissions of CO<sub>2</sub>. In the first place, sectoral ministers from the same country have different positions. A striking case is Germany whose minister of the environment has strongly fought for a CO<sub>2</sub> tax or levy and who has made climate change policy one of his political priorities. The German minister for the economy, on the other hand, responsible for energy policy, has constantly tried to delay and to weaken the Commission's greenhouse strategy and the tax in particular. Denmark and to a lesser extent the Netherlands have per capita emissions higher than the EC average but are in favour of a strong climate change policy in both Councils. The UK has per capita emissions above the EC average and pursues a rather reticent policy whereas France emits CO<sub>2</sub> below the EC average and is generally in favour of the Commission's strategy.

Whereas within the EC, countries with high per capita emissions are more positive towards an active policy to combat climate change than those with lower emissions, the picture is different on a world-wide scale. Here the US, which has the highest per capita emissions, strongly opposes a world-wide

353. See *Agence Europe*, No. 5738, 27.5.92, p. 8.

climate change policy<sup>354</sup>. Japan and the EC have almost the same CO<sub>2</sub> emission level considerably below the US emissions but whereas Japan's engagement in the international climate negotiations has been very reluctant<sup>355</sup>, the EC has at least tried to assume a position of leadership in this area<sup>356</sup>. The argument could also be extended to other factors, such as the structure of energy consumption. Germany and Denmark have a high share of coal (which emits most CO<sub>2</sub>) in energy consumption and are in favour of a CO<sub>2</sub>/energy tax, whereas the UK, with a correspondingly high share of coal is very reluctant in this respect<sup>357</sup>. If a selective use of a single variable were to be avoided, such as the "explanation" of the UK opposition against the Commission's strategy by its high per capita emissions, a whole range of variables would have to be considered in comparative analysis<sup>358</sup>. As a result, however, the simple deduction of *preferences* from hard data is impossible. Data on emissions, energy consumption, dependency on specific energy sources, etc. have to be interpreted. As there is usually more than one interpretation of a specific fact, it is impossible to conclude from data to interpretations. Instead, these interpretations have to be in the centre of the analysis<sup>359</sup>.

On the background of the diverging views of the ministers of the environment on the one hand and those responsible for energy on the other hand, a joint Energy/Environment Council took place on 13 December 1991. The joint Council did not come to a decision on the Commission's strategy

354. For an account of the US position, see Grubb et al., *Energy Policies and the Greenhouse Effect*, Vol. II, pp. 233 seq. and Fischer, *Die Klimakonvention in der internationalen Politik*, pp. 62 seq.

355. See Fischer, *Die Klimakonvention in der internationalen Politik*, pp. 102 seq.

356. For the emission data, see Table 5, p. 281.

357. See Table 7, p. 286.

358. For an example of such an approach, see Jänicke, *Conditions for Environmental Policy Success* and Jänicke/Mönch, *Ökologischer und wirtschaftlicher Wandel im Industrieländervergleich*.

359. This is not to deny that it could be interesting to ask for the relationship between political or economic structures or even geographical factors on the one hand and interpretations of these factors on the other. If it is possible to come to more than trivial results in such an inquiry, the relationship between both factors is certainly more complex than the method of "interest indicators" (Zürn, *Interessen und Institutionen*, pp. 243 seq.) suggests.

paper but narrowed down the divergences of position and confirmed some developments which had already been prepared before.

The most important of these developments is a re-nationalisation of the package of measures. The Council conclusions speak of a "need for a strategy at Community level based on a wide ranging package of Community and national measures"<sup>360</sup>. On the one hand, this is a recognition that *Community* measures are inevitable for reaching the stabilisation target adopted in October 1990. On the other hand, national measures gain an increasingly important place. On the topic of those national programmes, the Council conclusions announce:

"These programmes, appropriate to the specific circumstances of each Member State, will include measures decided at Community level as well as national measures. Possible measures to be considered include instruments of a technical, financial and social nature to be applied in the relevant sectors."<sup>361</sup>

With such a principle, anything goes: a tax as well as non-fiscal measures, as well as technical measures, information campaigns, etc., both at the national as at the Community level. Sectoral differentiation is also possible. Only two elements are mandatory: the stabilisation of CO<sub>2</sub> emissions of the entire EC by the year 2000 (explicitly) and the requirement that these measures do not disturb the functioning of the internal market (implicitly). Despite this differentiation of possible measures, the principle of a CO<sub>2</sub>/energy tax is beginning to be recognised. The respective text of the Council conclusions read:

"The Council, basing itself on existing studies and analyses, recognises that the national programmes and specific measures referred to above are unlikely to be sufficient alone to reach the Community objective of CO<sub>2</sub> stabilisation. It further recognises that, in order to reach CO<sub>2</sub> stabilisation in a cost-effective way, higher energy pricing through the use of fiscal instruments is likely to be needed to complement national and Community energy efficiency programmes."<sup>362</sup>

360. *Council Press Release 9916/91*, para. 4.

361. *Ibid.*, para. 5.

362. *Ibid.*, paras. 9-10

The recognition of the necessity of the tax was made dependent on the accomplishment of further studies on the economic consequences of such a tax and of its concrete design. Some of the studies commissioned relate to the feasibility and effects of exemptions from the tax or reductions of it, either for industrial sectors (with energy-intensive production and strong involvement in international trade, as already proposed by the Commission) or for some member states (which reflects the desire of Spain in particular not to hamper its economic development and its position that it emitted considerably less CO<sub>2</sub> as compared to Germany or to the United Kingdom<sup>363</sup>. Spain in particular followed its strategy to accept even wide-ranging Community environmental legislation even if it seemed to hamper Spanish economic development under the condition of "Community solidarity", i.e. provided that the richer states support the poorer ones or that the latter ones have the right to derogations from the general norm.

Whereas the idea of a tax had been more or less accepted at this point, there was still complete disagreement about the extent or nature of the tax. Denmark, Germany, Italy, Luxembourg, France and Belgium, i.e. half of the Council, resisted the idea of introducing a tax on CO<sub>2</sub> and on energy<sup>364</sup>. Therefore, the request for further studies does not seem to reflect a simple desire to delay the decision, although this motive may be an important one. Instead, the Council called upon the Commission to present concrete proposals, "including any necessary proposals for Community-wide taxation"<sup>365</sup>. In addition, the joint Energy/Environment Council has not even mentioned doubts about the physical reality of the greenhouse effect. The debate was concerned only with the ways and means to cope with it and the possibilities to avoid severe consequences for the economy. This indicates that a position on the basis of *classic environmental policy* has been the lowest common denominator for the Council on the basis of the unanimity rule.

363. The Council statement thus asks for studies on the possibility "for modification of the [tax] rate in relation to economic developments and environmental situation in the different member states"; *ibid.*, para. 11. This is a reference to the "economic and social cohesion" formula of the EEC Treaty (Art. 130r, 3); see also *Europe Environment*, No. 378, 7.1.92, section I, p. 7.

364. See *Europe Environment*, No. 378, 7.1.92, section I, p. 7.

365. See *Council Press Release* 9916/91, para. 11.

The tax debate was important for member states not only because of the expected size and economic consequences of the tax but also because it was meant by the Commission as the first attempt of a policy on the basis of *sustainability* which allows an interference in other policy areas (here taxation and energy policy) in order to achieve environmental goals. Therefore, the tax debate acquired a more fundamental dimension as the entry into a different way of policy-making. This may explain why the Maastricht Treaty explicitly maintains unanimity decision-making in environmental matters relating to taxation and to energy whereas it provides for majority voting as the general rule<sup>366</sup>. Although taxation matters are subject to Art. 99 of the Maastricht Treaty which provides for unanimity in any case and energy policy is not a competence of the EC even after Maastricht (and thus subject to unanimous decisions on the basis of Art. 235), the formulation of Art. 130s, 2 is a reassurance that a CO<sub>2</sub>/energy tax is in no case adopted by majority voting with the environmental chapter of the Maastricht Treaty as a legal base<sup>367</sup>. The adoption of many policy measures on the basis of *sustainability* is thus confined to unanimity decision-making.

#### b) The Re-nationalisation of Policy Measures

The debate on specific policy measures to deal with the greenhouse effect has opposed proponents of *classic environmental policy* arguing that a tax on CO<sub>2</sub> or energy would put a heavy burden on the economy to a smaller

366. Art. 130s, 2 of the Maastricht Treaty exempts "provisions primarily of a fiscal nature" and "measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply" from majority decision-making.

367. In this context, it is interesting to see the unusually complicated process foreseen by the Commission in its initial proposal for the entry into force of the CO<sub>2</sub>/energy tax; see *Vorschlag für eine Richtlinie des Rates zur Einführung einer Steuer auf Kohlendioxidemissionen und Energie*, COM (92) 226. Whereas the directive as a whole is to be adopted by unanimity on the basis of Art. 99 and 130s of the EEC Treaty, the Commission proposed that its entry into force be subject to a specific decision taken by a qualified majority (Art. 1 (2), second paragraph). The possible effects of this provision are unclear: It could lead to an easier unilateral adoption of the tax but also to its complete failure because some member states which do not want the tax would not accept being outvoted with regard to the date of its introduction.



group of countries advocating a more far-reaching policy on the basis of *sustainability* (in particular Denmark, the Netherlands and Germany). The prevalence of policies on the basis of *classic environmental policy* in the Council conclusions implies that measures which could constitute a backing of the EC's earlier claim for environmental leadership were unlikely to be adopted. In parallel to this policy-specific development, the institutional debate before and in particular after the Maastricht summit has had consequences for the EC strategy to deal with the greenhouse effect. *Member state dominance* became more important, in particular under the British presidency of the Council in the second half of 1992. The most important consequence of this frame of integration is the re-nationalisation of the greenhouse strategy.

Before the Maastricht summit in December 1991, "leadership" had still played an important role in the Council negotiations. At the Environment Council of 1 October 1991, the French minister of the environment (Brice Lalonde) declared that the EC had been the first major power in the world that wanted to stabilise CO<sub>2</sub> emissions and that it was now the first to look for concrete means to achieve this goal. For Brice Lalonde, this was a proof that the EC was the most dynamic actor in this field world-wide<sup>368</sup>. A few weeks later, at the informal Environment Council in Amsterdam,

"the Ministers and the Commissioner underlined the importance of the leading role of the European Community with respect to the approach to the climate problem and the finalisation of the Climate Convention."<sup>369</sup>

Half a year later, only two weeks after the Rio Summit where the EC had planned to exert its environmental leadership, the Lisbon European Council mentioned the leading role of the EC only in relation to the establishment of the "Commission on Sustainable Development" (a permanent follow-up body of the Rio conference) and the reform of the "Global Environmental Facility"

368. See *Agence Europe*, No. 5579, 2.10.91, p. 9.

369. EC Council, *Informal Meeting of the Environment Ministers of the European Communities and the Commissioner for the Environment of the European Communities*. President's conclusions, 12.10.1991, para. 22.

(an environmental financing instrument)<sup>370</sup>. Important as they may be, these two issues hardly correspond to earlier aspirations of world-wide environmental leadership.

The quest for environmental leadership has also been given up in relation to the Fifth Action Programme on the environment. The Commission had still regarded the programme as a condition for a leading position (but less for a leading policy) in international environmental policy and based its claim on the Environmental Imperative Declaration of the European Council of June 1990<sup>371</sup>. Whereas in a first Council negotiating text of the resolution, this reference was still maintained<sup>372</sup>, it had disappeared in the second draft resolution which speaks only of a "positive role" of the EC in international environmental policy and a positive contribution to it<sup>373</sup> but at the same time contains several new paragraphs on subsidiarity<sup>374</sup>.

Despite the fact that the Maastricht Summit had given the Community a formal competence to deal with global or regional environmental problems<sup>375</sup> (new Article 130r), the interpretation of the new Treaty provisions and of the old ones which were still valid at the time was increasingly marked by *member state dominance*. This interpretation does neither follow from the Maastricht Treaty nor from the subsidiarity principle adopted in this Treaty (Art. 3b). The fourth indent of Art. 130r which gives the Community a competence in global or regional environmental policy could be the legal basis of a policy of environmental

370. See *Schlußfolgerungen der Tagung des Europäischen Rates der Staats- und Regierungschefs am 26. und 27. Juni 1992 in Lissabon*, p. D494.

371. See the Commission proposal for the Council resolution adopting the Fifth Action Programme, EC Commission, *Proposal for a Council Resolution on a Community Programme of Policy and Action in Relation to the Environment and Sustainable Development*, COM (92) 23, 3.4.92, p. 3. For more details on the development of the Commission's position, see pp. 245 seq. of the present study.

372. See EC Council, *Proposal for a Council Resolution on a Community Programme of Policy and Action in Relation to the Environment and Sustainable Development*, 8408/1/92, 14.9.92, para. 6.

373. See EC Council, *Proposal for a Council Resolution on a Community Programme of Policy and Action in Relation to the Environment and Sustainable Development*, 10428/92, 30.11.92, paras. 37-38.

374. *Ibid.*, paras. 14-16.

375. "Regional" in this context refers to regions consisting of several states, such as Eastern Europe or the Mediterranean region.

leadership; it could also legitimise a mere residual competence for the Community. The subsidiarity principle does not provide a solution for the institutional level on which policy measures are carried out but is open for interpretation. The way in which member states and Commission reflect about the subsidiarity principle, either in terms of *supranational integration* or in terms of *member state dominance*, is responsible for the institutional dimension of policy measures.

The increasing framing of the policy-measures proposed in the framework of the Community strategy to deal with the greenhouse effect in terms of *member state dominance* instead of *supranational integration* can be illustrated with the example of energy saving measures which are one part of the original strategy proposed by the Commission. The Commission had originally conceived a strategy consisting of policy measures mainly at Community level or at least with a Community legal framework to guarantee that they meet the CO<sub>2</sub> stabilisation target and their compatibility with the Internal Market. National measures were only foreseen as a supplement<sup>376</sup>. The informal Environment Council in October 1991 and the joint Energy/Environment Council in December 1991 had already increased the role of national programmes for the implementation of the strategy and urged member states to submit those programmes to the Commission<sup>377</sup>.

One of the first concrete proposals on the basis of the Community strategy, a directive on energy saving in the framework of the SAVE programme, hardly contains any Community element. The proposal, which is still being negotiated at the time of the writing, bears strong traces of the discussion on subsidiarity. In other words, it is marked by the increasing weight of

376. See *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, SEC (91) 1744, 14.10.91, paras. 30-32.

377. See p. 255 for the results of the Environment Council of October 1991 in this respect. The joint Energy/Environment Council had considered Community measures as a supplement to national programmes and not vice versa as in the original Commission proposal; see *Council Press Release 9916/91*, paras. 5, 9 and 10. In summer 1992, merely four national programmes had been sent to the Commission. The German programme is published as Bundesminister für Umwelt, *Bericht der Bundesregierung an die Kommission der Europäischen Gemeinschaften über das nationale Programm zur Reduzierung der energiebedingten CO<sub>2</sub>-Emissionen und anderer Treibhausgase bis zum Jahre 2005*.

*member state dominance* at the expense of *supranational integration*. As a result, the negotiating text of the directive on energy saving, submitted by the British presidency, a fervent advocate of *member state dominance*, consists of a list of programmes to be set up and implemented by member states without specifying targets, deadlines or content<sup>378</sup>. Within the Council, the debate on integration has thus superseded the one on environmental policy.

### 3. Industry: Defending Classic Environmental Policy

- Industry was engaged in a major lobbying campaign against the Commission proposals of a tax on carbon-dioxide emissions and/or energy<sup>379</sup>. When it became certain that the Commission would finally propose such a tax, several EC-wide interest groups not only increased informal lobbying but went public in order to prevent such a decision. This campaign was almost exclusively directed against the proposal of a CO<sub>2</sub>/energy tax whereas the other elements of the Commission's strategy paper (in particular energy saving schemes) were hardly dealt with. In order to prevent the tax, industry was willing to accept virtually all other measures proposed by the Commission.
- The most important argument which industry used in its campaign against the tax was to warn against the competitive disadvantages it would create for European industry. On a joint press conference the day before the

378. See EC Council: *Vorschlag für eine Richtlinie des Rates zur Begrenzung der Kohlendioxidemissionen durch eine effizientere Energienutzung*, 10109/92, 17.11.92. A typical example is Art. 5 of the proposed directive: "Die Mitgliedstaaten erstellen Programme und führen diese durch, damit Neubauten auf lange Sicht wirksam nach Normen, die von den Mitgliedstaaten unter Berücksichtigung der Klimabedingungen und -zonen und des Verwendungszwecks des Gebäudes festgelegt werden, wärmegeklämt werden". No further specification of these programmes is given. Similar formulas can be found in the other articles. The negotiating text of the British presidency avoids binding commitments to such an extent that the Commission doubted its quality as a directive, i.e. as a legally binding text.

379. "I will not hide from you that, in recent weeks, we have been under intense pressure from an energetic lobby representing the main CO<sub>2</sub> producing countries", Environment Commissioner Ripa di Meana declared before the European Parliament; see *Agence Europe*, No. 5731, 16.5.92, p. 11.

Commission internally adopted its strategy<sup>380</sup>, the European Chemical Industry Association (CEFIC), the Association of European Automobile Manufacturers (ACEA), the European Association of Metals (EUROMETAUX), the European Cement Association, the European Petroleum Industry Association (EUROPIA) and the European Federation of Industrial Energy Consumers (IFIEC-Europe) declared that a "unilateral" EC-wide tax on energy consumption or carbon-dioxide emissions would cause severe economic damage without any certainty of achieving the desired environmental objective. Similar statements had been made earlier by the organisation of European steel industry (EUROFER) and by the umbrella organisation of European industry (UNICE)<sup>381</sup>. On the same occasion, the threat of industrial relocation, another standard argument in environmental policy-making, was also used: unilateral energy/carbon taxes, according to industry, could produce the opposite of the desired effect by forcing energy-intensive industries in the EC to close down, leaving a gap in supply which would be met by less energy-efficient industries outside the EC<sup>382</sup>.

Whereas the Commission has regarded the Community's share of 13 per cent of world-wide CO<sub>2</sub> emissions<sup>383</sup> as high enough to justify even unilateral action, industrial associations claimed that with *only* 13 per cent of global emissions, the EC should wait for the action of the US and promote energy saving in Central and Eastern Europe in the meantime<sup>384</sup>. UNICE even subscribed to the Commission's "no regret principle" by stating that whether or not global warming was occurring at a significant rate, some immediate measures were beneficial and should be encouraged in any case. These measures should be seen as an insurance premium related to the

380. The Commission strategy paper which is meant in this section is *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, SEC (91) 1744.

381. See *Agence Europe*, No. 5564, 11.9.91, p. 13 for the EUROFER statement and *Europe Environment*, No. 372, 1.10.91, section II, p. 1, for the press conference of UNICE. The latter had taken place one day before the meeting of the Environment Council.

382. The joint press conference of the industrial associations is reported in *Agence Europe*, No. 5574, 25.9.91, p. 13.

383. For the different countries' share in global CO<sub>2</sub> emissions, see Table 5 (p. 281), and Figures 6-8 (pp. 282-284).

384. See *Agence Europe*, No. 5574, 25.9.91, p. 13.

risks of global warming. UNICE's proposals for no-regret measures included the promotion of energy saving in Central and Eastern Europe and in particular the development of energy-efficient technologies (i.e. subsidies)<sup>385</sup>. Technology was also the solution which the coal industry, one of the main losers of a carbon/energy tax, offered. The Coal Industry Advisory Board (CIAB), an advisory board to the International Energy Agency (IEA) claimed that CO<sub>2</sub> emissions could be reduced by more than fifty per cent with new technologies. These opportunities, according to the CIAB, should be exploited given the long-term importance of coal as a source of energy and the risks of other forms of energy, in particular of nuclear power<sup>386</sup>.

After the Commission had adopted its strategy with the tax proposal as an integral part, claiming that non-fiscal measures would achieve only 60 per cent of the CO<sub>2</sub> emission reduction from the projected increase to the desired stabilisation<sup>387</sup>, industry began to offer compensatory action if only the tax plan was dropped. ACEA, the car manufacturers' association, volunteered to reduce the CO<sub>2</sub> emissions of their cars by ten per cent within the period from 1993 to 2005. Further reductions, according to ACEA, could be achieved by introducing traffic management methods and developing non-fossil fuels (e.g. from agricultural sources). Voluntary reduction schemes were also offered by the European Committee of Electricity Supply Industries (EURELECTRIC) and by the association of the mechanical, electrical, electronics and metalwork industries of the EC and EFTA (ORGALIME). ORGALIME also criticised the idea that a considerable part of the Commission's greenhouse strategy consisted of national measures which could threaten the Internal Market by establishing new barriers to trade. The Association of the European Chambers of Commerce that industrial sectors of business firms would either commit themselves to programmes for the rational use of energy or took steps to compensate for their emissions of greenhouse gases, such as reforestation. A further proposal was to exempt

385. See *Europe Environment*, No. 372, 1.10.91, section II, p. 1.

386. See *Europe Environment*, No. 373, 15.10.91, section II, pp. 2-3.

387. See SEC (91) 1744, p. 19.

industries which submitted CO<sub>2</sub> reduction plans from the CO<sub>2</sub>/energy tax.<sup>388</sup>

In sum, it appears that industry has changed its strategy from outright rejection of a tax and of any other measures to offering a deal. This deal meant that industry was willing to commit itself to voluntary and sector-specific CO<sub>2</sub> reduction plans if the tax plan was dropped. Before the joint Energy/Environment Council of December 1991, the strategy was even further modified. Some statements of industrial associations seem to indicate that industry expected a tax in one form or another to be adopted. Therefore, associations aimed at gaining exemptions from the tax or tax rebates if voluntary CO<sub>2</sub> reduction programmes were offered.

The offer of industrial interest groups to establish sector-specific voluntary energy efficiency schemes if the plan of a CO<sub>2</sub> or energy tax was dropped was directed at the industry-oriented DGs within the Commission which had from the outset been critical towards the tax plan, in particular DG III and DG XXI. DG III in particular favoured an approach which left the choice of the instruments and tools for energy efficiency measures to the enterprises themselves, arguing that in such a way, the goal of energy efficiency could be achieved in a most cost-efficient way. Centralised regulation such as the proposed CO<sub>2</sub>/energy tax, DG III argued, would incur higher cost than decentralised solutions adapted to specific circumstances. This argument is usually combined with the claim that voluntary arrangements are less "bureaucratic" than centralised regulations (to which proponents of binding legal obligations objected that they are also less efficient). Industry argues thus on the basis of *classic environmental policy*: a tax is a cost factor which should only be adopted by all countries with which strong economic links exist in order to avoid an unfavourable treatment of EC industry. The Commission's argument that the gradual introduction of the tax over a seven-year period would allow adaptation processes and lead to an improvement of industrial competitiveness by forcing technological innovation, has not been taken up. "International competitiveness" as an argument against environmental regulations

388. See *Europe Environment*, No. 377, 10.12.91, section II, p. 1 and *Agence Europe*, No. 5629, 13.12.91, p. 15.

indicates a separationist view of the economy and the environment and a primacy of economic goals. On the other hand, “voluntary agreements” are a favourite instrument of liberal economic policy and of its proponents within the Commission (DG III and DG XXI). Pleading for voluntary agreements does not deny the necessity of environmental protection measures but leaves the choice of instruments to those concerned. It incorporates a belief in responsible entrepreneurship and a distrust of state regulations. Decisions with economic consequences, in this logic, are preferably and most efficiently be taken at the level of the enterprise, as close as possible to the immediate consequences of the decision. The resonance of this version of the *classic environmental policy* frame with the economic liberalism of DG III and DG XXI might have been a reason why the Commission introduced the “conditionality” clause into its final tax proposal. Voluntary agreements, the responsibility of the entrepreneur and the principle that decisions should be taken at the lowest possible level (a kind of economic subsidiarity principle) are a central feature of the “new approach” of the Fifth Environmental Action Programme<sup>389</sup>. They resonate even better with *sustainability* as they do with *classic environmental policy* because *sustainability* extends economic thinking to the environment, including a positive attitude towards economic activity and economic actors which, contrary to *classic environmental policy*, are not considered primarily as those causing pollution and therefore treated with suspicion. As the decentralised responsibility of economic actors has been one of the elements of the programmatic change of EC environmental policy advocated by DG XI, this may be a further reason for the success of industry’s lobbying campaign. In addition, decentralised, “adapted” schemes were consistent with the re-nationalisation and differentiation of policy measures as a result of the increasing importance of *member state dominance* at the expense of *supranational integration* in the aftermath of the Maastricht summit.

#### 4. *The New Problem Definitions*

Two main developments characterised the emerging new problem definitions of the respective actors after the publication of the Commission’s

389. See COM (92) 23, Vol. II, pp. 9, 33, 69 seq.



strategy paper, namely the generalisation of *sustainability* within the Commission and the strengthening of *member state dominance* stemming from the Council. The generalisation of *sustainability* within the Commission and its explicit adoption as a basis of a major programmatic change of the Commission's approach to environmental policy making allows an alliance or at least a less conflictual co-operation between the more industry-oriented DGs and DG XI. The main reason for this possibility of alliance is that the policies for which those DGs are responsible can be continued and in particular be reformed under the label of modernisation. "Sustainable transport" can be the basis of a relaunch of EC transport policy which at the same time tries to meet transportation goals and those of environmental policy. The same is true for energy policy. *Sustainability* even allowed a common programmatic document of DG III and DG XI which had previously been conceptually separated. This frame-shift from *classic environmental policy* to *sustainability* is an example of a learning process. The results of this learning process in terms of policy proposals are only beginning to become visible. As this learning process constitutes the potential for a strengthening of the institutional role of the Commission by allowing a relaunch of some important policies and thus fits with the Commission's frame of *supranational integration*, it is likely to persist as a basis of the latter's policy.

The Council as a whole has not yet accepted policy proposals on the basis of *sustainability* but endorsed the Fifth Environmental Action Programme which is the Commission's blueprint for pursuing *sustainability*. However, the same factors which contributed to the frame shift within the Commission, namely the possibility of better co-operation between ministries which are more opposed at present and the opportunity to modernise those policies by taking environmental considerations into account instead of opposing them could work in the same direction. Until this point, however, the most important contribution of the Council to the framing of the greenhouse issue has been the reframing of its institutional dimension. The debate on subsidiarity and the ensuing strengthening of member state dominance have led to a re-nationalisation of the proposed policy measures even within the Commission. The target remains the same but the instruments are located at a different institutional level.

The increasing influence of *member state dominance* as the frame on integration has also marked the Fifth Environmental Action Programme which puts great emphasis on the concept of "shared responsibility", i.e. the specific responsibility of the state, enterprises and the consumer for different problems as a replacement of a primary and exclusive responsibility of the state to force enterprises and consumers to respect environmental concerns. Industry, whose actions are still motivated by *classic environmental policy*, has successfully appealed to this concept and achieved that the proposal of a CO<sub>2</sub>/energy tax, the core of the Commission's greenhouse strategy and its spearhead of *sustainability*, has been at least delayed.

As a result of these developments, *sustainability* has offered the Commission new possibilities for action. It has, however, not strengthened its institutional role by contributing to the adoption of strongly integrationist policy measures, such as the planned CO<sub>2</sub>/energy tax. On the contrary, the debate on integration and the strengthening of *member state dominance* has superseded the debate on environmental policy.

## Conclusion

This study has tried to trace the development of the EC's policy towards the greenhouse effect up to the Rio summit in June 1992. It has not adopted a classic interest-oriented perspective but instead assumed that needs, resources and preferences of actors are socially constructed. These social constructions have been called "frames". A change of those frames has been conceptualised as a learning process.

In the period analysed, such a learning process has taken place in the EC Commission. Within the Commission, environmental policy is now conceived on the basis of *sustainability* instead of *classic environmental policy*. In parallel, the basic frame of energy policy making has changed, though less radically, from *supply* to *energetics*. The *sustainability* frame became prominent within the Commission in the course of the debate on the greenhouse effect but was later generalised to the basis of the Commission's approach to environmental policy-making in general. It allows to integrate the greenhouse effect in particular and EC environmental policy in general into the logic of the Internal Market and the ongoing debate on implementation problems of Community law, in particular in the field of the environment. Whereas *classic environmental policy* leads to conflicting goals and strategies in the field of environmental protection (preventing the greenhouse effect), the Internal Market (economic liberalisation and growth) and the implementation of Community law (by allegedly contributing to the widening of the implementation gap), *sustainability* offers opportunities to fight the greenhouse effect without hampering economic growth, distorting the common market or enacting legislation which runs the risk of not being implemented by the member states. This enhanced problem-solving capacity of the *sustainability* frame compared to *classic environmental policy* refers to political problems. I do not claim (nor did I analyse) that *sustainability* is in any sense better for the environment or that it offers indeed solutions which are less bureaucratic and less sensible to non-implementation than the command-and-control approach of *classic environmental policy*. On the contrary, the critical potential of analysing the way issues are framed and how these frames are used by actors lies precisely in pointing out the type of problems for which they are used.

- The new frame of *sustainability* which emerged as the result of a learning process within the Commission does not only possess an increased political problem-solving capacity compared to the old one but it also involves different actors and different types of knowledge into the policy-process. If an environmental problem is framed in terms of *classic environmental policy*, natural scientists and natural scientific knowledge is of central importance for the design of policy measures. Within *sustainability*, economists and (macro)economic knowledge acquire a central importance. For this reason, the Commission's strategy to deal with the greenhouse effect at a rather early stage became decoupled from natural scientific knowledge and increasingly depended on economic arguments. For the Commission, *sustainability* allowed for a co-operation among different directorate-generals or at least the lowering of conflicts among the DG responsible for environmental protection and other DGs which are considered more business-oriented. The deeper reason for the possibility of co-operation among new groups of actors offered by *sustainability* is that it constitutes an attempt to integrate environmental policy concerns into economic policy and thus ends the defensive position of environmental policy and environmental policy-makers against economics and economic interests. In principle at least, although this potential has not been realised yet, *sustainability* allows even alliances with industry in a much easier way on the basis of appealing to common interests instead of having to resort to moral appeals as in *classic environmental policy*. The Commission's Fifth Environmental Action Programme, entitled "Towards Sustainability", relies heavily on this potential as a new instrument of environmental policy.
- For the Commission, *sustainability* also allowed a link between environmental policy and integration by introducing the concept of environmental leadership. Progress in the field of the greenhouse effect, the main area for the debate and development of *sustainability*, could thus lead to progress of integration in terms of *supranational integration*. A strong greenhouse policy, as a part of a broader policy of environmental leadership, would thus contribute to integration. This idea, vigorously promoted by the Commissioner for the Environment, ensured support even among his critics within the Commission. An important reason for the transformation of *sustainability* to an action frame which the Commission actively used and defended in order to gain support for its measures was the strong symbolic

component of *sustainability*. It allows to present policies in terms of modernity. This is in particular true for the external aspects of the greenhouse policy and the leadership claim. Environmental leadership conveys the image of the EC as a new type of power, dealing with contemporary problems in appropriate terms and contrasts this image to the one of the United States as a traditional military power neglecting problems that cannot be solved with traditional means of foreign policy. "Leadership" underlines the EC's aspiration to become a superpower, but a modern one. By promoting the leadership concept, the Commission could enhance its own role and status as the representative and speaker of the Community.

- › The European Parliament, on the other hand, has started at an early stage to frame the greenhouse effect in terms of *sustainability* but has remained incapable of using it as an action frame. Instead, it remains within the argumentation of *classic environmental policy*, demanding tougher standards, higher eco-taxes and shorter deadlines. The offensive use of an action frame like *sustainability* appears to be an important means of the European Parliament to increase its influence on the policy-making process in cases where it has no legal or institutional leverage. This would, however, require not only the institutional conditions enabling the European Parliament to develop and present new frames but also a different assessment of its own role which at present is aimed at becoming a "normal" Parliament. As the European Parliament has no legal competence in the policy-making process with respect to the greenhouse effect and has also not used the potential stemming from the promotion of an action frame for enhancing its role in the same way as the Commission has done, its role in the policy-development remained insignificant.

The Council has increasingly accepted *energetics* whereas *sustainability* is only beginning to be accepted by a minority of its members. *Energetics* offers possibilities for a relaunch of EC energy policy without major sacrifices. *Sustainability*, on the other hand, and in particular the CO<sub>2</sub>/energy tax, would lead to far-reaching changes in present environmental policies. The tax proposal in particular is assessed in completely different ways in *classic environmental policy* and in *sustainability*. Whereas in the former, it could be a dangerous blow to economic competitiveness and ineffective in terms of its environmental objective, it would be a means to internalise environmental costs and to increase international competitiveness in the

latter. At the time of the writing, only Denmark, the Netherlands and Germany seemed to accept the logic of *sustainability* whereas the other member states assess the proposed carbon tax and the Commission's strategy to deal with the greenhouse effect still in terms of *classic environmental policy*. The new frame of sustainability, actively promoted by the Commission, could open the same opportunities for new actor coalitions among the bureaucracies and political and economic forces within member states as it has done within the Commission. The same is true for the political problem-solving capacity of the new frame. At present, however, both tendencies are not visible empirically.

- In sum, *sustainability* allows to link environmental policy and liberal market economy in a single conceptual framework, i.e. to link the frames of environmental policy and of economic policy-making of the Commission and
- the member states. For this reason, *sustainability* allows new coalitions among actors which have conflicting problem definitions (and hence conflicting interests) if *classic environmental policy* is the dominant frame of environmental policy-making. This applies to coalitions among the different departments of the Commission or the member state governments as well as
- to coalitions between policy-makers and industry. *Sustainability* attempts to dissolve the conflict between environmental policy and market economy. Within *sustainability*, there is thus no embedded conflict between environmental priorities and economic interests. The link between *sustainability* and *supranational integration* introduces a third crucial element, namely the identity of the European Community. Thus, *sustainability* allows to integrate environmental policy, market economy and integration without *a priori* leading to conflicts among these three areas. The statement that there are no fundamental conflicts between these three areas does not exclude that conflicts may emerge. It only implies that, for instance, there is no basic conflict between environmental protection and economic growth as in the *classic environmental policy frame*.

The new frame of *sustainability* is better able to deal with possible conflicts among these policy areas because it is broader than *classic environmental policy* and attempts to integrate economic and environmental policy. Its problem-solving capacity is thus enhanced as compared to the latter. This problem-solving capacity refers to the potential to solve political problems. It does not imply that *sustainability* was more beneficial to the environment

than *classic environmental policy*. More precisely, it refers to the ability of the new frame to provide a single framework for the cognitive, normative and symbolic elements of the old frames. *Sustainability* provides a cognitive framework which does not separate between economic costs and benefits on the one hand and environmental costs and benefits on the other. The environment, in this framework, does not rank anymore among the "externalities" of economic logic. With regard to the normative aspect, the respect of nature (and creation) and the respect of the rights of future generations can go hand in hand with the maintenance of individual rights and responsibilities in economic life instead of having to resort to an ever increasing grasp of government regulations and limitations of individual freedom of enterprise in the name of environmental protection. Symbolically, the creative forces and the dynamism of the market economy can be mobilised in the service of the environment instead of being the sinners. Thus, the market as the best mechanism to balance societal demands can also deal with environmental degradation in its own terms instead of having to admit "market failure". Economic progress and modernity are not from the outset opposed to the protection of the environment. On the contrary, *sustainability* allows to include environmentally benign behaviour into the definition of progress and modernity.

As on the level of problem-solving, *sustainability* only provides a *potential* of action on the level of coalition formation. This structural possibility can, but does not have to, be realised by political actors. Problem-solving capacity and the opportunity for new coalitions must, however, not be interpreted in a narrow rationalistic sense. Speaking about the "adoption" of a frame does not imply a conscious act of choice. Actors do not choose one frame among several others which are equally available because it better serves their interests or because it secures most widespread agreement in negotiations. Problem definitions and frames are assessed on the basis of the criteria of truth (cognitive element), justice (normative element) and beauty (symbolic element). Actors can only base their actions on a new frame if these criteria are met. Coalitions can then be negotiated and problems be solved *on this basis*.

More generally, this study has tried to support the thesis that politics cannot and should not be analysed exclusively in terms of concepts like

power, interest, decision, pressure, influence, etc. Instead, it has argued that ideas are more than mere rationalisations or rhetoric packages but important categories for the analysis of politics and central elements of action. If ideas are important, it must be shown how ideas, events and action are related. This study has offered the concept of "frames" to capture this relationship. Frames are devices to interpret the world and to orient action. They consist of cognitive, normative and symbolic elements. This concept implies a broader notion of action than the one used by rationalistic approaches and thus allows a systematic investigation into the role of ideas and knowledge.

In this concept, ideas are no mere "epiphenomena" of the basic logic of power and interest. The present study has endeavoured to demonstrate that ideas are, on the contrary, at the basis of interests and the strategies to pursue them. The other extreme, however, should also be avoided, namely to treat ideas as a self-contained abstract universe. Ideas are not to be analysed according to their own logic. Such a view risks to privilege the role of consistency and argumentation, in other words, to focus on what happens within the world of ideas. From this, a traditional history of ideas is not far away. A similar risk, if attention is not directed exclusively at the logic of ideas, is a technocratic view which narrows the notion of ideas and knowledge to technical knowledge and thus brings technical experts in the centre of the analysis. Such an approach can also be enlarged and ask about the relationship between the world of ideas and the world of problems. Again, problems are easily defined as technical (e.g. environmental, energy, or health insurance) problems. As a result, technical experts might find the solution to a technical problem but are prevented from implementing it by political forces (lobbies of the most diverse kind, deals among political parties, politicians motivated "only" by electoral concerns, etc.). The analytical separation of technical problems and political problems leads to the conclusion that politics prevents problem-solving. Hence, political process and technical problem-solving should be separated. The notion of "learning" in such a view is often defined in technical terms and reflects a naïve relationship to progress and problem-solving.

By considering frames as consisting not only of cognitive but also of normative and symbolic elements, political questions, such as the distributive consequences of different frames, are not a priori excluded or



dismissed as less relevant. Broadening the definition of frames instead of restricting it to cognitive elements also avoids to define "learning" merely in terms of technical problem-solving. Instead, a meaningful and empirically fruitful concept of learning does not put the blame for unsuccessful learning on politics while seeing the cure in the hands of technicians which provide better information. Learning, if it includes normative and symbolic dimensions as well, is a political instead of a technical process. It is at the basis of interests instead of being prevented or enhanced by them.

The concept of framing also allows to avoid harmony-seeking concepts which regard shared or consensual knowledge as the basis for action by leaving the analysis of frames *of* action and moving towards the study of frames *for* action and frame competition. Frames are thus not only analytical devices which can be attached *ex post* to specific actions or which can be used to classify series or sets of action but also devices used by actors without having to consider them as mere rationalisations of actor's interests.

The analysis of frames should thus be able to contribute to the question of why actors want what they want instead of confining the inquiry to the question of how they get what they want. At the same time, it should be able to give ideas a place in the answers to this question by avoiding both extreme idealism and extreme realism. As it does not exclude political questions from the outset, it should also be able to include a critical dimension in the analysis without assuming the primacy of interests and power.

## Annexes

### *Annex 1: Data About the Greenhouse Effect*

The tables and figures of this annex show some basic data on the greenhouse effect. The first and simplest aim of their presentation is to make these data, which in this form are not generally accessible, available for researchers interested in the topic. The second reason for their presentation has to do with the basic goal of this study, namely to show that nothing directly follows from these data but that their importance depends on the interpretative frame through which they are perceived by actors (see also the discussion of this point on pp. 258 seq.).

*Table 4: Basic Facts About Greenhouse Gases*

Gas	Relative Contribution to the Greenhouse Effect over a 100 Year Period
Carbon Dioxide	61 %
Methane	15 %
CFCs	11,5 %
Nitrous Oxide	4 %
Others	8 %

*Source: SEC (91) 1744, A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency, p. 14.*

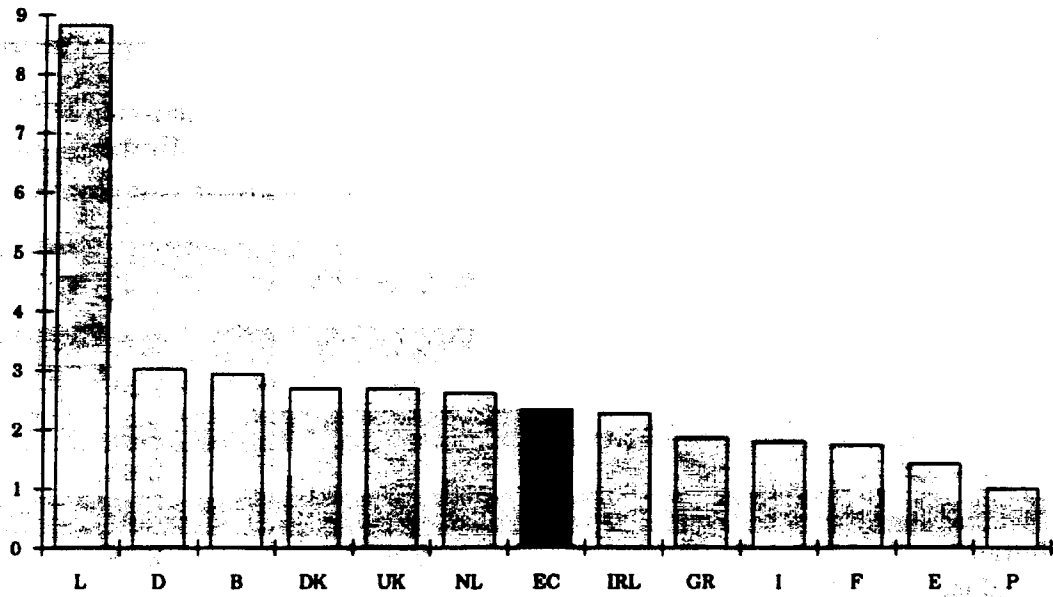
*Table 5: Total and Per Capita Emissions of Carbon (1989)*

Country	Total (million tons of carbon)	Per Cent of World Total	Per Capita Emission of Carbon
Portugal	10,3	0,2	1,00
Spain	55,0	0,9	1,42
France	97,5	1,7	1,74
Italy	102,8	1,7	1,79
Greece	18,6	0,3	1,86
Ireland	8,0	0,1	2,27
Netherlands	38,7	0,7	2,61
Denmark	13,8	0,2	2,69
United Kingdom	154,0	2,6	2,69
Belgium	29,1	0,5	2,93
Germany	186,1	3,2	3,02
Luxembourg	3,3	0,1	8,83
<b>Total EC</b>	<b>760,9</b>	<b>12,9</b>	<b>2,34</b>
USA	1852,7	23,0	5,34
Japan	296,5	5,0	2,40
USSR and Eastern Europe	1463,2	24,9	3,63
Rest of World	2011,9	34,2	0,49
<b>World Total</b>	<b>5885,2</b>	<b>100,0</b>	<b>1,13</b>

*Source: SEC (91) 1744, A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency, p. 15*

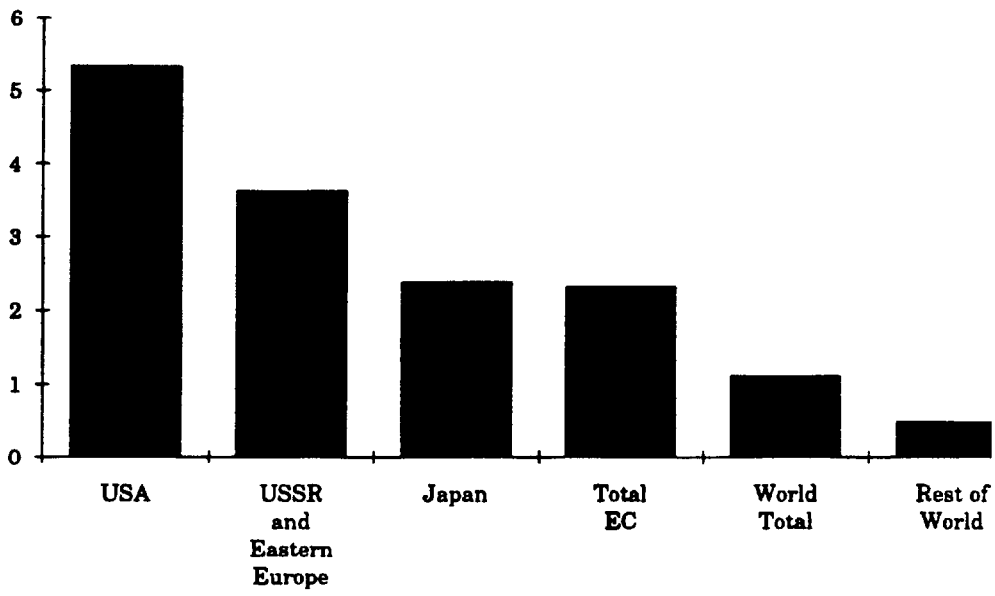
Note: The figures for the EC do not match the sum of the figures for the member states because of statistical differences and rounding errors.

*Figure 6: Per Capita Emissions of Carbon in the EC (in tons)*



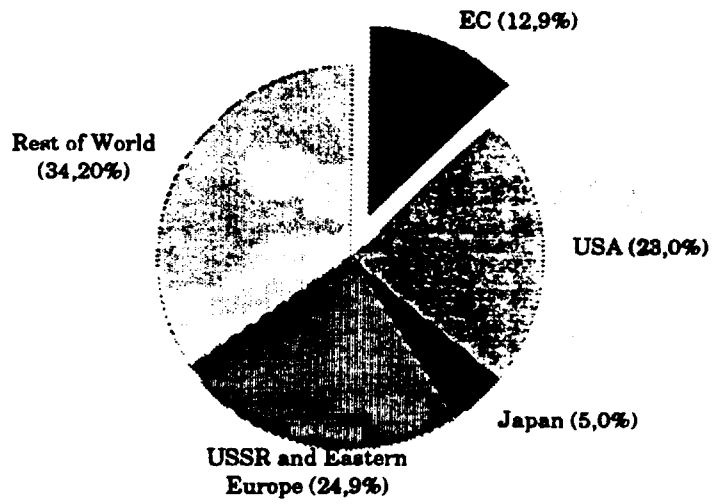
*Source: Based on Table 5*

*Figure 7: Per Capita Emissions of Carbon in the World (in tons)*



*Source: Based on Table 5*

*Figure 8: Share of World Carbon Emissions*



*Source: Based on Table 5*

*Table 6: Economic Sectors and Total CO<sub>2</sub> Emissions in the EC (in per cent)*

	Power Generation	Residential/ Commercial	Transport	Industry	Rest
B	21,1	24,5	21,7	28,3	4,4
DK	43,2	20,5	24,5	10,5	1,3
D	35,1	19,6	21,6	20,7	3,0
GR	46,2	11,9	24,2	14,8	2,9
E	32,9	9,8	32,3	20,1	4,9
F	13,6	25,4	34,0	23,6	3,5
IRL	34,0	30,2	20,0	15,4	0,4
I	29,3	20,2	26,0	19,8	4,7
L	11,9	10,6	21,4	56,1	0,0
NL	30,8	24,3	21,4	16,7	6,8
P	39,1	8,4	28,3	20,7	3,5
UK	37,9	18,8	24,1	15,1	4,2
EC	31,3	19,7	25,5	19,6	3,9

*Source: SEC (91) 1744, A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency, p. 16*

*Table 7: Structure of Gross Energy Consumption in the EC (in per cent)*

	Coal	Oil	Gas	Nuclear	Other
B	20,6	40,1	17,1	22,7	0,0
DK	33,2	52,9	8,9	0,0	5,1
D	28,0	39,7	17,6	13,8	0,9
GR	36,3	62,1	0,6	0,0	0,9
E	22,7	52,5	5,3	17,1	2,4
F	9,6	41,8	11,7	36,6	0,3
IRL	38,4	41,4	11,7	36,6	0,3
I	9,2	60,9	24,7	0,0	5,2
L	33,9	43,3	12,0	0,0	10,8
NL	12,5	36,7	47,9	1,5	1,8
P	16,3	78,8	0,0	0,0	4,8
UK	30,7	38,5	21,6	8,4	0,7
EC	21,0	44,8	18,3	14,3	1,6

*Source: SEC (91) 1744, A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency, p. 17*



*Annex 2: Research on Climate Change*

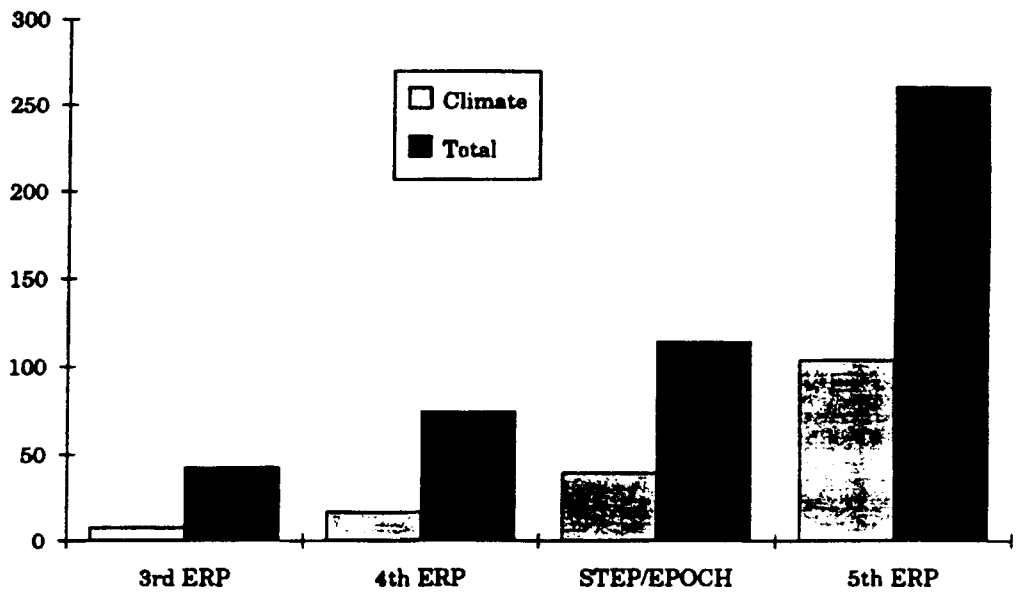
*Table 8: Research on Climate Change as a Part of Environmental Research*

Program	Duration	Publication	Climatic Research (MECU)/ percentage of total	Total Amount (MECU)
3rd ERP (1st climatology program)	1981 – 1985	L 101, 11.4.81, p. 1	8 (18,6%)	43
4th ERP (2nd climatology program)	1986 – 1990	L 159, 14.6.86, p. 31	17 (22,7%)	75
STEP/EPOCH	1989 – 1992	L 359, 8.12.89, p. 9	40 (34,8%)	115
5th ERP	1990 – 1994	L 192, 16.7.91, p. 29	104,6 (40%)	261,4

*Source: Official Journal of the EC, own calculations*

N.B.: The numbers for “climatology” in the 5th ERP refer to “global change programmes” which is a broader notion than “climatology”.

*Figure 9: Research on Climate and Total Environmental Research*



*Source: Based on Table 8*

*Annex 3: Commission Departments Mentioned in the Text*

<b>CdP</b>	<b>Forward Studies Unit (planing staff)</b>
<b>DG I</b>	<b>External Relations</b>
<b>DG II</b>	<b>Economic and Financial Affairs</b>
<b>DG III</b>	<b>Internal Market and Industrial Affairs</b>
<b>DG VI</b>	<b>Agriculture</b>
<b>DG VII</b>	<b>Transport</b>
<b>DG XI</b>	<b>Environment, Nuclear Safety and Civil Protection</b>
<b>DG XII</b>	<b>Science, Research and Development</b>
<b>DG XVII</b>	<b>Energy</b>
<b>DG XXI</b>	<b>Customs Union and Indirect Taxation</b>

## Bibliography

### *Books and Articles*

- Aberbach, Joel D. et al.: *Bureaucrats and Politicians in Western Democracies* (Cambridge, MA/London: Harvard University Press, 1981).
- Adler, Emanuel; Haas, Peter M.: *Conclusion: Epistemic Communities, World Order, and the Creation of a Reflective Research Program*; in: *International Organization* 46 (1992), pp. 367-390.
- Argyris, Chris; Schön, Donald A.: *Organizational Learning: A Theory of Action Perspective* (Reading etc.: Addison-Wesley, 1978).
- Audretsch, H.A.H.: *Supervision in European Community Law: Observance by the Member States of their Treaty Obligations. A Treatise on International and Supra-national Supervision* (Amsterdam/Oxford: North Holland, 2nd ed. 1986).
- Axelrod, Robert; Keohane, Robert O.: *Achieving Cooperation Under Anarchy: Strategies and Institutions*; in: *World Politics* 38 (1985/86), pp. 226-254.
- Axelrod, Robert (ed.): *Structure of Decision. The Cognitive Maps of Political Elites* (Princeton: Princeton University Press, 1976).
- Axelrod, Robert: *The Evolution of Cooperation* (New York: Basic Books, 1984).
- Ayubi, Nazih: *Political Islam. Religion and Politics in the Arab World* (London/New York: Routledge, 1991).
- Bach, Maurizio: *Eine leise Revolution durch Verwaltungsverfahren. Bürokratische Integrationsprozesse in der Europäischen Gemeinschaft*; in: *Zeitschrift für Soziologie* 21 (1992), pp. 16-30.
- Bardi, Luciano: *Il parlamento della Comunità Europea* (Bologna: Il Mulina, 1989).
- Baumol, William J.; Oates, Wallace E.: *The Theory of Environmental Policy* (Cambridge etc.: Cambridge University Press, 2nd ed. 1988).
- Beck, Ulrich: *Risikogesellschaft. Auf dem Weg in eine andere Moderne* (Frankfurt: Suhrkamp, 1986).
- Bellers, Jürgen: *Nationale und internationale Steuerungsfähigkeit in und von Nationalstaaten*; in: *Politische Vierteljahresschrift* 32 (1991), pp. 685-694.
- Benedick, Richard Elliot: *Ozone Diplomacy. New Directions in Safeguarding the Planet* (Cambridge, MA/London: Harvard University Press, 1991).
- Bennett, Graham: *The EC Large Combustion Plant Directive* (mimeo.: 1988).
- Benz, Arthur; Scharpf, Fritz W.; Zintl, Reinhard: *Horizontale Politikverflechtung. Zur Theorie von Verhandlungssystemen* (Frankfurt a.M./New York: Campus, 1992).
- Berger, Johannes; Offe, Claus: *Functionalism vs. Rational Choice. Some Questions Concerning the Rationality of Choosing One or the Other*; in: *Theory and Society* 11 (1982), pp. 521-526.
- Berger, Peter L.; Luckmann, Thomas: *The Social Construction of Reality. A Treatise in the Sociology of Knowledge* (Garden City, NY: Doubleday, 1966).
- Berlin, Dominique: *Organisation et fonctionnement de la Commission des Communautés européennes*; in: Sabino Cassese (ed.), *The European Administration/L'administration européenne* (Bruxelles: Institut International des Sciences Administratives, 1987), pp. 21-442.
- Beyme, Klaus von: *Die politischen Theorien der Gegenwart. Eine Einführung* (Opladen: Westdeutscher Verlag, 7th ed. 1992).

- Beyme, Klaus von: Institutionentheorie in der neueren Politikwissenschaft; in: Gerhard Göhler (ed.), Grundfragen der Theorie politischer Institutionen. Forschungsstand, Probleme, Perspektiven (Opladen: Westdeutscher Verlag, 1987), pp. 48-60.
- Binswanger, Hans Christoph: Ökologisch orientierte Wirtschaftswissenschaft; in: Bernhard Glaeser (ed.), Humanökologie. Grundlagen präventiver Umweltpolitik (Opladen: Westdeutscher Verlag, 1989), pp. 134-152.
- Black, Robert A.: Plus ça change, plus c'est la même chose: Nine Governments in Search of a Common Energy Policy; in: Helen Wallace, William Wallace, Carole Webb (ed.), Policy-Making in the European Community (London: John Wiley & Sons, 1st ed. 1977), pp. 165-196.
- Bohne, Eberhard: Recent Trends in Informal Environmental Conflict Resolution; in: Wolfgang Hoffmann-Riem/Eberhard Schmidt-Aßmann (ed.), Konfliktbewältigung durch Verhandlungen. Informelle und mittlerunterstützte Verhandlungen in Verwaltungsverfahren (Baden-Baden: Nomos, 1990), pp. 217-230.
- Bonham, G. Matthew; Shapiro, Michael J. (eds.): Thought and Action in Foreign Policy. Proceedings of the London Conference on Cognitive Process Models of Foreign Policy, March 1973 (Basel/Stuttgart: Birkhäuser, 1977).
- Boskin, Michael J.: Reagan and the Economy. The Successes, Failures, and Unfinished Agenda (San Francisco: ICS Press, 1989).
- Braun-Moser, Ursula: Europäische Verkehrspolitik - Chancen und Ziele (Sindelfingen: Libertas Verlag, 1989).
- Briggs, David: Environmental Problems and Policies in the European Community; in: Chris C. Park (ed.), Environmental Policies: an International Review (London etc.: Croom Helm, 1986), pp. 105-144.
- Brown Weiss, Edith: In Fairness to Future Generations. International Law, Common Patrimony, and Intergenerational Equity (Dobbs Ferry, NY: Transnational Publishers, 1989).
- Bungarten, Harald H.: Umweltpolitik in Westeuropa. EG, internationale Organisationen und nationale Umweltpolitiken (Bonn: Europa-Union Verlag, 1978).
- Burkhard-Reich, Barbara; Schumann, Wolfgang: Agrarverbände in der EG. Das agrarpolitische Entscheidungsgefüge in Brüssel und den EG-Mitgliedstaaten unter besonderer Berücksichtigung des Euro-Verbandes COPA und seiner nationalen Mitgliedsverbände (Kehl am Rhein/Straßburg: N. P. Engel Verlag, 1983).
- Capelletti, Mauro; Seccombe, Monica; Weiler, Joseph (eds.): Integration Through Law. Europa and the American Federal Experience, 3 Vols. (Berlin/New York: de Gruyter, 1985).
- Carlsnaes, Walter: Energy Vulnerability and National Security. The Energy Crises, Domestic Policy Responses and the Logic of Swedish Neutrality (London/New York: Pinter, 1988).
- Caspari, Conrad; Neville-Rolfe, Edmund: The Future of European Agriculture. Trade, Technology and the Environment (London: Economist Intelligence Unit, Special Report N. 2007, 1989).
- Cerhexe, Etienne (en collaboration avec Anne-Marie Suyders): Le droit européen - les objectifs et les institutions (Bruxelles: Bruylant & Nauwelaerts, 1989).
- Chiavarini Azzi, Guiseppo: Les experts nationaux: chevaux de troie ou partenaires indispensables?; in: Jimmy Jamar/Wolfgang Wessels (ed.), Community Bureaucracy at the Crossroads/L'administration européenne à l'heure du choix (Bruges: de Tempel, 1985), pp. 99-104.

- Churchill, R.; Freestone, D. (eds.): *International Law and Global Climate Change* (London/Dodrecht/Boston: Graham & Trotman/Martinus Nijhoff, 1990).
- Clark, William C.: *Managing Planet Earth*; in: *Scientific American* 261 (1989), pp. 47-54.
- Clinton Davis, Stanley: *International Affairs and the Environment*; in *Studia Diplomatica* 40 (1987), pp. 99-107.
- Cohen, Michael D.; March, James G.; Olsen, Johan P.: *A Garbage Can Model of Organizational Choice*; in: *Administrative Science Quarterly* 17 (1972), pp. 1-25.
- Coleman, James S.: *Foundations of Social Theory* (Cambridge, MA/London: Belknap, 1990).
- Coleman, James S.: *Power and the Structure of Society* (New York/London: Norton, 1974).
- Collier, U.L.; Hope, C.W.; Owens, S.E.: *Integrating the Environment with Community Energy Policy* (Cambridge: mimeo., 1989).
- Corcelle, Guy: *L'introduction de la 'voiture propre' en Europe*; in: *Revue du Marché Commun* 1985, pp. 258-263.
- Corcelle, Guy: *L'introduction de la 'voiture propre' en Europe: suite et fin?*; in: *Revue du Marché Commun* 1986, pp. 125-131.
- Corcelle, Guy: *La 'voiture propre' en Europe: le bout du tunnel est en vue!*; in: *Revue du Marché Commun* 1989, pp. 513-526.
- Crane, Diana: *Invisible Colleges* (Chicago: University of Chicago Press, 1972).
- Crozier, Michel: *Le phénomène bureaucratique. Essai sur les tendances bureaucratiques des systèmes d'organisation modernes et sur leurs relations en France avec le système social et culturel* (Paris: Seuil, 1963).
- Cyert, Richard M.; March, James G.: *A Behavioral Theory of the Firm* (Englewood Cliffs: Prentice-Hall, 1963).
- Czempiel, Ernst-Otto: *Der Stand der Wissenschaft von den Internationalen Beziehungen und der Friedensforschung in der Bundesrepublik Deutschland*; in: Klaus von Beyme (ed.), *Politikwissenschaft in der Bundesrepublik Deutschland. Entwicklungsprobleme einer Disziplin* (PVS Sonderheft 17/1986) (Opladen: Westdeutscher Verlag, 1986), pp. 250-263.
- Daintith, Terence; Hancher, Leigh: *Energy Strategy in Europe. The Legal Framework* (Berlin/New York: de Gruyter, 1986).
- Daintith, Terence; Williams, S.F.: *The Legal Integration of Energy Markets* (Berlin/New York: de Gruyter, 1987).
- Dant, Tim: *Knowledge, Ideology and Discourse. A Sociological Perspective* (London/New York: Routledge, 1991).
- Dehousse, Renaud; Weiler, Joseph H.H.: *The Legal Dimension*; in: William Wallace (ed.), *The Dynamics of European Integration* (London: Pinter, 1990), pp. 242-260.
- Deutsch, Karl: *The Nerves of Government* (New York: Free Press, 1963).
- Dewost, Jean-Louis: *Le vote majoritaire: simple modalité de gestion ou enjeu politique essentiel?*; in: Francesco Capotorti et al. (ed.), *Du droit international au droit de l'intégration. Liber Amicorum Pierre Pescatore* (Baden-Baden: Nomos, 1987), pp. 167-175.
- Dijk, Teun A. van: *News Analysis. Case Studies of International and National News in the Press* (Hillsdale, NJ etc.: Lawrence Erlbaum, 1988).
- Dijk, Teun A. van: *News as Discourse* (Hillsdale, NJ: Lawrence Erlbaum, 1988).

- Dijk, Teun A. van: Structures of News in the Press; in: Teun A. van Dijk (ed.), *Discourse and Communication. New Approaches to the Analysis of Mass Media Discourse and Communication* (Berlin etc.: de Gruyter, 1985), pp. 69-93.
- Donat, Marcell von: *Brüsseler Machenschaften. Dem Euro-Clan auf der Spur* (Baden-Baden: Nomos, 3rd ed. 1977).
- Donat, Marcell von: *Das ist der Gipfel! Die EG-Regierungschefs unter sich* (Baden-Baden: Nomos, 1987).
- Douglas, Mary; Wildavsky, Aaron: *Risk and Culture. An Essay on the Selection of Technological and Environmental Dangers* (Berkeley etc.: University of California Press, 1983).
- Douglas, Mary: A Typology of Cultures; in: Max Haller/Hans-Jürgen Hoffmann-Nowotny, Wolfgang Zapf (ed.), *Kultur und Gesellschaft. Verhandlungen des 24. Deutschen Soziologentages, des 11. Österreichischen Soziologentages und des 8. Kongresses der Schweizerischen Gesellschaft für Soziologie in Zürich 1988* (Frankfurt/New York: Campus, 1989), pp. 85-97.
- Dürr, Hans-Peter: Problems of Environmental Cooperation in Europe: A Non-Governmental View; in: Markus Jachtenfuchs/Michael Strübel (eds.), *Environmental Policy in Europe. Assessment, Challenges and Perspectives* (Baden-Baden: Nomos, 1992), pp. 57-67.
- Economic Instruments for Environmental Protection* (Paris: OECD, 1989).
- Eder, Klaus: *Die Vergesellschaftung der Natur. Studien zur sozialen Evolution der praktischen Vernunft* (Frankfurt a.M.: Suhrkamp, 1988).
- Eder, Klaus: *Framing and Communicating Environmental Action. A Discourse Analysis of Environmentalism* (Firenze: European University Institute, mimeo., 1992).
- Eder, Klaus: *Geschichte als Lernprozeß? Zur Pathogenese politischer Modernität in Deutschland* (Frankfurt: Suhrkamp, 1991).
- Eder, Klaus: *Why Talk About Values? Comment on Hechter* (Paper Presented at the European Social Theory Conference on the Rational Choice Perspective in Sociological Theory and Analysis, 6-7 June 1991, European University Institute, Firenze (mimeo.): 1991).
- Eisenstadt, Shmuel N.: Culture and Social Structure in Recent Sociological Analysis; in: Hans Haferkamp (ed.), *Social Structure and Culture* (Berlin/New York: de Gruyter, 1989), pp. 5-11.
- Elster, Jon: *Rationality*; in: *Contemporary Philosophy* 2 (1982), pp. 111-131.
- Elster, Jon: *Rationality and Social Norms* (Paper Presented at the European Social Theory Conference on the Rational Choice Perspective in Sociological Theory and Analysis, 6-7 June 1991, European University Institute, Firenze (mimeo.): 1991).
- Elster, Jon: *Ulysses and the Sirens. Studies in Rationality and Irrationality* (Cambridge etc.: Cambridge University Press/Editions de la maison des sciences de l'homme, 1979).
- Etheredge, Lloyd S.: *Can Governments Learn? American Foreign Policy and Central American Revolutions* (New York: Pergamon Press, 1985).
- Evers, Adalbert; Nowotny, Helga: *Über den Umgang mit Unsicherheit. Die Entdeckung der Gestaltbarkeit von Gesellschaft* (Frankfurt a.M.: Suhrkamp, 1987).
- Fantechi, Roberto; Ghazi, Anver (eds.): *Carbon Dioxide and Other Greenhouse Gases: Climatic and Associated Impacts. Proceedings of a Symposium Organized by the Commission of the European Communities, Directorate-*

- General for Science, Research and Development, and held in Brussels from 3-5 November 1986 (Dodrecht etc.: Kluwer, 1989).
- Feick, Jürgen; Jann, Werner: 'Nations matter' - Vom Eklektizismus zur Integration in der vergleichenden Policy-Forschung?; in: Manfred G. Schmidt (ed.), Staatstätigkeit. International und historisch vergleichende Analysen (PVS-Sonderheft 19) (Opladen: Westdeutscher Verlag, 1988), pp. 196-220.
- Fischer, Wolfgang: Die Klimakonvention in der internationalen Politik. Klimaschutz-Politik zwischen globaler Verantwortung und nationalen Interessen (Jülich: Forschungszentrum Jülich, 1992).
- Fleck, Ludwig: Entstehung und Entwicklung einer wissenschaftlichen Tatsache. Einführung in die Lehre vom Denkstil und Denkkollektiv (Frankfurt a.M.: Suhrkamp, 1980/1935).
- Funtowicz, Silvio; Ravetz, Jerry: Post-normal Science: A New Science for New Times; in: Scientific European, October 1990 (1990), pp. 20-22.
- Gaber, Harald/Natsch, Bruno: Gute Argumente: Klima (München: Beck, 1989).
- Galtung, Johan: Europe in the Making (London: Crane Russak, 1989).
- Galtung, Johan: Expectations and Interaction Processes; in: Inquiry 2 (1959), pp. 213-234.
- Galtung, Johan: The European Community: A Superpower in the Making (London: Allen and Unwin, 1973).
- Gamson, William A.; Modigliani, Andre: Media Discourse and Public Opinion on Nuclear Power: A Constructionist Approach; in: American Journal of Sociology 95 (1989), pp. 1-37.
- Garaudy, Roger: Intégrismes (Paris: Pierre Belfond, 1990).
- Gardner, Richard N.: Sterling-Dollar Diplomacy in Current Perspective. The Origins and the Prospects of Our International Economic Order (New York: Columbia University Press, 2nd ed. 1980).
- Garfinkel, Harold: Studies in Ethnomethodology (Englewood Cliffs, NJ: Prentice-Hall, 1967).
- Garrett, Geoffrey: International Cooperation and Institutional Choice: the European Community's Internal Market; in: International Organization 46 (1992), pp. 533-560.
- Gehring, Thomas: Dynamic International Regimes: Sectorally Integrated Normative Systems. Aspects of the Relationship between International Law and International Politics (Berlin: Free University, Ph.D thesis, 1992).
- Gerbet, Pierre: La construction de l'Europe (Paris: Imprimerie nationale, 1983).
- Giddens, Anthony: Central Problems in Social Theory. Action, Structure and Contradiction in Social Analysis (London/Basingstoke: Macmillain, 1979).
- Goffman, Erving: Encounters. Two Studies in the Sociology of Interaction (London: Allen Lane, 1961).
- Goffman, Erving: Frame Analysis. An Essay on the Organization of Experience (Cambridge, MA: Harvard University Press, 1974).
- Goffman, Erving: Strategic Interaction (Philadelphia: University of Pennsylvania Press, 1969).
- Göhler, Gerhard; Lenk, Kurt; Schmalz-Bruns, Rainer (eds.): Die Rationalität politischer Institutionen. Interdisziplinäre Perspektiven (Baden-Baden: Nomos, 1990).
- Göhler, Gerhard; Schmalz-Bruns, Rainer: Perspektiven der Theorie politischer Institutionen; in: Politische Vierteljahresschrift 29 (1988), pp. 309-349.



- Göhler, Gerhard; Lenk, Kurt; Münkler, Herfried; Walther, Manfred (eds.): Politische Institutionen im gesellschaftlichen Umbruch: ideengeschichtliche Beiträge zur Theorie politischer Institutionen (Opladen: Westdeutscher Verlag, 1990).
- Göhler, Gerhard (ed.): Grundfragen der Theorie politischer Institutionen: Forschungsstand, Probleme, Perspektiven (Opladen: Westdeutscher Verlag, 1987).
- Göhler, Gerhard: Soziale Institutionen - Politische Institutionen. Die Probleme der Institutionentheorie in der neueren deutschen Politikwissenschaft. Beiträge zur Theorie und zum Wandel politischer und sozialer Institutionen; in: Wolfgang Luthard/Arno Waschkuhn (ed.), Politik und Repräsentation (Marburg: Schüren, 1988), pp. 12-28.
- Gourevitch, Peter A.: Keynesian Politics: The Political Sources of Economic Policy Choices; in: Peter A. Hall (ed.), The Political Power of Economic Ideas. Keynesianism Across Nations (Princeton: Princeton University Press, 1989), pp. 87-106.
- Gowa, Joanne: Anarchy, Egoism and Third Images; in: International Organization 40 (1986), pp. 167-186.
- Grabitz, Eberhard; Schmuck, Otto; Steppart, Sabine; Wessels, Wolfgang: Direktwahl und Demokratisierung. Eine Funktionenbilanz des Europäischen Parlaments nach der ersten Wahlperiode (Bonn: Europa-Union Verlag, 1988).
- Graßl, Hartmut/Klingholz, Reiner: Wir Klimamacher. Auswege aus dem globalen Treibhaus (Frankfurt a.M.: Fischer, 1990).
- Graßl, Hartmut: Der zusätzliche Treibhauseffekt und das Klima; in: Aus Politik und Zeitgeschichte B16 (1992), pp. 3-8.
- Grosser, Alfred: Les Occidentaux. Les pays de l'Europe et les Etats-Unis depuis la guerre (Paris: Fayard, 1978).
- Grubb, Michael; Brackley, Peter; Ledic, Michik; Mathur, Ajay; Rayner, Steve; Russell, Jeremy; Tanabe, Akira: Energy Policies and the Greenhouse Effect. Vol. II: Country Studies and Technical Options (Aldershot: Dartmouth, 1991).
- Grubb, Michael: Energy Policies and the Greenhouse Effect. Vol. I: Policy Appraisal (Aldershot: Dartmouth, 1990).
- Gündling, Lothar; Weber, Beate (eds.): Dicke Luft in Europa. Aufgaben und Probleme der europäischen Umweltpolitik (Heidelberg: C.F. Müller, 1988).
- Gusfield, Joseph R.: The Culture of Public Problems. Drinking-Driving and the Symbolic Order (Chicago/London: Chicago University Press, 1981).
- Haas, Ernst B.; Williams, Mary Pat; Babei, Don: Scientists and World Order. The Uses of Technical Knowledge in International Organizations (Berkeley: University of California Press, 1977).
- Haas, Ernst B.: Beyond the Nation-State. Functionalism and International Organization (Stanford: Stanford University Press, 1964).
- Haas, Ernst B.: The Uniting of Europe. Political, Economic, and Social Forces 1950-1957 (Stanford: Stanford University Press, 2nd ed. 1968).
- Haas, Ernst B.: When Knowledge is Power. Three Models of Change in International Organizations (Berkeley/Los Angeles/Oxford: University of California Press, 1990).
- Haas, Ernst B.: Why Collaborate? Issue-Linkage and International Regimes; in: World Politics 32 (1979/80), pp. 357-405.
- Haas, Ernst B.: Words Can Hurt You; Or, Who Said What to Whom About Regimes; in: Stephen D. Krasner (ed.), International Regimes (Ithaca and London: Cornell University Press, 1983), pp. 23-59.

- Haas, Peter M. (ed.): Knowledge, Power, and International Policy Coordination, Special Issue of *International Organization*, Winter 1992.
- Haas, Peter M.: Do Regimes Matter? Epistemic Communities and Mediterranean Pollution; in: *International Organization* 43 (1987), pp. 377-403.
- Haas, Peter M.: Introduction: Epistemic Communities and International Policy Coordination; in: *International Organization* 46 (1992), pp. 1-35.
- Haas, Peter M.: Saving the Mediterranean. The Politics of International Environmental Cooperation (New York: Columbia University Press, 1990).
- Habermas, Jürgen: Strukturwandel der Öffentlichkeit. Untersuchungen zu einer Kategorie der bürgerlichen Gesellschaft (Darmstadt/Neuwied: Luchterhand, 15th ed. 1984).
- Habermas, Jürgen: Theorie des kommunikativen Handelns. 2 Vols. (Frankfurt a.M.: Suhrkamp, 1988).
- Habermas, Jürgen: Zur Logik der Sozialwissenschaften (Frankfurt a.M.: Suhrkamp, 1985).
- Habermas, Jürgen: Zur Rekonstruktion des Historischen Materialismus (Frankfurt a.M.: Suhrkamp, 3rd ed. 1982).
- Hagstotz, Werner; Kösters, Walther: Bestimmungsfaktoren subjektiver Umweltbelastung. Wahrnehmung der Wirklichkeit oder Wahrnehmung per Wirklichkeit?; in: *Politische Vierteljahresschrift* 27 (1986), pp. 347-356.
- Haigh, Nigel: EEC Environmental Policy and Britain. An Essay and a Handbook (London: Environmental Data Services, 1984).
- Haigh, Nigel: The European Community and International Environmental Policy; in: *International Environmental Affairs* 3 (1991), pp. 163-180.
- Hajer, Maarten A.: Bias in Environmental Discourse. An Analysis of the Acid Rain Controversy in Great Britain (mimeo.: 1990).
- Hall, Peter A.: The Political Power of Economic Ideas: Keynesianism Across Nations (Princeton, NJ: Princeton University Press, 1989).
- Hampicke, Ulrich: Ökologische Ökonomie. Individuum und Natur in der Neoklassik (Opladen: Westdeutscher Verlag, 1992).
- Hardin, Garrett: The Tragedy of the Commons; in: *Science* 162 (1968), pp. 1243-1248.
- Hardin, Russell: Collective Action (Baltimore: Johns Hopkins University Press, 1982).
- Hayes, Fiona: The Role of COREPER in EEC Decision-Making; in: *Administration (Dublin, Institute of Public Administration)* 2 (1984), pp. 177-200.
- Hayes-Renshaw, Fiona; Lequesne, Christian; Mayor Lopez, Pedro: The Permanent Representations of the Member States to the European Communities; in: *Journal of Common Market Studies* 28 (1989), pp. 119-137.
- Hechter, Michael: Should Values Be Written Out of the Social Scientist's Lexicon? (Paper Presented at the European Social Theory Conference on the Rational Choice Perspective in Sociological Theory and Analysis, 6-7 June 1991, European University Institute, Firenze (mimeo.): 1991).
- Hedberg, Bo: How Organizations Learn and Unlearn; in: Paul C. Nystrom/William H. Starbuck (ed.), *Handbook of Organizational Design. Vol. 1: Adapting Organizations to their Environments* (Oxford: Oxford University Press, 1981), pp. 3-27.
- Höhn, Hans-Joachim: Natur - Gesellschaft - Kultur. Auf dem Weg zu einer ökologischen Sozialethik; in: *Aus Politik und Zeitgeschichte* B20 (1991), pp. 28-35.

- Holzner, Burkart; Marx, John H.: Knowledge Application. The Knowledge System in Society (Boston etc.: Allyn and Bacon, 1979).
- Husserl, Edmund: Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch: Allgemeine Einführung in die reine Phänomenologie (Den Haag: Martinus Nijhoff, 1950).
- Immler, Hans: Natur in der ökonomischen Theorie. Teil 1: Vorklassik - Klassis - Marx; Teil 2: Naturherrschaft als ökonomische Theorie - Die Physiokraten (Opladen: Westdeutscher Verlag, 1985).
- Immler, Hans: Vom Wert der Natur. Zur ökologischen Reform von Wirtschaft und Gesellschaft (Opladen: Westdeutscher Verlag, 2nd ed. 1990).
- Isaac, Guy: L'insertion du parlement Européen dans le système juridictionnel des Communautés Européennes; in: *Annuaire Français de Droit International* XXXII (1986), pp. 794-809.
- Jachtenfuchs, Markus; Huber, Michael: Institutional Learning in the European Community: The Response to the Greenhouse Effect; in: J.D. Liefferink/P.D. Lowe/A.P.J. Mol (ed.), *European Integration and Environmental Policy* (London: Belknap Press, in press).
- Jachtenfuchs, Markus; Hey, Christian; Strübel, Michael: Umweltpolitik in der Europäischen Gemeinschaft; in: Volker von Prittwitz (ed.), *Umweltpolitik als Modernisierungsprozeß. Politikwissenschaftliche Umweltforschung und -lehre in der Bundesrepublik* (Opladen: Leske + Budrich, 1993), pp. 137-162.
- Jachtenfuchs, Markus; Strübel, Michael (eds.): *Environmental Policy in Europe. Assessment, Challenges and Perspectives* (Baden-Baden: Nomos, 1992).
- Jachtenfuchs, Markus: Die EG nach Maastricht. Das Subsidiaritätsprinzip und die Zukunft der Integration; in: *Europa-Archiv* 47 (1992), pp. 279-287.
- Jachtenfuchs, Markus: EC Foreign Environmental Policy and Eastern Europe; in: Markus Jachtenfuchs/Michael Strübel (ed.), *Environmental Policy in Europe. Assessment, Challenges and Perspectives* (Baden-Baden: Nomos, 1992), pp. 17-41.
- Jachtenfuchs, Markus: The European Community and the Protection of the Ozone Layer; in: *Journal of Common Market Studies* 28 (1990), pp. 261-277.
- Jamar, Jimmy; Wessels, Wolfgang (eds.): *Community Bureaucracy at the Crossroads/L'administration communautaire à l'heure du choix* (Bruges: de Tempel, 1985).
- Jänicke, Martin; Mönch, Harald: Ökologischer und wirtschaftlicher Wandel im Industrieländervergleich. Eine explorative Studie über Modernisierungskapazitäten; in: Manfred G. Schmidt (ed.), *Staatstätigkeit. International und historisch vergleichende Analysen* (PVS-Sonderheft 19) (Opladen: Westdeutscher Verlag, 1988), pp. 389-405.
- Jänicke, Martin: Conditions for Environmental Policy Success: An International Comparison; in: Markus Jachtenfuchs/Michael Strübel (ed.), *Environmental Policy in Europe. Assessment, Challenges and Perspectives* (Baden-Baden: Nomos, 1992), pp. 71-97.
- Jann, Werner: Vier Kulturtypen, die alles erklären? Kulturelle und institutionelle Ansätze der neueren amerikanischen Politikwissenschaft; in: *Politische Vierteljahresschrift* 27 (1986), pp. 361-377.
- Jaques, Elliott: *A General Theory of Bureaucracy* (London/New York: Heinemann/Halsted, 1976).
- Jervis, Robert: Realism, Game Theory, and Cooperation; in: *World Politics* 40 (1988), pp. 317-349.

- Joerges, Christian: Paradoxes of Deregulatory Strategies at Community Level: The Example of Product Safety Policy; in: Giandomenico Majone (ed.), *Deregulation or Re-Regulation? Regulatory Reform in Europe and in the United States* (London/New York: Pinter/St. Martin's Press, 1990), pp. 176-197.
- Johnson, Stanley; Corcelle, Guy: *The Environmental Policy of the European Community* (Lancaster: Kluwer, 1989).
- Johnson, Stanley P.: *The Earth Summit: The United Nations Conference on Environment and Development (UNCED)* (London etc.: Graham and Trotman/Martinus Nijhoff, 1993).
- Kahnemann, Daniel; Tversky, Amos: Choices, Values, and Frames; in: *American Psychologist* 39 (1984), pp. 341-350.
- Kaiser, Karl; Weizsäcker, Ernst Ulrich von; Comes, Stefan; Bleischwitz, Raimund: *Internationale Klimapolitik. Eine Zwischenbilanz und ein Vorschlag zum Abschluß einer Klimakonvention* (Bonn: Europa-Union Verlag, 1991).
- Kapteyn, P.J.G.; Verloren van Themaat, P.: *Introduction to the Law of the European Communities* (Deventer/London: 2nd ed. 1989).
- Katzenstein, Peter J.: *Analyzing Change in International Politics: The New Institutionalism and the Interpretative Approach* (Köln: Max-Planck-Institut für Gesellschaftsforschung, Discussion Paper 90/10, 1990).
- Katzenstein, Peter J.: *Der neue Institutionalismus und internationale Regime: Amerika, Japan und Westdeutschland in der internationalen Politik*; in: Hans-Hermann Hartwich (ed.), *Macht und Ohnmacht politischer Institutionen. 17. Wissenschaftlicher Kongreß der DVPW, 12. bis 16. September 1988 in der Technischen Hochschule Darmstadt* (Opladen: Westdeutscher Verlag, 1989), S. 356-369.
- Keck, Otto: *Der neue Institutionalismus in der Theorie der Internationalen Politik*; in: *Politische Vierteljahresschrift* 32 (1991), pp. 635-653.
- Kelsen, Hans: *Hauptprobleme der Staatsrechtslehre entwickelt aus der Lehre vom Rechtssatze* (Tübingen: Mohr, 1911).
- Keohane, Robert O.; Hoffmann, Stanley: *Institutional Change in Europe in the 1980s*; in: Robert O. Keohane/St Stanley Hoffmann (eds.), *The New European Community. Decisionmaking and Institutional Change* (Boulder etc.: Westview, 1991), pp. 1-39)
- Keohane, Robert O.: *After Hegemony. Cooperation and Discord in World Politics* (Princeton: Princeton University Press, 1984).
- Keohane, Robert O.: *International Institutions and State Power* (Boulder, CO: Westview, 1989).
- Keohane, Robert O.: *Neoliberal Institutionalism. A Perspective on World Politics*; in: id., *International Institutions and State Power* (Boulder/CO: Westview, 1989), pp. 1-20.
- Keohane, Robert O.: *Reciprocity in International Relations*; in: *International Organization* 40 (1986), pp. 1-27.
- Kepel, Gilles: *La revanche de Dieu. Chrétiens, juifs et musulmans à la reconquête du monde* (Paris: Seuil, 1991).
- Kingdon, John W.: *Agendas, Alternatives, and Public Policies* (Boston/Toronto: Little, Brown, and Co., 1984).
- Kirchner, Emil J.: *The European Parliament: Performance and Prospects* (Aldershot: Grower, 1984).
- Kohler-Koch, Beate (ed.): *Regime in den internationalen Beziehungen* (Baden-Baden: Nomos, 1989).

- Kohler-Koch, Beate: Interessen und Integration. Die Rolle organisierter Interessen im westeuropäischen Integrationsprozeß; in: Michael Kreile (ed.), Die Integration Europas (PVS Sonderheft 23) (Opladen: Westdeutscher Verlag, 1992), pp. 81-119.
- ✓ Koster, Veit: From Stockholm to Brundtland; in: *Environmental Policy and Law* 20 (No. 1-2) (1990), pp. 14-19.
- Krämer, Ludwig: Du contrôle de l'application des directives communautaires en matière d'environnement; in *Revue du Marché Commun* 313 (1988), pp. 22-28.
- Krämer, Ludwig: *EEC Treaty and Environmental Protection* (London: Sweet & Maxwell, 1990).
- Krämer, Ludwig: The Single European Act and Environmental Protection: Reflections on Several New Provisions in Community Law; in: *Common Market Law Review* 24 (1987), pp. 659-688.
- Krämer, Ludwig: Umwelt; in: Hans von der Groeben et al. (eds.), *Kommentar zum EWG-Vertrag*. Vol. 3, (Baden-Baden: Nomos, 4th ed. 1991), pp. 3909-4006.
- Krasner, Stephen D.: Structural Causes and Regime Consequences: Regimes as Intervening Variables; in: Stephen D. Krasner (ed.), *International Regimes* (Ithaca and London: Cornell University Press, 1983), pp. 1-21.
- Kratochwil, Friedrich; Ruggie, John Gerald: International Organization: A State of the Art on an Art of the State; in: *International Organization* 40 (1986), pp. 753-775.
- Kratochwil, Friedrich: Rules, Norms, Values, and the Limits of 'Rationality'; in: *Archiv für Rechts- und Staatsphilosophie* 72 (1986), pp. 301-329.
- Lang, Winfried: Diplomatie zwischen Ökonomie und Ökologie. Das Beispiel des Ozonvertrages von Montreal; in: *Europa-Archiv* 43 (1988), pp. 105-110.
- Lau, Christoph: Risikodiskurse: Gesellschaftliche Auseinandersetzungen um die Definition von Risiken; in: *Soziale Welt* 40 (1989), pp. 418-436.
- Laurman, J.A.: Recommendations; in: Roberto Fantechi/Anver Ghazi (ed.), *Carbon Dioxide and Other Greenhouse Gases: Climatic and Associated Impacts* (Dodrecht etc.: Kluwer, 1989), pp. 270-272.
- Leenen, A. Th. S.: Participation of the EEC in International Environmental Agreements; in: *Legal Issues of European Integration* 1 (special issue) (1984), pp. 93-111.
- Leggett, Jeremy (ed.): *Global Warming. The Greenpeace Report* (Oxford/New York: Oxford University Press, 1990).
- Lehmbruch, Gerhard; Singer, Otto; Grande, Edgar; Döhler, Marian: Institutionelle Bedingungen ordnungspolitischen Strategiewechsels im internationalen Vergleich; in: Manfred G. Schmidt (ed.), *Staatstätigkeit. Historische und vergleichende Analysen* (Special Issue 19/1988 of *Politische Vierteljahresschrift*) (Opladen: Westdeutscher Verlag, 1988), pp. 251-283.
- Lehmbruch, Gerhard: 10 Jahre Konservatismus in der Bundesrepublik Deutschland — Versuch einer Bilanz. Paper Presented at the Conference on "Wende-Inventur — Herausforderungen moderner Gesellschaftspolitik in den 90er Jahren", Bonn, 20.10.1992 (mimeo.).
- Lehmbruch, Gerhard: Wirtschaftspolitischer Strategiewechsel und die institutionelle Verknüpfung von Staat und Gesellschaft; in: Hans-Hermann Hartwich (ed.), *Macht und Ohnmacht politischer Institutionen*. 17. Wissenschaftlicher Kongreß der DVPW in der Technischen Hochschule Darmstadt (Opladen: Westdeutscher Verlag, 1989), pp. 222-235.

- Liberatore, Angela: EC Environmental Research and EC Environmental Policy. A Study in the Utilization of Knowledge for Regulatory Purposes (Firenze: EUI Working Paper 89/407, 1989).
- Liberatore, Angela: Problems of Transnational Policymaking: Environmental Policy in the European Community; in: *European Journal of Political Research* 19 (1991), pp. 281-305.
- Lindberg, Leon N.; Scheingold, Stuart A. (eds.): *Regional Integration. Theory and Research* (Cambridge/MA: Harvard University Press, 1971).
- Lindberg, Leon N.; Scheingold, Stuart A.: *Europe's Would-Be Polity. Patterns of Change in the European Community* (Englewood Cliffs/NJ: Prentice-Hall, 1970).
- Lindberg, Leon N.: Political Integration as a Multidimensional Phenomenon Requiring Multivariate Measurement; in: Leon N. Lindberg/Stewart S. Scheingold (ed.), *Regional Integration. Theory and Research* (Cambridge, MA: Harvard University Press, 1971), pp. 45-127.
- Lindblom, Charles E.: *Inquiry and Change. The Troubled Attempt to Understand and Shape Society* (New Haven/London/New York: Yale University Press, Russel Sage Foundation, 1990).
- Lindblom, Charles E.: *The Intelligence of Democracy. Decision Making Through Mutual Adjustment* (New York/London: The Free Press/Collier-Macmillan, 1965).
- Lindenberg, Siegwart: Choice and Culture: The Behavioral Basis of Cultural Impact on Transactions; in: Hans Haferkamp (ed.), *Social Structure and Culture* (Berlin/New York: de Gruyter, 1989), pp. 175-200.
- Lindenberg, Siegwart: Homo Socio-oeconomicus: The emergence of a General Model of Man in the Social Sciences; in: *Journal of Institutional and Theoretical Economics* 146 (1990), pp. 727-748.
- Lipschutz, Ronnie D.: Bargaining Among Nations. Culture, History, and Perceptions in Regime Formation; in: *Evaluation Review* 15 (1991), pp. 46-74.
- List, Martin: *Umweltschutz in zwei Meeren. Vergleich der internationalen Zusammenarbeit zum Schutz der Meeresumwelt in Nord- und Ostsee* (München: tuduv, 1991).
- Louis, Jean-Victor; Waelbroeck, Denis (eds.): *Le Parlement Européen dans l'évolution institutionnelle* (Bruxelles: Editions de l'Université de Bruxelles, 1988).
- Lowe, Philip: The Reform of the Community's Structural Funds; in: *Common Market Law Review* 25 (1988), pp. 503-521.
- Luce, R. Duncan; Raiffa, Howard: *Games and Decisions. Introduction and Critical Survey* (New York: John Wiley & Sons, 1957).
- Ludet, Daniel; Stotz, Rüdiger: Die neue Rechtsprechung des französischen Conseil d'Etat zum Vorrang völkerrechtlicher Verträge; in: *Europäische Grundrechtezeitschrift* 17 (1990), pp. 93-106.
- Luhmann, Niklas: *Grundrechte als Institution* (Berlin: Duncker & Humblot, 1965).
- Luhmann, Niklas: *Legitimation durch Verfahren* (Frankfurt: Suhrkamp, 1989, 2nd ed.).
- Luhmann, Niklas: *Ökologische Kommunikation. Kann die moderne Gesellschaft sich auf ökologische Gefährdungen einstellen?* (Opladen: Westdeutscher Verlag, 2nd ed. 1988).
- Luhmann, Niklas: *Rechtssoziologie* (Opladen: Westdeutscher Verlag, 1987, 3rd ed.).

- Luhmann, Niklas: *Soziale Systeme. Grundriß einer allgemeinen Theorie* (Frankfurt: Suhrkamp, 2nd ed. 1988).
- Luhmann, Niklas: *Soziologie des Risikos* (Berlin: de Gruyter, 1991).
- Luhmann, Niklas: *Soziologische Aufklärung 1. Aufsätze zur Theorie sozialer Systeme* (Opladen: Westdeutscher Verlag, 6th ed. 1991).
- Luhmann, Niklas: *Soziologische Aufklärung 2. Aufsätze zur Theorie der Gesellschaft* (Opladen: Westdeutscher Verlag, 4th ed. 1991).
- Luhmann, Niklas: *Soziologische Aufklärung 5. Konstruktivistische Perspektiven* (Opladen: Westdeutscher Verlag, 1990).
- Lukes, Steven: *The Rationality of Norms* (Paper Presented at the European Social Theory Conference on the Rational Choice Perspective in Sociological Theory and Analysis, 6-7 June 1991, European University Institute, Firenze (mimeo.): 1991).
- Lutton, Philippe: *Les équilibres mouvants du système institutionnel de la Communauté économique européenne. Quelques réflexions*; in: *Revue française de science politique* 35 (1985), pp. 26-44.
- MacNeill, Jin; Winsemius, Peter; Yakushiji, Taizo: *Beyond Interdependence. The Meshing of the World's Economy and the Earth's Ecology. A Report to the Trilateral Commission* 1990).
- Maier, Charles S.: *The Politics of Productivity: Foundations of American International Economic Policy after World War II*; in: Peter J. Katzenstein (ed.), *Between Power and Plenty. Foreign Economic Policies of Advanced Industrial States* (Madison: University of Wisconsin Press, 1978), pp. 23-49.
- Majone, Giandomenico (ed.): *Deregulation or Re-regulation. Regulatory Reform in Europe and the United States* (London/New York: Pinter/St. Martins Press, 1990).
- Majone, Giandomenico: *Cross-National Sources of Regulatory Policymaking in Europe and the United States*; in: *Journal of Public Policy* 11 (1991), pp. 79-106.
- Majone, Giandomenico: *Evidence, Argument and Persuasion in the Policy Process* (New Haven/London: Yale University Press, 1989).
- Majone, Giandomenico: *Policies as Theories*; in: *Omega* 8 (1980), pp. 151-162.
- Majone, Giandomenico: *Research Programs and Action Programs, Or Can Policy Research Learn From the Philosophy of Science?*; in: P. Wagner et al. (ed.), *Social Science in a Societal Context* (Cambridge: Cambridge University Press, 1991).
- Majone, Giandomenico: *The Uncertain Logic of Standard-Setting*; in: *Zeitschrift für Umweltpolitik* 5 (1982), pp. 305-323.
- Mann, David: *Environmental Learning in a Decentralized Political World*; in: *Journal of International Affairs* 44 (1991), pp. 301-337.
- Mannheim, Karl: *Ideologie und Utopie* (Frankfurt a.M.: G. Schulte-Blumke, 3rd ed. 1952).
- Mannheim, Karl: *Konservatismus. Ein Beitrag zur Soziologie des Wissens* (Frankfurt a.M.: Suhrkamp, 1984).
- Mannheim, Karl: *Wissenssoziologie* (Berlin/Neuwied: Luchterhand, 1964).
- March, James; Olsen, Johan: *Rediscovering Institutions* (New York: The Free Press, 1989).
- March, James G.; Olsen, Johan P.: *The New Institutionalism: Organizational Factors in Political Life*; in: *American Political Science Review* 78 (1984), pp. 734-749.

- March, James G.: *Decisions and Organizations* (Oxford/New York: Basil Blackwell, 1988).
- March, James G.: *Variable Risk Preferences and Adaptive Aspirations*; in: *Journal of Economic Behavior and Organization* 9 (1988), pp. 5-24.
- Mastellone, Carlo: *The External Relations of the E.E.C. in the Field of Environmental Protection*; in: *International and Comparative Law Quarterly* 30 (1981), pp. 105-117.
- Mayntz, Renate (ed.): *Implementation politischer Programme II* (Opladen: Westdeutscher Verlag, 1983).
- Mayntz, Renate: *Corporate Actors in Public Policy. Changing Perspectives in Political Analysis*; in: *Norsk Statsvitenskapelig Tidsskrift* 3 (1986), pp. 7-25.
- Mazey, Sonia; Richardson, Jeremy: *EC Policy-Making: An Emerging European Policy Style*; in: J.D. Liefferink/P.D. Lowe/A.P.J. Mol (ed.), *European Integration and Environmental Policy* (London: Belknap Press, in press).
- Mead, George H.: *Mind, Self, and Society. From the Standpoint of a Social Behaviorist* (Chicago: University of Chicago Press, 1967).
- Michelmann, Hans J.: *Organisational Effectiveness in a Multinational Bureaucracy* (Farnborough: Saxon House, 1978).
- Miller, Max: *Kollektive Lernprozesse. Studien zur Grundlegung einer soziologischen Lerntheorie* (Frankfurt: Suhrkamp, 1986).
- Mitrany, David: *A Working Peace System. An Argument for the Functional Development of International Organization* (London: Royal Institute of International Affairs, 1943).
- Modelski, George: *Is World Politics Evolutionary Learning?*; in: *International Organization* 44 (1990), pp. 1-24.
- Moravcsik, Andrew: *Negotiating the Single European Act: National Interests and Conventional Statecraft in the European Community*; in: *International Organization* 45 (1991), pp. 19-56.
- Morone, Joseph G.; Woodhouse, Edward J.: *Averting Catastrophe. Strategies for Regulating Risky Technologies* (Berkeley/Los Angeles/London: University of California Press, 1986).
- Müller-Brandeck-Bocquet, Gisela: *Ein föderalistisches Europa? Zur Debatte über die Föderalisierung und Regionalisierung der zukünftigen Europäischen Politischen Union*; in: *Aus Politik und Zeitgeschichte* B45 (1991), pp. 13-25.
- Münch, Richard: *Die Struktur der Moderne. Grundmuster und differentielle Gestaltung des institutionellen Aufbaus der modernen Gesellschaften* (Frankfurt: Suhrkamp, 1992).
- Noël, Emil: *Le Parlement face à la Commission*; in: Jean-Victor Louis/Denis Waelbroeck (ed.), *Le Parlement Européen dans l'évolution institutionnelle* (Bruxelles: Editions de l'Université de Bruxelles, 1988), pp. 107-129.
- Nollkaemper, André: *The European Community and International Environmental Co-operation: Legal Aspects of External Community Powers*; in: *Legal Issues of European Integration* 2/1987, pp. 55-91.
- Nye, Joseph R.: *Neorealism and Neoliberalism*; in: *World Politics* 40 (1988), pp. 235-251.
- Nye, Joseph S.: *Nuclear Learning and U.S.-Soviet Security Regimes*; in: *International Organization* 41 (1987), pp. 371-402.
- O'Keeffe, David; Schermers, Henry G. (eds.): *Mixed Agreements* (Deventer: Kluwer, 1983).



- Oberthür, Sebastian: Die internationale Zusammenarbeit zum Schutz des Weltklimas; in: *Aus Politik und Zeitgeschichte B16* (1992), pp. 9-20.
- Oberthür, Sebastian: Die Zerstörung der stratosphärischen Ozonschicht als internationales Problem. Interessenkonstellationen und internationaler politischer Prozeß; in: *Zeitschrift für Umweltpolitik und Umweltrecht* 1992), pp. 155-185.
- OECD and the Environment (Paris: OECD, 1986).
- Ökonomische Instrumente der Umweltpolitik: neuer Weg oder Sackgasse? Umweltpolitisches Gespräch. Symposium der Deutschen Stiftung für Umweltpolitik/Leitung: K.-H. Hansmeyer (Beiträge zur Umweltgestaltung A 93) (Berlin: Schmidt, 1984).
- Olson, Mancur: *The Logic of Collective Action. Public Goods and the Theory of Groups* (Cambridge, MA: Harvard University Press, 1965).
- Orr, David W.: U.S. Energy Policy and the Political Economy of Participation; in: *The Journal of Politics* 4 (1979), pp. 1027-1056.
- Pag, Sabine: The Relations Between the Commission and National Bureaucracies; in: Sabino Cassese (ed.), *The European Administration/L'administration européenne* (Bruxelles: Institut International des Sciences Administratives, 1987), pp. 443-496.
- Pearce, David; Barbier, Edward; Markandya, Anil: *Sustainable Development: Economics and Environment in the Third World* (London: Earthscan, 1990).
- Pearce, David W./Turner, R. Kerry: *Economics of Natural Resources and the Environment* (New York etc.: Harvester Wheatsleaf, 1990).
- Peters, Guy: *The Politics of Bureaucracy* (New York: Longman, 3rd ed. 1984).
- Prittitz, Volker von; Wolf, Klaus Dieter: Die Politik der globalen Güter; in: Volker von Prittitz (ed.), *Umweltpolitik als Modernisierungsprozeß. Politikwissenschaftliche Umweltforschung und -lehre in der Bundesrepublik Deutschland* (Opladen: Leske + Budrich, 1993), pp. 193-218.
- Prittitz, Volker von: *Das Katastrophenparadox. Elemente einer Theorie der Umweltpolitik* (Opladen: Leske + Budrich, 1990).
- Puchala, Donald J.: *Fiscal Harmonization in the European Communities. National Politics and International Cooperation* (London/Dover: Frances Pinter, 1984).
- Puchala, Donald: *International Transactions and Regional Integration*; in: Leon N. Lindberg/Stuart A. Scheingold (ed.), *Regional Integration. Theory and Research* (Cambridge/MA: Harvard University Press, 1971), pp. 128-159.
- Putnam, Robert D.: *The Beliefs of Politicians. Ideology, Conflict, and Democracy in Britain and Italy* (New Haven/London: Yale University Press, 1973).
- Rapoport, Anatol: *Fights, Games, and Debates* (Ann Arbor: University of Michigan Press, 1960).
- Rasmussen, Hjalte: *On Law and Policy in the European Court of Justice: A Comparative Study in Judicial Policymaking* (Dodrecht/Boston/Lancaster: Martinus Nijhoff Publishers, 1986).
- Ravetz, Jerome: *Scientific Knowledge and Its Social Problems* (Harmondsworth: Penguin, 1973).
- Rayner, Steve: *A Cultural Perspective on the Structure and Implementation of Global Environmental Agreements*; in: *Evaluation Review* 15 (1991), pp. 75-102.
- Rehbinder, Eckard; Stewart, Richard: *Environmental Protection Policy* (Berlin/New York: de Gruyter, 1985).

- Rein, Martin: *Frame-Reflective Policy Discourse* (Leyden: Leyden Institute for Law and Public Policy, Working Paper, 1986).
- Riker, William H.: *The Theory of Political Coalitions* (New Haven/London: Yale University Press, 1962).
- Rose, Richard: *What is Lesson-Drawing?*; in: *Journal of Public Policy* 11 (1991), pp. 3-30.
- Rubinstein, Ariel: *Comments on the Interpretations of Game Theory*; in: *Econometrica* 59 (1991), pp. 909-924.
- Sabatier, Paul A.: *Knowledge, Policy-Oriented Learning, and Policy Change. An Advocacy Coalition Framework*; in: *Knowledge: Creation, Diffusion, Utilization* 8 (1987), pp. 649-692.
- Samuel, Pierre: *L'effet de serre* (Paris: éditions entente, 1990).
- Sand, Peter H.; *Lessons Learned in Global Environmental Governance: Lessons Learned in Global Environmental Governance* (Washington: World Resources Institute, 1990).
- Sandholtz, Wayne; Zysman, John: 1992: *Recasting the European Bargain*; in: *World Politics* 1989, pp. 95-128.
- Scharpf, Fritz W.: *Decision Rules, Decision Styles, and Policy Choices* (Köln: Max-Planck-Institut für Gesellschaftsforschung, Discussion Paper 88/3, 1988).
- Scharpf, Fritz W.: *Games Real Actors Could Play: The Problem of Connectedness* (Köln: Max-Planck-Institut für Gesellschaftsforschung, Discussion Paper 90/8, 1990).
- Scharpf, Fritz W.: *The Joint-Decision Trap: Lessons From German Federalism and European Integration*; in: *Public Administration* 66 (1988), pp. 239-278.
- Scharpf, Fritz W.: *Verhandlungssysteme, Verteilungskonflikte und Pathologien der politischen Steuerung*; in: Manfred G. Schmidt (ed.), *Staatstätigkeit. International und historisch vergleichende Analysen* (Opladen: Westdeutscher Verlag, 1988), pp. 61-87.
- Scharpf, Fritz W.: *Vom Fug und Unfug institutioneller Erklärungen*; in: *Politische Vierteljahresschrift* 29 (1988), pp. 271-275.
- Schelling, Thomas C.: *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960).
- Scheuing, Dieter H.: *Umweltschutz auf der Grundlage der Einheitlichen Europäischen Akte*; in: *Europarecht* 1989, pp. 152-192.
- Schlicht, Ekkehart: *Rationality, Bounded or not, and Institutional Analysis*; in: *Journal of Institutional and Theoretical Economics* 146 (1990), pp. 703-719.
- Schmalz-Bruns, Rainer: *Neo-Institutionalismus*; in: Thomas Ellwein et al. (ed.), *Jahrbuch zur Staats- und Verwaltungswissenschaft, Vol. 4* (Baden-Baden: Nomos, 1990), pp. 315-337.
- Schneider, Anne; Ingram, Helen: *Behavioral Assumptions of Policy Tools*; in: *Journal of Politics* 52 (1990), pp. 510-529.
- Schneider, Gunter; Sprenger, Rolf-Ulrich (eds.): *Mehr Umweltschutz für weniger Geld. Einsatzmöglichkeiten und Erfolgchancen ökonomischer Anreizsysteme in der umweltpolitik. Seminar, Straßburg 1983. In Zusammenarbeit mit der Kommission der Europäischen Gemeinschaften (Ifo Studien zur Umweltökonomie 4)* (München: Ifo-Institut für Wirtschaftsforschung, 1984).
- Schneider, Volker; Werle, Raymund: *Vom Regime zum korporativen Akteur. Zur institutionellen Dynamik der Europäischen Gemeinschaft*; in: Beate Kohler-Koch (ed.), *Regime in den internationalen Beziehungen* (Baden-Baden: Nomos, 1989), pp. 409-434.

- Schumann, Wolfgang: EG-Forschung und Policy-Analyse. Zur Notwendigkeit, den ganzen Elefanten zu erfassen; in: Politische Vierteljahresschrift 32 (1991), pp. 232-257.
- Schütz, Alfred: Collected Papers, Vol I: The Problem of Social Reality (Den Haag: Martinus Nijhoff, 1962).
- Schütz, Alfred: Collected Papers, Vol. II. Studies in Social Theory (Den Haag: Martinus Nijhoff, 1964).
- Schütz, Alfred: Collected Papers, Vol. III. Studies in Phenomenological Philosophy (Den Haag: Martinus Nijhoff, 1966).
- Schütz, Alfred: Der sinnhafte Aufbau der sozialen Welt (Frankfurt a.M.: Suhrkamp, 5th ed. 1991).
- Schütz, Alfred: On Multiple Realities; in: id., Collected Papers, Vol. I: The Problem of Social Reality (Den Haag: Martinus Nijhoff, 1962), pp. 207-259.
- Schwarz, Michiel; Thompson, Michael: Divided We Stand. Redefining Politics, Technology and Social Choice (New York etc.: Harvester Wheatsheaf, 1990).
- Schwarze, Jürgen: Die Befolgung von Vorabentscheidungen des Europäischen Gerichtshofs durch deutsche Gerichte (Baden-Baden: Nomos, 1988).
- Schwarze, Jürgen: Europäisches Verwaltungsrecht. Entstehung und Entwicklung im Rahmen der Europäischen Gemeinschaft (2 Vols.) (Baden-Baden: Nomos, 1988).
- Schwarze, Jürgen: The Role of the European Court of Justice in the Interpretation of Uniform Law Among Member States of the European Communities (Baden-Baden: Nomos, 1988).
- Sebenius, James K.: Challenging Conventional Explanations of International Cooperation: Negotiation Analysis and the Case of Epistemic Communities; in: International Organization 46 (1992), pp. 323-365.
- Segerstråle, Ullica: The (Re)Colonialization of Science by the Life-World: Problems and Prospects; in: Hans Haferkamp (ed.), Social Structure and Culture (Berlin/New York: de Gruyter, 1989), pp. 245-268.
- Sen, Amartya K.: Rational Fools: A Critique of the Behavioral Foundations of Economic Theory; in: Philosophy and Public Affairs 6 (1977), pp. 317-344.
- Sidjanski, Dusan: L'avenir fédéraliste de l'Europe. La Communauté européenne des origines au traité de Maastricht (Paris: Presse Universitaires de France, 1992).
- Siebert, Horst: Ökonomische Theorie der Umwelt (Tübingen: Mohr, 1978). *Transl.:* Economics and the Environment. Theory and Policy. Second, Revised and Enlarged Edition (Berlin etc.: Springer, 1987).
- Siedentopf, Heinrich; Ziller, Jacques (eds.): Making European Policies Work. The Implementation of Community Legislation in the Member States. Vol. I: Comparative Syntheses (London/Newbury Park/New Delhi: Sage Publications, 1988).
- Sikora, R.I./Barry, B. (eds): Obligations to Future Generations (Philadelphia: Temple University Press, 1978).
- Simon, Herbert A.: From Substantive to Procedural Rationality; in: Spiro J. Latsis (ed.), Method and Appraisal in Economics (Cambridge etc.: Cambridge University Press, 1976), pp. 129-148.
- Simonis, Udo E.: Kooperation oder Konfrontation: Chancen einer globalen Klimapolitik; in: Aus Politik und Zeitgeschichte B16 (1992), pp. 21-32.
- Skolnicoff, Eugene B.: The Policy Gridlock of Global Warming; in: Foreign Policy 79 (1990), pp. 77-93.

- Smart, Barry: Foucault, Sociology, and the Problem of Human Agency; in: *Theory and Society* 11 (1982), pp. 121-141.
- Snidal, Duncan: The Game Theory of International Politics; in: *World Politics* 38 (1985/86), pp. 25-57.
- Stein, Herbert: *Presidential Economics. The Making of Economic Policy From Roosevelt to Reagan and Beyond* (Washington: American Enterprise Institute, 2nd. 1988).
- Strasser, Daniel: *Les finances de l'Europe. Le droit budgétaire et financier des Communautés européennes* (Paris: Librairie Générale de droit et de jurisprudence, 4th ed. 1990).
- Strübel, Michael: *Internationale Umweltpolitik. Entwicklungen — Defizite — Aufgaben* (Opladen: Leske + Budrich, 1992).
- Strübel, Michael: *Nationale Interessen und europäische Politikformulierung in der Umweltpolitik*; in: Michael Kreile (ed.), *Die Integration Europas* (PVS Sonderheft 23) (Opladen: Westdeutscher Verlag, 1992), pp. 274-291.
- Task Force "Environment and the Internal Market" (ed.): "1992" — *The Environmental Dimension* (Bonn: Economica, 1990).
- Taylor, D.; Diprose, G.; Duffy, M.: *EC Environmental Policy and the Control of Water Pollution: the Implementation of Directive 76/464 in Perspective*; in: *Journal of Common Market Studies* 24 (1986), pp. 225-246.
- Temple Lang, John: *The Ozone Layer Convention: A New Solution to the Question of Community Participation in 'Mixed' Internationale Agreements*; in: *Common Market Law Review* 23 (1986), pp. 157-176.
- Thompson, Michael; Ellis, Richard; Wildavsky, Aaron: *Cultural Theory* (Boulder/San Francisco/Oxford: Westview Press, 1990).
- Thompson, Michael: *Among the Energy Tribes: A Cultural Framework for the Analysis and Design of Energy Policy*; in: *Policy Sciences* 17 (1984), pp. 321-339.
- Timsit, Gérard: *Théorie de l'administration* (Paris: Economica, 1986).
- Vasquez, John A.: *A Learning Theory of the American Anti-Vietnam War Movement*; in: *Journal of Peace Research* XII (1976), pp. 299-314.
- Vogel, David: *National Styles of Regulation. Environmental Policy in Great Britain and the United States* (Ithaca: Cornell University Press, 1986).
- Wagner, R. Harrison: *The Theory of Games and the Problem of International Cooperation*; in: *American Political Science Review* 77 (1983), pp. 330-346.
- Walker, R.B.J.: *Realism, Change, and International Political Theory*; in: *International Studies Quarterly* 31 (1987), pp. 65-86.
- Wallace, Helen: *Making Multilateral Negotiations Work*; in: William Wallace (ed.), *The Dynamics of European Integration* (London: Pinter, 1990), pp. 213-228.
- Wallace, Helen: *Negotiation and Coalition Formation in the European Community*; in: *Government and Opposition* 20 (1985), pp. 453-472.
- Wallace, Helen: *Negotiation, Conflict and Compromise. The Elusive Pursuit of Common Policies*; in: Helen Wallace, William Wallace, Carole Webb (ed.), *Policy-Making in the European Community* (Chichester etc.: John Wiley & Sons, 2nd ed. 1983), pp. 43-80.
- Wallace, William (ed.): *The Dynamics of European Integration* (London: Pinter, 1990).
- Wallace, William: *Introduction: The Dynamics of European Integration*; in: William Wallace (ed.), *The Dynamics of European Integration* (London: Pinter, 1990), pp. 1-24.

- Walton, Richard E.; McKersie, Robert B.: *A Behavioral Theory of Labor Negotiations. An Analysis of a Social Interaction System* (New York etc.: McGraw-Hill, 1965).
- Waltz, Kenneth N.: *Theory of International Politics* (New York etc.: McGraw-Hill, 1979).
- Watzlawick, Paul (ed.): *Die erfundene Wirklichkeit. Wie wissen wir, was wir zu wissen glauben? Beiträge zum Konstruktivismus* (München/Zürich: Piper, 1981).
- Weede, Erich: *Der ökonomische Erklärungsansatz in der Internationalen Politik*; in: *Politische Vierteljahresschrift* 30 (1989), pp. 254-272.
- Weiler, Joseph H.H.: *Il sistema comunitario europeo. Processo politico e struttura giuridice* (Bologna: Il Mulino, 1985).
- Weiler, Joseph: *Community, Member States and European Integration: Is the Law Relevant?*; in: *Journal of Common Market Studies* 1982, pp. 39-56.
- Weiler, Joseph: *The Community System: the Dual Character of Supranationalism*; in: *Yearbook of European Law* 1 (1981), pp. 267-306.
- Weiner, Klaus-Peter: *Zwischen Freihandelszone und Weltmacht. Auf dem Weg zu einer gemeinsamen Außen- und Sicherheitspolitik der EG*; in: *Blätter für deutsche und internationale Politik* 1989, pp. 339-350.
- Weizsäcker, Ernst Ulrich von: *Erdpolitik. Ökologische Realpolitik an der Schwelle zum Jahrhundert der Umwelt* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1989).
- Weizsäcker, Ernst Ulrich von: *Ökologischer Strukturwandel als Antwort auf den Treibhauseffekt*; in: *Aus Politik und Zeitgeschichte* B16 (1992), pp. 33-38.
- Weizsäcker, Ernst Ulrich von: *Regulatory Reform and the Environment: The Case for Environmental Taxes*; in: Giandomenico Majone (ed.), *Deregulation or Re-Regulation? Regulatory Reform in Europe and in the United States* (London/New York: Pinter/St. Martin's Press, 1989), pp. 198-210.
- Weizsäcker, Ernst Ulrich von: *Sustainability: A Task for the North*; in: *Journal of International Affairs* 44 (1991), pp. 421-432.
- Wendt, Alexander; Duvall, Raymond: *Institutions and International Order*; in: James N. Rosenau/Ernst Otto Czempiel (ed.), *Governance without Government. Order and Change in World Politics* (Cambridge: Cambridge University Press, 1992), pp. 51-73.
- Wendt, Alexander: *Anarchy is what States Make of it: The Social Construction of Power Politics*; in: *International Organization* 46 (1992), pp. 391-425.
- Wendt, Alexander: *The Agent-Structure Problem in International Relations Theory*; in: *International Organization* 41 (1987), pp. 335-370.
- Wessels, Wolfgang; Bulmer, Simon: *The European Council. Decision-making in European Politics* (London: 1987).
- Wessels, Wolfgang: *Administrative Interaction*; in: William Wallace (ed.), *The Dynamics of European Integration* (London: Pinter, 1990), pp. 229-241.
- Wessels, Wolfgang: *Community Bureaucracy in a Changing Environment*; in: Jimmy Jamar/Wolfgang Wessels (ed.), *Community Bureaucracy at the Crossroads/L'administration communautaire à l'heure du choix* (Bruges: de Tempel, 1985), pp. 8-36.
- Wessels, Wolfgang: *Der Europäische Rat. Stabilisierung statt Integration? Geschichte, Entwicklung und Zukunft der EG-Gipfelkonferenzen* (Bonn: Europa-Union Verlag, 1980).
- Wessels, Wolfgang: *The EC Council: The Community's Decisionmaking Center*; in: Robert O. Keohane/St Stanley Hoffmann (ed.), *The New European Community*.

- Decisionmaking and Institutional Change (Boulder/San Francisco/Oxford: Westview, 1991), pp. 133-154.
- What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility; in: *American Journal of International Law* 84 (1990), pp. 190-212.
- Wicke, Lutz; Huckestein, Berkhard: *Umwelt Europa — der Ausbau zur ökologischen Marktwirtschaft* (Gütersloh: Verlag Bertelsmann Stiftung, 1991).
- Wicke, Lutz: *Die ökologischen Milliarden* (München: Kösel, 1986).
- Wicke, Lutz: *Umweltökonomie. Eine praxisorientierte Einführung* (München: Vahlen, 1991).
- Wijkman, Per Magnus: *Managing the Global Commons*; in: *International Organization* 36 (1982), pp. 511-536.
- Wildavsky, Aaron; Drake, Karl: *Theories of Risk Perception: Who Fears What and Why*; in: *Daedalus* 119 (1990), pp. 41-60.
- Wildavsky, Aaron: *Choosing Preferences by Constructing Institutions: A Cultural Theory of Preference Formation*; in: *American Political Science Review* 81 (1987), pp. 3-21.
- Wilke, Marc; Wallace, Helen: *Subsidiarity: Approaches to Power-sharing in the European Community* (London: Royal Institute of International Affairs, Discussion Papers No. 27, 1990).
- Wittgenstein, Ludwig: *Philosophische Untersuchungen* (Frankfurt a.M.: Suhrkamp, 1982).
- Wittgenstein, Ludwig: *Tractatus logico-philosophicus* (Frankfurt a.M.: Suhrkamp, 1982/1921).
- Wolf, Klaus Dieter: *Internationale Regime zur Verteilung globaler Ressourcen. Eine vergleichende Analyse der Grundlagen ihrer Entstehung am Beispiel der Regelung des Zugangs zur wirtschaftlichen Nutzung des Meeresbodens, des geostationären Orbits, der Antarktis und zu Wissenschaft und Technologie* (Baden-Baden: Nomos, 1991).
- World Commission on Environment and Development: *Our Common Future* (Oxford: Oxford University Press, 1987).
- Wright, David: *EC Environmental Policy: Coping with Interdependency*; in: *Futures* 1991), pp. 709-723.
- Wuthnow, Robert; Hunter, James Davison; Bergesen, Albert; Kurzweil, Edith: *Cultural Analysis. The Work of Peter L. Berger, Mary Douglas, Michel Foucault, and Jürgen Habermas* (London etc.: Routledge & Kegan Paul, 1984).
- Wynne, Brian: *Frameworks of Rationality in Risk Management: Towards the Testing of Naïve Sociology*; in: Jennifer Brown (ed.), *Environmental Threats. Perception, Analysis and Management* (London/New York: Belhaven Press, 1989), pp. 33-47.
- Wynne, Brian: *Risk Management and Hazardous Waste. Implementation and the Dialectics of Credibility* (Berlin etc.: Springer Verlag, 1987).
- Young, Oran R.: *International Regimes: Toward a New Theory of Institutions*; in: *World Politics* 39 (1986/87), pp. 105-122.
- Young, Oran: *Regime Dynamics: The Rise and Fall of International Regimes*; in: Stephen D. Krasner (ed.), *International Regimes* (Ithaca and London: Cornell University Press, 1983), pp. 93-113.
- Young, Oran: *The Effectiveness of International Institutions: Hard Cases and Critical Variables*; in: James N. Rosenau/Ernst Otto Czempiel (ed.),

- Governance without Government. Order and Change in World Politics (Cambridge: Cambridge University Press, 1992), pp. 160-194.
- Young, Oran: The Politics of International Regime Formation: Managing Natural Resources and the Environment; in: International Organization 43 (1989), pp. 349-375.
- Zartman, William: Negotiations: Theory and Reality; in: Journal of International Affairs 29 (1975), pp. 69-77.
- Ziegler, Rolf: Norms as Frames of Action (Paper Presented at the European Social Theory Conference on the Rational Choice Perspective in Sociological Theory and Analysis, 6-7 June 1991, European University Institute, Firenze (mimeo.): 1991).
- Zürn, Michael: Interessen und Institutionen in der internationalen Politik. Grundlegung und Anwendungen des situationsstrukturellen Ansatzes (Opladen: Leske + Budrich, 1992).

### *Documents*

- Association for the Conservation of Energy: *A 2020 Energy Vision in the European Community and How to Achieve it*. Study for the "Cellule de Prospective", 6.12.1990.
- Bericht der Arbeitsgruppe von Experten der Mitgliedstaaten über den Einsatz ökonomischer und steuerlicher Instrumente in der EG-Umweltpolitik*, XI/185/90-DE, 5.9.1990.
- Bericht der Bundesregierung an den Deutschen Bundestag über Maßnahmen zum Schutz der Ozonschicht*, Deutscher Bundestag, Drucksache 11/8166, 22.10.1990.
- Bericht der Bundesregierung über die Konferenz der Vereinten Nationen für Umwelt und Entwicklung in Rio de Janeiro* (3.-14. Juni 1992), Deutscher Bundestag, Drucksache 12/3380, 30.9.1992.
- Beschluß der Bundesregierung zur Reduzierung der energiebedingten CO<sub>2</sub>-Emissionen in der Bundesrepublik Deutschland auf der Grundlage des Zweiten Zwischenberichts der Interministeriellen Arbeitsgruppe "CO<sub>2</sub>-Reduktion" (IMA CO<sub>2</sub>-Reduktion)*, Deutscher Bundestag, Drucksache 12/2081, 12.2.1992.
- Bloch von Blottnitz, Undine: *Bericht im Namen des Ausschusses für Energie, Forschung und Technologie über die Mitteilung der Kommission der Europäischen Gemeinschaften an den Rat mit dem Entwurf für eine EntschlieÙung über eine Orientierung der Gemeinschaft für die Weiterentwicklung der neuen und erneuerbaren Energiequellen*, A2-63/86, 17.6.1986.
- Bloch von Blottnitz, Undine: *Bericht im Namen des Ausschusses für Energie, Forschung und Technologie über Maßnahmen der Gemeinschaft im Jahre 1988/89 auf den Gebieten der erneuerbaren Energien, der Energieeinsparung und der rationellen Energienutzung*, A2-249/87, 9.12.1987.
- Bundesminister für Umwelt, Naturschutz und Reaktorsicherheit: *Bericht der Bundesregierung an die Kommission der Europäischen Gemeinschaften über das nationale Programm zur Reduzierung der energiebedingten CO<sub>2</sub>-Emissionen und anderer Treibhausgase bis zum Jahre 2005*, June 1992.

- Bundesminister für Umwelt, Naturschutz und Reaktorsicherheit: *Beschluß der Bundesregierung vom 7. November 1990 zur Reduzierung der CO<sub>2</sub>-Emissionen in der Bundesrepublik Deutschland bis zum Jahr 2005*, 1990.
- Bundesminister für Umwelt, Naturschutz und Reaktorsicherheit: *EG Umweltministerrat: Töpfer für drastische Einschränkung der Abfallexporte und konkrete Schritte zum Klimaschutz*, BMU Pressemitteilung 94/92, 19.10.1992.
- Bundesminister für Umwelt, Naturschutz und Reaktorsicherheit: *Ermittlung und Bewertung von CO<sub>2</sub>-Minderungspotentialen in den neuen Bundesländern der Bundesrepublik Deutschland*, 1992.
- Bundesminister für Umwelt, Naturschutz und Reaktorsicherheit: *Vergleichende Analyse der in den Berichten der Enquete-Kommission "Vorsorge zum Schutz der Erdatmosphäre" und in den Beschlüssen der Bundesregierung ausgewiesenen CO<sub>2</sub>-Minderungspotentiale und Maßnahmen*, 1991.
- Climate Change: The 1990 and 1992 IPCC Assessments. IPCC First Assessment Report: Overview and Policymaker Summaries and 1992 IPCC Supplement (WMO/UNEP, 1992).*
- Cost-Effectiveness Analysis of CO<sub>2</sub> Reduction Options. "Bottom-Up" Approach. Part II: Single Country Reports. CO<sub>2</sub> Study. Crash Programme. Report for the Commission of the European Communities, DG XII, JOULE Programme, Models for Energy and Environment, October 1990.*
- Draft Treaty on the Union*, Luxembourg Presidency Document, reprinted in: *Europe Documents* No. 1722/1723, 5.7.1991.
- Draft Union Treaty*, Dutch Presidency's Working Document, reprinted in: *Europe Documents*, No. 1746/1747, 20.11.1991.
- EC Commission, Delegation of the Commission of the European Communities in Washington: *Note on Ozone Depletion*, 1.11.1991.
- EC Commission, Directorate General for Economic and Financial Affairs: *The Economics of Policies to Stabilize or Reduce Greenhouse Gas Emissions: The Case of CO<sub>2</sub>*, II/335/90-EN, 11.10.1990.
- EC Commission, Forward Studies Unit: *Transport and the Environment: a Global and Long-Term Response by the Community*. Final Report of the Transport/Environment Steering-Group, Brussels, January 1990.
- EC Commission, Legal Service: *Community Strategy to Limit CO<sub>2</sub> Emissions and to Improve Energy Efficiency*, JUR (91) 3769, 19.6.1991.
- EC Commission: *A Common Platform: Guidelines for the Community for UNCED 1992*, SEC (91) 1693, 30.10.91; reprinted in *Europe Environment*, No. 376, 26.11.1991.
- EC Commission: *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*; reprinted in *Europe Documents*, No. 1743, 12.11.1991.
- EC Commission: *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, SEC (91) 1744, 14.10.1991.
- EC Commission: *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, September/October 1991.
- EC Commission: *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, 7.10.1991.
- EC Commission: *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, October 1991.
- EC Commission: *Biomass — A New Future?*, SEC (92) 232, 31.1.1992.



- EC Commission: *Commission conclusions on the greenhouse effect*, December 1990 (mimeo.).
- EC Commission: *Communication from the Commission to the Council: A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency* (with Annexes), XI/626/91, 22.9.1991.
- EC Commission: *Communication to the Council "The greenhouse effect and the Community"*. Commission work programme concerning the evaluation of policy options to deal with the greenhouse effect and draft Council Resolution on the greenhouse effect and the Community, COM (88) 656, 16.11.1988.
- EC Commission: *Compte rendu succinct de la réunion informelle des ministres de l'Environnement (Rome, 22 et 23 septembre 1990)*, SI (90) 700, 25.9.1990.
- EC Commission: *Conclusions of CO<sub>2</sub> Co-ordination Meeting or 15.10.91 in View of Environment/Energy Council Preparation*, 16.10.1991.
- EC Commission: *Der Zustand der Umwelt in der Europäischen Gemeinschaft. Überblick*, COM (92) 23, Vol. III, 3.4.92.
- EC Commission: *Die Europäer und ihre Umwelt*, 1983.
- EC Commission: *Die Europäer und ihre Umwelt*, 1986.
- EC Commission: *Draft Communication to the Council on A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, presented jointly by Mr. Ripa di Meana and Mr. Cordoso e Cunha, 31.5.1991.
- EC Commission: *Eine Gemeinschaftsstrategie für weniger Kohlendioxidemissionen und mehr Energieeffizienz*, KOM (92) 246, 1.6.1992.
- EC Commission: *Energieplanung in der Europäischen Gemeinschaft (auf regionaler Ebene)*, COM (91) 53, 8.5.1991.
- EC Commission: *Energy and the Environment*, COM (89) 369, 8.2.1990.
- EC Commission: *Environnement. Note explicative*, 20.2.1991.
- EC Commission: *Erster Jahresbericht an das Europäische Parlament über die Kontrolle der Anwendung des Gemeinschaftsrechts*, COM (84) 181, 11.4.1984.
- EC Commission: *Europe 2000: Outlook for the Community's Territory*; reprinted in *Europe Documents*, No. 1739, 24.10.1991.
- EC Commission: *European technologies for energy management — Thermie programme*, COM (89) 121, 22.3.1989.
- EC Commission: *File Note: Council High Level Energy Group*, 10th October 1991, 11.10.1991.
- EC Commission: *Für eine dauerhafte und umweltgerechte Entwicklung. Ein Programm der Europäischen Gemeinschaft für Umweltpolitik und Maßnahmen im Hinblick auf eine dauerhafte und umweltgerechte Entwicklung*, COM (92) 23, Vol. II, 3.4.92 (fifth environmental action programme).
- EC Commission: *Going Beyond Words: A Community Action Programme to Limit EC Carbon Dioxide Emissions*, XI/584/90, 22.11.1990.
- EC Commission: *Grünbuch zu den Auswirkungen des Verkehrs auf die Umwelt. Eine Gemeinschaftsstrategie für eine "dauerhaft umweltgerechte Mobilität"*, COM (92) 46, 6.4.92.
- EC Commission: *Industrielle Wettbewerbsfähigkeit und Umweltschutz*, SEC (92) 1986, 4.11.92.
- EC Commission: *Informal Discussion Paper from the Services of the Commission on the Convention on Global Climate Change*, 30.5.1991.
- EC Commission: *Les Européens et l'environnement en 1988*.
- EC Commission: *Manuel de procédure*, mise à jour 1991.

- EC Commission: *Minutes of Interservice Meeting of 8.1.1992, 15.1.1992.*
- EC Commission: *Mission Report. Preparation of ad hoc Energy/Environmental/ECOFIN Council Group on CO<sub>2</sub>, 4.11.1991.*
- EC Commission: *Mitteilung der Kommission an den Rat über die Situation bei der ERdölversorgung einschließlich zwei Vorschlägen für Richtlinien des Rates über Maßnahmen bei Versorgungsschwierigkeiten und über die Erdölvorräte, COM (90) 514, 22.11.1990.*
- EC Commission: *Mitteilung der Kommission über ein sektorielles Forschungs- und Entwicklungsprogramm der Europäischen Wirtschaftsgemeinschaft auf dem Gebiet der Umwelt gemäß Beschluß des Rates der Europäischen Gemeinschaft vom 3. März 1981, OJ C 51, p. 2, 10.3.1981.*
- EC Commission: *Mitteilung der Kommission über eine gesamteuropäische Energiecharta, COM (91) 36, 14.2.1991.*
- EC Commission: *Neunter Jahresbericht über die Kontrolle der Anwendung des Gemeinschaftsrechts, COM (92) 136, 27.5.92.*
- EC Commission: *Note de Dossier: Meeting of the Energy/Environment ad hoc Group of the Council (Friday, 8th November 1991), 12.11.1991.*
- EC Commission: *Note for the Attention of Mr. L.J. Brinkhorst, Director General DG XI: Timing of Activities on CO<sub>2</sub>, Jan. - May 1992, 28.1.1992.*
- EC Commission: *Orientations de la politique pour l'environnement suite au sommet de Dublin (Communication de M. Ripa di Meana à la Commission), SEC (90) 1776, 18.9.1990.*
- EC Commission: *Policy Options in View of the Community's CO<sub>2</sub> Emission Stabilisation Target, SEC (90) 496, reprinted in Europe Documents, No. 1681, 10.1.1991.*
- EC Commission: *Projet de procès-verbal de la 1039ème réunion de la Commission, 13.12.1990.*
- EC Commission: *Projet de procès-verbal de la 1040ème réunion de la Commission tenue à Bruxelles, COM (90) PV 1040, 20.12.1990.*
- EC Commission: *Proposal for a Council Decision adopting a specific research and technological development programme in the field of non-nuclear energies, COM (90) 164, 28.5.1990.*
- EC Commission: *Proposal for a Council Decision concerning the promotion of energy efficiency in the Community, COM (90) 365, 13.11.1990.*
- EC Commission: *Proposal for a Council Decision on the Establishment of a Monitoring Mechanism in Order to Secure Compliance with the CO<sub>2</sub> Stabilization Community Target by the Year 2000. Draft 5, 22.11.1991.*
- EC Commission: *Proposal for a Council Decision on the Sharing out of CO<sub>2</sub> Emissions Among Member States in Order to Achieve the CO<sub>2</sub> Stabilization Community Target by the Year 2000, 27.6.1991.*
- EC Commission: *Proposal for a Council Decision on the Sharing out of CO<sub>2</sub> Emissions Among Member States in Order to Achieve the CO<sub>2</sub> Stabilization Community Target by the Year 2000, 29.5.1991.*
- EC Commission: *Proposal for a Council Directive on Excise Duties on Motor Fuels From Agricultural Sources, COM (92) 36, reprinted in Europe Documents, No. 1768, 4.4.92.*
- EC Commission: *Proposal for a Council Regulation Allowing Voluntary Participation by Companies in the Industrial Sector in a Community Eco-Audit Scheme, COM (91) 459, January 1992.*
- EC Commission: *R&D Programme in the Field of the Environment 1991 - 1994. Workprogramme, XII/177/91-EN, 1991.*

- EC Commission: *Spezifische Aktionen zur Vergrößerung des Marktanteils der erneuerbaren Energieträger*. ALTENER, COM (92) 180, 29.6.92.
- EC Commission: *Subsidiarity and the Environment*, II/00944, 15.2.1991.
- EC Commission: *The Conservation of Tropical Forest: The Role of the Community*, COM (89) 410, 2.8.1989.
- EC Commission: *Towards Sustainability. A European Community Programme of Policy and Action in Relation of the Environment*, 16.9.1991.
- EC Commission: *Vorschlag für eine Entscheidung des Rates über ein gemeinschaftsweites Beobachtungssystem zur Messung der Emissionen von CO<sub>2</sub> und anderen Treibhausgasen*, COM (92) 181, 1.6.1992.
- EC Commission: *Vorschlag für eine Entscheidung des Rates über ein Gemeinschaftsprogramm auf den Gebieten der strategischen Analyse, der Vorausschau und der Bewertung im Bereich von Forschung und Technologie (1988-1992) — MONITOR*, COM (88) 386, 27.7.1988.
- EC Commission: *Vorschlag für eine Entscheidung des Rates über ein spezifisches Programm für Forschung und technologische Entwicklung im Bereich der Umwelt (1990-1994)*, COM (90) 158, 28.5.1990.
- EC Commission: *Vorschlag für eine Entscheidung des Rates über ein spezifisches Programm für Forschung und technologische Entwicklung im Bereich der nichtnuklearen Energien (1990-1994)*, COM (90) 164, 28.5.1990.
- EC Commission: *Vorschlag für eine Entscheidung des Rates zur Annahme von zwei spezifischen Programmen für Forschung und technologische Entwicklung auf dem Gebiet der Umwelt (STEP and EPOCH) (1989-1992)*, COM (88) 632, 21.11.1988.
- EC Commission: *Vorschlag für eine EntschlieÙung des Rates der Europäischen Gemeinschaften über ein Programm der Europäischen Gemeinschaft für Umweltpolitik und Maßnahmen im Hinblick auf eine dauerhafte und umweltgerechte Entwicklung*, COM (92) 23, Vol. I, 3.4.92.
- EC Commission: *Vorschlag für eine Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten bezüglich der Mindestwirkungsgrade von neuen, mit flüssigen oder gasförmigen Brennstoffen beschickten Warmwasserheizkesseln*, COM (90) 368, 29.10.1990.
- EC Commission: *Vorschlag für eine Richtlinie des Rates zur Aufhebung der Richtlinie 75/404/EWG über die Einschränkung des Einsatzes von Erdgas in Kraftwerken*, COM (90) 306, 6.7.1990.
- EC Commission: *Vorschlag für eine Richtlinie des Rates zur Einführung einer Steuer auf Kohlendioxidemissionen und Energie*, COM (92) 226, 1992.
- EC Commission: *Vorschlag für einen Beschluß des Rates zur Annahme von mehrjährigen FuE-Programmen auf dem Gebiet der Umwelt (1986-1990)*, COM (85) 391, 24.7.1985.
- EC Commission: *Vorschlag für einen Beschluß des Rates zur Annahme von drei mehrjährigen Forschungs- und Entwicklungsprogrammen auf dem Gebiet der Umwelt (1986-1990)*, OJ C 301, p. 1, 25.11.85.
- EC Commission: *Vorschlag für einen Beschluß des Rates zur Festlegung eines sektoriellen Forschungs- und Entwicklungsprogramms auf dem Gebiet der Umwelt (Umweltschutz und Klimatologie)(indirekte und konzertierte Aktionen) 1981-1985*, OJ C 228, p. 1, 8.9.1980.
- EC Commission: *Vorschlag für einen Beschluß des Rates zur Festlegung eines mehrjährigen Forschungsprogramms der Europäischen Wirtschaftsgemeinschaft auf dem Gebiet der Klimatologie indirekte Aktion 1979-1983*, OJ C 247, p. 2, 18.10.1978.

- EC Council: *A Common Platform: Guidelines for the Community for UNCED 1992. Council Conclusions*, 10339/91, 17.12.1991.
- EC Council: *A Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency. Draft Council Conclusions*, 9374/91, 14.11.1991.
- EC Council: *Beschluß des Rates vom 10. Juni 1986 zur Annahme von mehrjährigen Forschungs- und Entwicklungsprogrammen auf dem Gebiet der Umwelt (1986-1990)*, OJ L 159, p. 31, 14.6.1986.
- EC Council: *Beschluß des Rates vom 10. Juni 1986 zur Annahme von mehrjährigen Forschungs- und Entwicklungsprogrammen auf dem Gebiet der Umwelt (1986-1990) (86/234/EWG)*, OJ L 159, p. 31, 14.6.1986.
- EC Council: *Beschluß des Rates vom 18. Dezember 1979 zur Festlegung eines mehrjährigen Forschungsprogramms der Europäischen Wirtschaftsgemeinschaft auf dem Gebiet der Klimatologie (indirekte Aktion 1980-1984) (80/27/EWG)*, OJ L 12, p. 24, 17.1.1980.
- EC Council: *Beschluß des Rates vom 23. April 1990 über das gemeinschaftliche Rahmenprogramm im Bereich der Forschung und technologischen Entwicklung (1990-1994) (90/221/Euratom, EWG)*, OJ L 117, p. 28, 8.5.1990.
- EC Council: *Beschluß des Rates vom 24. Juni 1988 über das System der Eigenmittel der Gemeinschaften*, OJ L 185, p. 24, 15.7.1988.
- EC Council: *Beschluß des Rates vom 28. September 1987 über das gemeinschaftliche Rahmenprogramm im Bereich der Forschung und technologischen Entwicklung (1987-1991) (87/516/Euratom, EWG)*, OJ L 302, p. 1, 24.10.1987.
- EC Council: *Beschluß des Rates vom 3. März 1981 zur Festlegung eines sektoriellen Forschungs- und Entwicklungsprogramms auf dem Gebiet der Umwelt (Umweltschutz und Klimatologie) — indirekte und konzertierte Aktionen — (1981-1985) (81/213/EWG)*, OJ L 101, p. 1, 11.4.1981.
- EC Council: *Communication à la presse, 1546ème session du Conseil (ECOFIN)*, 10321/91, 16.12.1991.
- EC Council: *Conclusions on Climate Change Policy*, 31.10.1990, reprinted in Churchill/Freestone, *International Law and Global Climate Change*, pp. 266-268.
- EC Council: *Conclusions on Energy and the Environment*, reprinted in *Europe Documents*, No. 1621, 1.6.1990, 1.6.1990.
- EC Council: *Council Conclusions: Community Strategy to Limit Carbon Dioxide Emissions and to Improve Energy Efficiency*, SN/283/91, 13.12.1991.
- EC Council: *Council Decision of 29 October 1991 concerning the promotion of energy efficiency in the Community (SAVE programme)*, OJ L 307, p. 34, 8.11.1991.
- EC Council: *Council Directive of 24 November 1988 on the Limitation of Emissions of Certain Pollutants into the Air from Large Combustion Plants*; OJ L 336, 7.12.1988, p. 1.
- EC Council: *Council Regulation (EEC) No. 2008/90 of 29 June 1990 concerning the promotion of energy technology in Europe (Thermie programme)*, OJ L 185, p. 1, 17.7.1990.
- EC Council: *Council Resolution of 21 June 1989 on the greenhouse effect and the Community*, OJ C 183, p. 4, 20.7.1989.
- EC Council: *Declaration of the Council of the European Communities and of the Representatives of the Governments of the Member States Meeting in the Council of 22 November 1973 on the Programme of Action of the European*

*Communities on the Environment*, OJ C 112, p. 1, 20.12.73 (first environmental action programme).

EC Council: *Draft Conclusions*, SN/281/91, 13.12.1991.

EC Council: *Empfehlung des Rates vom 19. Dezember 1978 an die Mitgliedstaaten betreffend Verfahren zur Berechnung der Umweltschutzkosten der Industrie*, OJ L 5, p. 1, 9.1.1979.

EC Council: *Entscheidung des Rates vom 14. März 1989 über ein spezifisches Programm für Forschung und technologische Entwicklung im Bereich der Energie — nichtnukleare Energien und rationelle Energienutzung — (1989-1992) (Programm JOULE) (89/236/EWG)*, OJ L 98, p. 13, 11.4.1989.

EC Council: *Entscheidung des Rates vom 20. November 1989 über zwei spezifische Programme für Forschung und technologische Entwicklung im Bereich der Umwelt: STEP and EPOCH (1989-1992) (89/625/EWG)*, OJ L 359, p. 9, 8.12.1989.

EC Council: *Entscheidung des Rates vom 29. April 1992 über die von der Gemeinsamen Forschungsstelle für die Europäische Wirtschaftsgemeinschaft durchzuführenden spezifischen Forschungsprogramme (1992-1994) (92/273/EWG)*, OJ L 141, p. 11, 23.5.1992.

EC Council: *Entscheidung des Rates vom 29. Oktober 1991 zur Förderung der Energieeffizienz in der Gemeinschaft (Programm SAVE)*, OJ L 307, p. 34, 8.11.1991.

EC Council: *Entscheidung des Rates vom 7. Juni 1991 über ein spezifisches Programm für Forschung und technologische Entwicklung im Bereich der Umwelt (1990-1994) (91/354/EWG)*, OJ L 192, p. 29, 16.7.1991.

EC Council: *Entscheidung des Rates vom 9. September 1991 über ein spezifisches Programm für Forschung und technologische Entwicklung im Bereich der nichtnuklearen Energien (1990-1994) (91/484/EWG)*, OJ L 257, p. 37, 14.9.1991.

EC Council: *EntschlieÙung des Rates und der im Rat vereinigten Vertreter der Regierungen der Mitgliedstaaten der Europäischen Gemeinschaften vom 3. Oktober 1984 betreffend den Zusammenhang zwischen Umwelt und Entwicklung*, OJ C 272, p. 1, 12.10.1984.

EC Council: *EntschlieÙung des Rates vom 13. Februar 1975 betreffend Maßnahmen zur Erreichung der vom Rat am 17. Dezember 1974 festgelegten Ziele der gemeinschaftlichen Energiepolitik*, OJ C 153, p. 6, 9.7.1975.

EC Council: *EntschlieÙung des Rates vom 16. September 1986 über neue energiepolitische Ziele der Gemeinschaft für 1995 und die Konvergenz der Politik der Mitgliedstaaten*, OJ C 241, p. 1, 25.9.1986.

EC Council: *EntschlieÙung des Rates vom 17. Dezember 1974 betreffend Ziele der gemeinschaftlichen Energiepolitik für 1985*, OJ C 153, p. 2, 9.7.1975.

EC Council: *EntschlieÙung des Rates vom 17. Dezember 1974 für ein Aktionsprogramm der Gemeinschaft im Bereich der rationalen Energienutzung*, OJ C 153, p. 5, 9.7.1975.

EC Council: *EntschlieÙung des Rates vom 17. September 1974 betreffend eine neue energiepolitische Strategie für die Gemeinschaft*, OJ C 153, p. 1, 9.7.1975.

EC Council: *EntschlieÙung des Rates vom 26. Juni 1975 betreffend die Festlegung eines kurzfristigen Ziels im Bereich der Verringerung des Erdölverbrauchs*, OJ C 153, p. 9, 9.7.1975.

EC Council: *EntschlieÙung des Rates vom 3. März 1975 über Energie und Umweltschutz*, OJ C 168, p. 2, 25.7.1975.

- EC Council: *Informal Meeting of the Environment Ministers of the European Communities and the Commissioner for the Environment of the European Communities*. President's conclusions, Amsterdam, 12.10.1991 (mimeo).
- EC Council: *Informal Meeting of the Ministers of the Environment of the European Community and the Commissioner for the Environment of the European Community*. Conclusions of the President, 23.2.92.
- EC Council: *Negotiations in the framework of the INC (Intergovernmental Negotiating Committee for a Framework Convention on Climate Change) — Community Coordination*, 4349/92, 30.1.1992.
- EC Council: *Press Release, 1544th Meeting of the Council (Environment/Energy)*, 9916/91, 13.12.1991.
- EC Council: *Proposal for a Council Resolution on a Community Programme of Policy and Action in Relation to the Environment and Sustainable Development*, 8408/1/92, 14.9.92.
- EC Council: *Proposal for a Council Resolution on a Community Programme of Policy and Action in Relation to the Environment and Sustainable Development*, 10428/92, 30.11.92.
- EC Council: *Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States Meeting within the Council of 17 May 1977 on the Continuation and Implementation of a European Community Policy and Action Programme on the Environment*, OJ C 139, p. 1, 13.6.77 (second environmental action programme).
- EC Council: *Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States, Meeting within the Council of 7 February 1983 on the Continuation and Implementation of a European Community Policy and Action Programme on the Environment (1982 to 1986)*, OJ C 46, p. 1, 17.2.83 (third environmental action programme).
- EC Council: *Resolution of the Council of the European Communities and of the Representatives of the Governments of the Member States, Meeting within the Council of 19 October 1987 on the Continuation and Implementation of a European Community Policy and Action Programme on the Environment (1987 to 1992)*, OJ C 328, p. 1, 7.12.87 (fourth environmental action programme).
- EC Council: *The Organization of Co-operation in Environmental Questions*, 23.2.1992.
- EC Council: *Vorschlag für eine Richtlinie des Rates zur Begrenzung der Kohlendioxidemissionen durch eine effizientere Energienutzung (vorgelegt im Rahmen des SAVE-Programmes)*, 10109/92, 17.11.92.
- Economic and Social Committee: *Stellungnahme zu dem Vorschlag für eine Entscheidung des Rates über ein spezifisches Programm für Forschung und technologische Entwicklung im Bereich der nichtnuklearen Energien (1990-1994)*, CES (90) 1214, 18.10.1990.
- Economic and Social Committee: *Stellungnahme zu dem Vorschlag für eine Entscheidung des Rates zur Förderung von Energieeinsparungen in der Gemeinschaft (SAVE)*, CES (91) 408, 20.3.1991.
- Economic and Social Committee: *Stellungnahme zu dem Vorschlag für ein mehrjähriges Forschungsprogramm auf dem Gebiet der Klimatologie (Indirekte Aktion 1979-1983)*, OJ C 128, p. 6, 21.5.1979.
- Economic and Social Committee: *Stellungnahme zu dem Vorschlag für einen Beschluß des Rates zur Annahme von mehrjährigen FuE-Programmen auf dem Gebiet der Umwelt 1986-1990*, OJ C 101, p. 1, 28.4.1986.

- Economic and Social Committee: *Stellungnahme zu dem Vorschlag für einen Beschluß des Rates zur Festlegung eines sektoriellen Forschungs- und Entwicklungsprogrammes auf dem Gebiet der Umwelt (Umweltschutz und Klimatologie) (indirekte und konzertierte Aktionen) 1981-1985*, OJ C 353, p. 15, 31.12.1980.
- Economic and Social Committee: *Stellungnahme zu dem Vorschlag für eine Entscheidung des Rates zur Annahme von zwei spezifischen Programmen für Forschung und technologische Entwicklung auf dem Gebiet der Umwelt (STEP and EPOCH) (1989-1992)*, OJ C 139, p. 4, 5.6.1989.
- Economic and Social Committee: *Stellungnahme zum Thema: Energie und Umwelt*, CES (91) 879, 4.7.1991.
- Economic and Social Committee: *Stellungnahme zur Mitteilung der Kommission über eine gesamteuropäische Energiecharta*, CES (91) 880, 4.7.1991.
- Enquete-Kommission "Schutz der Erdatmosphäre" des Deutschen Bundestages: *1. Zwischenbericht der Enquete-Kommission des Bundestages zum Schutz der Erdatmosphäre* (Bonn: Bundestagsdrucksache 11/3246, 1988).
- Enquete-Kommission "Schutz der Erdatmosphäre" des Deutschen Bundestages (ed.): *Klimaänderung gefährdet globale Entwicklung. Zukunft sichern — Jetzt handeln* (Bonn/Karlsruhe: Economica/C.F. Müller, 1992).
- Enquete-Kommission "Schutz der Erdatmosphäre" des Deutschen Bundestages: *Schutz der Erde. Eine Bestandsaufnahme mit Vorschlägen zu einer neuen Energiepolitik. Dritter Bericht der Enquete-Kommission des 11. Deutschen Bundestages "Vorsorge zum Schutz der Erdatmosphäre"*, 2 Vols. (Bonn: Deutscher Bundestag, Zur Sache 19/90, 1990).
- Environmental Resources Limited: *Formulation of an International Protocol for Reducing Global CO<sub>2</sub> Emissions From Energy*, April 1991.
- Estgen, Nicolas: *Bericht im Namen des Ausschusses für Energie, Forschung und Technologie zu dem Vorschlag der Kommission der Europäischen Gemeinschaften an den Rat für einen Beschluß zur Annahme von drei mehrjährigen Forschungs- und Entwicklungsprogrammen auf dem Gebiet der Umwelt (1986-1990)*. I. Umweltschutz, II. Klimatologie, III. Größere technologische Risiken, A2-216/85, 12.2.1986.
- European Council: *Environmental Imperative Declaration*, reprinted in *Europe Documents*, No. 1632/1633, 29.6.90. pp. 10-12.
- European Council: *Schlußfolgerungen der Tagung des Europäischen Rates der Staats- und Regierungschefs am 26. und 27. Juni 1992 in Lissabon*; reprinted in *Europa-Archiv* 47 (1992), pp. D489-D514.
- European Energy Charter*; reprinted in *Europe Documents*, No. 1754, 21.12.1991.
- European Environmental Bureau: *Memorandum to the European Council and the Portugese Presidency*, January 1992.
- European Environmental Bureau: *Memorandum to the European Council and the United Kingdom Presidency*, July 1992.
- European Environmental Bureau: *The Opinion of the EEB and the CRE Concerning the Community's Framework Programme for Research 1990-1994* (Brussels: European Environmental Bureau, 1989).
- European Parliament: *Beschluß des Rates zur Annahme von mehrjährigen F&E-Programmen auf dem Gebiet der Umwelt (1986-1990)*, OJ C 68, p. 76, 24.3.1986.
- European Parliament: *Debate: Environmental Taxes on Energy*, OJ 3-411, p. 46, 18.11.1991.

- European Parliament: *Debatte: Aussprache zur Forschungspolitik*, OJ 3-381, p. 27, 10.10.1989.
- European Parliament: *Debatte: Bekämpfung der zunehmenden CO<sub>2</sub>-Konzentration in der Atmosphäre*, OJ 2-342, p. 322, 12.9.1986.
- European Parliament: *Debatte: Energie und Umwelt*, OJ 3-406, p. 119, 11.6.1991.
- European Parliament: *Debatte: Erklärung der Kommission zu den spekulativen Erhöhungen der Ölpreise*, OJ 3-394, p. 351, 11.10.1990.
- European Parliament: *Debatte: Forschung und Umwelt*, OJ 2-335, p. 51, 18.2.1986.
- European Parliament: *Debatte: Maßnahmen der Gemeinschaft im Energiebereich (1988-1989)*, OJ 2-360, p. 120, 19.1.1988.
- European Parliament: *Debatte: Umweltschutz*, OJ 2-335, p. 33, 18.2.1986.
- European Parliament: *Debatte: Verkehr und Umwelt*, OJ 3-408, p. 86, 10.9.1991.
- European Parliament: *Decision on the common position established by the Council with a view to the adoption of a Decision on a specific research and technological development programme in the field of non-nuclear energies (1990-1994)*, OJ C 240, p. 113, 16.9.1991.
- European Parliament: *Decision on the common position established by the Council with a view to the adoption of a directive on the transit of natural gas through grids*, OJ C 129, p. 88, 20.5.1991.
- European Parliament: *Entschließung mit der Stellungnahme des Europäischen Parlaments zum Vorschlag der Kommission der Europäischen Gemeinschaft an den Rat für einen Beschluß zur Annahme von drei mehrjährigen F&E-Programmen auf dem Gebiet der Umwelt (1986-1990)*, I. Umweltschutz, II. Klimatologie, III. Größere technologische Risiken, OJ C 68, p. 78, 24.3.1986.
- European Parliament: *Entschließung mit der Stellungnahme des Europäischen Parlaments zu dem Vorschlag der Kommission der Europäischen Gemeinschaften an den Rat für einen Beschluß zur Festlegung eines mehrjährigen Forschungsprogrammes der Europäischen Wirtschaftsgemeinschaft auf dem Gebiet der Klimatologie (indirekte Aktion 1979-1983)*, OJ C 6, p. 21, 8.1.1979.
- European Parliament: *Entschließung mit der Stellungnahme des Europäischen Parlaments zu dem Vorschlag der Kommission der Europäischen Gemeinschaften an den Rat für einen Beschluß zur Festlegung eines sektoriellen Forschungs- und Entwicklungsprogramms auf dem Gebiet der Umwelt (Umweltschutz und Klimatologie) (indirekte und konzertierte Aktionen) 1981-1985*, OJ C 28, p. 60, 9.2.1981.
- European Parliament: *Entschließung zum Abschluß des Verfahrens der Konsultation des Europäischen Parlaments zum Vorschlag der Kommission der Europäischen Gemeinschaften an den Rat für einen Beschluß zur Änderung des sektoriellen Forschungs- und Entwicklungsprogramms auf dem Gebiet der Umwelt (Umweltschutz und Klimatologie) — Indirekte und konzertierte Aktion — 1981-1985*, OJ C 77, p. 113, 19.3.1984.
- European Parliament: *Legislative Entschließung mit der Stellungnahme des Europäischen Parlaments zu dem Vorschlag der Kommission an den Rat für eine Entscheidung über ein spezifisches Programm für Forschung und technologische Entwicklung im Bereich der Umwelt (1990-1994)*, OJ C 324, p. 283, 24.12.1990.
- European Parliament: *Legislative Resolution Embodying the Opinion of the European Parliament on the Proposal From the Commission to the Council for a Regulation Concerning the Promotion of Energy Technology in Europe*, OJ C 38, p. 107, 19.2.1990.



- European Parliament: *Legislative Resolution embodying the opinion of the European Parliament on the proposal from the Commission to the Council for a Decision concerning the promotion of energy efficiency in the Community*, OJ C 240, p. 282, 16.9.1991.
- European Parliament: *Resolution on 1994 being declared Community Energy Year*, OJ C 267, p. 201, 14.10.1991.
- European Parliament: *Resolution on economic and fiscal instruments of environmental policy*, OJ C 183, p. 296, 15.7.1991.
- European Parliament: *Resolution on energy and the environment*, OJ C 183, p. 308, 15.7.1991.
- European Parliament: *Resolution on energy and the environment*, OJ C 183, p. 303, 15.7.1991.
- European Parliament: *Resolution on European Coal Policy*, OJ C 262, p. 61, 10.10.1988.
- European Parliament: *Resolution on measures to counteract the rising concentration of carbon dioxide in the atmosphere (the "greenhouse" effect)*, OJ C 255, p. 272, 13.10.1986.
- European Parliament: *Resolution on measures to protect the ecology of tropical forests*, OJ C 295, p. 193, 26.11.1990.
- European Parliament: *Resolution on regulating the trade in tropical woods and tropical wood products as a means of tropical forest management and conservation*, OJ C 158, p. 306, 26.6.1989.
- European Parliament: *Resolution on the Conclusions of the Second World Conference on Climate*, OJ C 324, p. 212, 24.12.1990.
- European Parliament: *Resolution on the Consequences of a Rapid Rise in the Sea Level Along Europe's Coasts*, OJ C 158, p. 330, 26.6.1989.
- European Parliament: *Resolution on the conservation of tropical forests*, OJ C 295, p. 195, 26.11.1990.
- Fitzsimons, James: *Report drawn up on behalf of the Committee on Energy, Research and Technology on research and energy policy measures to counteract the rising concentration of carbon dioxide in the atmosphere (the "greenhouse" effect)*, A2-68/86, 27.6.1986.
- Gasoliba i Böhm, Carles-Alfred: *Bericht des Ausschusses für Energie, Forschung und Technologie über den Vorschlag der Kommission für eine Entscheidung des Rates über ein spezifisches Programm für Forschung und technologische Entwicklung im Bereich der nichtnuklearen Energien (1990-1994)*, A3-5/91/B, 10.1.1991.
- Gasoliba i Böhn, Carles-Alfred: *Recommendation of the Committee on Energy, Research and Technology on the Common Position established by the Council with a view to the adoption of a decision on a specific research and technological development programme in the field of non-nuclear energies (1990-1994)*, A3-187/91, 27.6.1991.
- Green Group of the European Parliament: *Fighting against the greenhouse effect by imposing levy on non-renewable energies*; reprinted in *Europe Environment*, No. 368, 9.7.1991.
- Hervé, Michel: *Bericht des Ausschusses für Energie, Forschung und Technologie über den Vorschlag der Kommission für eine Entscheidung des Rates über ein spezifisches Programm für Forschung und Technologie im Bereich der Umwelt (1990-1994)*, A3-287/90, 7.11.1990.
- Jensen, Kirsten: *Report of the Committee on the Environment, Public Health and Consumer Protection on energy and the environment*, A3-124/91, 6.5.1991.

- La hausse des taxes sur l'énergie en vue de réduire les émissions de CO<sub>2</sub>: problèmes et mesures d'accompagnement. Approche "top-down". Etude sur le CO<sub>2</sub>. Crash Programme. Rapport pour la Commission des Communautés Européennes DG XII, Programme JOULE, Modèles pour l'énergie et l'Environnement, Octobre 1990.*
- La Pergola, Antonio: Report of the Committee on Energy, Research and Technology on the Commission proposal for a Council decision adapting Decision 87/516/Euratom, EEC concerning the framework programme of Community activities in the field of research and technological development (1987-1991), A3-302/91, 7.11.1991.*
- Lannoye, Paul: Report of the Committee on Energy, Research and Technology on energy and the environment, A3-125/91, 7.5.1991.*
- Lataillade, Pierre: Bericht des Ausschusses für Wirtschaft, Währung und Industriepolitik über den Vorschlag der Kommission an den Rat für eine Richtlinie zur Angleichung der Rechtsvorschriften der Mitgliedstaaten bezüglich der Mindestwirkungsgrade von neuen, mit flüssigen oder gasförmigen Brennstoffen beschickten Warmwasserheizkesseln, A3-63/91, 20.3.1991.*
- Mitglieder des Europäischen Umweltbüros: EG-Binnenmarkt und Umwelt. Weißbuch der europäischen Umweltverbände für eine ökologische Wirtschaftspolitik in der EG (Brussels: European Environmental Bureau, 1991).*
- Muntingh, Hemmo: Bericht des Ausschusses über Umweltfragen, Volksgesundheit und Verbraucherschutz über die Notwendigkeit eines Übereinkommens zum Schutz der Wälder, A3-24/92, 24.1.1992.*
- Muntingh, Hemmo: Report drawn up on behalf of the Committee on the Environment, Public Health and Consumer Protection on regulating the trade in tropical wood and tropical wood products as a means of tropical forest management and conservation, A2-394/88, 14.2.1989.*
- Muntingh, Hemmo: Report drawn up on behalf of the Committee on the Environment, Public Health and Consumer Protection on measures to protect the ecology of the tropical forests, A3-181/90, 5.7.1990.*
- OECD: L'OCDE et les aspects économiques du changement climatique: rapport d'activité, C/MIN(91)11, 29.5.1991.*
- Rinsche, Günter: Bericht im Namen des Ausschusses für Energie, Forschung und Entwicklung über den Vorschlag der Kommission an den Rat für eine Entscheidung zur Annahme von zwei spezifischen Programmen für Forschung und technologische Entwicklung auf dem Gebiet der Umwelt (STEP and EPOCH), A2-4/89/B, 20.3.1989.*
- Robles Piquer, Carlos: Report of the Committee on Energy, Research and Technology on 1994 being declared Community Energy Year, A3-217/91, 1.7.1991.*
- Roelants du Vivier, François: Report drawn up on behalf of the Committee on the environment, Public Health and Consumer Protection on the consequences of a rapid rise in the sea level along Europe's coastlines, A2-87/89, 19.4.1989.*
- Santos, Maria: Report by the Committee on Development and Cooperation on the conservation of tropical forests, A3-231/90, 26.9.1990.*
- This Common Inheritance. Britain's Environmental Strategy, London: HMSO, September 1990.*
- Topmann, Günter: Report of the Committee on Transport and Tourism on transport and the environment, A3-216/91, 31.7.1991.*

Verwaerde, Yves: *Report of the Committee on Energy, Research and Technology on the proposal from the Commission to the Council for a decision concerning the promotion of energy efficiency in the Community*, A3-123/91, 6.5.1991.

Verwaerde, Yves: *Second Report of the Committee on Energy, Research and Technology on the proposal from the Commission to the Council for a decision concerning the promotion of energy efficiency in the Community*, A3-186/91, 28.6.1991.

Vohrer, Manfred: *Report of the Committee on the Environment, Public Health and Consumer Protection on economic and fiscal instruments of environment policy*, A3-130/91, 13.5.1991.















