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**Negotiations and Voluntary  
Agreements: A Feasible Instrument  
for Sustainable Development?**

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## Preface

This report is the final outcome of the research project “Negotiations and Voluntary Agreements as Instruments for Sustainable Development – Preconditions, Accomplishment and Results” (*Forhandlinger og frivillige avtaler som virkemiddel for en bærekraftig utvikling – forutsetninger, gjennomføring og resultater*).

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# 1 Introduction

Negotiations and voluntary agreements are examples of the so-called “new environmental policy instruments” that have become more frequently used in order to cope with environmental problems. The new instruments substitute, or supplement, the more traditional “command-and-control instruments” and statutory regulations which according to widespread opinions do not solve the problems we face in various policy areas including environmental policy. The idea behind voluntary arrangements is to create “win-win” situations whereby “the regulator achieves the desired results with decreased enforcement costs, while the regulated community is provided with more flexibility in meeting societal goals – thus eliminating economic inefficiencies” (Daley, 2007:165).

The aim of this study is to analyse voluntary agreements and assess the feasibility of this instrument in relation to sustainable development. Contrary to many other studies, we focus primarily on the negotiation *process*, including the preconditions and outcome. The economic and strategic perspectives that are frequently applied in studies of negotiations will be supplemented with more communicative and deliberative perspectives.

## 1.1 Negotiations and voluntary agreements in Norway

One may argue that in the case of Norway negotiations and voluntary agreements between public authorities and interest groups are not at all *new* policy instruments. Norway has a long tradition for negotiations and agreements between government and various organised interests. As Rokkan (1966:107) pointed out in his analysis of “numerical democracy and corporate pluralism”, the central arena for decision-making was the bargaining table where the government authorities met directly with representatives of trade unions, business associations and other interest group. After WWII the Norwegian government established numerous boards, councils and committees. The members of such corporatist bodies represent the civil service, interest groups and relevant expertise.

In comparative studies Norway is ranked at, or close to, the top of the list of corporatist countries (e.g. Schmitter 1979, Lijphart and Crepaz 1991, Siaroff 1999). However, during the last decades there has been a certain decline of corporatism in Norway. The number of public boards and committees has been substantially reduced and to some degree at least, corporatist representation has been replaced or supplemented by less institutionalised forms of lobbyism (Rommetvedt 2005).

In relatively new policy areas, like environmental policy, the use of corporatist bodies has been rather limited in Norway (Klausen and Rommetvedt 1997). However, in recent years a number of voluntary agreements regarding environmental problems have been negotiated between government and industry. These negotiations and agreements may be interpreted as new forms of corporatism even though normally the literature on

voluntary environmental agreements does not refer to the literature on corporatism (cf. Langhelle, 2005). Bearing Norwegian corporatist traditions in mind, one could have expected a more extensive use of corporatist bodies and negotiated agreements in order to handle environmental problems. However, Norway has not been a forerunner in this respect and consequently the voluntary agreements we analyse in this study are relatively new.

The first voluntary environmental agreements negotiated between Norwegian business associations and the Ministry of the Environment were a number of agreements on the collection and recycling of waste packing products, which were negotiated in 1994 and 1995 between business associations and the Ministry of the Environment. The first agreement from 1994 covered drinking carton and was amended in 1996. In 1995, agreements on brown paper cardboard, metals and all other types of packing materials were negotiated. All of these agreements were renegotiated in 2003. In 1997, an agreement on the reductions of climate gases from the aluminium industry was negotiated. An agreement on the reduction, collection and treatment of waste from electric and electronic products (EE-products) was negotiated in 1998. In 2001, the Ministry of Environment and the process industry negotiated an agreement with the intention to reduce SO<sub>2</sub> emissions. An agreement between the Ministry and the energy and electronics industry was negotiated in 2002 in order to reduce SF<sub>6</sub>-gases from the electro branch including importers, producers and users of electronic appliances. Furthermore, in 2002 an agreement was negotiated on the collection and handling of double-glazed windows sealed with PCB containing glue.

The agreements mentioned above were negotiated on what we may call an ad hoc basis. They were not anchored in a traditional corporatist body. However, it should be mentioned that various environmental measures have been included in what may be considered to be one of the most typical corporatist arrangements in Norway, namely the agreements on agricultural policy that are negotiated every year between the Government and the two Norwegian farmers' and smallholders' associations.

## 1.2 Research questions

In this report we will analyse voluntary agreements within the context of sustainable development. Four main questions are addressed:

The first question concerns the features and characteristics of voluntary agreements as such, and how voluntary agreements should be placed in relation to other policy instruments and policy paradigms. Voluntary agreements will here be discussed in relation to regulations, information, economic instruments and corporatist arrangements.

The second question addressed is linked to the fact that voluntary agreements are negotiated. This is sometimes included as a defining characteristic of voluntary agreements. Few international studies, however, have focused upon the *process* of negotiations. The question is whether the nature, role and function of negotiations actually have an impact on the success or not of voluntary agreements. In this report we will therefore try to "open" the "black box" of negotiations. We will in the following



present a theoretical framework that especially highlights *negotiations* in relation to voluntary agreements. The negotiations of the agreements will be analysed in terms of 1) the *preconditions* which made negotiations relevant, 2) the *processes* of the actual negotiations, and 3) the *results* of the negotiations. The underlying question here is if and eventually how and under which circumstances the actual negotiations contributed to a better environmental policy or not.

The third question concerns the effectiveness of voluntary agreements. As the number of voluntary approaches has increased in OECD countries, often in combination with one or more other instruments (OECD, 2003), there is an increasing literature on their performance<sup>1</sup>. These experiences will be used as a background for our own case studies from Norway. By comparing with experiences gained internationally we will discuss how well the Norwegian cases reflect international experiences. From this perspective on voluntary agreements, the aim of the report is to discuss the success of – or lack of success – of the voluntary agreements and to draw some general implications on the relevance of voluntary agreements for environmental policy.

The fourth question addressed is how to place voluntary agreements in relation to sustainable development. Can voluntary agreements be seen as an effective policy instrument for sustainable development? This question is no doubt problematic, more speculative and also hard to provide definitive answers to. It is nonetheless an important question, especially since voluntary agreements have been seen as a possible instrument to realise a sustainable development. OECD argues that voluntary agreements are pragmatic, flexible responses that can accommodate and secure international competitiveness and at the same time contribute to the achievement of sustainability or sustainable development (OECD, 1999:9). The linkage between voluntary agreements and realisation of sustainable development, however, is by no means straightforward. Outlining and discussing some of the possible linkages therefore constitutes an important part of this report.

### 1.3 Selection of cases and data sources

Our analyses are based on qualitative studies of a number of cases. The total “population” of voluntary agreements on environmental policy in Norway is limited and consequently the choice opportunities with regard to the sampling of cases are restricted. In our project we have chosen to focus on waste management and agriculture. The cases we have selected for our project may be grouped into three categories:

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<sup>1</sup> There have been a number of larger studies of voluntary agreements. Among them are a number of studies by the European Environment Agency (EEA), OECD and UNEP, and research projects funded by the European Commission such as the Concerted Action on Voluntary Approaches (CAVA) and Voluntary Agreements – Implementation and Efficiency (VAIE) studies. For an overview, see Brink (2002).

1. A number of agreements on the collection and recycling of various types of waste packing products that were negotiated in the 1990s and renegotiated in 2003.
2. An agreement negotiated in 2002 on the collection and handling of hazardous waste, namely PCB containing double-glazed windows.
3. Agreements on various environmental measures included in the yearly negotiations on agricultural policy.

The first two categories represent the waste management sector, a sector where voluntary agreements have been negotiated relatively frequently in Norway. Statutory regulations regarding waste management had existed for several years before a number of voluntary agreements were negotiated from the mid 1990s onwards. In other words, these cases represent a sector where negotiations and voluntary agreements may be characterised as *new* policy instrument. The cases we have selected within this sector represent non-hazardous and hazardous waste respectively.

The waste management cases cover a variety with regard to the degree of success or failure. At the time of selection, the negotiations and agreements in the first category seemed successful while the agreement in the second category was running into crisis. However, the crisis which was related to the implementation of the agreement on PCB containing windows was overcome.

In the agriculture sector there is a long tradition for the use of negotiated agreements in order to handle problems related to farming. The primary aim of these agreements is to improve the income possibilities of the farmers and to regulate the market for farming products. Problems related to the environment are relatively new in this context, but they are treated within an old established framework of negotiated agreements. In simplified terms we may say that in this case the problem is fairly new, but the instrument is old.

The agreements concerning agriculture and environment have been analysed in a separate report by Arild Farsund (2005). His study covers a period from the 1970s to the beginning of the 21<sup>st</sup> century. In this report we concentrate on the first and second categories of agreements on waste management. The cases in the first category are presented in Chapter 4 which includes the “Agreement on the reduction, collection and recycling of waste from brown paper packaging”, the “Agreement on the reduction, collection and recycling of waste from drinking carton packaging”, the “Agreement on the reduction, collection and recycling of waste from carton packaging” and the “Agreement on the reduction, collection and recycling of waste from plastic packaging”. The case in the second category is described in Chapter 5 on the “Agreement on prevention and reduction of environmental problems associated with the handling of PCB containing double-glazed windows”.

Our study is based on qualitative analyses of data from documents and interviews. Documents include the texts of the agreements, reports and propositions submitted to the Parliament by the Government, letters and press releases from the Ministry of the Environment, reports from the Norwegian Pollution Control Authority and various business associations, and statistical information from the Statistics Norway.

Interviews were based on semi-structured interview guides. Interviews concerning the agreement on PCB containing windows was supplemented by a questionnaire with predetermined answers, which the informants were requested to fill in order to summarise some of the topics that had been discussed during the interview. The interviewees represent the Norwegian Ministry of the Environment, the Norwegian Pollution Control Authority, a municipality, waste management companies, and a variety of business associations that participated in the negotiations (for details, see Appendix).

## **1.4 Outline of the report**

In the next chapter (chapter 2), we try to establish what can be called the context of sustainable development by defining sustainable development and outlining the major controversies of the sustainable development debate. Thereafter, we make some initial linkages between voluntary agreements and sustainable development and explore how these linkages can be approached.

In chapter 3, we address and discuss the nature of voluntary agreements, and introduce our theoretical approach, which is based on different logics of decision-making. This approach outlines different types and logics of decision-making processes, including various types of negotiations, based on different decision situations depending on the character of preferences (Rommetvedt 2006). The typology serves as the point of departure for the analysis of the negotiations on voluntary agreements, together with the evaluation criteria developed by the European Environment Agency (EEA 1997a) and OECD (1999, 2003) in their assessments of voluntary agreements in European and OECD countries.

In chapter 4 and 5, we present the case studies of the different negotiations and voluntary agreements included in this report. Chapter 4 concentrates on the agreements on the collection and recycling of waste packing products negotiated in 1994 and 1995 and renegotiated in 2003. In Chapter 5 we turn to the 2002 agreement on the collection of PCB containing double-glazed windows.

In chapter 6, we make a comparative assessment of the agreements, based on the EEA and OECD recommendations presented in chapter 3 and return to the question of whether voluntary agreements can be seen as an effective policy instrument for sustainable development.

## 2 Voluntary agreements in the context of “sustainable development”

While some argue that voluntary agreements cannot yet be said to be a central feature of current environmental policy (Cederlöf 2001, Lindén and Carlson-Kanyama 2002), others point to the rapid diversity and increase of voluntary agreements among OECD countries (Jordan, Wurzel and Zito 2003). Others again predict that voluntary agreements will assume an increasingly important role within environmental policy-making (EEA 1997a, Cabugueira 2001, Hanks 2002). This growth in voluntary agreements has been explained in different ways. Hanks (2002:103) argue that many countries “have recognised the limits to command-and-control regulation and market-based instruments as a means on their own of achieving sustainable development”. Thus, voluntary agreements are seen as a way to surpass the limitations of other traditional policy instruments in the quest for sustainable development.

Other explanations for the increased use of voluntary agreements have been the wish to promote a more cooperative approach to environmental governance and the encouragement of the “entrepreneurial dynamism and informational advantages of the business sector”. Also a need to minimise the potential for “regulatory capture” by business has been important (Hanks, 2002:103). In our context, however, the already mentioned linkage between voluntary approaches and sustainable development made by OECD is worth recapitulating. Voluntary approaches have been

... developed by policy-makers and industrialists to provide pragmatic responses to new policy problems, namely the need for more flexible ways to achieve *sustainability*, and the need to take into account the rising concerns about industrial competitiveness and the increasing administrative burden after three decades of command-and-control-based environmental policy (OECD, 1999:9).<sup>2</sup>

Whether or not voluntary agreements can be seen as a useful policy instrument in the broader context of sustainable development, however, is not only dependent upon the features and characteristics of voluntary agreements but also upon what sustainable development is said to entail. There are a number of definitions (see Pearce et al.1989, Pezzey 1992, Murcott 1997), and a number of approaches to sustainable development. Several typologies of sustainable development have been developed. Andrew Dobson (1999) has developed a typology that describes three broad “ideal” conceptions of what he prefers to call “conceptions of environmental sustainability”. MacManus (1996) identifies nine broad approaches to “sustainability”. Others have made distinctions between very weak, weak, strong and very strong conceptions of sustainable development (Turner 1993, Pearce 1993, Daly 1996).

In general, sustainable development is first and foremost connected to the World Commission of Environment and Development (WCED) and the report *Our Common*

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<sup>2</sup> Our italics.

*Future*. Sustainable development was here defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987:43). The definition of sustainable development further contained two key concepts, according to WCED:

- the concept of ‘needs’, in particular the essential needs of the world’s poor, to which overriding priority should be given; and
- the idea of limitations imposed by the state of technology and social organisation on the environment’s ability to meet present and future needs (WCED, 1987:43).

The report from the World Commission also contained a hierarchy of the problems and challenges of sustainable development. There is no doubt that intra-generational justice - understood as need satisfaction and equal opportunity - is the first priority of sustainable development. It constitutes the first part of the definition, “development that meets the needs of the present”, and is seen as the primary concern both within and between countries. As such sustainable development entails a strong commitment to redistribution between rich and poor, both nationally and globally.

Of the environmental problems addressed, the World Commission saw climate change (and the energy issue) and threats towards biological diversity as the most acute and pressing problems. The Commission was also concerned about general pollution (PCB, radioactive pollution, acid rain etc.) and food security. Arguably, the sustainable development issues and their importance could be ranked in the following order (Langhelle, 2000):

1. The satisfaction of human need, in particular the essential needs of the world’s poor
2. Climate change (and the energy issue)
3. Loss of biological diversity
4. Pollution (PCB, radioactive pollution, acid rain etc.)
5. Food security

If these preconditions are changed it is obvious that the conception itself and the implications that follow from it also change. As a conception sustainable development as portrayed in *Our Common Future* (1987) stresses strategies such as “reviving growth, changing the quality of growth, meeting essential needs, ensuring a sustainable level of population, conserving and enhancing the resource base, reorienting technology and managing risk and merging environment and economics in decision making”. This was seen as the critical objectives that follow from the concept of sustainable development for environment and development policies (WCED, 1987:49).

The implications of sustainable development for environmental policy have been widely discussed after the release of *Our Common Future*. Interpretations of sustainability have been divided on a number of issues: what the most pressing issues are, the ranking of environmental problems, economic growth, the magnitude of (necessary) change and also what the most suitable policy measures are for sustainable development. Much of

this debate can be linked to the second key concept of sustainable development: “the idea of limitations imposed by the state of technology and social organisation on the environment’s ability to meet present and future needs” (WCED, 1987: 43). From this viewpoint, voluntary agreements can be seen as an expression of a new sustainable development “tool” which addresses both technological change and new forms of social organisation.

## 2.1 Sustainable development and ecological modernisation

Sustainable development (and *Our Common Future*) has also been conceived as an expression of ecological modernisation<sup>3</sup>. Albert Weale (1992:31), for instance, argues that the emergence of the new belief system called “ecological modernisation”, most notably, is formulated in the Brundtland report. Maarten A. Hajer (1995:26) makes the same argument: “The 1987 Brundtland Report *Our Common Future* can be seen as one of the paradigm statements of ecological modernisation”<sup>4</sup>. Albert Weale, (1992) referring to Germany, describes the “ideology” of ecological modernisation as a denial of the validity of the assumptions underlying the pollution control strategies of the 1970s. These strategies were, according to Weale, based on the assumptions:

... that environmental problems could be dealt with adequately by a specialist branch of the machinery of government; that the character of environmental problems was well understood; that environmental problems could be handled discretely; that end-of pipe technologies were typically adequate; and that in the setting of pollution control standards a balance had to be struck between environmental protection and economic growth and development (Weale, 1992:75).

The strategies based on these assumptions soon proved to be incapable of solving the environmental problems they were supposed to deal with. Instead, they resulted in problem displacement, across time and space, rather than problem solving (Weale, 1992:76). Nonetheless, the “re-conceptualisation” of the relationship between economy and the market represented a decisive break from the assumptions that informed the first wave of environmental policy. The ideology of ecological modernisation challenged “the fundamental assumption of the conventional wisdom, namely that there was a zero-sum trade-off between economic prosperity and environmental concern” (Weale, 1992:31). Environmental protection, in this “new” ideology, is no longer seen as a burden upon the economy, but rather as a potential source of future growth (Weale, 1992:75).

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3 As Christoff (1996) points out, ecological modernisation is used in different ways by different authors. Some use it to describe technological developments; others use it to define changes in environmental policy discourse. Others again seem to think of it as a new belief system.

4 Others, however, such as John Dryzek (1997), Martin Jänicke (1997) and Andrew Blowers (1998), seem to think of sustainable development and ecological modernisation as overlapping, but not identical concepts. They disagree, however, as to which of the two perspectives has the most “radical” policy implications. For a discussion, see Langhelle (2000).

Maarten A. Hajer (1995) gives a description of ecological modernisation in accordance with Weale's interpretation, and argues in the same manner that a decisive break has taken place. In Hajer's perspective, however, ecological modernisation is presented not so much as a reaction to failures in environmental policy, but rather as a reaction to the radical environmental movements of the 1970s:

The historical argument, in brief, is that a new way of conceiving environmental problems has emerged since the late 1970s. This policy discourse of ecological modernisation recognises the ecological crisis as evidence of a fundamental omission in the working of the institutions of modern society. Yet, unlike the radical environmental movements of the 1970s, it suggests that environmental problems can be solved in accordance with the workings of the main institutional arrangements of society. Environmental management is seen as a positive-sum game: pollution prevention pays (Hajer, 1995:3).

In its most general form, Hajer (1995:25) defines ecological modernisation as "the discourse that recognises the structural character of the environmental problematique but none the less assumes that existing political, economic, and social institutions can internalise the care for the environment". In the same vein, Dryzek (1997:144) describes ecological modernisation as a partnership "in which governments, businesses, moderate environmentalists, and scientists cooperate in the restructuring of the capitalist political economy along more environmentally defensible lines".

Whether or not sustainable development and ecological modernisation are seen as expressions of the same changes in environmental policy, there are no doubt similarities between them. The similarities can be summed up as follows: The ecological modernisation move from "remedial" to "anticipatory" strategies is also present in *Our Common Future*. Moreover, and both ecological modernisation and sustainable development direct their attention to the *causes* of environmental problems. Both see technology as a major instrument for solving environmental problems. Both argue for a sector-encompassing policy approach, where concern for the environment is to be integrated in every sector of society. Both promote the use of new policy instruments, and changes at the micro-level seem crucial in both paradigms. "Producing more with less" is a slogan that fits both of these paradigms. Both argue that it is possible, in theory, to reconcile concern for the environment with economic growth (Langhelle, 2000).

Besides the fact that voluntary agreements are seen as a new policy instrument, the similarities between ecological modernisation and sustainable development also define the content of voluntary agreements that could be said to contribute to sustainable development. Such agreements would be agreements that inhibit "anticipatory" strategies, agreements that focus on the causes of environmental problems, agreements that enhance technological development, and agreements that are sector encompassing and agreements that promote eco-efficiency.

Still, however, one can ask the question of the amount or degree necessary of each of these criteria in order to qualify as sustainable development. One of the most pressing debates on sustainable development has been related precisely to the degree of change which is seen as necessary to realise a sustainable development, or in other words, the

magnitude of change seen as necessary for the reconciliation of economy and environment.

## 2.2 The magnitude of change – weak and strong sustainability

Some have argued that sustainable development requires more profound changes than what is often prescribed from the perspective of ecological modernisation (Jänicke 1997, Langhelle 2000). According to Jänicke (1997), sustainable development demands more than ecological modernisation understood as resource efficiency. An “ecologically sustainable development” demands structural changes in four specific social sectors, the construction complex, the road traffic complex, the energy complex and the agro-industrial complex.<sup>5</sup> Structural change is defined as a “change of their societal role and importance” (Jänicke, 1997:19-20). In the same manner, one may argue that sustainable development seem to require more structural change than what is usually expressed by the proponents of ecological modernisation. Moreover, win-win solutions may be difficult to achieve and trade-offs, therefore, may be necessary for a sustainable development (Langhelle 2000).

Within the economic approaches to sustainable development, this has been a central debate between the advocates of weak and strong sustainability. The economic debate has primarily had a focus on *the composition of capital necessary in order to sustain welfare over time* (Beckerman 1994, 1995, Daly 1995, Jacobs 1995, Skolimowski 1995, Serafy 1996 and Common 1996). According to Pearce and Barbier (2000), most economists accept that economic development around the world is leading to irreversible depletion of *natural* capital and what is more, the question whether this is necessarily unsustainable. If other types of capital, either physical or human, can compensate future generations, welfare could still be non-declining over time and development would be sustainable. Thus, the economic debate has concentrated more on the second key concept of sustainable development in *Our Common Future* (1987): “the idea of limitations imposed by the state of technology and social organisation on the environment’s ability to meet present and future needs” (WCED, 1987:43).

Weak sustainability only requires that *the aggregate value* of the total capital stock (of natural, physical and human capital), is non-declining over time. Moreover, all natural capital is, according to Pearce and Barbier (2000), seen as *non-essential* within the perspective of weak sustainability. If this position is taken seriously, the policy

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<sup>5</sup> The construction complex includes the construction industry, local government, or institutions interested in increasing the value of land (this sector uses the largest share of materials and land, and generates the most solid waste and goods transportation), the road traffic complex includes car producers and their suppliers, the service network, the mineral oil industry, the road construction industry, etc., and finally the energy complex includes the multinational primary energy industries, the utilities, closely associated with the powerful energy-intensive basic industries), or the agro-industrial complex (Jänicke, 1997:19).



implications seem to disintegrate. That is, there is really no such thing as a problem of sustainable development (when narrowed to intergenerational justice and physical sustainability). Compared with the positions identified by Pearce (1993:19), however, this position should actually be labelled very weak sustainability, because of the belief in “infinite substitution possibilities”.

Dobson (1998) on the other hand argues convincingly that there are in fact very few who make this claim and as such he excludes this position from his typology of environmental sustainability (as opposed to sustainable development, Dobson’s focus is on physical sustainability). Therefore a more reasonable interpretation of weak sustainability is that, even within this perspective, critical natural capital, that is natural capital critical to the production and reproduction of human life, should be sustained (Dobson, 1998:43). Furthermore, it is argued, “there is considerable scope for substituting man-made wealth for natural environmental assets” (Pearce, Markandya and Barbier 1989:48, Pearce 1993:16). Subsequently, even if, as Pearce (1993:19) puts it, “infinite substitution is rejected”, some substitution is still possible, and arguably, even desirable (from an anthropocentric view).

Unfortunately this makes both weak sustainability and the notion of critical natural capital “radically indeterminate” (Dobson, 1998), in the sense that the discussions of what actually constitute critical natural capital usually never gets beyond the point of being natural capital critical to the production and reproduction of human life. At this level of abstraction, therefore, what the critical resources are, how much of these resources that can be consumed within our generation or which natural environmental assets that can be substituted with man-made capital are usually not addressed. As a result there tends to be few guidelines to extract from the perspective of weak sustainability. It is an open question, however, if the perspective of strong sustainable development brings one further towards the specification of a sustainable development path. According to Pearce and Barbier (2000:24):

[...] the strong sustainability view suggests that environmental resources and ecological services that are essential for human welfare and cannot be easily substituted by human and physical capital should be protected and not depleted. Maintaining or increasing the value of the total capital stock over time in turn requires keeping the non-substitutable and essential components of natural capital constant over time.

Defending the strong sustainability position from Wilfred Beckerman’s (1994) seminal attack on the concept of sustainable development, Herman Daly (1995) argues that the most important issue in the sustainable development debate is the issue of *complementarity*. This is seen as the “key to strong sustainability” (Daly, 1995:53):

Strong sustainability requires that manmade and natural capital each be maintained intact separately, since they are considered complements: weak sustainability requires that only the sum of the two be maintained intact, since they are presumed to be substitutes. As natural capital more and more becomes the limiting factor the importance of keeping it separately intact increases (Daly, 1995:53).

As indicated by Daly (1995:52), the complementarity of manmade and natural capital is “made obvious at the concrete and common sense level by asking: what good is a saw-

mill without a forest; a fishing boat without a population of fish; a refinery without petroleum deposits; an irrigated farm without an aquifer or river?" While it seems odd to deny complementarity in this straightforward sense, it is not obvious what the *implications* of maintaining natural capital intact really are for say, consumption. What if we produce more with less? Nor is it obvious that natural capital is the limiting factor for all types of production and consumption. What if we produce more out of natural resources that are not scarce?

Except for making the point clear that natural capital is a necessary input for production and consumption, the environmental resources and ecological services essential for human welfare are not specified, thus leaving it more or less in the dark. Daly (1996) is however quite clear on what he sees as the implications of strong sustainability for consumption. He notes that "[w]hat is needed in the first instance are reduced levels of consumption [...] and we need to specify 'reduced consumption levels' of resources and environmental services" (Daly, 1996:14:17). Yet again one may legitimately ask, of what, and for what reasons? It seems that the conclusion needs further justification, and it is not that easy to see the big difference, at this stage, between weak and strong sustainability.

While Pearce and Barbier (2000) contend that the debate between weak and strong sustainability is just as relevant today as it was before, it seems obvious that one needs to move beyond this debate in order to draw conclusions regarding policy implications. One way forward is to ask the question what the scarce resources really are. If there are none, one could easily conclude that what Pearce (1995:113) has labelled "the overconsumption hypothesis", is wrong. What really matters from an environmental point of view, according to Pearce, is the *ratio* of resource use to production and consumption. This distinction is important because "consumption can rise while the ratio of resources to consumption can fall at the same time. The extent to which total resource use rises then depends on whether the ratio falls faster than the level of consumption rises" (Pearce, 1995:115). *As such, there is a race between resource efficiency, growth in consumption and the total level of resource use.* Moreover as we shall see later, this is where ecological modernisation and industrial ecology comes in as powerful and possible strategies for reaching sustainable development.

Weizsäcker et al (1998), argue in the same manner as Pearce, stating that what is needed is an improvement in what they label "resource productivity" by a factor of 4. Based on an assessment of "the scientific analysis of climate change and other ecological menaces", they argue that "the world may have some 50 years left to close the gaps" (Weizsäcker, Lovins and Lovins, 1998:256). Yet Pearce (1995) does not make any claims about the actual improvements needed in the ratio or factor. Weizsäcker et al (1998:244), however, seem to be unsure about what the exact number is, claiming that a: "Factor Four may just not be enough for ecological sustainability". The argument that the material intensity of OECD countries should be reduced by a factor of ten and not a factor of four is rendered without any objections. Furthermore Weizsäcker is also a member of 'The Factor Ten Club'. What the exact number is, 4 or 10 or 7 or 8 (if there is *one*), does not seem to make any difference to the conclusions drawn from what is described as the "efficiency cure" and the "neo-cornucopian' visions":

Doing more with less is not the same as doing less, doing worse or doing without. Efficiency does not mean curtailment, discomfort or privation. [...]. By themselves energy efficiency plus productive, sustainable farming and forestry practices could make up to 90 per cent of today's environmental problems virtually disappear, not at a cost but – given favourable circumstances – at a profit (Weizsäcker, Lovins and Lovins, 1998:xxii).

The 21<sup>st</sup> century need not be depressing at all. If our “neo-cornucopian” visions come true, even the gravest worldwide distribution problems can be solved without any part of the world's [sic] having to accept significant sacrifices in well-being (Weizsäcker, Lovins and Lovins, 1998:268).

As such, it would seem that the approach of both Pearce and Weizsäcker et al are firmly within the weak sustainability approach. The important thing to do is to *produce* and get people to *buy* the really efficient equipment, scrap (recycle) the old stuff and to produce and buy eco-food to the extent possible. Thus, it is really not *consumption*; it seems, but rather *production* that will direct us towards a sustainable future (possibly with some demand pressure from consumers). What is called for is primarily the “next industrial revolution”, what Hawken et al (1999) call “natural capitalism”. This industrial revolution is exactly what some see ecological modernisation as representing (Langhelle, 2005).

Following Dobson's (1998) distinction between strategies and conceptions of sustainability, however, it is not clear why these strategies should only be related to weak sustainability. As Daly (1995) argues in his attack on the weak sustainability perspective:

No one denies the reality of technical progress, but to call such changes the substitution of capital for resources (or of manmade for natural capital) is a serious confusion. It seems that some economists are counting as “capital” all improvements in knowledge, technology, managerial skills, etc. – in short, anything that would increase the efficiency with which resources are used. If this is the usage, then “capital” and resources would by definition be substitutes in the same sense that more efficient use of a resource is a good substitute for having more of the resource. But formally to define capital as efficiency would make a mockery of the neoclassical theory of production, where efficiency is a ratio of output to input and capital is a quantity of input (Daly, 1995:52).

Therefore, increasing the ratio or factor of output to input is *really not substitution* between different forms of capital, but an increase in efficiency, regardless of whether sustainable development is defined in terms of strong or weak sustainability. In our view the real difference between strong and weak sustainability boils down not to the question of complementarity, but to something, which is not always clear in the debate, namely the explicit or implicit view on the state of nature. How serious are the environmental challenges facing human kind? These assumptions are fundamentally linked to the question of scarcity. What are the real scarce resources? For the advocates of weak sustainability, it is really not that obvious whether resources are scarce at all (in the sense that further depletion would have serious impacts on what is usually referred to as critical natural capital). Hence, there is still room for substitution between natural and other types of capital. For the advocates of strong sustainability, however, we are

beyond the point where the present (or any increase in) consumption of natural capital can be sustained.

*As such, the proponents of weak and strong sustainability seem to be divided by their views on the state of nature and ecological limits, and hence of scarcity.* Support for this argument comes from a statement made by Wackernagel and Rees (1996) which suggests that “[a]s things stand, the pace of stock depletion and accelerating global change suggests that remaining natural capital stocks are already inadequate to ensure long-term ecological stability. In these circumstances, we believe that ‘strong sustainability’ is a necessary condition for ecologically sustainable development” (Wackernagel and Rees, 1996:37). Thus, *the links seem to go between scarcity and strong sustainability and no scarcity and weak sustainability.* In the context of Pearce’s (1995) account of the race between resource efficiency, growth in consumption and the total level of resource use, there seems to be an additional division between those who believe that ‘the efficiency approach’ is sufficient, and those who believe that it is necessary but not sufficient for a sustainable development, regardless of the view on scarcity. Accordingly *the links seem to go between sufficiency and pattern and insufficiency and level.*<sup>6</sup>

There are therefore at least two different opinions regarding the existence of ecological limits and whether or not these have been exceeded by human actions and these opinions are linked to two different conceptions of sustainability, weak and strong. On the other hand, there is an additional division between those who believe that the efficiency approach is sufficient, and those who believe that it is necessary but not sufficient for a sustainable development, regardless of the view on limits and scarcity. As Pearce and Atkinson concludes:

Nonetheless, crucial issues remain. This is most true concerning critical natural assets where trade-offs, insofar as they exist, are highly unpalatable. Perhaps we have reached a stage in human development when additional environmental depreciation does have such high costs that it constitutes de facto non-substitutability. This is what many ecologists have been saying for some time. But advocates of strong sustainability have been strongest in assertion and weakest in offering empirical substance for their views. That does not make them wrong, but it does suggest they have yet to be proved right (Pearce and Atkinson, 1998:20).

Seen together, these findings give rise to the four different perspectives shown in Table 2.1.

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<sup>6</sup> Pearce explains the difference between consumption levels and patterns the following way: “*Agenda 21* speaks interchangeably of changing consumption and changing consumption patterns. (It also speaks illogically of ‘very high consumption *patterns*’. A pattern cannot be high or low.) But the two are quite different. Consumption can change without the pattern – the product composition of demand – changing, and the pattern can change without the overall level of consumption changing. If our interest is in reducing *resource* consumption ... then changing consumption patterns away from resource-intensive products to less resource intensive products will help achieve the desired effect will help achieve the desired effect” (Pearce, 1995:117).

**Table 2.1. Perceptions of sustainable development inherent in the sustainability debate**

	<b>Weak sustainability (No limits/scarcity)</b>	<b>Strong sustainability (Limits/scarcity)</b>
<b>The efficiency approach sufficient (patterns)</b>	1. Beckerman Pearce?	2. Weizsäcker et al
<b>The efficiency approach necessary but not sufficient (levels)</b>	3. Pearce? OECD	4. Wackernagel and Rees Daly

Positioning Pearce, Weizsäcker et al, and Wackernagel and Rees and Daly in different sustainability categories follows on from the above discussion. Pearce, however, has been suffixed with a question mark and is placed in two cells, because the logic of his approach places him in cell 2, but he seems to place himself in cell 1. The position of the OECD needs some further explanation. Ever since the Rosendal workshop in 1995 and the background paper presented there, the OECD has argued that eco-efficiency may not be sufficient for sustainable consumption (and thus sustainable development). The worry is that the achievements gained through an eco-efficient economic development strategy could be overwhelmed by continued growth in consumption. If gains in efficiency in areas like the energy and transport sectors continuous to be outstripped by absolute growth in the volume consumed, eco efficiency may be insufficient. Increased efficiency can also reduce costs and thus encourage expansion of capacity, income and increased consumption, which may lead to increased environmental pressure (OECD, 1995:A30).

Thus, the OECD is placed in cell 3 due to the expressed views on ecological limits, the present state of the environment and the possible limitations of eco-efficiency. The question therefore is does one need to change the patterns of consumption, rather than the level of consumption? Focusing on patterns fits nicely with the sustainability strategies that have the goals of eco-efficiency and ‘producing more with less’ at their core. Whilst proponents of the efficiency approach would challenge the view that there is a necessary contradiction between patterns and levels, they would also argue that changes in consumption patterns eventually would affect environmental pressures from consumption, and ultimately reduce the *level of environmental pressure* from consumption, which is also the ultimate goal. One way of addressing this problem is through decoupling. OECD (2002) has stressed that decoupling of environmental pressures from economic growth is one of the main objectives adopted by the OECD. Decoupling occurs “when the growth rate of the environmentally relevant variable is less than of its economic driving force (e.g. GDP) over a given period” (OECD,

2002:11). A further distinction between relative and absolute decoupling is made by the OECD (2002):

The term *decoupling* refers to breaking the link between “environmental bads” and “economic goods”. Decoupling environmental pressures from economic growth is one of the main objectives of the OECD Environmental Strategy for the First Decade of the 21<sup>st</sup> Century, adopted by OECD Environment Ministers in 2001.

... Decoupling can be either *absolute* or *relative*. Absolute decoupling is said to occur when the environmentally relevant variable is stable or decreasing while the economic driving force is growing. Decoupling is said to be relative when the growth rate of the environmentally relevant variable is positive, but less than the growth rate of the economic variable (OECD, 2002:4).

Although relative decoupling is necessary, it may not be sufficient for a sustainable development path, that is, as long as the environmental pressure is growing. Thus, the OECD (2002:11) argues that, in most cases, “absolute changes in environmental pressures are of fundamental concern”. *Absolute* decoupling, therefore, is what seems necessary to secure a sustainable development path.

### **2.3 Linkages between sustainable development and voluntary agreements**

As seen from the above discussion, the debates on sustainable development (and ecological modernisation) are complex and disputed. While this may be of no surprise, it still constitutes an important background for this study and what it tries to explore. From the above discussion at least three possible linkages can be made.

The first has already been noted and revealed from the similarities between ecological modernisation and sustainable development. To recall, both ecological modernisation and sustainable development argue for “anticipatory” strategies, a focus on the causes of environmental problems, technological development, sector encompassing approaches and eco-efficiency. A voluntary agreement should, therefore, in principle, have one or more of these characteristics in order to be seen as a sustainable development tool.

While this is one possible way of linking the two, another way is to focus on the differences but also similarities between weak and strong sustainability. It is evident from the above discussion that the perception of sustainable development affects the question of how voluntary agreements are judged from a sustainable development perspective. From a weak sustainability perspective, the focus of the voluntary agreements should be on resource efficiency. Recalling Pearce, what really matters from an environmental point of view is the *ratio* of resource use to production and consumption. From a strong sustainability perspective, it could be argued that the primary focus of the voluntary agreement should be on reducing the level of consumption, although also resource efficiency would be viewed as important. As shown in Table 2.1, however, advocates of strong sustainability can favour the strategy of resource efficiency.

Therefore, a third way of linking voluntary agreements and sustainable development seems necessary. Our suggestion is that one should ask the question what environmental problems the voluntary agreements actually address, and furthermore, whether or not these problems can be linked to critical natural capital? Following this line of reasoning one would have to answer the following question raised by Pearce and Atkinson (1998):

... physical loss of the asset is an indicator of non-sustainability if it provides critical services. Hence, either some physical amount of the resource is to be conserved or its physical stock size should not fall below a certain critical level or else catastrophic consequences may result. However, while this might be argued to characterise assets such as the ozone layer it is debatable as to whether it applies to all such natural assets; this would imply that *each* natural asset should be kept physically intact. The question here is which assets are critical in this way? (Pearce and Atkinson, 1998:14).

This implies that in order to be an effective policy instrument for sustainable development, it is not enough for the voluntary agreement to perform well, in the sense of reaching the targets set in the agreement or contributing to the solving of the environmental problem in question. The agreement must also address an environmental problem that can be related to critical natural capital (and hence sustainable development). Thus, this linkage presupposes an assessment of the magnitude and importance of different environmental problems, or in other words, some kind of ranking of environmental problems. Although this may seem as a strict criterion, it nonetheless captures the essence of some of the discussions about voluntary agreements in Norway. We return to these discussions in chapter 6.

### 3 Towards a framework for the analysis of negotiations and voluntary agreements

#### 3.1 Policy instruments

Policy instruments are disputed. Policy instruments are the myriad of techniques available for governments to implement their policy objectives (Howlett 1991, Jordan, Wurzel and Zito 2003), and policy instruments “are the tools through which governmental authorities wield their power” (Bemelmans-Videc and Vedung, 1998). There are also a number of different categorisations of policy instruments (cf. Lundqvist 1996, Vedung 1998, Nispen and Ringeling 1998, Cederlöf 2001, Lindén and Carlson-Kanyama 2002, Jordan, Wurzel and Zito 2003). A widespread classification of policy instruments distinguish between regulation, economic instruments and information (Vedung, 1998). As pointed out by Vedung the effectiveness and legitimacy of policy instruments usually involve unique mixes of several policy instruments. But it is still crucial for policymakers to have a good overview of the generic forms of the different instruments in order to be able to combine them. Thus, choosing the appropriate combination is one of the most intricate and important tasks in political planning, and requires knowledge of instruments in themselves and in combination.

Vedung also argue that there can be no universal categorical scheme of policy instruments. There must be “numerous classifications varying with theoretical and practical perspective” (Vedung, 1998:22). In the following, we will start out with Lindén and Carlson-Kanyama’s (2002:898-899) classification of policy instruments which include information, economic instruments, administrative instruments and physical improvements, and this for two reasons: The classification scheme is used by Lindén and Carlson-Kanyama’s (2002) to highlight the uniqueness of voluntary agreements as a distinct policy instrument, and there might be an element of the policy instrument “physical improvements” in several of the cases we look upon in this study. The different identified policy instruments are described the following way by Lindén and Carlson-Kanyama’s (2002:898-899):

*Information* refers to aspects of knowledge and mediation with the aim of attracting attention. The receiver of the information is supposed to notice and benefit from the arguments voluntarily, and ultimately, the information will effect attitudes and lead to a change in or new behaviour. Policy instruments belonging to this group include written information, advertisements, environmental awards, environmental reports and labelling. *Economic instruments* are used to induce changes in behaviour by increasing or reducing the costs of certain behaviour. Economic instruments are meant to “function as catalysts for changes in the future”. Although they may be efficient in theory, however, they are in real world politics often traded-off against other important policy goals. Economic instruments include taxing, pricing, trade in emissions, subsidies and reducing interest rates on investments.



*Administrative instruments* punish deviant behaviour with negative sanctions which are usually known to the deviator in advance. The authorities are responsible for both the introduction and observance of instruments and the parties have to obey. Administrative instruments include environment quality norms, restrictions on trade, permits, prohibitions, a fine and legislated regulations. *Physical improvements* are intended to facilitate new patterns of behaviour. Examples are the construction of waste depositories, separate lanes for bicycles and changes in infrastructure to change behaviour in a wanted direction (Lindén and Carlson-Kanyama, 2002:898-899).

These four groups of instruments share a top down perspective in the sense that they are formulated, established, controlled and evaluated by an authority, but they may vary in influence and effect. Moreover, they may be used in various combinations to increase efficiency and also legitimacy. The main features of these different policy instruments are summarized Lindén and Carlson-Kanyama (2002:899) as shown in Table 3.1.

**Table 3.1. Policy instruments, influence on actors and effects**

Instrument	Influence	Effect
Information	Voluntary	Slow
Economic instruments	Catalytic	Short-range
Administrative instruments	Immediate, forcing	Middle-range
Physical improvements	Reminding, repeating	Change habits

The question is now where the policy instrument of voluntary agreements should be placed. Lindén and Carlson-Kanyama consider it as an instrument somewhere between information and economic instruments, primarily because it is seen as a more horizontal process. The motivational aspect is different in the sense that the parties in question have to stand on a more equal footing: “To be able to formulate agreements there is a need for creativity provided by both parties, e.g. the authority and the industry. Voluntary agreements require a continuous communication process”. Therefore, voluntary agreements “represent a very sharp contrast” to all other policy instruments and they cannot be reduced to information or economics (Lindén and Carlson-Kanyama, 2002:899).

Vedung, however, regards voluntary agreements as a subcategory of information. This is made clear in the following paragraph:

Consider, for example, negotiations between public authorities and some private party and the ensuing agreement. Is this not a policy instrument in its own right? The answer here is no. Pursued in calm and civilised forms, negotiations are cases of governing through persuasion. The public authority confines itself to informing, arguing, and persuading. At a certain point, however, a threat of regulating the

matter may be enunciated. But not even this would constitute a new, separate means of governance but only a threat of regulation (Vedung, 1998:37).

Since Vedung also sees regulation, economic instruments and information as representing different degrees of “authoritative force” from stronger to weaker, he would agree that information in principle represent less use of power by the state. But why cannot voluntary agreements be seen as a subcategory also of regulation? In another paragraph where Vedung discusses the difficulty of drawing the line between information and threats of regulation, it becomes unclear whether voluntary agreements are considered as a regulatory measure or information:

In a negotiation, would it not be reasonable to view, for instance, threats of enacting some regulatory measure as a form of information? Because it is not yet enacted, it does not seem to be a regulation. Still, in the present scheme, it would be a regulatory measure (Vedung, 1998:36).

Where to draw the line, therefore, seem to depend partly upon the strength or force behind the actual threat, since it is linked to the question of “authoritative force” in a fundamental way. But if voluntary agreements can turn into regulation, one can also question the claim made by Lindén and Carlson-Kanyama (2002:899) that “both partners represent the same share of importance” in a voluntary agreement. As argued by Glasbergen (1998) it is highly questionable whether public and private parties can really be equal<sup>7</sup>. Government performs certain specific tasks and will always have a special status. Moreover, given the fact that enforcement usually is provided through the threat of sanctions or new legislation (OECD, 1999), the importance, equality and status of the negotiating should be treated as an empirical issue in each case.

The above discussion is also related to the question if voluntary agreements represent a new policy instrument or a new mix of instruments. Voluntary agreements have been in use for at least 30 years in Japan (Tsutsumi, 2001). Still, voluntary agreements have most commonly been used to deal with the environmental problems which entered the political agenda in the early 1990s, like climate change and waste recycling problems (OECD, 1999:12). Voluntary agreements have, therefore, also been placed as a subcategory of what Jordan, Wurzel and Zito (2003) call “‘new’ environmental policy instruments” (NEPIs). NEPIs include market based instruments, voluntary agreements, Eco-labels, “other” instruments and also “old” instruments. Other instruments are a “residual category” of NEPIs defined as “instruments that are of national importance (for example subsidies) or which are ‘new’ to the country in question” (Jordan, Wurzel and Zito 2003:12). “Old” instruments refer to instruments like regulations being used in a new way. One example is the regulatory changes now coming from the EU where EU has a direct effect on member states by altering the nature of the regulations they adopt (Jordan, Wurzel and Zito 2003:12).

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<sup>7</sup> Nonetheless, Glasbergen (1998:12) acknowledges that communication and dialogue between parties “that are considered equal are seen as the most important instruments” within what he calls “the co-operative management model”. See below.

What Glasbergen (1998) and Meadowcroft (1998) identifies as “co-operate management” and “co-operative management regimes” also have a close resemblance with voluntary agreements. Co-operative management is seen as a relatively new and distinct model of governance besides regulatory control, market regulation, civil society and contextual control and self-regulation. For Glasbergen (1998:13), co-operative environmental governance “is a rather young model of governance”. The co-operative management model “assigns a key role to collaborative relations between governments, mediating non-governmental organisations, and private interests. The mechanism for change lies in communication and dialogue, the results of which are laid down in voluntary agreements among the participants” (Glasbergen, 1998:3). The negotiations are supposed to promote collective action and a joint policy practice:

The negotiations are supposed to arrive at a joint policy practice. Public and private parties bring in their knowledge and perceptions. Through negotiations, they try to formulate a common analytical and normative framework in which:

- a) A shared definition of the problem emerges.
- b) A common desire to tackle the problem evolves.
- c) Each of the parties makes whatever contributions it can to the resolution of the problem.

Thus conceived, the negotiations entail a redefinition of group interests within the context of a broader common interest (Glasbergen, 1998:12).

Moreover, the results of the negotiations are laid down in the form of an agreement and provide the basis of a contract that can be more or less binding. What Glasbergen (1998) terms “co-operate management” is thus close to what others call voluntary agreements or negotiated agreements.

### **3.2 Defining voluntary agreements**

As several authors have pointed out, there is no commonly agreed definition of voluntary agreements (EEA 1997a, OECD 1999, Jordan, Wurzel and Zito 2003). Sometimes the term “voluntary” is used interchangeably with “environmental” and there are broader and narrower definitions of voluntary agreements. Glasbergen (1998:13) prefers the term “environmental agreements” because it remains an open question how voluntary the agreements actually are. OECD (1999) has a different terminology. According to OECD (1999), voluntary agreements can be seen as a subcategory of what they call “voluntary approaches”. This includes *Public voluntary programmes*, *Negotiated agreements* and *Unilateral commitments*.

Public voluntary programmes are defined as “commitments devised by the environmental agency and in which individual firms are invited to participate. Since participation in the voluntary programme is a choice left to individual companies, they can be seen as ‘optional regulations’” (OECD, 1999:9-10). Negotiated agreements are defined as “commitments for environmental protection developed through bargaining between a public authority and industry. They are frequently signed at the national level between an industry sector and a public authority, although agreements with individual firms are also possible” (OECD, 1999:10). Unilateral commitments are commitments

set by the industry acting independently without any involvement of a public authority (OECD, 1999:9-10)<sup>8</sup>. The discussion in OECD (1999) of the terminology of voluntary agreements also reveals some of the tensions of where to place voluntary agreements as a policy instrument:

The term ‘voluntary agreement’ is a tautology, for by its very nature an agreement between different parties implies that it is voluntarily signed. By definition each party is free to sign a contract or not. Moreover, the term voluntary agreement covers two different meanings. On the one hand, it designates the broad category of voluntary instruments. It is used as a substitutive term of voluntary initiatives or voluntary approaches. On the other hand, it is used in a more narrow sense to name the environmental agreements negotiated between industry and public authorities. It is then used as a synonym of negotiated agreement which is only one type of voluntary instrument. Last but not least, the term ‘voluntary’ is questionable where the agreement is signed by industry with public authorities. In fact, they may use their coercive power to pose a threat of introducing a new regulation if industry does not abate pollution (OECD, 1999).

In the following, we will use the term voluntary agreements in the more narrow sense identified by OECD, as a synonym with negotiated agreements<sup>9</sup>. This is the definition of environmental agreements used by EEA (1997a, 1997b) and voluntary agreements used by Lindén and Carlson-Kanyama (2002). EEA defines environmental agreements as “covering only those voluntary commitments undertaken by firms and sector(s), which are the result of *negotiations* with public authorities and/or explicitly recognised by the authorities” (EEA, 1997a:20, see also Brink 2002:18)<sup>10</sup>. According to Lindén and Carlson-Kanyama (2002), voluntary agreements can be seen as a policy instrument which aims at applying new knowledge and routines to specified issues. Voluntary agreements are the results of co-operation between two or more partners, an authority and an industry, and are intended to be followed by some form of contract. It is more formally defined the following way:

From a theoretical perspective, voluntary agreements include commitments made by individual companies or by trade and industry and are *a result of negotiations* with public authorities and/or have been accepted by them. The definition spans a broad spectrum ranging from voluntary commitments and non-binding agreements to legally binding agreements (Lindén and Carlson-Kanyama, 2002:898)<sup>11</sup>.

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8 A final category of voluntary approaches mentioned by OECD (1999) is what they call “private agreements”, which are agreements reached through direct bargaining between stakeholders: polluters and pollutes. There is, however, little information according to OECD (1999) available on their use and performance.

9 This does not imply, however, that we disagree with the classification made by OECD. It must be seen as a reflection of our focus on negotiations and the interest in the effects of negotiations.

10 Our italics.

11 Our italics.

In our approach voluntary agreements are seen as a result of negotiations, but they can be either legally binding or non-binding in a strictly legal sense.

EEA (1997a, 1997b) and OECD (1999, 2003) make a further distinction between *target setting* voluntary agreements and *implementation* environmental agreements. In the first, the target as such is negotiated and set as part of the negotiations. In the second, the aim of the voluntary agreement is compliance with an already set target (EEA, 1997a:54), and concerns the selection and implementation of the measures to achieve it (OECD, 1999:20). This distinction is important, according to OECD (1999:21), for the following reason: “The distinction between target-based and implementation-based approaches is very important as regards the credibility of voluntary instruments in public opinion. Where the objective is set by polluters, it is suspected of being lower than the target set by government because it only takes the specific interests of the parties involved into account, not the public interest in general”. A voluntary agreement, however, can include both *target setting* and *implementation*.

Whether one negotiates the target or the implementation of the target, or both, is thus an important distinction. Contrary to Glasbergen (1998:13fn), however, also the negotiating process itself is regarded as important in our approach. Glasbergen (1998:13fn) argues that although important, the role of negotiations is “not a distinguishing characteristic of the model” he terms co-operative management, because negotiations “always takes place, even in the regulatory control model”. Although this may be true, it is still, as we see it, a matter of degree and character. In fact, Glasbergen’s argument seems to challenge his own model since what is said to entail the “redefinition of group interest within the context of a broader common interest” in his own model, is negotiations (Glasbergen, 1998:12). In our view, therefore, negotiations are one of the core characteristics of voluntary agreements (in the narrow sense). Whether or not the negotiations actually succeed in redefining group interest, however, is first and foremost an empirical issue. The point here is just that the negotiating process itself is what may lead to a common understanding of environmental problems and mutual responsibilities (Nilsson, 1998). In the following we will elaborate further some theoretical approaches which address the role and function of negotiations in voluntary agreements.

### **3.3 The negotiating process – role and function**

Despite the growing interest and focus on voluntary agreements, there are few studies that have an explicit focus on the negotiational aspect of voluntary agreements. Most studies focus upon the conditions, efficiency or success of voluntary agreements. These questions are no doubt important. Several authors do, however, argue that voluntary agreements can have a substantial learning effect and change not only behaviour, but also preferences and judgements. Ramesohl and Kristof argue that voluntary agreements “represent a new approach, which promises to introduce a completely new quality of interaction into the policy process if appropriate framework conditions and guidelines are set” (Ramesohl and Kristof, 2002:344). Our assumption is that part of the explanation of the success or not of voluntary agreements may be related to the “black box” of what happens in actual negotiations.

The process of negotiating can be seen from different theoretical perspectives. In a simple form, negotiations can be said to include the two components of *arguing* and *bargaining*. To argue, according to Elster (1991:478), is to “engage in communication for the purpose (or apparent purpose) of *persuading* an opponent, i.e., to make the other change his beliefs about factual or normative matters”. In the process of arguing the statements asserted are made with a claim to being valid. To bargain, on the other hand, “is to engage in communication for the purpose of *forcing* or *inducing* the opponent to accept one’s claim” (Elster, 1991:478). In this process, bargainers rely on threats and promises, and bargaining power is derived not from the force of the better argument, but from the credibility of threats and promises.

Often, the strategic element of bargaining based on self-interest is used to explain the outcomes of negotiations (Hagem 1996, Sunnevåg 2000, Torvanger 2001, Torvanger and Skodvin 1999, OECD 1999). What matters according to law and economics is whether the costs of reaching an agreement exceed the value created by the agreement or not (OECD, 1999:42). Firms and branch organisations will try to minimise costs and maximise benefits (Jasinski 2000). Voluntary agreements also have transaction costs that include costs of identifying and collecting information on the partners, bargaining costs involved during the negotiation and the elaboration of the contract and enforcement costs (OECD, 1999:40). These costs may, nonetheless, be lesser than the costs of regulation. Contracting costs, a large number of parties and opportunism of economic agents (“their willingness to get the largest part of the pie to the detriment to the others”), however, are severe obstacles to voluntary approaches according to OECD (1999).

Several authors, on the other hand, have stressed arguing or dialogue, as a vital component of voluntary agreements. Lindén and Carlsson-Kanyama (2002:897) argue that voluntary agreements represent a communication process between an authority and a partner where relations of dependency and mutuality are important. In a way, this can be seen as a parallel to the “deliberative turn” in democratic theory. Deliberation, according to Dryzek (2000), is as a social process “distinguished from other kinds of communication in that deliberators are amenable to changing their judgements, preferences, and views during the course of their interaction, which involve persuasion rather than coercion, manipulation, or deception” (Dryzek, 2000:2). Deliberative theorists in general stress “that the political process involves more than self-interested competition governed by bargaining and aggregative mechanisms” (Bohman and Rehg, 1997:xiii). To engage in communication may thus involve more than strategic action. What matters in this perspective is the nature of the communication. The question whether negotiations are dominated by deliberation or bargaining is first and foremost an empirical issue, but we need theoretically defined categories in order to answer the question.

### 3.4 Specifying negotiations: strategic bargaining, deliberative negotiation and deliberation

The discussion above shows that there is a need for clarification and specification of different types of negotiating and bargaining processes. The distinction between strategic and communicative action may serve as one point of departure (cf. Habermas 1984). Another one is the types and constellations of preferences and the various ‘logics’ of decision-making, which have been applied in the construction of a typology of public decision-making processes (Rommetvedt 2006).

Preferences related to specific decisions are based on a number of gradable or absolute norms and values etc. and consequently preferences may be related to divisible or indivisible goods. Biological needs are related to conditions for survival. They are matters of life or death and in that sense they are absolute. Moral norms concerning right and wrong and legal norms with regard to what is lawful or unlawful are absolute in a similar way. Material values that exceed biological needs on the other hand are matters of degree. They are divisible goods that may have greater or lesser value.

Preferences may be given in advance or developed during the actual decision-making process. When several actors are involved in the process, actors’ preferences may be similar or different, compatible or conflicting. These elements constitute different decision situations. Table 3.2 presents the three different decision situations where various kinds of negotiations seem to be most relevant.<sup>12</sup>

**Table 3.2. Negotiating processes (bold indicates labels used for each process)**

Type:	II	III	IV
Decision situation	Similar preferences, divisible goods	Unclarified and/or different but compatible preferences	Unclarified preferences, assumed public good
Decision-making process	<b>Strategic bargaining</b>	<b>Deliberative negotiation</b>	<b>Deliberation</b>
Character of decision-making process	Strategic	Communicative	Communicative
Result of decision	Compromise	Package deal	Qualified consensus
Decision problem	Bargaining deadlock	No opportunities for package deal	Disagreement on the public good
Legitimacy basis	Participation + substantial reasonableness	Participation + sincere argumentation	Arguments on the public good

<sup>12</sup> The table presents an excerpt from Table 2 in Rommetvedt (2006:200). The complete typology comprises eight types of decision-making processes: I) war, II) strategic bargaining, III) deliberative negotiation, IV) deliberation, V) voting, VI) trial, VII) investigation and VIII) subsumption.

*Strategic bargaining* is a process based on threats and promises. It is most relevant when preferences are similar and given in advance, and directed towards divisible goods. The intended result is some sort of compromise where each of the participants get their share of a divisible good. The compromise depends on the parties' strategic resources. The basis for legitimacy is participation in the process and some kind of reasonableness with regard to the outcome.

*Deliberation* on the other hand is a communicative process most suitable for situations where the participants' preferences are not clarified at the outset and where participants assume that there is a common or public good. Deliberation is based on an open dialogue where the participants are willing to change preferences on the basis of good arguments referring to the public good. The aim is to reach a qualified consensus on the common good.

Between strategic bargaining and deliberation we find *deliberative negotiation* related to decision situations where the parties have different, but compatible preferences. Strategic bargaining is particularly relevant in zero-sum games where one party's winnings are identical to the other party's losses. Deliberative negotiation on the other hand is related to variable-sum games where both parties can win. The process is not purely dependent on strategic resources but also on serious discussion and appraisal to find out how preferences can be united to the benefit of both parties. The aim of the process is to construct package deals where both parties get what each of them wants most.

What then is the relationship between the three decision situations and processes on the one hand, and the different perspectives on sustainable development on the other (cf. Table 2.1)? At first sight strong versus weak sustainability and the question of efficiency appear as matters of degree and accordingly suitable for bargaining. However, some of the perspectives presented above are based on the assumption that there are certain limits or thresholds with regard to natural resources and sustainability and that increased efficiency is not sufficient to solve the problems. In that case we are confronted with matters of absolute character and bargaining aiming at compromises where parties share divisible goods are not suitable. Open and sincere deliberations in order to find a common solution seems more appropriate. Uncertainty with regard to the existence of limits and where they are to be drawn may open up for deliberations in order to clarify the situation and consequently for changes in preferences. The (potential) possibility of substitution may enhance the relevance of deliberative negotiations where each of the parties are willing to (re)consider their preferences and substitute one good for another in a package deal where both parties get what they want most.

The different logics of the various decision-making processes have certain implications with regard to the equal status of participants in negotiations and the voluntariness with regard to agreements. Of course, formally public authorities and private parties do not have an equal status. Government may always (threaten to) regulate activities directly by law or indirectly by taxation. However, in practice one may approach a certain equality of status. We would assume that this is the case when knowledge about the



problem and its solution is limited and/or uncertain. In that case, the parties have a similar/common lack of information and consequently preferences are not fixed. One may find solutions and develop common preferences through deliberative processes.

In the case of an agreement based on deliberation and qualified consensus, there is no problem characterising the agreement as voluntary. Deliberative negotiations leading to package deals where each of the parties get what they want – possibly by substituting one good for another – may also be characterised as voluntary. However, the question of voluntariness is more complicated in relation to strategic bargaining and compromises based on threats and promises. In this case the compromise depends on the parties' strategic resources and the credibility of the threats and promises. Even if the parties 'agree' on a compromise one may question whether this is really 'voluntary'. Faced with a threat of regulations by law which might be even worse for the industry or a threat of shutting down a factory and increased unemployment, one or the other party may feel that they are captured in a situation with no real choice.

Whether intended or not, an explicit – and possibly also an implicit – threat of this sort may have an impact on the character of the negotiating process. A crucial question may be raised in this context: Is it possible to carry through a truly deliberative process with an open and sincere dialogue if there is an underlying threat of 'something worse' to happen if the parties do not reach consensus or agreement on a package deal? Or: Will the knowledge of an underlying threat or the introduction of an explicit threat force the participants into a process characterised by strategic bargaining – a process where open dialogue is impossible? We will return to this question in the following sections.

### **3.5 OECD and EEA recommendations for the design of voluntary agreements**

As the number of voluntary approaches has increased in OECD countries, often in combination with one or more other instruments (OECD, 2003) there are an increasing literature on their performance. The evaluations of voluntary agreements report mixed results. Although hesitant to make overly generalised statements of voluntary approaches, including negotiated agreements, OECD (2003:14) argues that "there are only few cases where such approaches have been found to contribute to environmental improvements *significantly different* from what would have happened anyway". This is close to the conclusion drawn by Helby who argues that voluntary approaches "often have aims that are quite modest and produce results that do not deviate clearly from business-as-usual" (Helby, 2002:184). Chidiak (2002) draws a similar conclusion in relation to the French experience with voluntary agreements for greenhouse gas reduction. He concludes that the "considerable reductions in specific GHG emissions can hardly be seen as a direct consequence of the VA [voluntary agreements] commitments. Instead they seem to have been triggered by other environmental regulations, and above all, by industry's heavy investments in technology modernisation and cost reduction efforts".

OECD (1999:11), however, also argues that voluntary approaches are "likely to generate significant 'soft effects' in terms of dissemination of information and

awareness-raising”. Moreover, OECD (1999) argues that negotiated agreements perform better when being used in a policy-mix and when being used to explore new policy areas. Overall, however, it must be said that OECD (2003) is relatively reluctant towards voluntary agreements. This is partly due to the performance of voluntary agreements, but also partly due to OECD’s overall approach to policy instruments. OECD clearly regards voluntary approaches as the third-best-approach, after economic instruments and more flexible command and control regulations:

A ‘first best’ approach would be to replace the ‘command and control’ policies by economy-wide economic instruments – taxes or tradable permits – where technically and administratively possible ...

A ‘second-best’ option could be to improve the flexibility of pre-existing ‘command-and-control’ regulations, instead of a piece-meal approach that lets only a few companies attain environmental improvements in a more flexible manner...

The performance of many voluntary approaches would be improved if there were a real threat of other instruments being used if (appropriately set) targets are not met. However, if it is likely – or widely believed – that the alternative policy would entail significant negative social impacts, the credibility of such threats may not be great (OECD, 2003:15).

Krarup and Ramesohl, (2002) on the other hand, argue that voluntary agreements can have a positive effect on industrial energy consumption and CO<sub>2</sub> emissions, if, among other things, they are embedded in broader policy mixes and adapted to specific target groups. Johannsen (2002) argue that the combination of voluntary agreements and taxes in Denmark do actually have an impact on firm behaviour. Rietbergen, Farla and Blok (2002) argue that between a quarter and a half of the energy savings in the Dutch manufacturing industry can be attributed to the voluntary agreements compared with “business-as-usual”:

... the rate of energy efficiency improvement has increased by 33-100% compared with a situation in which there is no agreements. Apparently, then, the agreements are valuable policy instruments for energy efficiency improvement if accompanied by ambitious target setting, effective supporting measures and reliable monitoring procedures (Rietbergen, Farla and Blok, 2002:162).

Reflecting the mixed experiences with voluntary agreements, many recommendations for improving their efficiency have been put forward and OECD (2003:15) argue that the “likelihood of a voluntary approach providing any environmental improvements beyond ‘Business-as-Usual’ depends strongly on their quality”. EEA (1997a) concluded that many of the agreements surveyed in the EU did not include monitoring and reporting requirements. This had the effect of damaging the credibility of the instruments, denying accountability and making it “extremely difficult to conduct ex-post evaluations of their effectiveness” (EEA, 1997a:12). The recommendations made by EEA (1997a) included general guidelines for what environmental agreements (EAs) are most suitable for and when implementation would be more effective. Table 3.3 below shows some of the requirements for improved use of EAs as summarised by EEA (1997a:15):

**Table 3.3. EEA recommendations regarding environmental agreements (EAs)**

<b>EAs are most suitable for:</b>	<b>Implementation is more effective when:</b>
<ul style="list-style-type: none"> <li>• Pro-active industries or businesses</li> </ul>	<ul style="list-style-type: none"> <li>• Clear targets are set prior to the agreement</li> </ul>
<ul style="list-style-type: none"> <li>• Small number of partners or high organisation level of signatory partners</li> </ul>	<ul style="list-style-type: none"> <li>• The agreement specifies the baseline against which improvements will be measured</li> </ul>
<ul style="list-style-type: none"> <li>• Production of goods (i.e. industry)</li> </ul>	<ul style="list-style-type: none"> <li>• The agreement specifies reliable and clear monitoring and reporting mechanisms</li> </ul>
<ul style="list-style-type: none"> <li>• Sectors which have matured and face limited competition (i.e. where there are few opportunities for 'free-riders')</li> </ul>	<ul style="list-style-type: none"> <li>• Technical solutions are available in order to reach the agreed targets</li> </ul>
<ul style="list-style-type: none"> <li>• environmental problems of limited scale (national and regional environmental problems)</li> </ul>	<ul style="list-style-type: none"> <li>• The costs of complying with the EA are limited and are relatively similar for all members of the target group</li> </ul>
<ul style="list-style-type: none"> <li>• limited numbers of sources of pollution</li> </ul>	<ul style="list-style-type: none"> <li>• Third parties are involved in the design and application of EAs</li> </ul>
<ul style="list-style-type: none"> <li>• long-term targets (early signal)</li> </ul>	

The suitability and effectiveness of voluntary agreements described by EEA (1997a) is also reflected in OECD's (1999) recommendations for both voluntary approaches (VAs) in general and negotiated agreements in particular. They should, according to OECD, include:

– *Clearly defined targets*

The targets should be transparent and clearly defined. VAs should define quantitative targets. Moreover, the setting of interim objectives is crucial since they permit all the parties to identify difficulties arising during implementation at an early stage.

– *Characterisation of a business-as-usual scenario*

Before setting the targets, estimates of a business-as-usual trend – what the emission levels or other target variables are likely to be, given natural technical progress within the considered industry – should be established in order to provide a baseline scenario.

– *Credible regulatory threats*

Made at the negotiation stage, a threat of regulation by public authorities provides companies with incentives to go beyond the business-as-usual trend.

– *Credible and reliable monitoring*

Provisions for monitoring and reporting are essential for keeping track of performance improvements. They constitute the key to avoiding failure to reach targets. Monitoring should be made at both the firm level and the sector level in the case of collective VAs. In certain contexts, monitoring by independent organisations may be used.

– *Third party participation*

Involving third parties in the process of setting the objectives and the performance monitoring of VAs increases their credibility. More generally, environmental performance should be made public and transparent. It provides industry with additional incentives to achieve their commitments.

– *Individual penalties for non compliance*

Provisions should be made for individual sanctions for non-complying firms, by either making binding commitments, or by establishing linkages between VA commitments and regulatory requirements (e.g., the integration of VAs requirements into operating permits).

– *Information-oriented provisions*

In order to maximise the informational soft effects of VAs, supporting technical assistance activities, technical workshops, and publishing best practice guides should be promoted.

– *Provisions reducing the risk for competition distortions*

In the case of collective VAs, safeguards against adverse effects on competition could be provided by notification of new VAs to anti-trust authorities (OECD, 1999:12-13).

OECD's recommendations are based on the review and evaluation of a number of voluntary approaches in general and negotiated agreements in particular. OECD's recommendations also sum-up many of the recommendations made elsewhere in the literature on voluntary agreements. Moreover, these recommendations are closely linked to the criteria OECD has proposed for evaluating voluntary agreements. OECD's (1999:103-108) evaluation criteria focus on environmental effectiveness (target ambitiousness and the degree of goal attainment), economic efficiency, administrative and compliance costs, competition concerns, dynamic effects, innovation, soft effects, diffusion of information and viability and feasibility.

We shall return to these criteria later in this study as they are applied to our own cases. For now we will just briefly focus on one of them; the question of environmental effectiveness, since this is relevant to the discussion of the performance of voluntary agreements and its linkages to sustainable development. The "issues at stake" regarding *environmental effectiveness* are the following, according to OECD (2003:42):

- a) Have the environmental targets been set at an appropriate level?
- b) Have the existing environmental targets been met?
- c) To what extent have the achievements been due to the instrument in question? What would have happened in a 'Business-as-Usual scenario'?

The main problem discussed by OECD (1999, 2003) in this regard is the problem of “regulatory capture”. “Regulatory capture” is described and explained in the following way:

Since the abatement of emissions is costly, polluting firms have a clear incentive to obstruct the introduction of a more stringent environmental policy. If they succeed, the regulation is not passed and they do not pay additional expenses for the environment. The policy is said to have been “captured” by industry. More generally, environmental regulation is captured when regulatory costs are zero for a firm. This includes cases where new legislation has been successfully obstructed but also cases where it has been passed but has been flawed: either the objective to be achieved set by the law corresponds to a Business-as-Usual pattern or the objective is more ambitious, but firms know that it will not be enforced. In using this definition, a voluntary approach will be considered as being captured by industry when the environmental target set is no more than the abatement associated with a Business-as-Usual pattern. But to go beyond this all-or nothing view of capture, it is also considered that there is a degree of capture when the target is close to the Business-as-Usual pattern: the closer the target to this pattern, the higher the degree of capture of a voluntary approach by industry interests” (OECD, 2003:43).

In the cases discussed by OECD (2003:49), most of the environmental targets are in fact met, and sometimes with a wide margin. The problem is that in many cases, it is impossible to say if the targets have been realised due to the voluntary approach or not, simply because one does not know what would otherwise have happened. This is referred to as “the counterfactual problem” (OECD, 2003:50). The problem is a problem of knowing what a realistic alternative to the voluntary agreement could have been:

... it remains unclear what would have been the – realistic – alternative to a given policy or policy combination. Would there in practice have been sufficient political willingness to give priority to reaching ambitious environmental targets – if that, for instance, could jeopardise the (often modest) employment in the most affected (highly polluting) sectors? (OECD, 2003:14).

The “counterfactual problem” gives rise to two possible scenarios. In the first, there was in fact no political will for economic instruments and more flexible command and control regulations, and the agreement is thus the best possible solution. In the second scenario, however, there was in fact political will to impose economic instruments and more flexible command and control regulations, but something else made it possible for industry to avoid such measures. In this last scenario, the agreement would in fact represent a substitute for something which could be a better solution for society as such. The question is if this is a likely scenario or not, and if this was the case, what the “something else” then could be.

How then should we assess the EEA and OECD recommendations in the light of the various forms of negotiations discussed in section 3.3? First of all, the recommendations seem to be based on an assumption about ‘rational’ actors behaving strategically. The calls for clear baselines (business-as-usual) and clear (quantifiable) targets, small numbers of participants, credible regulatory threats and individual penalties are elements that point in this direction. These are elements that seem most appropriate in situations with good

knowledge about the problem and its solution, and where the parties' preferences are given in advance. Public authorities want to reduce environmental problems at the cost of industries, which on the other hand want to avoid the costs and do as little as possible. In other words: Authorities want substantial change while industries want business-as-usual.

Reduced *quantities* of pollution and related costs are divisible entities suitable for strategic bargaining and compromises, but what if the knowledge about the problem and possible solutions is limited and the preferences are not fixed? What if there are thresholds and absolute limits to sustainability involved? In that case some of the fundamental assumptions about 'rational' actors, strategic bargaining and compromises are not fulfilled. Deliberation and deliberative negotiation might be more relevant decision-making processes in situations like that. However, in the search for clarity and quantification under credible threats one risk to pervert open and sincere communicative processes and end up with strategic processes where the parties try to avoid instead of achieve something.

This discussion indicates that QECD and EEA criteria may be productive under some circumstances, but in other situations they may be counter-productive. In other words, the relevance of strategic bargaining, deliberative negotiation and deliberation respectively, needs to be concretised and related to specific situations and environmental problems.

### **3.6 Three tracks for the analysis of voluntary agreements**

With the above discussion of the relationship between voluntary agreements and sustainable development, voluntary agreements as a distinct policy instrument, the focus on the bargaining process and criteria for evaluating voluntary agreements, we now turn to the Norwegian cases. As we said in the introduction, three questions will be given a special focus in the following: 1) the *preconditions* which led to negotiations, 2) the *processes* of the actual negotiations, and 3) the *results* of the negotiations. Given this, we have three-track approach for our analysis of the Norwegian cases.

The first track of analysis consists of a description of the background and characteristics of the policy problem at hand, and the institutional setting and existing regulation in the area within which the different voluntary agreements evolved. This is thus linked to the question of the nature of the decision-making process and the preconditions for the actual negotiations. Here, we will rely on existing literature and official documents.

To identify and isolate these processes in practice, however, is not straightforward. A place to start is to ask under which circumstances negotiations might turn out as dominantly deliberative or dominantly strategic. This can be called "appropriate framework conditions". Two types of preconditions will be focused upon in this study. The first is what can be called "*procedural preconditions*", i.e. procedural preconditions for the actual negotiations. The procedural preconditions are among other things linked to the norms and values which the actors' preferences are based upon. These can be gradable, like money and other material values, or they can be absolute like moral norms and judicial rules. A precondition for compromises is that the goods and bads

which are negotiated are dividable. Another variable is the number of participants, the structure and organisation level of industry and so on.

The second is what can be called “*substantive preconditions*”, i.e. the preconditions which relate to the actual content of the problem which is to be addressed. The substantial preconditions are linked to a number of variables. One is the nature of the environmental problem to be solved. Environmental problems vary according to their geographical scope (global – local) the source (diffuse - point), the range of measures (sectoral – cross-sectoral), time span (short – long) and solutions (structural – technological) (Reitan, 1998). In addition, there is the question of already existing regulations and how they affect the conditions for a voluntary agreement. Moreover, procedural and substantial preconditions are not always easy to keep separate. The question of who should participate and the “legitimacy” of voluntary agreements reflect both procedural and substantial preconditions. As pointed out by OECD (1999:104), the target process of voluntary agreements usually leaves out two major actors of the political arena: “non industrial stakeholders (green groups, consumer associations, etc) and the legislative branch of government”.

The second track builds on the first track and concentrates on the actual negotiations – if they, based on our typology of public decisions-making processes – can be seen as deliberative or strategic and to what degree it is possible to identify changes in the different partners understanding of the problem, their perception of the targets and of the implementation of the agreements. This track thus focuses on changes in the actor’s preferences and perception of the problem during the negotiating process. And the question is if the negotiations can be said to entail a redefinition of group interests within the context of a broader common interest, here understood as sustainable development. The analysis following this track will be based on interviews with the participants in the actual negotiations.

The third track takes the recommendations and evaluation criteria developed by EEA (1997a) and OECD (1999, 2003) as the starting point. The questions addressed here are thus the environmental effectiveness (target ambitiousness and degree of goal attainment), economic efficiency, administrative and compliance costs, competition concerns, dynamic effects, innovations, soft effects and diffusion of information and viability and feasibility (OECD, 1999:103-118). The analysis following this track will be based on official statistics and an analysis of the framework within which these agreements have been established. This three-track approach will make it possible also to address possible discrepancies between the different actor’s self-perception of the agreements, and the actual achievements of the agreements.

## 4 The negotiations and agreements on the collection and recycling of packaging waste

Packaging waste became an increasing problem and more visible political issue during the late 1980s and 1990s for several reasons. One reason was the general increase in environmental awareness which followed the release of *Our Common Future* in 1987. Another reason was the increase in consumption and the share magnitude of waste generated from packaging, for which no system of recycling or system for re-use existed. In the following we first describe the more general development of the waste management regime which was established during the 1990s, and place the voluntary agreements within this context. Thereafter we look more specifically at several of the voluntary agreements negotiated in this period. The voluntary agreement that we look upon are: the “Agreement on the reduction, collection and recycling of waste from brown paper packaging”, the “Agreement on the reduction, collection and recycling of waste from drinking carton packaging”, the “Agreement on the reduction, collection and recycling of waste from carton packaging” and the “Agreement on the reduction, collection and recycling of waste from plastic packaging”.

All of these were renegotiated in 2002, and during the negotiations they also changed their names. In the new agreements, the word “reduction” is left out but replaced by the word “optimisation”. For example, the “Agreement on the reduction, collection and recycling of waste from brown paper packaging” now reads “Agreement on the collection and recycling of waste from brown paper packaging, including also the optimisation of brown paper packaging”. The reason for this change will be explained and discussed in the following sections.

### 4.1 Packaging waste management – background and case description

The agreements on packing products constitute an important part of the development of the waste management regime in Norway and they have a common context and background. The main structure of the Norwegian waste management regime was developed in the late 80s and early 90s. Today, the most important instruments in the Norwegian waste policy regime are, besides the voluntary agreements, a tax on final disposal of waste (land filling and incineration) that was introduced in 1999, regulation of land filling and incineration according to EU legislation, municipal responsibility for household waste and producer responsibility for ee-waste, packaging, cars (from 2007), tyres, batteries, lubricant oil and PCB-containing windows<sup>13</sup>. The following description of the development of the waste management regime in Norway focuses primarily on

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13 [http://www.environment.no/templates/themepage\\_\\_\\_\\_2120.aspx](http://www.environment.no/templates/themepage____2120.aspx)



the most relevant elements for the voluntary agreements introduced for packaging materials.

Waste management in Norway moved higher up on the political agenda in the national follow-up process of the report from the World Commission on Environment and Development (WCED), *Our Common Future* (1987). In the national follow-up, the Ministry of Environment launched a Report to the Parliament (White Paper) (St.meld. nr. 46, 1988-89) where a strategy for waste management was introduced. While most of the national measures described concerned special waste<sup>14</sup>, the Report signalled that it would establish a national committee with representatives from business-, labour- and consumer organisations and the authorities, to develop a plan for recycling, minimisation of the total amount of waste and minimisation hazardous substances from waste. “The Committee for waste minimisation and recycling” was established 29 September 1989, and their report was launched in 1990 (NOU, 1990:28). In the autumn 1991, the Government issued a new Report to the Parliament based on the recommendations from the Committee (St.meld. nr. 44, 1991-92). The new Report laid the foundations for the national waste management strategy.

The Report stated that the overall goal for waste management was that the environmental problems caused by waste should be solved so that waste caused as little harm as possible, while at the same time, waste and the handling of waste should occupy as few societal resources as possible. This implied that the choice between waste minimisation (reduced waste generation, material recycling or energy recovery) and an environmentally responsible final treatment (disposal and incineration without conversion to energy), should be based on socio-economic considerations, like geography and population density. Still, however, due consideration should be given to the fact that the environmental consequences of the existing waste management regime was unknown. The main strategy was further outlined as follows (St.meld. nr. 44, 1991-92, p. 7):

- 1) To prevent waste generation and to reduce hazardous substances in waste
- 2) Promote reuse, recycling and energy recovery
- 3) Secure an environmentally responsible final treatment of end waste

The Report further stated that the work with reducing waste problems should be based on the “polluter-pays principle”, the “cradle-to-grave principle” and the “precautionary

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<sup>14</sup> Special waste is defined as follows by the Ministry of Environment: “Waste that cannot be adequately dealt with together with consumer waste because it may lead to serious pollution or hazards that are damaging to humans or animals” (Ministry of Environment, 2000. See: <http://www.odin.no/md/english/doc/reports/022051-220006/dok-bu.html>). Special waste constitutes a serious environmental challenge. According to the Ministry of Environment, special waste makes up 650 000 tonnes a year. Of this 340 000 tonnes are collected and delivered for domestic treatment, 240 000 tonnes are treated within the industry, 40 000 tonnes are exported and approximately 30 000 tonnes are disposed of “in an unknown manner”. As stated by the Ministry of Environment (2000), it is “assumed that a large amount of this waste ends up in the wrong places and thereby causes serious pollution”.

principle”. Other stated goals included the establishment of more market based framework conditions for waste management, and to make the environmental costs associated with waste management more visible (St.meld. nr. 44, 1991-92, p. 8). Regarding the choice of policy instruments, two criteria were put forward, “cost-efficiency” and “steering-efficiency”. The first criterion implies that a policy instrument is “cost-efficient” if it accomplishes the environmental policy at the lowest possible socio-economic cost. The other criterion implies that a policy instrument has a high degree of “steering-efficiency” if quantitative environmental goals can be fulfilled with a high degree of certainty. In addition, it was argued that policy instruments also had to secure cost-efficiency over time. This was referred to as “dynamic efficiency” (St.meld. nr. 44, 1991-92, p. 24).

Moreover, the Report introduced, for the first time, the concept of Extended Producer Responsibility (EPR)<sup>15</sup>. EPR could be achieved through economic instruments like product fees, direct regulations, recycling schemes or voluntary agreements. According to the Report, minimising waste was dependent upon a close and well established cooperation with business. The Report referred to already established voluntary agreements in the Netherlands and stated that it would give priority to such work in Norway. The Report explicitly stated that the Government wanted the different business organisations to “take on this responsibility through voluntary agreements with the state”. The Report, however, contained two different and contradictory descriptions of the nature of negotiations. On the one hand, it was stated that the role of the state first and foremost would be to set the targets for waste management and to control that the set targets were met. In addition, municipalities and business should get the necessary framework conditions to solve the tasks they were given. On the other hand, it was stated that the actual targets for the different areas would be determined in the actual negotiations, but that the targets would have to be in accordance with a socio-economic “correct solution” (St.meld. nr. 44, 1991-92, p. 7). The Report also described the already ongoing work with voluntary agreements in some branches for products like glass, newspapers and magazines. Working groups had already been established and consultations were carried through with industry regarding spill oil, car batteries and agricultural plastics (St.meld. nr. 44, 1991-92, p. 42).

With regard to waste packaging materials except for glass, the discussions regarding different models and waste management regimes went back and forth for three and a half years (cf. Opedal and Farsund, 1997), following two different strategies, one strategy primarily based on taxes, another strategy based on voluntary agreements. The first strategy followed the tax on one-time packaging materials for beer and mineral water

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<sup>15</sup> It is not explicitly referred to as the concept of “Extended Producer Responsibility”. In substance, however, what was said is what later has become part of the concept of EPR. (See St.meld. nr. 44, 1991-92, p. 28 and p. 35, see also Røine 2005).

that had been introduced already in 1974<sup>16</sup>. Different models for how to extend this tax to other packaging materials were discussed in the follow-up of the Report No. 44 in Parliament. In the 1994 National Budget, presented in the autumn 1993, a tax for one-way beverage packaging was approved, creating benefits for reusable beverage packaging (Røine, 2005). In the revised National Budget 1994, presented in the spring 1994, the Government took this a step further by suggesting a packaging tax on some conserved food products. This tax was postponed by Parliament “because it wanted to create a comprehensive tax system for packaging based on types of packaging material (not on type of product)” (Røine, 2005:85). Government was instead asked by Parliament to propose strategies for extending the fundament for taxation on packaging, aiming to implement this in 1995.

In the recommendations from the Parliament’s Standing Committee on Finance and Economic Affairs on the Fiscal Budget for 1995 (St.prp. nr. 1 (Proposition No. 1), 1994-95), the majority in the Committee argued for an extended tax system where all packaging materials, regardless of content, should be taxed. The packaging tax was partly influenced by the then coming EU Packaging Directive (EU/94/62), and was intended to force producers and importers of consumer goods to re-consider their packaging consumption (Røine and Lee, 2005). The tax system should take into account different types of packaging and be based on the overall environmental goals for waste management. The proposal made the tax level dependent upon the percentage of packaging that was collected and recycled. For example, if 40 % of the material in one of the fractions, metal, plastic, paper and so on, was collected and recycled, 40 % of the tax would be refunded.

This was, once more, postponed by the Parliament who asked the Government to propose a general plan for all packaging waste, including an overall system of taxation and of policy instruments aiming at establishing recovery systems for these products (Røine, 2005). In parallel, however, since 1994 the Ministry of Environment had been working together with invited representatives of the different industrial value chains for various materials, and “established working groups to suggest organisational and economic practical solutions for increased collection of waste for recycling in Norway,

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16 The voluntary agreements on the collection and recycling of waste packing products that was negotiated in 1994 and 1995 and renegotiated in 2003, applies to the packaging products which are not part of the above tax scheme or exempted from the tax scheme. The tax scheme was originally constructed as a dual system, where bottles and cans that was part of an authorised deposit and recycling system were exempted from the tax, while all packaging that did not, paid full tax even though some of it was collected and recycled. This system was proposed changed by Government in 1993, and adopted by Parliament in 1994. The new tax scheme made the tax level dependent upon the percentage of packaging that was collected and recycled. Parliament, however, wanted to stimulate re-use as opposed to material recycling and energy recovery. Therefore, a base tax on one-time packaging was introduced. The base tax was independent of the percentage of packaging collected and recycled (Ørbeck and Birkelund, 1997). The base tax has been controversial and disputed for several reasons. Some have questioned the environmental effects and others have argued that it has negative effects on competition between different products and producers. The tax was proposed removed in the Fiscal Budget for 2004-2005, and again in 2006.

including suggestions on policy instruments for obtaining this” (Ministry of Environment, cited by Røine 2005:85).

The costs of the proposed tax scheme was estimated by the Confederation of Norwegian Enterprise (NHO) and the Federation of Norwegian Commercial and Service Enterprises (HSH) to be approximately NOK 3 billion, or an increase in average costs by more than 12 % (Røine, 2005:85), a substantial increase in the tax burden for industry. Although the tax would decrease with a higher percentage collected and recycled, this was seen as an extremely costly waste management strategy by business. In response to the proposal from the Government, therefore, the industry proposed their own model for how the environmental targets could be met, and the instrument they proposed was voluntary agreements.

On 15 February 1995 seven branch organisations<sup>17</sup> launched a joint proposal outlining a model for how to organise, finance and secure a waste management regime for packaging materials. This was later presented in a publication dated 3 May 1995.<sup>18</sup> In the presentation of the proposed model, several arguments were highlighted in order to substantiate the claim that voluntary agreements represented the best solution for the environment, consumers and industry and also for the authorities. In the foreword to the proposal, the branch organisations also described some of the principles upon which the proposal was based.

The point of departure for the proposal was that the organisations accepted the “polluter-pays principle”, which in this case meant that it was the responsibility of business to secure the collection and recycling of the packaging that was produced and used. The second point of departure was that the organisations accepted the authorities’ goals about reducing the amount of used packaging materials that ended up in society’s waste streams. The proposal, therefore, did not address the goals, but the means which should be used to achieve these goals. The third point of departure was the recognition that the authorities through the voluntary agreements still should have political control with the system that should be established. Lastly, the proposal stated that business accepted that a possible agreement could contain the possibility of sanctions if the targets were not met (Proposal, 3 May 1995). When this proposal was launched, however, the negotiations between industry and the Ministry of Environment had already been going on for some time.

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17 The organisations were Dagligvareleverandørenes forening, Dagligvarehandelens Miljø- og Emballasje Forum, Norske Colonialgrossisters Forbund, Norges Dagligvarehandels Forbund, Den Norske Emballasjeforening, Prosess- og foredlingsindustriens Landsforening, Næringsmiddelindustriens landsforening.

18 “*Høyere retur til lavere kostnad. Næringslivets retur- og gjenvinningsmodell.*” In the continuation we refer to this as Proposal, 3 May 1995.

## 4.2 The negotiations

It is difficult to demarcate the actual negotiations from the political processes that took place prior to the actual negotiations. It also proved difficult to reconstruct the negotiations that took place during 1994 and 1995. On the one hand, the parties involved expressed quite different views on the negotiations and what actually happened in the process of making the agreements. Some also had problems with remembering the details. On the other hand, there are reasons to believe that the parties were probably never in complete agreement on the circumstances that led to the actual agreements. However, some important elements of the negotiating process can be outlined partly from the interviews and partly from written sources.

### 4.2.1 Procedural and substantial preconditions

Seen in relation to the types of negotiations discussed in section 3.3, and also the EEA and OECD criteria for when voluntary agreements are most suitable, there are a number of procedural and substantial preconditions for the negotiations that should be taken into consideration. In accordance with the EEA criteria, there were a relatively small number of partners involved in each of the agreements, but they did involve the relevant producers, importers and distributors. The industrial chain could arguably be said to be mature and organised, and thus the likelihood of free riders was reduced. The OECD criterion of a credible regulatory threat was also present. The submission of Proposition No. 1 (1994-95) to the Parliament, and the political majority behind the tax-proposal in the Parliament's Standing Committee on Finance and Economic Affairs, seem to have convinced the industry that there was a real determination in Parliament to tax packaging materials if nothing was done. This was clearly recognised in the proposal from the industry: "... there is no one in the industry that doubts the political will to implement a tax if the goal of waste reduction is not achieved one way or the other" (the industry's proposal, 3 May 1995).

Before, and partly during the negotiations with the Ministry of Environment, however, one procedural precondition, related to the preferences within the different industrial chains, was of special importance. This was the acceptance of the Extended Producer Responsibility (EPR). Before the branch proposal was put forward, there was a lot of activity and effort devoted to convince different companies and the members of the branch organisations representing producers, fillers and packers, distributors and retailers, that a voluntary agreement would in fact represent a better solution than the proposed tax. There were some resistances within industry itself, where some of the actors at the outset did not accept and did not want to commit themselves to the principle of Extended Producer Responsibility. As such, the proposal seems to have been an attempt not only to create a common stance in the negotiations with the Ministry of Environment, but also within the industry. The controversy regarding the EPR principle reflected a fundamental disagreement among different employees in the industrial organisations. In a way, the question of refuting or accepting the EPR principle was linked to an absolute or non-gradable norm or perception of what was the proper responsibility of industry and what was the proper responsibility of the state. In other words, it was a question of accepting the EPR principle or not. The principle was

an either or, not something which seemed to be accepted by degree. Accepting the principle had clear implications, placing the responsibility for waste collection and recycling with the industry.

The substantial preconditions, i.e. the preconditions that relate to the actual content of the problem which is to be addressed, was also favourable. The subject addressed involved the production of goods (packaging materials), and the environmental problem(s) addressed can be seen as being of limited scale, mostly local and regional (although as we shall see in chapter 6, there is some disagreement as to how narrow/broad the waste management problem actually should be seen). Regarding the OECD criterion of clearly defined targets, the Ministry of Environment in cooperation with industry had already done a lot of preparatory work to find the optimal targets for collection and recycling as seen from an environmental and socio-economic perspective. Røine (2005:86) describes the work done within the working group lead by the Norwegian Ministry of Environment (NMoE) with eight representatives from the plastic packaging value chain in the following way:

The working group suggested the targets to be 30 % material recycling and 50 % energy recovery and that the plastic packaging chain should have the responsibility for achieving these targets within a certain deadline, formalised in a covenant between NMoE and the industrial representatives. It is, however, generally accepted both within and outside this group that this specific target was more based on political processes and negotiations between industry and NmoE, than on exact scientific results and calculations.

A lot of preparatory work was therefore conducted prior to the actual negotiations determining the content of the voluntary agreements. Thus, the targets, contrary to the EPR principle, were gradable, which also favoured an agreement.

#### **4.2.2 The content of the agreements**

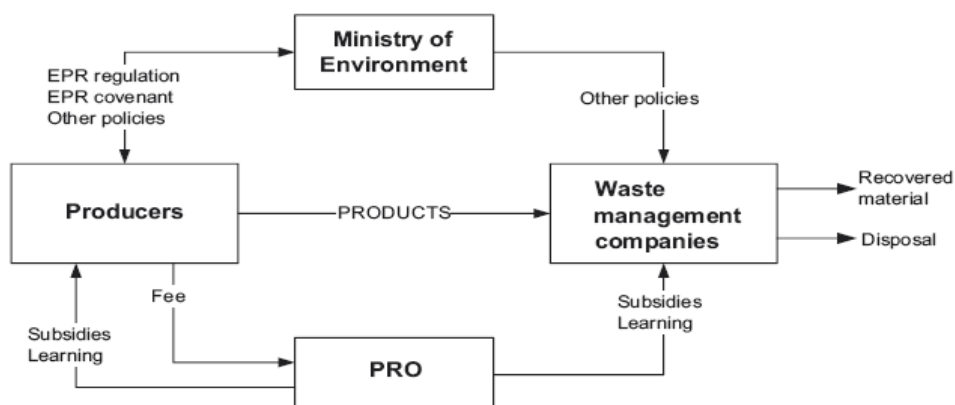
The voluntary agreement on drinking carton was finalised first, in 1994<sup>19</sup>, and the rest of the agreements, i.e. on brown paper packaging, waste from carton packaging and plastic packaging was finalised in 1995. The agreements included the targets determined by the Ministry of Environment and followed the proposal made by industry. The agreements are more or less identical in wording and content, except for the targets that vary according to the different types of packaging materials. The first paragraph in the agreements specified the partners of the agreement. The second paragraph stated the purpose of the agreement. The overall goal was to reduce the environmental problems caused by packaging waste. This was to be done by reducing the amount of waste and to secure the collection and recycling of the waste, under the

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<sup>19</sup> The agreement on drinking carton was signed 21 of June 1994 and lacked some of the elements that were later included in the other agreements. These elements, however, were included in a supplementary agreement 9 of May 1996 (Hjellnes COWI, 2000:8). Since we lack data from the negotiation process in 1994, the discussion is based on the negotiation processes leading to the other agreements.

condition that it was reasonable from the balancing of environmental-, resource- and economic conditions. Paragraph 3 contained definitions of the packaging materials involved and defined core concepts such as waste reduction and recycling. Paragraph 4 specified the scope of the agreement. The goal of waste reduction, however, was not specified (but reporting on measures was required).

Paragraph 5 specified the duties of the industrial chain of packaging materials, from producers, fillers and packers to distributors and retailers. The first part (§ 5.1) specified the collective duty of the industry to establish a material company (also called Producer Responsibility Organisation (PRO) by Røine and Lee (2005)). The aim of the PRO or material company is to act on behalf of the producers to comply with the set targets and to secure the actual collection and recycling, including the establishment of a return system. It also specified the collective duty of the industry to finance the company and secure that the different companies would participate in the system. The paragraph also specified the rules for the companies, who could be owners/shareholders, the composition of the board, and the condition that the material company should be run as a non-profit company. The organisation and role of the PRO is illustrated in Figure 4.1 below (from Røine, 2005:62):



**Figure 4.1. Structured overview of collective EPR systems.**<sup>20</sup>

Paragraph 5.2 specified the targets and contained the duty of implementing waste reducing measures. Paragraph 5.3 specified the actual targets for the material in question. For brown paper, a system for collection and recycling was to be in place before 1 July 1996 and within 1999 at least 80 % of the packaging waste should be recycled, of which at least 65 % should be material recycling. For plastics, at least a total of 80 % of the packaging waste should be collected within 1999. 30 % should be

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<sup>20</sup> Røine and Lee (2005) use the term “EPR covenant” instead of voluntary agreements.

materially recycled and at least 50 % used for energy recovery. For carton, at least 60 % of the total should be recycled within 1999, of which at least 50 % of the total should be materially recycled. For drinking carton, 60 % of all waste should be collected and recycled. The deadline for the fulfilment of the target for drinking carton was 1997.

Paragraph 5.4 specified the duty of developing a plan of information towards consumers and municipalities to secure the implementation of the agreement. Paragraph 5.5 specified the duty of yearly reporting to the Norwegian Pollution Control Authority (SFT), within 1 of April, and the content of reporting.

Paragraph 6 specified the duties of the Ministry of Environment. The general responsibility of the Ministry was to make sure that the conditions for collection and recycling was as effective as possible. The Ministry took the responsibility of establishing a Packaging Committee, which should supervise the further developments, secure information and coordination between the different systems and actors responsible for collection and recycling, including the municipalities who had the responsibility of household waste. The committee was to be organised with representation from the parties involved, and also the municipalities. In addition, the Ministry would make sure that the necessary statistics of total amount of waste generated for the different packaging materials and the handling of the waste fractions was developed. The statistics developed would serve as the basis for estimating the achieved collection and recycling rates and in the assessment of the duties of the packaging chain specified in paragraph 5.3. The Ministry also took the obligation to contribute to information measures in cooperation with the packaging chain.

The last paragraph (§ 7) stated among other things that the agreement was to be evaluated during the year 1997. It was also stated that substantial changes in the framework conditions, political, economic or environmental, could justify a renegotiation of the agreement. If the parties did not agree on such a renegotiation, each of the parties could themselves or jointly nullify the agreement. Thus, the agreements were valid until one of the parties decided to discontinue the agreement. The agreements were signed by the Minister of Environment, Torbjørn Berntsen, and the representatives of the industry.

#### **4.2.3 The negotiation process**

To recall, we analyse the negotiation process as seen in relation to three different categories of decision situations and types of decision-making processes. The first type, *strategic bargaining*, is defined as a process based on threats and promises. It is most relevant when preferences are similar and given in advance, and directed towards divisible goods. The intended result is some sort of compromise where each of the participants gets their share of a divisible good. The second, *deliberation*, is defined as a communicative process most suitable for situations where the participants' preferences are not clarified at the outset and where participants assume that there is a common or public good. Deliberation is based on an open dialogue where the participants are willing to change preferences on the basis of good arguments referring to the public good. The aim is to reach a qualified consensus on the common good. The third type of decision-making processes, *deliberative negotiation*, lies between strategic bargaining



and deliberation and is related to decision situations where the parties have different, but compatible preferences. As we argued earlier, strategic bargaining is particularly relevant in zero-sum games where one party's winnings are identical to the other party's losses. Deliberative negotiation on the other hand is related to variable-sum games where both parties can win, and where the aim of the process is to construct package deals where both parties get what they want-s most- on the different issues that each of them prioritises most.

Turning to the actual negotiating process, none of these categories fits the nature of the negotiations as a whole. It is possible, however, to use the typology to identify and divide the negotiations into different stages or sequences. Arguably, the negotiations started as strategic bargaining and the changed character into deliberative negotiations.

The actual negotiations between the industry and the Ministry of Environment lasted a little less than a year (from autumn 1994 to the signing of the agreements in autumn 1995). 6-7 meetings were held, with a lot of communication on phone and e-mails in between. The starting point seems to have been a situation of strategic bargaining. The bargaining power of the Ministry of Environment was derived from "the credibility of threats", represented by the tax proposal in Parliament, reflecting a political will in Parliament to regulate the waste from packaging products. This regulatory threat was no doubt regarded as real by the industry. The threat was so "real" that one of our informants did not conceive the situation as a "bargaining" situation at all. The industry was in a situation where it would either get a NOK 3 billion tax, or it would have to accept a "voluntary agreement". Thus, in this interpretation, the industry had little to bargain with.

The industry acknowledged that the cards were unequally distributed. This was, as we saw earlier, recognized in the proposal from May 1995, where industry stated that it did not doubt the political will to tax packaging materials if nothing happened. It was also stated that a "strong motive" for taking on the responsibility for the use of packaging, was to avoid the tax on packaging. However, it was argued that "the maybe most important thing" that had happened since the release of the Report to the Parliament was that "a collective industry has acknowledged the responsibility for its own use of packaging, and that organisations and firms with diverging interests had managed to agree on the best comprehensive solution", a solution that would "secure that all types of packaging gradually can be collected and recycled" (the industry's proposal, 3 May 1995).

To some extent, this underlines the point made earlier about the importance of the acceptance of the EPR principle. The industry nonetheless perceives the negotiations as "real" and judges the outcome of the agreements as part of "real" negotiations. Moreover, when the industry evaluates the result of the negotiations, the initial tax proposal from the Ministry is included in the judgement. Some, therefore, point to the fact that they managed to stop the tax proposal, which according to them, was the less favoured in parliament and even in the Ministry of Finance, which did not like the actual design of the tax proposal.

In addition, the industry was involved in the preparatory work of setting targets based on a mix of environmental and socio-economic criteria. Although these targets were

finally determined by the authorities, the goals were linked to the principles of “cost-efficiency” and “steering-efficiency” (presented in section 4.1), which in a way was how industry wanted to approach the problem of setting the waste targets. In the proposal from the industry, this was used as an argument against the proposed tax. A tax could “in given situations”, lead to and “motivate” a collection of waste which was too high when seen from “socio-economic and environmental considerations” (Proposal, 3 May 2005).

Seen in retrospect, it can be argued that the “decisive” point occurred before the formal negotiations started, that is when the industry accepted the EPR principle. It made it necessary for the industry to present a solution, which was conceived to be much better for the industry. Several arguments were presented in the proposal in order to convince the authorities that this was the best solution also for the environment, for consumers and the Ministry of Environment. Among other things, the proposal argued that the proposed tax could have unintended consequences, and in some cases lead to an increased use of packaging that was less environmentally sound. Their own proposal, it was argued, would not have such distorting effects. In addition, the proposed model left it to the Government to set the targets and conditions, while implementation was left to the industry.

Seen in relation to our typology of negotiating processes, one important question concerns where to draw the line between the formal and informal negotiations which took place. If we include the informal negotiations which occurred after the tax proposal was launched but before the formal negotiations, it seems reasonable to argue that the tax proposal changed the preferences of the industry. The internal process of the industry led to the acceptance of the EPR principle and motivated the industry to strategic negotiations which in turn changed into deliberative negotiations. The process ended in a package deal where the Government should set the targets. The industry managed to avoid the proposed tax in exchange for their own solution with regard to implementation, which should be the responsibility of the industry. The package deal can be seen as the outcome of sincere argumentation. If we only include the formal negotiations, however, it seems reasonable to argue that the negotiations all in all fits best with the description of deliberative negotiations.

### **4.3 Monitoring, evaluation and renegotiation of the voluntary agreements**

The voluntary agreements for packaging materials included both monitoring and reporting obligations for the industry. Reports were to be given to the Norwegian Pollution Control Authority (SFT) on a yearly basis. In addition, § 7 in the agreements stated that the agreements should be evaluated by 1997. The first evaluation was conducted in 1998 by the Pollution Control Authority on behalf of the Ministry of Environment and in cooperation with industry. The evaluation report was, in general, positive. The conclusion from SFT was that the obligations, all in all, had been respected by the parties. It seemed possible to reach the established targets within reasonable time. For brown paper the targets were already met, and glass drinking

carton and carton were close to reaching the targets. Some processes, however, had taken longer time than expected, among them the establishing of statistics. SFT therefore requested improvements in the foundations of statistics. According to SFT, there was also a need for more efforts aiming at waste reduction. SFT saw no need for fundamental changes in the agreements at the time of the assessment.

The agreements were further discussed in a Report to the Parliament (St.meld. nr. 8, 1999-2000). Here it was stated that contact and dialogue with the affected branches of industry was a precondition for the establishment of good solutions, and voluntary agreements supplemented with regulations had shown good results. In the discussions of the Report, Parliament asked the Government for further information on the voluntary agreements (Innst. S. No. 256, 1999-2000). In many ways the evaluation which followed set the agenda for the re-negotiations which ended with a new set of agreements in 2002.

#### **4.3.1 The Hjeltnes COWI assessment**

Partly as a response to the request from Parliament and partly as a result of their own wish to assess the new policy instruments, the Ministry of Environment engaged the consultancy firms Hjeltnes COWI AS and COWI AS to do an independent assessment of the agreements on the reduction, collection and recycling of packaging waste. The study was conducted in close cooperation with the Ministry and a reference group with representatives from the established material companies (Plastretur AS, Norsk Returkartong AS, Norsk Resy AS, Norsk GlassGjenvinning AS, Norsk MetallGjenvinning AS, Kartonggjenvinning), and the interest organisation of the municipal- and inter-municipal waste companies (Norske Reholdsverks Forening). In addition, SFT (the Norwegian Pollution Control Authority) and Kjetil Røine from the Industrial Ecology Programme (IndEcol) at the Norwegian University of Science and Technology (NTNU) participated in the reference group. The Hjeltnes COWI assessment was published in June 2000, and sent on a hearing to affected and interested organisations by the Ministry of Environment.

The mandate for the assessment was to give an evaluation of the established targets for reduction, collection and recycling from a societal economic perspective. The Hjeltnes COWI-report used three criteria to evaluate the agreements as a policy instrument: “steering-efficiency”, “cost-efficiency” and “dynamic efficiency”. A policy instrument “has a high degree of steering-efficiency if it is possible to establish quantitative targets which are concrete and controllable, and where the policy leads to an as high as possible fulfilment of these targets” (Hjeltnes COWI, 2000:20). A cost-efficient policy instrument is a policy instrument which leads to the accomplishment of the policy at the lowest societal cost. Dynamic efficiency is secured if the policy instrument is also cost-efficient over time, and further, dynamic efficiency provides continuous incentives for the actors to change their behaviour towards optimal waste management (Hjeltnes COWI, 2000:20).

All in all, the report concluded that the agreements to a large degree fulfilled all these criteria. Although the actual targets were not yet reached (with the exception of brown paper), it was argued that the actual targets for each of the waste fractions was the end-

result of several measures, or the creation of a whole new “system”, a system which included sorting, collecting, receiving, recycling, information and administration. The deadlines in the agreements (especially for drinking carton, carton and plastics) were therefore judged to be “unrealistically short” (Hjellnes COWI, 2000:24). Moreover, even though the targets were not fully reached, substantial progress had been achieved in a relatively short period of time, and for all the agreements one was close to reaching the targets fully.

The high degree of steering efficiency was attributed to several factors. The first was that the Government through the agreements actually had managed to get the industry collectively committed to fulfil the targets. Other factors which had contributed to this were the political signalling which came from Parliament. During the period 1994-1998, Parliament continuously argued that if the targets were not met, a tax was still an option (Hjellnes COWI, 2000:25). Another factor was the increased interaction between municipalities and the material companies which escalated after a slow start. In addition, other policy measures like the regulation of brown paper from 1994 (making it obligatory for possessors of brown paper waste to sort, keep and deliver brown paper), the tax on final disposal of waste introduced in 1999 (making it economically interesting for the municipalities to participate in the collection schemes under the voluntary agreements), and other laws and regulation, contributed to the system as such.

Regarding cost-efficiency, the report concluded that there were good reasons to claim that the agreements and established systems were cost-efficient compared to the alternative proposed tax-system. Although it is emphasized that the report did not evaluate this alternative (Hjellnes COWI, 2000:40), some general arguments are given regarding this alternative. The first line of reasoning is that a tax-system would have given the state and the industry substantial administrative costs. A further argument presented was that one of the main reasons for the industry to enter the voluntary agreements in the first place, was to avoid a tax which would impose substantially higher costs than the alternative. In the system created to handle the waste, the industry has self-interest in keeping the costs as low as possible.

Concerning dynamic efficiency, the report concluded that the agreements had resulted in a number of activities which could lead to a more optimal packaging waste management. One major aspect and reasoning for the creation of the system was to use and rely on market mechanisms. Competition among firms, according to the report, was in itself a mechanism which was driving product developments from economic and environmental concerns towards more optimal packaging waste management. The agreements, however, also had one additional effect, the creation of the “Steering Committee for reduction of packaging waste” (SfA). This work “started late” (Hjellnes COWI, 2000:42), but the importance of the work in the Committee should not be underestimated.

The Steering Committee was established in 1998 by the industry in order to initiate and implement waste reduction measures as specified in the agreements. The Committee had members from the whole chain of packaging waste, i.e. of producers, fillers, packers and distributors. In addition, the Confederation of Norwegian Enterprise

(NHO), the Federation of Norwegian Commercial and Service Enterprises (HSH) were part of the Committee.

The Committee was to report according to the provision in the agreements § 5.2. Here it was stated that “a yearly overview of actually achieved waste reduction and estimates on next year’s waste reduction” should be part of the reporting. Reduced use of materials, changed production processes, re-use solutions, refill solutions and increased standardisation of packaging are used as examples in § 5.2. As pointed out in the Hjellnes COWI assessment, this was not done in the beginning, due to the technical and statistical difficulties of actually measuring waste reductions. Instead, the SfA Committee got acceptance from the Norwegian Pollution Control Authority (SFT) to report on the efforts that had actually been carried out during the year and documenting achievements and improvements in the industry. In 1999, 49 efforts within different branches and for different products were presented (Hjellnes COWI, 2000:52). In addition, the Committee started work on developing indicators to measure use of packaging products over time, and initiated cooperation with the research institute Stiftelsen Østfoldforskning (STØ) to further improve measures of packaging efficiency and reduction.

The Hjellnes COWI assessment, however, reported a general shift in focus in the “Steering Committee for reduction of packaging waste” (SfA). SfA worked more on the *optimisation* of packaging than on the *reduction* of packaging waste. Optimisation was more focused on “better resource utilisation in the whole value chain” (Hjellnes COWI, 2000:53), and solutions which focused on re-use, better utilization of transport through simplified packaging solutions, better and simpler use of packaging, and changes in packaging materials. SfA also developed a proposal for a definition of waste otimisation which was included in the report: “The continuous improvement of packaging in the whole packaging chain which sustains sufficient protection of the packed commodity with the lowest possible total environmental load” (Hjellnes COWI, 2000:62). This would not, however, according to the Hjellnes COWI assessment, necessarily lead to less use of packaging, but reduce the total amount of resource use.

There was, therefore, a conflict of goals between the political goal of reducing waste and the focus within industry on packaging optimisation. Based on this, the Hjellnes COWI assessment recommended that one should encourage an evaluation of the environmental efficiency of packaging in the entire life cycle, and not focus one-sidedly on waste reduction (Hjellnes COWI, 2000:54-61). The main target, however, “should still be to reduce the total amount of waste” ((Hjellnes COWI, 2000:61).

The assessment concluded that there were reasons to re-formulate the agreements in order to focus more on reduced resource-use instead of a single focus on the reduction of waste. Hjellnes COWI report pointed at a number of possible changes in the agreements that could be put on the agenda in a re-negotiation of the agreements (Hjellnes COWI, 2000:135-136):

- The targets for collection and recycling
- Deadlines for achieving the targets

- Relaxing the agreements formulations which reduce the possibility of cooperation in collecting and recycling, including the possibility of merging agreements
- The division of labour between the authorities and industry regarding information

With this, the Hjellnes COWI assessment had set the stage for a new round of negotiations between authorities and industry.

#### **4.3.2 The re-negotiations of the agreements**

The re-negotiations of the voluntary agreements started in January 2002 and the new agreements were signed in March 2003. The negotiations lasted longer than some of the parties expected. 4-5 formal meetings were held, but also this time with a lot of communication among the different parties in between meetings. Several organisations participated in all the negotiations for all the different packaging waste fractions, among them the Confederation of Norwegian Enterprise (NHO).

In addition to the above mentioned recommendations and proposals put forward by the Hjellnes COWI assessment, a new Report to the Parliament (St.meld. nr. 24, 2000-2001) was important for the negotiations which took place. In the Report, the Government commented both on the Hjellnes COWI assessment and also on the responses from 20 organisations which expressed their views on the Hjellnes COWI report in the conducted hearing. The agreements were thoroughly discussed in the Report and the Government concluded that it would continue the agreements with the industry on packaging waste, however with some adjustments to ensure that a high proportion of the waste continued to be collected and recycled.

As noted above, the Hjellnes COWI assessment opened up for negotiations on the targets of collection and recycling. The original targets for plastics were 30 % material recycling and 50 % energy recovery of the plastic packaging consumption per year within 1999.<sup>21</sup> In 1999, however, the achieved figures were 18 % for material recovery and 39,8 % for energy recovery. The Hjellnes COWI report showed high costs for collecting and sorting out plastic waste. Achieving the set targets for drinking carton and carton was problematic, too. In its comments in Report No. 24 (2000-2001:106), the Ministry of Environment signalled that it would adjust the targets downwards:

Among other things, the Government will adjust the targets downwards for material recovery of packaging waste from plastics, drinking carton and carton ... In addition, the Government will consider to strengthen the targets for energy recovery of packaging waste from plastics and drinking carton.

In the negotiations, however, partly as a result of the appointment of a new Government and a new Minister of Environment, the Ministry changed its position on this issue, and

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<sup>21</sup> In addition there were particular targets set for Expandable Polystyrene (EPS, isopor): 50 % material recycling and 10 % energy recovery per year.

instead argued that it wanted to uphold the goals for plastics and the other materials. In Report No. 25 (2002-2003) this change was justified with reference to the so-called Sem-declaration which required the level of ambition in waste management to be continued. The Sem-declaration constituted the foundation for the new government coalition between the Conservative Party, the Christian Peoples Party and the Liberal Party. This change in position led to a bargaining deadlock where the Confederation of Norwegian Enterprise (NHO) took on the role as a mediator. The Government, however, did not change its position and the targets remained at the same level.

Although some of the informants felt that the plastic packaging industry was more or less over-run by the Ministry in the negotiations, the Hjellnes COWI report was not clear about what the targets for plastics should be, and even argued that “full goal attainment was possible” (Hjellnes COWI, 2000:134). The deadline for goal attainment, however, was moved from 1999 to 2008.

On another issue, however, the industry managed to change the content of the agreement. The original paragraph 5.2 was changed from “Reduction of packaging waste” to a new paragraph 5.2 reading “Packaging optimisation”. In the new paragraph to goal of reducing the amount of waste is still included, but this goal is now on par with the goal of waste optimisation. The change from “Reduction of packaging waste” to “Packaging optimisation” represents the most important change from the earlier agreements. In the reports from SFT (Norwegian Pollution Control Authority) to the Ministry of Environment in 2001, which was based on the self-reporting from industry, SFT concluded that “despite positive examples and single efforts, [SFT] can not see that the industry fulfils its obligations related to waste reduction in the agreements” (SFT, 22.06.01, letter to Ministry of Environment). The reduction of packaging waste was therefore one of the paragraphs in the original agreement which was most problematic for the industry. The modification of this paragraph was therefore important for industry.

There were also other reasons for this change. The breakage of packaging materials, and thus the destruction of the product which the packaging is supposed to protect, was seen as a serious problem. The environmental effects of breakage were seen as more serious than the effects of “a little more” packaging. Optimisation was also linked to a “from-cradle-to-grave principle”. A focus on the lowest possible total environmental load, therefore, was seen as a more proper target than a single focus on waste reduction. Accordingly, the “Steering committee for the reduction of packaging waste” changed its name to the “Business Committee for Packaging Optimisation” (NOK) in 2002. Another reason mentioned by informants was that the producers of packaging materials did not want too many references that implied a reduction of what they actually produce, namely packaging materials.

Compared with the first round of negotiations, the situation in the re-negotiations was different in several respects. First, the basic structure of the “system” which was created by the original agreements was more or less settled. The Hjellnes COWI assessment, and also Report to the Parliament No. 24 (2000-2001), primarily addressed “adjustments”. Second, many of the issues for re-negotiations were known and developed together by the different parties through the Hjellnes COWI assessment. The

collaboration between the different actors in the system was therefore well established. Third, according to one informant, contrary to the first round the re-negotiations were “real” negotiations on a more equal footing. The deadlock that occurred over the targets for plastics supports such an interpretation. In the first round of negotiations, a deadlock over targets would have been highly unlikely given the background of the negotiations, and the clear perception that Government was to set the targets.

The threat of an altogether different model for packaging waste based on taxes was still seen as a possibility if the industry did not deliver, but it was less likely in the re-negotiations of the agreements. Furthermore, the industry had now acknowledged the responsibility for its own use of packaging. On this background, all in all we consider “deliberative negotiations” to be the most adequate interpretation and characterisation of the process. Certain strategic elements were included in the discussions, especially on targets. The acceptance of packaging *optimisation* in addition to reduction, however, was the result of a deliberative process where the authorities were convinced by the industry’s argument that damages caused by insufficient packaging represent a more serious environmental problem. The outcome of the deliberative negotiations was a package deal where the industry accepted the set targets for waste collection and recycling while the authorities accepted the goal of optimisation.

#### 4.4 Goal attainment

The goal attainment has been a permanent concern for both the industry and the authorities. For the industry, however, it goes beyond that. Goal attainment has been seen as *the* core issue and a necessity in order to avoid a change from voluntary agreements to a tax based system. In a way, goal attainment and actually making the system work has also become a matter of prestige for the industry. The industry needs to show the authorities that they can perform and take the responsibility for these problems, and thus to show that voluntary agreements are plausible options for the solution of environmental problems in other areas as well.

Meeting the targets has had its ups and downs during the 12 – 13 years the agreements have been operational. However, the Norwegian Pollution Control Authority (SFT) reported record high collection and recycling of packaging waste in 2006. In 2006, 435 261 tons of packaging waste was collected, representing 90 % of all packaging waste.<sup>22</sup> For brown paper, the recycling target was fully achieved with regard to material recovery. The total collection rate was 96 % in 2006. For plastics, the total recycling was 78 % (excluding expandable polystyrene (EPS)), just marginally behind the target. The target for material recovery of 30 % was achieved. The target of 50 % material recycling for EPS was not achieved, but the share used for energy recovery increased to 47 % in 2006. 79 % of EPS was recycled, an increase of 13 % from 2005.

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22 See [http://www.sft.no/nyheter/brev/emballasjeavfall\\_2006\\_fellesbrev.pdf](http://www.sft.no/nyheter/brev/emballasjeavfall_2006_fellesbrev.pdf)



For carton, material and energy recovery increased in 2006. The material recovery target was not met, but the total recovery target of 60 % was achieved. Seen together, it was only plastics which have not achieved the total recycling target according to the agreements. Only EPS and carton have not achieved the material recovery targets. Total recycling for all the fractions showed an increase from 86 % in 2005 to 90 % in 2006.

In their evaluation, SFT concluded the following way:

The results achieved in 2006 shows that the packaging chains in all essential fulfils the demands in the packaging agreements and provides that Norway meets the international requirements for the collection of packaging. Through its reporting, the material companies show that it is still works intensely to reach a high degree of recycling. SFT is satisfied with the work conducted by the material companies in 2006 and is confident that the obligations in the packaging agreements are undertaken the best possible way.<sup>23</sup>

Judged from the voluntary agreements' targets and the system which the agreements created, the voluntary agreements have no doubt been a success.

Despite this, the threat of new taxes has been more or less constant from the Government. The base tax on one-time packaging was proposed removed in the Fiscal Budget for 2004-2005, and again in the budget for 2006-2007. In St.prp. no. 1 (2005-2006), the Government removed the exemption of drinking carton (juice, milk and other products) from the environmental tax on drink packaging. In effect, the voluntary agreement on drinking carton was terminated. Drinking carton is now included in the general tax system, where the tax level is dependent upon the percentage of packaging collected and recycled.

In 2006, the Confederation of Norwegian Enterprise (NHO) and the Norwegian Packaging Association (Den Norske Emballasjeforening (DNE)) wrote a joint letter to the Minister of Finance defending the voluntary agreements and expressing deep concern about political signals of new and increased taxes on packaging.<sup>24</sup>

The problem for the authorities, however, is the fact that the amount of packaging waste keeps increasing. In the last five years, packaging waste increased by 15 %, and although the collection and recycling of packaging waste increased with 25 % in the same period, the goal of waste reduction seems increasingly difficult to achieve. We will return to this problem in the discussion of voluntary agreements as a policy instrument for sustainable development in chapter 6.

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23 [http://www.sft.no/nyheter/brev/emballasjeavfall\\_2006\\_fellesbrev.pdf](http://www.sft.no/nyheter/brev/emballasjeavfall_2006_fellesbrev.pdf)

24 <http://www.packnews.no/xp/pub/venstre/emballasje/132583>

## **5 The negotiations and agreement on PCB containing double-glazed windows**

In this chapter we will analyse the negotiations between four business associations within the building and construction industry and the Ministry of the Environment which resulted in a voluntary agreement regarding the collection and proper treatment of PCB containing double-glazed windows.

There are several reasons why we have chosen to take a closer look at this case. One is the severity of the problem. PCB is highly poisonous and scraped double-glazed windows were an important source of pollution. Another reason was the fact that the traditional command-and-control instrument, or statutory regulations, did not prevent the dumping of scraped windows with PCB. New instruments were needed and the parties decided to negotiate a voluntary agreement. Third but not least, to negotiate and implement the agreement was not at all straightforward. The process ran into crises a couple of times. In the end the authorities laid down new statutory regulations at the request of the industry, which at the outset preferred the voluntary approach. In other words, we expected an analysis of the PCB window case to illuminate a variety of interesting aspects of negotiations and voluntary agreements as instruments for environmental policy.

Our analysis is based on a variety of documents from environmental authorities, the Government and Parliament, business associations and the company *Ruteretur* which operates the collection and handling system that was established on the basis of the agreement. Furthermore, we have conducted in-depth interviews with representatives of the business associations that participated in the negotiations and signed the agreement, the Norwegian Pollution Control Authority which assisted the Ministry of the Environment during negotiations and now administer and oversee the relevant regulations, and *Ruteretur*. Interviews were based on a semi-structured interview guide. At the end of the interview the informants were asked to fill in a structured questionnaire with predetermined answers. The intention of the questionnaire was to summarise some of the topics that had been discussed during the interview. Interviews with altogether seven persons were conducted in Oslo on May 2 and 3, 2007 (see Appendix).

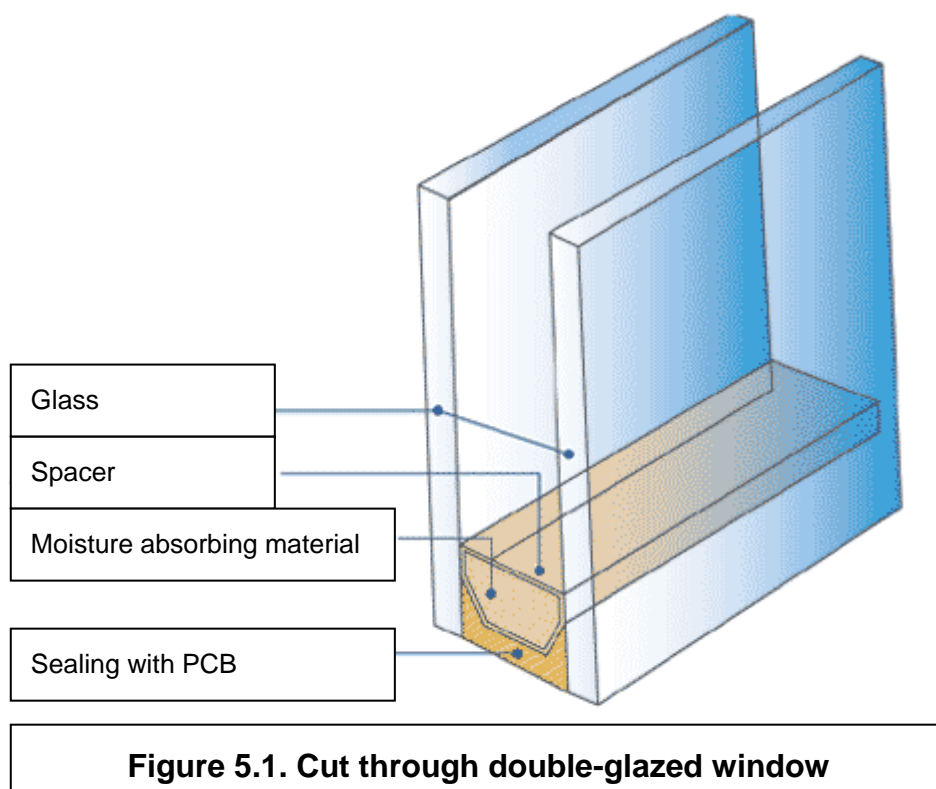
### **5.1 Case description**

On April 30, 2002 the Minister of the Environment and representatives of four business associations signed an “Agreement on prevention and reduction of environmental

problems associated with the handling of PCB containing double-glazed windows”.<sup>25</sup> The business associations included the Norwegian Glass and Glazing Association (Glassbransjeforbundet i Norge, our translation), the Norwegian Joinery Manufacturers Association (Norske Trevarefabrikkers Landsforbund), the Norwegian Real Estate Association (Foreningen Norsk Eiendom, our translation), and the Association of Commercial Real Estate (Foreningen Næringseiendom).

### 5.1.1 PCB containing windows on the agenda

PCB is one of the worst environmental poisons and was a component of the sealing glue that was used in the production of double-glazed windows from 1965 to 1975. In 1980, PCB was banned in Norway. Double-glazed windows with PCB are categorised as hazardous waste and should be handled in a safe manner according to the Provisions of Act regarding the treatment of special waste settled in 1994.<sup>26</sup> However at the turn of the century, there were still substantial quantities of PCB “out there”. PCB from scraped double-glazed windows was considered to be one of the major remaining emission factors, but the collection of windows was very low.



<sup>25</sup> In Norwegian: *Avtale om forebyggelse og reduksjon av miljøproblemer knyttet til håndtering av PCB-holdige isolerglassvinduer*. The translations into English, here and in the following text, are unofficial translations by the authors of this report.

<sup>26</sup> *Forskrift om spesialavfall av 19. mai 1994 (spesialavfallsforskriften)*.

PCB and double-glazed windows were set on the agenda of the Norwegian Parliament, the *Storting*, in 2000-2001. Several informants credit the manager of PCB-Sanering AS, a company established in 1998 in order to handle PCB (www.pcb.no), for drawing attention to the problem. In the budget recommendation submitted by the Standing Committee on Energy and the Environment in December 2000, both the Socialist Left Party and the Conservatives suggested increased allowances in order to cleanup PCB.<sup>27</sup> A couple of weeks later, three conservative MPs tabled a private members' proposal regarding an action plan for the fight against the environmental poison PCB.<sup>28</sup> PCB was also an issue in the Government's report on environmental policy and the state of the environment which was submitted to the Parliament in January 2001.<sup>29</sup>

Simultaneously the construction industry was working out a "National Action Plan for Building and Construction Waste". 70 people in 11 different working groups and representatives of the Green Warriors of Norway (Norges Miljøvernforbund) participated in the development of the action plan. It was signed by the Federation of Norwegian Construction Industries (Byggenæringens Landsforening), the Norwegian Association of Heavy Equipment Contractors (Maskinentrepenørenes Forbund), the Norwegian Association of Technical Contractors (Tekniske Entreprenørers Landsforening, our translation) and the Norwegian Aggregates Producers Association (Pukk- og grusleverandørenes Landsforening), and published in February 2001.<sup>30</sup>

The plan stated that "the building and construction industry would take a historic and vigorous pull for environment protection" (p. 5). 27 measures related to the handling of environmentally dangerous substances, waste reduction, industrial recycling, and knowledge and information were listed in order to fulfil this promise. The first measure on the list was "the establishment of an arrangement for a free of charge handling in of PCB containing double-glazed windows". The goal was "100 % collection and secure handling of environmentally hazardous waste" (p. 6, 29). The plan specified a number of responsibilities for various actors including collaboration, "when natural", between public authorities and industrial associations with regard to systems for the handling in of waste (p. 36f).

In June 2001, the private members' proposition and the Government's report were discussed in Parliament on the basis of recommendations from the Standing Committee on Energy and the Environment.<sup>31</sup> A resolution requesting the Government to prepare a

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<sup>27</sup> *Budsjett.innst. S. 9 (2000-2001).*

<sup>28</sup> *Dokument nr. 8:38 (2000-2001). Forslag fra stortingsrepresentantene Jan Petersen, Jan Tore Sanner og Bent Høie om handlingsplan for bekjempelse av miljøgiften PCB.*

<sup>29</sup> *St.meld. nr. 24 (2000-2001) Regjeringens miljøvernpolitikk og rikets miljøtilstand.*

<sup>30</sup> *Nasjonal handlingsplan for bygg- og anleggsavfall.*

<sup>31</sup> *Innst. S. nr. 277 and 295 (2000-2001).*

proposal about a system for collecting and handling PCB containing windows was adopted unanimously.<sup>32</sup>

In the proposition to the Parliament regarding the fiscal budget for 2002, the Stoltenberg government suggested a NOK 10 million grant in order to support the collection and handling of PCB containing windows. The proposition stated that the industry would be consulted and that the Ministry of the Environment intended to enter into an agreement with business associations in which “the industry would commit itself not to continue the ongoing illegal handling of PCB containing windows”.<sup>33</sup> After its accession in October 2001, the new Bondevik government submitted an additional budget proposition including a NOK 2 million increase of the allowance for the treatment of PCB containing windows, and in December the Parliament granted NOK 12 million to this purpose. The grant should be administered by the Norwegian Pollution Control Authority (Statens forurensningstilsyn).<sup>34</sup>

According to our informants, the allowance was the result of the lobbying efforts vis-à-vis the Parliament carried out by business associations. Political pressure via MPs was necessary due to scepticism among civil servants. Civil servants thought that the new funding scheme would be interpreted as a reward for not committing a crime. Normally, breaking the law should lead to punishment. Instead one would be paid for doing what everybody is legally bound to do. On the other hand, in practice the legal regulations did not work and “everybody” knew that in the process of renovating buildings substantial quantities of double-glazed windows were dumped without proper handling of the PCB.

One could say that a wish for an effective practical solution of the problem overrode legal principles. The new subsidy for PCB handling implicated that legal obligations in line with the “logic of appropriateness” (in this case: lawfulness) were substituted by (or combined with) a “logic of consequentiality” and economic incentives that were supposed to tip the cost-benefit balance of the industry in a more environmentally sound direction (cf. March and Olsen 1989).

### 5.1.2 Negotiating an agreement

With the Government’s declared intention to establish an agreement with the industry even more logics of decision-making were added to the case. An agreement needs to be based on some sort of negotiations. We will return to the question of whether these negotiations should be characterised as “bargaining”, “deliberation” or “deliberative

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<sup>32</sup> *Forhandlinger i Stortinget 7. juni 2001, s. 3486f.*

<sup>33</sup> *St.prp. nr. 1 (2001-2002), Kap. 1441 Statens forurensningstilsyn, Post 77 Tilskot til innsamling av isolerglassruter som inneheld PCB.*

<sup>34</sup> The Stoltenberg government (Labour) had to resign after loosing the general election in September 2001. However, in line with Norwegian traditions the outgoing government submitted its fiscal budget proposal to the Parliament before the resignation in October (*St. prp. nr. 1, 2001-2002*). A number of amendments were submitted to the Parliament by the new Bondevik government (a coalition comprising the Christian People’s Party, the Conservatives and the Liberal Party), after its accession (*St. prp. nr. 1. Tillegg nr. 4, 2001-2002*).

negotiation” later (cf. Ch. 3.4). At this stage we use “negotiations” as a collective term for these types of decision-making processes.

The possibility of developing a system for collection and handling of double-glazed windows with PCB was a matter of informal discussions among a number of public and industrial actors in 2001. The Norsas AS consultancy played an important role as advisor. Norsas, the Norwegian Resource Centre for Waste and Recycling, was established in 1988 by the Ministry of the Environment, the Confederation of Norwegian Enterprise (Næringslivets Hovedorganisasjon) and the Norwegian Association of Local and Regional Authorities (Kommunenes Sentralforbund). It was privatised in 2000 and is now a wholly-owned subsidiary of the COWI consultancy ([www.norsas.no](http://www.norsas.no)). Norsas presented an outline of a handling system for PCB containing windows based on earlier experiences with other waste recycling systems.

There are different opinions among our informants of whether the initiative was taken by the industry or by public authorities. Some say that the authorities initiated the process and believe that Norsas operated on behalf of the Ministry. Others refer to the business associations’ action plan for building and construction waste and claim that the initiative was taken by the industry. In any case, at this point in time the general atmosphere among politicians and the Confederation of Business Enterprise and other business associations was in favour of voluntary agreements in order to deal with environmental problems – even though civil servants were more sceptical.

Negotiations between the aforementioned four business associations and the Ministry of the Environment, assisted by the Pollution Control Authority, started in February 2002 and the Agreement was signed by the end of April. § 1 states that the aim of the Agreement is to prevent emissions of PCB by collecting all scraped PCB containing double-glazed windows and make sure that they are treated in a proper way in accordance with the Provisions of Act of 19 May 1994 on special waste.<sup>35</sup>

The industry committed itself to develop and establish a system for proper collection and handling of scraped double-glazed windows with PCB (§ 3). The arrangement should be operative by 1 July 2002 at the latest. Anyone should have the opportunity to handle in double-glazed windows, paying a compensation similar to what they would normally do at an ordinary waste plant. The industry should establish a non-profit administrative unit in order to run the arrangement, and an adequate funding scheme based on a certain compensation and/or income from recycled materials. The compensation should be determined and collected by the industry. The level of compensation should be based on cost efficiency and one should make sure that most of the industry would join such that the arrangement would be neutral with regard to conditions of competition.

The Ministry of the Environment committed itself to support the arrangement with a NOK 9 million allowance in 2002, and to consider additional government funding in the

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<sup>35</sup> *Spesialavfallsforskriften.*

future (§ 4). Financial support would be based on applications and allocated through the Norwegian Pollution Control Authority. Pending implementation of the Agreement, a temporary operation in order to collect double-glazed windows was carried out in the summer 2002. For a period of two months, 6000 windows containing 300 kilos of PCB were handled in. In 2001 it took a full year to collect the same quantity of PCB from windows.<sup>36</sup>

### 5.1.3 Implementation and crisis

On 3 June 2002 the company Ruteretur AS<sup>37</sup> was established by the four business associations that had signed the Agreement with the Ministry. Later the Timber and Building Materials Dealers' Association (Trelast og Byggevarehandelens Fellesorganisasjon, our translation) joined the other four. The purpose of Ruteretur is to “develop, run, administer, monitor and organise cost efficient and social-economically profitable return systems for secure collection of PCB containing double-glazed windows”. The company’s goal achievement should be directed by the Agreement and the company should operate on a non-profit basis. Daily operations of Ruteretur are managed by Norsas AS and the Managing Director of Ruteretur is a Norsas employee paid-by-the-hour. Ruteretur does not handle PCB containing windows itself. Ruteretur has signed contracts with the two waste handling companies PCB-Sanering AS and Veolia Miljø Gjenvinning AS. They take apart the windows and handle the PCB containing sealing, and Ruteretur reimburses some of their costs. A maximum of NOK 1100 per tonne double-glazed windows was set for the 2004-2007 period ([www.ruteretur.no](http://www.ruteretur.no)).

At first the reimbursement was covered by the allowance from the Ministry for the Environment. This was a temporary arrangement in order to get a rapid start of the window collection system. In 2002 and 2003 the Ministry granted a total of NOK 21 million for this purpose. From January to July 2003, more PCB containing windows were collected than during the entire 2002.<sup>38</sup> However, the permanent funding scheme that the business associations had committed themselves to establish was still not in place when the money from the Ministry was spent. Ruteretur was facing a crisis. If the funding problem was not resolved then Ruteretur would not be able to continue operating the window collection system.

In a letter to the signatory business associations in September 2003, the Minister of the Environment wrote that an important commitment in the Agreement had been broken and that he expected the industry to implement the necessary measures in order to make sure that the Agreement would be fulfilled.<sup>39</sup> In October the industry finally agreed on a

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36 Press release from the Ministry of the Environment, dated 1 October 2002 ([www.regjeringen.no](http://www.regjeringen.no)).

37 The Norwegian name could be translated to “Window Pane Return Ltd”.

38 Press release from the Ministry of the Environment, dated 18 September 2003 ([www.odin.dep.no](http://www.odin.dep.no)).

39 Letter from the Minister of the Environment, dated 18 September 2003 ([www.regjeringen.no](http://www.regjeringen.no)).

funding scheme based on a system of environmental compensation to be paid by the manufacturers of double-glazed panes and cladding glass. At the outset the compensation was set to NOK 15 per window pane (excl. VAT). It was increased to NOK 22.50 in 2005, and then reduced to NOK 17 in 2006.

A heated debate arose between the business associations and especially within the Norwegian Glass and Glazing Association before the way out of the funding problem was found. The Glass and Glazing Association had signed the Agreement with the Ministry of the Environment, but it turned out that important member companies disagreed. Major glass pane manufacturers argued that double-glazed windows with PCB are what some of our informants call “historic waste”, not produced by existing companies but by companies that were shut down years ago. They claimed that import of window panes would create a substantial free-rider problem and lead to distortion of competition. In a highly competitive market domestic manufacturers would risk customers not to pay the extra costs connected with the environmental compensation. Consequently the Norwegian glass and glazing industry would end up with the black man.

A number of factors contributed to the solution to the compensation problem. The industry risked to become the subject of strict regulations and lose control of the funding scheme if the Agreement with the Ministry was broken. Business associations would lose credibility with regard to negotiations and voluntary agreements, and the industry would risk a bad reputation with regard to environmental responsibility. The Confederation of Norwegian Enterprise, which is generally in favour of voluntary agreements, called on the signatory associations and their members to fulfil the agreed obligations as soon as possible. By the end of September 2003 the Ministry of the Environment was informed that the funding scheme was in place and that the window collection arrangement would soon be operative again. The Minister was very pleased and declared that this showed that the industry takes its social corporate responsibility seriously.<sup>40</sup>

#### **5.1.4 New problems and the need for new regulations**

One problem had found its solution, but there were more to come. The collection of PCB containing windows increased, but some of the actors in the business evaded the system and did not contribute financially to the arrangement. The actors that did contribute to the system became more and more concerned with the free-rider problem associated with growing import of double-glazed windows. At a meeting in December 2003, Ruteretur informed the Pollution Control Authority about the problems and that they had run into a difficult economic situation. In a letter to the chairman of the board of Ruteretur in January 2004 the Pollution Control Authority asked for further information. The Authority declared that their interpretation of the information given by

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40 Press release from the Ministry of the Environment, dated 30 September 2003 ([www.odin.dep.no](http://www.odin.dep.no)).



Ruteretur was that the compensation based return system for PCB containing windows was not yet operative and that the system could collapse at any time.<sup>41</sup>

Ruteretur and the industry were particularly concerned with the government agencies *Statsbygg* and *Forsvarsbygg* and the counties and municipalities. *Statsbygg* – the Directorate of Public Construction and Property – acts on behalf of the Norwegian government as property manager and advisor in construction and property affairs ([www.statsbygg.no](http://www.statsbygg.no)). *Forsvarsbygg* – the Norwegian Defence Estates Agency – is a subordinate of the Ministry of Defence and responsible for planning, construction, administration, leasing and disposal by sale of defence estates and properties ([www.forsvarsbygg.no](http://www.forsvarsbygg.no)). The two agencies and local authorities administer a vast number of buildings. They are major purchasers of double-glazed windows, but according to our informants they were reluctant to join the Ruteretur system.

As early as May 2003 the Minister of the Environment asked government Ministries and subordinate government agencies to purchase environmentally friendly products. The Minister referred to the free-rider problem and said that the State should not buy products, including double-glazed windows, from purchasers who did not join a waste return system.<sup>42</sup> In February 2004, the Ministry of the Environment sent a letter to the public building owners and asked them to insist that manufacturers and importers of double-glazed windows should document that they participate in a return system for PCB containing windows.<sup>43</sup> However, according to our informants the impact of the Ministry's appeal was limited.

Gradually Ruteretur and the business associations came to the conclusion that the voluntary agreement needed to be supplemented by obligatory regulations. The Confederation of Norwegian Enterprise hesitated, but by the end of February the Confederation sent a letter to the Ministry of the Environment asking for Provisions of Law. In April the Pollution Control Authority asked a substantial number of institutions and organisations for comments on a draft version of the Provisions.<sup>44</sup> In July 2004, a new Chapter 14 on scraped PCB containing double-glazed windows was added to the Provisions of Act regarding recycling and handling of waste.<sup>45</sup>

The new provisions state that importers and manufacturers of double-glazed windows have a duty to make sure that every waste possessor may deliver scraped PCB containing windows for proper treatment and that the compensation should not exceed

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41 Letter dated 19 January 2004 ([www.sft.no](http://www.sft.no)).

42 Press release from the Ministry of the Environment, dated 14 May 2003 ([www.regjeringen.no](http://www.regjeringen.no)).

43 *Innkjøp av isolerglassvinduer. Brev fra Miljøverndepartementet til Statsbygg, Forsvarsbygg, Kommunene v/Kommunenes Sentralforbund og Fylkeskommunene*, datert 5.2.2004 ([www.regjeringen.no](http://www.regjeringen.no)).

44 Letter from the Norwegian Pollution Control Authority, dated 19 April 2004 ([www.sft.no](http://www.sft.no)).

45 *Forskrift om gjenvinning og behandling av avfall (avfallsforskriften), Kapittel 14, tilføyd ved forskrift 13. juli 2004 nr. 1127* ([www.lovdatabasen.no](http://www.lovdatabasen.no)).

the normal price for delivery of double-glazed windows without PCB at an ordinary waste processing plant. Importers and manufacturers have to fulfil their obligations by participation in a return system approved by the Pollution Control Authority (§ 14-3). Furthermore, purchasers of more than 200 double-glazed windows per year are obliged to request and be able to document that the importers and manufacturers participate in an approved return system for PCB containing windows (§14-4). In practice the criteria for an approved return system (specified in Appendix 1 of the Provisions) means that importers and manufacturers of double-glazed windows have to participate in the return and compensation system that was established according to the 2002 agreement and is administered by Ruteretur.

No doubt the system for collection and handling of PCB containing double-glazed windows had a complicated birth and childhood. The voluntary agreement needed the support of statutory obligations established by the new Provisions of Act. However, at present (spring 2007) the combination of voluntary and obligatory arrangements seem to function quite well. The number of window panes that was collected increased from 14,669 in 2002 to 51,553 in 2005. The figures represent an increase from 18 to 78 per cent of the double-glazed windows that were expected to be replaced in 2002 and 2005 respectively. In 2006, 66,535 windows were collected. In fact this corresponds to 110 % of the estimated total. According to Ruteretur, this is explained by a very high level of activity in the building industry and furthermore that some of the collected windows do not contain PCB.<sup>46</sup>

## **5.2 Preconditions for the negotiations**

In this section we will take a more analytic look at the preconditions for the negotiations. The discussion will be informed by the earlier experiences and evaluations of voluntary agreements and the theoretical perspectives on negotiations that were presented in Ch. 3. These are the questions we will explore: What was the character of the environmental problem, of the basic regulations, and of the constellations of actors' preferences that shaped the substantive and procedural preconditions for the negotiations?

### **5.2.1 The nature of the problem**

The way of dealing with various environmental problems depends among other things on the nature of the specific problem. As mentioned above, PCB is a highly poisonous substance and the renewal of double-glazed windows with PCB containing sealing was assumed to be one of the most important remaining sources of pollution. The nature of the PCB containing window problem may, like other environmental problems, be characterised according to a number of dimensions (Reitan 1998, cf. Ch. 3): geographical scope (global – local), the source (diffuse - point), the range of measures

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<sup>46</sup> Sources: *Ruteretur: Årsrapport 2005* and *2006* (annual reports), p. 5 and 7 respectively.

(sectoral – cross-sectoral), time span (short – long) and solutions (structural – technological).

The geographical scope of the PCB problem is global and pollution is found all over the world, including the Arctic. However, in our case the problem was delimited to a specific, local source of pollution: double-glazed windows produced in a relatively short time span from 1965 to 1975. However, the time span for the renewal and need to take care of scraped PCB containing windows was more uncertain. Sources of pollution were located at specific points, i.e. the buildings that were to be renovated, but the buildings with double-glazed windows are spread all over the country and consequently the source of emission should be characterised as rather diffuse. In our case the range of measures was related to a specific sector, the building and construction industry. Possible solutions to the problem were of technological and organisational character. Far-reaching structural changes were not needed.

All in all the nature of the problem may seem fairly straightforward. However, there were certain complexities involved. The number and exact location of sources of pollution, the timing of emissions (here: renewal of windows), and the total quantity of PCB containing windows were important elements of uncertainty. The EEA (1997a, cf. Ch. 3) concluded that environmental agreements are most suitable for environmental problems of limited scale and a limited numbers of sources of pollution and consequently we have to conclude that in this respect the nature of problem represented certain complications with regard to the suitability of a voluntary agreement.

### 5.2.2 Organisational preconditions

In their assessment of environmental agreements the EEA (1997a) pointed to a number of factors of organisational character. Among other things environmental or voluntary agreements were considered to be most suitable for proactive industries, for small number of partners or high organisation level of signatory partners, for production of goods, and for sectors which have matured and face limited competition (i.e. where there are few opportunities for ‘free-riders’).

At the start of the history of our case, the PCB problem had been known for a long time, but the awareness and understanding in the construction industry had been limited. Our informant in one of the business associations did not hesitate to admit that in the beginning they knew very little about the problem. Accordingly, in a longer perspective we can not say that the industry was proactive. However, the preparation of the National Action Plan for Building and Construction Waste that was signed by business associations in 2001 shows that at this moment the associations had become much more attentive and active.<sup>47</sup> The industry itself launched the establishment of a system for the collection of PCB containing windows as their action number 1 and they set the target,

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<sup>47</sup> It should be added that in 1997 the Norwegian Glass and Glazing Association engaged a consultancy, Yelsvik Associates, to investigate the PCB problem. The report, *Forseglede ruter med PCB-holdig tetningsmasse i Norge*, by Tore Gjelsvik, was presented in February 1997.

100 % collection and proper handling of hazardous waste, prior to the negotiations and agreement with the Ministry of the Environment.

Voluntary agreements should be suitable for the production of goods and consequently also for the production of double-glazed windows. However, in our case the problem to be addressed in the negotiations and subsequent agreement was not related to the production of PCB containing windows itself, but to the handling of scraped windows. PCB containing windows are so-called “historic waste”, in many cases produced by companies that are now shut down. Furthermore, renovation of buildings and the handling of PCB containing windows is related not only to the production of window panes, but to the whole value chain from glass and window producers via building materials dealers, carpenters and house owners who renovate buildings and purchase windows, to waste plants and recycling companies.

The number of parties engaged in the negotiations was fairly limited. Four business associations and the Ministry participated and signed the agreement. However, we have observed several problems associated with the organisation of relevant actors. The most severe problems were related to the Glass and Glazing Association and the organisation of building owners. The point of departure seemed favourable as the Glass and Glazing Association organise all the significant producers of double-glazed windows. However, the two major producers opposed the agreement even though they were members of the association. The real estate associations which participated in the negotiations and signed the agreement did not (and do not) include the public agencies that manage a huge number of buildings on behalf of central and local government and the military defence. In other words, the problem with real estate managers was related to a low level of organisation and thus in accordance with the problems one should expect on the basis of the assessments made by EEA. Furthermore, a high level of organisation may be a necessary condition for successful negotiations on voluntary agreements, but it is not a sufficient condition. In our case the problems within the Glass and Glazing Association demonstrate that there is an additional need for organisational discipline and active support of the members. Associations that negotiate on behalf of their members have to inform, motivate and convince their members that a negotiated agreement is the best solution.

The scepticism among manufacturers of double-glazed windows was related to the (emerging) funding system (which implicated that they should pay an environmental compensation on each window pane they produced), the conditions of competition and the free-rider problem. The fear of the free-rider problem and consequent distortion of competition was related to the fact that double-glazed windows could easily be imported from manufacturers in other countries without paying the environmental compensation. At this stage the association of timber and building materials dealers did not participate in the process.

### **5.2.3 Procedural preconditions**

Most of the preconditions discussed above are of a substantive character, related to the actual problem. However, some of the elements are also related to what we have called procedural preconditions. The duality of substantive and procedural preconditions is

illustrated by the number and kind of actors engaged (and not engaged) in the negotiations. Here we will focus on the regulative framework conditions for the negotiations and the constellations of norms, values and preferences that constituted the decision-making situation.

As we have seen, the use of PCB was legally prohibited in 1980 and the Provisions of Act settled in 1994 made it clear that everybody have an obligation to treat hazardous waste, which undoubtedly includes PCB, in a proper and safe manner. However, buildings were renovated and double-glazed windows were scraped and dumped without anyone taking care of the PCB containing sealing glue. In other words, the legal “command-and-control” instruments did not function in practice. In principle the problem could be met with new regulations and stricter control but in this case the problem was also related to the absence of a working return system and consequently there was a need for new policy instruments. Furthermore, at this point in time, voluntary agreements were generally considered to be one of the promising so-called “new environmental policy instruments” at hand. Politicians and business associations were in favour of the use of voluntary agreements, even though civil servants were more sceptical.

The legal framework represents an important procedural precondition for the negotiations, not only in itself, but also with regard to the constellation of preferences that constitute a given decision situation (cf. Ch. 3 and Rommetvedt 2006). The preferences of the actors involved in a given decision-making process are formed on the basis of a variety of interest, norms and values, including legal norms. An important aspect of legal norms is their absolute nature. Legal norms define what is either lawful or unlawful. Gradable norms and values on the other hand, make compromises possible. Negotiating parties may split a cake or divide a sum of money and have e.g. one half each. An action regulated by law cannot be e.g. 50 per cent lawful and 50 per cent unlawful. In other words, the procedural preconditions for negotiations over absolute norms and values are different from the preconditions for negotiations over gradable values and dividable goods.

In general one would expect negotiations over absolute norms and values to be more complicated than negotiations over gradable norms and values. In our case the prohibition of the use of PCB and the obligation to handle hazardous waste like PCB in a proper way, represented non-negotiable legal norms that are supposed to be followed by law-abiding citizens and decision-makers. In general there is a widespread consensus that the laws should be followed in order to avoid anarchy. However, compliance with the law and proper treatment of the PCB containing windows represent economic costs and economic costs are gradable and dividable. In our case the procedural preconditions were characterised by a combination of gradable and absolute, or negotiable and non-negotiable, norms and values. The situation was rather complex, but a combination of elements like the ones we have seen in the PCB windows case may open up for negotiations over a package deal and thus improve the possibility of reaching an agreement.

The rather complex preconditions for the negotiations on PCB containing windows are reflected in the six questionnaires that were filled in by our informants at the end of our

interviews in order to summarise some of the topics we had discussed.<sup>48</sup> The informants were asked to tell whether they agreed or disagreed completely or partly with a number of statements. Three informants agreed and three disagreed that the relationship between the industry and the Ministry was conflictual and that the parties had opposing views and interests at the outset or beginning of the negotiations. Only one informant agreed that by and large the industry and the authorities agreed already at the beginning of the negotiations. All the informants agreed that the authorities had limited understanding of the needs of the industry while three informants agreed and three disagreed that the industry had little understanding of the views of the authorities. It is interesting to notice that there was no clear-cut division between the representatives of the authorities and the representatives of the business associations in their assessments of these statements.

### 5.3 The negotiation process

We now turn to the negotiation process between the business associations and the Ministry. In Ch. 3 we presented three different types of negotiations: strategic bargaining, deliberative negotiation and deliberation (based on Rommetvedt 2006). The relevance and feasibility of each type of negotiation process was assumed to depend on procedural and substantive preconditions and constellations of preferences. The discussion in the previous section shows that the preconditions were rather complex. Under circumstances like this we would hypothesise that the negotiation process will have a mixed character. Furthermore, we would expect that both the dynamics of negotiations in general and the mixed character of the negotiations in our case will lead to changes on the way.

In the questionnaire we used in order to summarise the interviews, we asked the informants to give an overall description or characterisation of the negotiation process on the basis of three predetermined statements which were meant to reflect the three types of negotiations. The following statements were used to operationalise the respective types of negotiations:

- \* *Strategic bargaining*: “A strategic tug of war where the parties tried to induce the other party by means of threats and promises.”
- \* *Deliberative negotiation*: “A ‘give and take’ situation where one of the parties tried to achieve his wishes in one area, while the other party would be given the opportunity to realize his views in another.”
- \* *Deliberation*: “An open dialog between the parties in order to find a common understanding of the problems and their solution.”

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<sup>48</sup> Two informants in the Pollution Control Authority filled in one joint questionnaire while two informants in one of the business associations filled in one questionnaire each.

The informants were asked to tell whether these characteristics were appropriate to a very or fairly *high* degree, or a fairly or very *low* degree. In order to capture the (potential) dynamics of the negotiation, the informants were requested to give separate assessments of the *first* and the *last* part of the process respectively. The answers given by the representatives of the business associations are presented in table 5.1. Each star represents one informant.<sup>49</sup>

**Table 5.1. The degree of strategic bargaining, deliberation and deliberative negotiation in the first and last part of the negotiation on PCB containing double-glazed windows.**

	High degree		Low degree	
	First part	Last part	First part	Last part
Strategic bargaining	***	*	**	****
Deliberative negotiation	***		**	*****
Deliberation	***	****	**	*

The table shows that the informants' perceptions of the process are rather mixed, particularly in the first part of the negotiations. This is in line with our expectations based on the complex preconditions for the process. The results should be interpreted with caution, but we do see an interesting development from the first to the last part of the negotiations. In the first part of the negotiating process, we find elements of strategic bargaining alongside with deliberation and deliberative negotiation. In the last part of the process, the element of deliberation and open dialog became more dominant while the elements of strategic bargaining and deliberative negotiation became less conspicuous.

An important element in negotiations characterised by deliberation and open dialog is the parties' willingness to learn and change preferences during the negotiation process. In our case three of the five representatives of the industry agreed that during the process the *public authorities* learned a lot about the needs of the industry and that the opinions of the authorities were influenced by this. They also agreed that the authorities listened to the industry's arguments and that the industry influenced the authorities' opinions. However, the informants that represented the authorities did not agree that the authorities changed opinions during the process.

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<sup>49</sup> The numbers are small but they represent the important participants in the process. However, the assessments given by the informants in the Pollution Control Authority are not included in the table, owing to the fact that they did not participate in the first part of the negotiations.

Two of the informants from the business associations agreed that the *industry* learned a lot about the environmental problems and that the opinions of the industry were influenced by this. Four of the business representatives agreed that the industry was willing to listen and accepted several of the opinions expressed by the public authorities.

Some remarks about the use of the term “the industry” should be added here. In fact, in order to understand the negotiations on double-glazed windows we need to nuance the picture. In our case two important factors need to be mentioned. First, the opinions of business associations do not necessarily reflect the views of their members, and second, “the industry” comprises a variety of companies with different positions and functions in the value chain.

During the interviews some of the informants told us that in the beginning some business associations resisted but when their representatives in the process learned more about the PCB problem they changed their minds. However, the individual members of the associations did not participate in the negotiation process and consequently they were not directly exposed to the information and learning element of the process. To a certain extent the representatives of the business associations came to act like “missionaries” on behalf of the environment vis-à-vis their member companies. As we have seen, the Glass and Glazing Association in particular faced severe problems with the gap in opinions between the association and some of its member companies.

Despite of the rather complex preconditions, the negotiation process between the Ministry and the business associations developed well and an agreement was reached within two-three months time. In our questionnaire the informants were confronted with the following statement: “In reality the agreement was dictated by the authorities, the industry had little to say”. The civil servants agreed completely with this statement while three of the business representatives disagreed completely (two) or partly (one). Two business representatives agreed partly that the agreement was dictated by the authorities. A possible explanation of these discrepancies may be that the representatives of the business associations and the civil servants focused on different aspects of the agreement in their assessments. It seems likely that the authorities focused mainly on the establishment of a return system while the representatives of the industry were more concerned with the question of who among the business actors should pay the bill.

We should to emphasise that informal discussions and negotiations had been going on for quite a long time before the formal and final negotiations with the Ministry started. Furthermore, it was the industry itself that through the National Action Plan for Building and Construction Waste set the major target: to establish a return system and collect 100 per cent of the scraped double-glazed windows with PCB. This paved the way for a relatively short formal negotiation process and the agreement that was signed by the end of April 2002.

In general the signing of the agreements marks the end of the negotiation process. However, in this case the signing of the agreement was not the end of story.



## 5.4 Implementation problems and their solution

The implementation of the agreement on PCB containing windows turned out to be very problematic. There were two major problems that arose in the implementation phase, first the funding problem and then the free-rider problem.

As we have seen in section 5.1, the industry did not manage to establish the funding system in time and in 2003 Ruteretur was running out of money when the government allowance was spent. Attention was focused on the Glass and Glazing Association and involved the question of who is responsible for “historic waste”. The suggested funding scheme was based on an environmental compensation to be paid by the manufacturers for each double-glazed window pane they produced. As mentioned before, the production of double-glazed windows sealed with PCB containing glue ended in the mid 1970s. Since then many of the manufacturers had shut down. Why should the manufacturers of today be held responsible for the sins of their predecessors? In principle it is questionable whether one company can be held legally responsible for what another company has done.

A sum of money is dividable and negotiations concerning economic costs (and benefits) make compromises possible. In this case the environmental compensation could have been divided and a potential compromise could have implicated that each actor in the value chain should pay a share of the total compensation. Normally a compromise is the result of strategic bargaining. It seems appropriate to say that the strategic bargaining element in the process regarding PCB containing windows was primarily a tug-of-war between the various industrial actors, not between the business associations on the one hand and the authorities on the other.

A compromise could have resolved the funding problem, but on the other hand the most practical and efficient solution seemed to be to collect the environmental compensation at a stage in the value chain where the number of actors is limited and easy to overview. In the end the business associations came to the common conviction that the best solution was to collect the environmental compensation at one specific position in the value chain, namely that of the glass and glazing companies. A significant element of deliberation and sincere dialog was involved in the process and finally consensus was reached.

It should be added that before consensus was reached, the business associations came under a strong pressure to solve the problem. According to our informants, the explanation of how the way out of the problem was found should be related to the prestige of the industry. The industry would risk a bad reputation with regard to their ability to fulfil corporate social and environmental responsibilities. Furthermore, the standing of voluntary agreements in general would suffer. The business associations, headed by the Confederation of Norwegian Enterprise, had a strong general preference for voluntary agreements as one of the new environmental policy instruments. They wanted to avoid the use of traditional command-and-control instruments in order to solve environmental problems. There was too much at stake, and the industry managed to solve the problem at this stage.

In the subsequent phase, the free-rider problem turned out to be even more complicated. In the end the industry itself, not the public authorities, asked for a command-and-control instrument to be put to use. The Provisions of Act settled in July 2004 stated that all the relevant actors were legally obliged to participate in an approved window return system. Participation in the voluntarily agreed system was no longer voluntary.

In general the Confederation of Norwegian Enterprise advocated the use of voluntary agreement instead of public regulations, and according to our informants the Confederation was reluctant to accept the need for provisions of act. However, Ruteretur and the business associations in the building sector managed to convince the Confederation that obligatory regulations were necessary in order to avoid the free-rider problem and make the window collection system work properly.

A superficial glance at the outcome of the process may lead to the conclusion that the voluntary agreement was put aside and that the “real” instrument for the collection of PCB containing double-glazed windows is the Provisions of Act. A couple of informants representing the authorities seemed to adhere to this interpretation. They told us that nobody refer to the agreement anymore, what counts is the provisions. However, what seems more appropriate is to say that the present arrangement for the collection and handling of PCB containing windows represents a combination of voluntary and obligatory elements. The arrangement or *organisation* of the return system was the result of the *voluntary* agreement, but *participation* in the arrangement is now *statutory*.

Ruteretur and the business associations are pleased with the combination and one may ask what is now in it for the industry. Our informants point out three advantages. When the industry discovers a free-rider or competing company which tries to evade the system, they can call upon the Pollution Control Authority. On the basis of the Provisions of Act the Pollution Control Authority may then go through with an inspection and tell the company to join the Ruteretur system. In this way the free-rider problem is removed, or at least reduced.

Another important advantage for the industry is the control they have over the environmental compensation. The compensation is paid to the not-for-profit company Ruteretur and if the compensation exceeds the costs, then Ruteretur may reduce the level of compensation. As we have seen this happened in 2006 when the compensation per window pane was reduced from NOK 22.50 to NOK 17. The alternative would be an environmental tax or fee to be paid to the tax authorities. The informants in the business associations are convinced that a surplus would end up in the public purse instead of being used to lower the tax level. Furthermore, the representatives of the industry believe that the authorities would not be able to run a publicly owned return system as efficiently as the current private system. The incentive for cost-efficiency would be lower in a publicly owned system and consequently the costs for the industry would be higher.

## 5.5 Goal attainment

The legal regulations, the industry’s National Action Plan, and the Agreement between the industry and the Ministry of the Environment have a common goal: *all* scraped

double-glazed windows with PCB should be collected and treated properly. In principle the goal is clear and ambitious. However, to establish the baseline and what “all” means in practice, is a complicated matter.

A study carried out by Ruteretur in 2004, indicated that the number of PCB containing windows had been significantly overestimated. Earlier estimates were based on the assumption that double-glazed windows sealed with PCB containing glue were produced from 1965 to 1975. However, the new mapping showed that until 1970 there was a very limited use of PCB. A substantial number of the windows were coupled without the use of PCB containing sealing. Originally the total quantity of PCB was estimated to 250-400 tonnes. In the new study the total quantity of PCB used in double-glazed windows was estimated to 140-150 tonnes. The estimated scope of replacement of PCB containing windows was reduced from 178-200,000 windows per year to approximately 70-75,000 windows in 2004.<sup>50</sup>

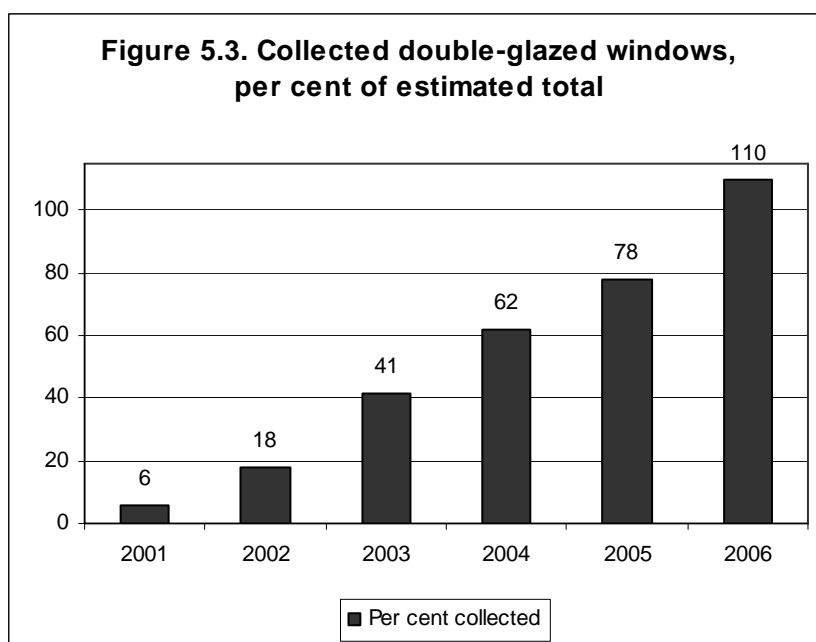
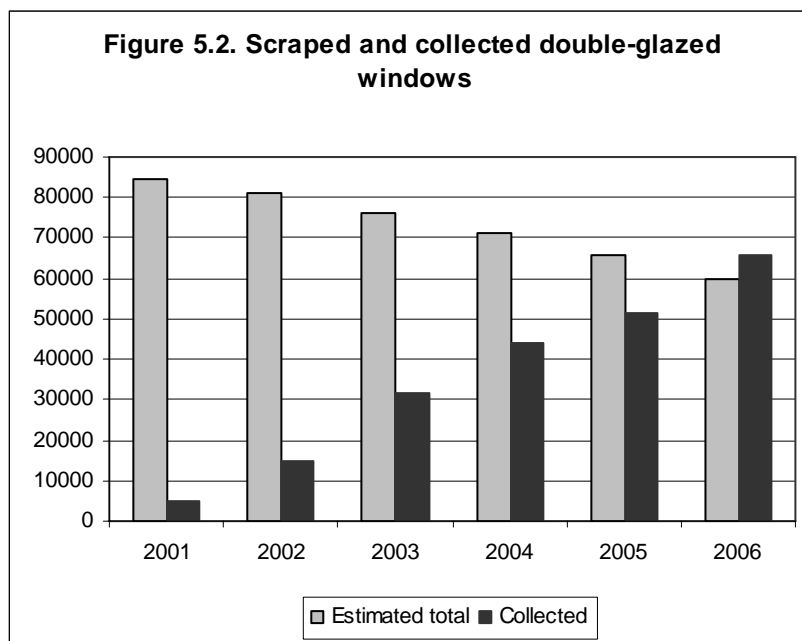
The report from the study admitted that the estimates were uncertain, but the report stated that it was more likely that the estimates were too high than too low. According to our informants in the Norwegian Pollution Control Authority, the new estimates were considered to be realistic by the Authority and consequently they were accepted as the baseline for the collection of PCB containing windows.

The estimated quantities of scraped PCB containing windows and the actual collection of windows are presented in Figures 5.2 and 5.3.<sup>51</sup> As we can see, there has been a continuous and dramatic growth in the collection of PCB containing windows since the establishment of Ruteretur. In 2001 only 6 per cent of the scraped windows were collected. In 2005 the corresponding figure was 78 per cent. However, in 2006 number of collected windows exceeded the number of windows that was expected to be scraped. The number of collected windows equalled 110 per cent of the estimated total and consequently one may suspect that the estimates of scraped windows have been too low. However, according to Ruteretur there are two explanations. First, estimates are based on a stable replacement tempo, and second, some of the collected windows do not contain PCB, but when in doubt they should be treated as if they did. Most likely the recent economic growth and boom in the construction industry in Norway has led to an (unexpected) increase in the replacement of double-glazed windows. Consequently, in reality the degree of goal attainment is somewhat lower than suggested by Figure 5.3, but we do not know how much lower. We are not in a position to critically re-examine the 2004 estimates. We have no better suggestion and as long as the 2004 estimates are accepted by the Pollution Control Authority, we have to use this as the baseline.

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<sup>50</sup> Ruteretur: *Årsrapport 2004* (annual report), p. 7.

<sup>51</sup> Sources: Ruteretur: *Årsrapport 2004, 2005, 2006* (annual reports).



OECD recommended that before setting the target for a voluntary agreement, a “business-as-usual trend” should be established in order to provide a baseline scenario. The business-as-usual trend shows what the emission level or other target variables are likely to be, given natural technical progress within the considered industry (OECD 1999, cf. Ch. 3). Obviously, the ambitions for an agreement should be higher than business-as-usual.

In our case business-as-usual would imply a very low level of collection of windows with PCB. It is difficult to see how “natural technical progress” should increase the collection level. Furthermore, as the total number of scraped windows was reduced, one

would expect even fewer windows to be collected. Instead we have seen that both the number of collected windows and the collected portion of scraped widows have increased substantially. An organisational effort, not only natural technical progress, was needed in order to establish a collection and handling system for PCB containing windows. The establishment and organisation of the collection system was based on the voluntary agreement and later supported by the statutory regulations given in the Provisions of Act. No doubt, the agreed arrangement has contributed to a reduction of the pollution of PCB stemming from double-glazed windows far beyond the business-as-usual scenario. Whether this is good enough is another question.

## **6 Towards sustainable development? Assessing the agreements**

In the first part of this chapter we compare the negotiations on voluntary agreements for packaging waste with the agreement on PCB containing windows, and to some degree also the agreements on environmental measures included in the negotiations on agricultural policy (Farsund 2005). We discuss the findings on the basis of among other factors the recommendations regarding the design and effectiveness of voluntary agreements presented by the EEA and OECD (cf. Chapter 3.5).

In the second part, we discuss the national waste policy goals and the question of whether voluntary agreements are a feasible policy instrument for sustainable development. The discussion is related to the tension between efficiency gains and consumption levels and strong and weak definitions of sustainability presented in Chapter 2.

### **6.1 Comparing and assessing negotiations and agreements**

The overall impression of the two categories of voluntary agreements we have analysed in this report is positive. There have been problems on the way, but the agreements on collection and treatment of various types of packaging waste and PCB containing double-glazed windows seem to function well. The impression of the third category of agreements that has been analysed in our project is more mixed. This category comprises the environmental measures which have been included in the yearly agreements on Norwegian agricultural policy. (As mentioned in Chapter 1, these agreements have been analysed in a separate report, cf. Farsund (2005).) Environmental problems have been addressed in the negotiations on agricultural policy, but the priorities that have been given to environmental concerns and the selected measures vary. Environmental improvements have been made in agriculture, but it seems as if the environment has been handled as a balancing item in negotiations that are primarily concerned with the income possibilities of the farmers.

These findings may seem surprising for a number of reasons. EEA and OECD assessments regarding the use of voluntary agreements in order to solve environmental problems indicate that such agreements are feasible for mature and well organised goods producing industries. No doubt farming is a mature goods producing industry, and in the case of Norway extremely well organised. The Government can negotiate with two Norwegian farmers' and smallholders' associations which in practice can commit all farmers. There are no significant free-riders outside these organisations. In the cases of packaging waste and PCB containing windows there are large varieties of firms and business associations involved and the free-rider problem has been substantial. Contrary to what one could expect, the agreements on waste and PCB management seem to function well compared to those on environmental measures in

agriculture. In the yearly negotiations on agricultural policy, the selection of environmental measures has changed almost from one year to another.

Norwegian environmental policy is based on a so-called “sector responsibility principle” which implies that each sector should be responsible for and handle its own environmental problems. Environmental problems should not be left to someone outside the sector, that is to someone who is less able to influence what really happens within the sector. In other words, within the sector a more “holistic” approach is recommended. One could expect the institutionalisation of yearly negotiations on agriculture to facilitate such a holistic approach to the farming industry. However, even though a number of concerns and goals, including regional development in sparsely populated rural areas and the environment, have been integrated into the negotiations on agriculture, the agreements seem first and foremost to be concerned with the income of the farmers and the regulation of the market for agricultural products. If there is a conflict between the farmers’ income generating possibilities and environmental concerns, then the latter are likely to give way to the former.

The involvement of “third parties” has been recommended for negotiations on voluntary environmental agreements. In our cases, negotiations on agriculture are the only ones where one could say that a “third party” was involved. The Ministry of Agriculture and Food plays the dominating role in the negotiations on agriculture, but the Ministry of the Environment was (and is) a “third party” represented in the Government’s negotiating committee. The role of the Ministry of the Environment in the negotiations on agriculture is unclear, but the fluctuations with regard to the priorities given to environmental concerns indicate that Ministry’s has not always been an effective guarantor for the environment.

In the cases of packaging waste and PCB containing windows the negotiator on behalf of the authorities was the Ministry of the Environment. There was no explicit conflict of interests on the public authorities’ side of the negotiating table. However, as we have seen there was a variety of business associations represented on the industry’s side of the table. In fact, negotiations on important elements took place, not across the negotiating table between the authorities on the one side and the industry on the other, but on the industry’s side between and within the business associations. For packaging waste it concerned the acceptance of the Extended Producer Responsibility (EPR), and for PCB containing windows, business associations and member companies disagreed on the desirability of the proposed collection systems and how to handle and divide the costs.

Speaking of voluntary environmental agreements there seems to be a tendency to regard negotiations as two-party games where the public authorities advocate environmental interests while the industry is concerned with their profits. In sum, the three categories of agreements analysed in this report and in Farsund (2005) show that this is not necessarily the case. On the one hand various government ministries may have diverging interests. In the window case, some of the problems in the implementation phase of the agreement were related to the reluctance of the public agencies that administer the buildings of the Norwegian state and military defence. On the other hand we have also seen that to some degree business associations have acted as

spokespersons for the environment vis-à-vis more sceptical member companies, and among the farmers there are different views with regard to ecological versus more industrialised production. Furthermore, the foundation of privately owned waste management companies implies that new business interests are established and grounded on environmental concerns. Consequently, one should take into consideration that the interests may vary on both the public and the private side of the negotiating table.

Critics of voluntary agreements argue that normally the ambitions and set goals are too modest. In reality they do not differ from “business as usual”, or improvements are no better than what should be expected as a natural consequence of the technological development. This problem may also be related to a lack of adequate measuring instruments.

The measurement problems have been demonstrated in our cases. Estimates of the quantities of packaging waste and problematic and hazardous waste are uncertain and consequently we do not know for sure whether the goals have been set at an appropriate level. However, we have seen work devoted to improve statistics, and even more important, a substantial increase in the collection of waste. No doubt the increase deviates from “business as usual”. In the case of packaging waste, there have been substantial increases in the collection and recycling of various types of waste. For double-glazed windows, we have seen that there was hardly any collection of scraped PCB containing windows at all prior to the implementation of the agreement. Furthermore, technological development does not in itself lead to changes. The crucial factor in our cases is the organisation of the waste management systems, and these systems were established on the basis of the negotiated agreements.

Waste management systems could have been organised by public authorities, of course. In fact, the Minister of Environment during the first negotiations on voluntary agreements in 1994/95 has stated that he originally had a state company financed by a fee in mind (Bjerk, 2005). The establishment of public agencies or publicly owned companies for waste collection and management would have been more in line with the traditional use of “command-and-control-instruments”. However, by leaving the organisation of the collection system to the industry the government could exploit the knowledge and financial resources of the industry. On the other hand, by taking on responsibility the industry could keep control of the funding system. Both in the case of packaging waste and PCB containing windows the industry could reduce the fee instead of letting the surplus generated by the material companies “disappear” in the public purse.

No doubt the risk of free-riders represents a challenge to voluntary agreements. However, the problem is not necessarily solved by traditional command-and-control-instruments. As we have seen, for many years there were legal regulations against PCB but scraped PCB containing windows were dumped, not collected and treated in a proper manner. The legal instrument did not work and there was a need for additional instruments. The voluntary agreement came as a supplement to the legal regulations. However, in the next phase new legal regulations were introduced as a supplement to the voluntary agreement. It was the industry itself, not the public authorities that asked



for new Provisions of Act when the voluntary collection system ran into problems. Other voluntary agreements, like the agreement on electric and electronic waste (the EE-agreement), are also supplemented with legal regulations.

Some assessments of voluntary agreements may give the impression that the “basic” and most important policy instrument is legal regulations, and that voluntary agreements are considered to be a less important, secondary instrument. However, our cases indicate that a ranking like this is not always adequate and that the importance of the two types of instrument should be assessed on more equal terms. In the case of PCB containing windows the collection system was organised on the basis of the voluntary agreement while participation was made obligatory through the Provisions of Act. The voluntary instrument did not work without the legal instrument, but neither did the legal regulations that were laid down prior to the voluntary agreement. Both types of policy instruments were needed.

## **6.2 Voluntary agreements and sustainable development**

The voluntary agreements have been a successful policy instrument in terms of creating a system for collecting and recycling packaging waste, and for collecting and handling PCB waste from windows. For packaging waste, the “Business Committee for Packaging Optimisation” (NOK) has also made real efforts to make business aware of the potential of optimisation of packaging.

The discussion of linkages between sustainable development and voluntary agreements, however, is related to a much larger debate concerning the requirements of a sustainable development path. Accordingly, linking voluntary agreements and sustainable development is not straight forward. There are different perceptions of sustainable development and what sustainable development entails. There are discussions of what constitutes a sustainable development path, which are closely linked to waste management policies and goals. As we argued in chapter 1, how to assess the voluntary agreements from a sustainable development is no doubt problematic. Assessments tend to be more tentative and it is hard to provide definitive answers. The following section explores further the three ways we linked voluntary agreements and sustainable development in chapter 2.

The first linking was to place voluntary agreements within the general policy orientations of ecological modernisation and sustainable development. Both ecological modernisation and sustainable development argue for “anticipatory” strategies with a focus on the causes of environmental problems, technological development, sector encompassing approaches and eco-efficiency. A voluntary agreement should, therefore, in principle include one or more of these elements in order to be seen as a sustainable development tool.

The second linking was to focus on the differences but also similarities between general orientations focusing on efficiency gains, consumption levels and weak and strong sustainability. As argued in chapter 2, these general orientations can be linked as shown in the fourfold Table 2.1. On the one hand, there is a general disagreement as to whether we are currently in “overshoot”, that is, whether we are consuming more than what can

be regarded as sustainable or not. What is at stake here is basically the current and future state of nature. For the advocates of weak sustainability, it is really not that obvious whether resources are scarce at all (in the sense that further depletion would have serious impacts on what is usually referred to as critical natural capital). Hence, there is still room for substitution between different types of natural capital, and between natural capital and other types of capital. For the advocates of strong sustainability, however, we are beyond the point where the present (or any increase in) consumption of natural capital can be sustained.

In addition, there seems to be a division between those who believe that the “efficiency approach” is sufficient, and those who believe that it is necessary but not sufficient for a sustainable development. While some argue that efficiency gains can reduce the environmental load to the acceptable levels, others argue that sustainable development requires reduced levels of consumption. For them, it is not enough to produce more efficiently and change consumption patterns away from resource intensive products to less resource intensive products. It is necessary to address the level of consumption. OECD’s position may be seen as a middle ground position, in the sense that they are by no means sure that eco-efficiency is sufficient for sustainable consumption (and thus sustainable development). The worry is that the achievements gained through an eco-efficient economic development strategy could be overwhelmed by continued growth in consumption.

The third way we linked voluntary agreements and sustainable development was by asking what environmental problems the voluntary agreements actually address, and furthermore, whether or not these problems can be linked to critical natural capital or critical ecological problems. This implies that in order to be an effective policy instrument for sustainable development, it is not enough for the voluntary agreement to perform well in the sense of reaching the targets set in the agreement or contributing to the solution of the environmental problem in question. The agreement must also address an environmental problem that can be related to critical natural capital (and hence sustainable development). Thus, this linkage presupposes an assessment of the magnitude and importance of different environmental problems.

Arguably all three linkages have been present in the discussions of the waste management regime in Norway. In the following we address these linkages in turn, and link them explicitly to the voluntary agreements addressed in chapter 4 and 5.

### **6.2.1 Voluntary agreements, ecological modernisation and sustainable development**

Dryzek (1997:144) describes ecological modernisation as a partnership “in which governments, businesses, moderate environmentalists, and scientists cooperate in the restructuring of the capitalist political economy along more environmentally defensible lines”. Ecological modernisation is described as “a systems approach which takes seriously the complex pathways by which consumption, production, resource depletion, and pollution are interrelated” (Dryzek, 1997:143). Dryzek also argues that the core of ecological modernisation is that there is money in it for businesses. This is substantiated by ideas like:

- (1) “Pollution is a sign of waste”. Hence, less pollution means more efficient production;
- (2) Solving environmental problems in the future may turn out to be vastly more expensive than to prevent the problem from developing in the first place;
- (3) An unpolluted and aesthetically pleasing environment may give more productive, healthier, and happier workers;
- (4) “There is money to be made in selling green goods and services”; and
- (5) There is money to be made in “making and selling pollution prevention and abatement products” (Dryzek, 1997:142).

According to Jansen and Osland (2007), ecological modernisation is based on two assumptions. The first being that the relation between economic growth and environmental protection can be considered to be a positive-sum game where technological innovation is seen as the solution for environmental problems. The second being that ecological modernisation emphasises extensive use of market mechanisms:

... the ecological restructuring of the economy is not, as it was in the environmentalist conception from around 1970, seen to be in conflict with the institutional logic of the market economy — production for a market with the purpose of making a profit. On the contrary, rather than aiming at a radical restructuring of the institution of the market, this policy strategy emphasises an extensive use of the market mechanism. Pollution is seen as a symptom of inefficiency in industrial production (WCED, 1987: 220), and reduced pollution (‘increased efficiency’) can be achieved by ensuring that environmental considerations are incorporated at an early stage into all decisions in all sectors of the economy as well as by the internalisation of environmental costs in the price of the goods in the market (Jansen and Osland, 2007:6).

If we consider the voluntary agreements of packaging waste from the above perspectives, the agreements that we have looked at contain many of the characteristics of ecological modernisation. Several features are prominent. The agreements represent a new policy instrument. The system created makes extensive use of, and is designed in order to utilize market mechanisms. Waste is seen as a resource, and there is a general perception that waste can be seen as a symptom of inefficiency. Through “optimisation”, the use of packaging materials is minimised and subsequently the growth in packaging waste is being curbed and partly reduced. Thus, there are several arguments which support a claim that the voluntary agreements can be seen as an expression of ecological modernisation.

The same arguments can be made regarding the agreement on PCB containing windows, although this agreement concerns a different environmental problem and has a limited time-span. The agreement on PCB containing windows makes use of the same policy instrument, draws on the design of and experiences from the packaging waste agreements, and like the others, makes extensive use of market mechanisms in order to get rid of the hazardous waste PCB.

If we look closer at the agreements for packaging waste, however, there is a tension between the goals of waste reduction and waste optimisation within the agreements.

This tension points towards some of the fundamental problems that exist between different strategies for sustainable development. These differences, we will argue, are also present in the national waste management regime.

### **6.2.2 Norway's waste policy: Mixing efficiency gains, reduced consumption and weak and strong sustainability**

If we look at the development of the Norwegian waste policy regime from the early 1990s onwards, it is possible to detect what can be described as a tension in waste management between an efficiency approach and reduced consumption on the one hand, and a weak and a strong sustainability approach on the other hand. These tensions are reflected both in the national goals and in the policy measures which are supposed to secure the national targets.

In Report to the Parliament No. 8 (1999-2000), the general approach and goals for the national waste policy were further developed. The overall goals from Report No. 44 (1991-92) were upheld, but the Government saw it as necessary to make the level of ambition clearer. The strategic goal for waste management was formulated as follows: "Damage to people and the environment caused by waste is to be minimized, while the waste and waste management should occupy as little as possible of societies resources".<sup>52</sup> Waste management goals were further specified in three objectives. The first objective was formulated as follows: "Growth in the volume of waste that is generated should be significantly lower than the rate of economic growth." (St.meld. nr. 8, 1999-2000, p. 87).<sup>53</sup>

This was justified by the fact that the economic growth and the volume of waste had roughly speaking increased at the same pace. This development would have serious environmental effects, and if the growth in the volume of waste continued we would inflict increased harm to the environment. An addition, however, it was acknowledged that there are practical limits as to how much of the waste can be recycled and as to how stringent the requirements made on the waste facilities can be. It was, therefore, necessary to force a wedge between future economic growth and the growth in the volume of waste (St.meld. nr. 8, 1999-2000, p. 87). Hence, the objective was to break the link between the generation of waste and economical growth. The second objective was formulated as follows:

Given the fact that the quantity of waste for final treatment is to be reduced to a socio-economical and environmentally reasonable level, the aim is that the quantity of waste dealt with by final treatment should, by the year 2010, be equal to

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<sup>52</sup> In Report No. 24 (2000-2001), the strategic goal was reformulated slightly to the following: "Damage to people and the environment caused by waste is to be minimized. To achieve this, waste problems are to be solved by means of policy instruments that ensure a good socio-economic balance between the quantity of waste generated and the quantities recycled, incinerated or land filled." The other goals remained the same.

<sup>53</sup> Our translations.

approximately 25 percent of the quantity of waste generated (St.meld. nr. 8, 1999-2000, p. 87).

Final treatment here means disposal and incineration without conversion to energy.<sup>54</sup> The goal implies that around 75 percent of the waste is to be recycled either by utilising it as materials or as energy. This is justified by the fact that some types of waste, like metals, are only suitable for material recycling and cannot be incinerated. Other types of waste like bark and chippings are unsuitable for material recycling but suitable for energy utilisation. Some waste will be suitable for both material recycling and energy utilisation. The general rule, however, is that “if socio-economic assessments show that material recycling can be placed on an equal footing with energy utilisation, then material recycling will be preferred” (St.meld. nr. 8, 1999-2000, p. 88).

The third objective concerned hazardous waste and stated that “practically all hazardous waste is to be dealt with in an appropriate way so that it is either recycled or sufficient treatment capacity is provided within Norway.” Thus, the aims of waste management were strengthened, and in following years, governments and Parliament have upheld these goals and even strengthened them. In Report No. 21 (2004-2005), the goal of 75 % recycling of waste was raised to 80 %. In addition, a number of new measures were introduced:

- Take steps to raise the proportion of waste recovered, with the aim of reaching 80 per cent.
- Implement a strategy for biodegradable waste, which will include
  - the introduction of waste management plans as a mandatory element of all building projects,
  - the prohibition of landfilling of biodegradable waste, planned to take effect from 1 January 2009.
- Implement a new strategy to increase the proportion of hazardous waste delivered to approved facilities.
- Play an active role in the development of new legally binding and globally applicable rules to ensure that ship recycling is carried out in an environmentally sound way.<sup>55</sup>

Despite the strengthening of waste management policies, however, the amount of waste generated in Norway has been steadily increasing due to rising consumption. From 1995 to 2005, the amount of household waste produced per person in Norway rose from 269

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<sup>54</sup> For incineration involving energy recovery, the final treatment is defined the following way: “In the case of incineration involving an energy utilisation lower than 100 percent then it is the portion of waste that corresponds to the portion of unused energy that is regarded as finally treated. If, for example, the utilisation of energy in a plant is 70 percent, then 30 percent of the quantity of waste is considered to be finally treated, but if the utilisation of energy is 90 percent then 10 percent of the quantity of waste is considered finally treated (St.meld. nr. 8, 1999-2000, p. 88).

<sup>55</sup> [http://www.regjeringen.no/Rpub/STM/20042005/021EN/PDFS/STM200420050021000EN\\_PDFS.pdf](http://www.regjeringen.no/Rpub/STM/20042005/021EN/PDFS/STM200420050021000EN_PDFS.pdf)

kg to 407 kg per year. The main reason is economic growth, stated to be “the most important driving force behind the growing quantities of waste”.<sup>56</sup> In other words, economic growth has resulted in higher production and consumption. Table 6.1 shows the relative rise in waste generation and GDP in Norway from 1995 to 2005.

**Table 6.1. Relative rise in waste generation and GDP in Norway, 1995 to 2005 (percent, 1995=100)** <sup>57</sup>

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>GDP fixed prices</b>	100	105	111	114	116	120	122	124	125	130	133
<b>Household waste</b>	100	116	105	116	120	124	129	138	142	148	156
<b>Industrial waste</b>	100	98	103	105	107	107	107	107	109	115	125
<b>Total waste</b>	100	101	103	107	109	110	111	113	115	121	131

As shown in table 6.1, household waste has been rising steadily (with the exception of the year 1997), and it has been rising more than GDP between 1998 and 2005. The growth in industrial waste is less for the whole period, but industrial waste increases strongly between 2003 and 2005. The growth in total waste is only 2 % less than the growth in GDP for the whole period.

At the same time, however, the last 10-15 years has witnessed a steep rise in the amount of waste used for energy and material recovery, and more and more hazardous chemicals are now collected and treated properly. A large part of this development has been due to the voluntary agreements developed in this period. Table 6.2 shows the waste recovered on a yearly basis between 1995 and 2004. The figures include both household and industrial waste, and recovery includes material recovery, energy recovery and composting.

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56 [http://www.environment.no/templates/status\\_\\_\\_3897.aspx](http://www.environment.no/templates/status___3897.aspx)

57 Source: Statistics Norway. State of the Environment Norway ([www.environment.no](http://www.environment.no)).

[http://62.92.43.137/InternetReportServer?/MiljoInfoRapporter/MalNokkeltall\\_tabell\\_SL\\_2&pRapportID=6RM1-1-1&pSprak=EN&rc%3aparameters=false](http://62.92.43.137/InternetReportServer?/MiljoInfoRapporter/MalNokkeltall_tabell_SL_2&pRapportID=6RM1-1-1&pSprak=EN&rc%3aparameters=false)

**Table 6.2. Waste recovered in Norway, 1995-2004** <sup>58</sup>

<b>Year</b>	<b>Quantity of waste recovered (tonnes)</b>	<b>Proportion of total waste recovered (%)</b>
<b>1995</b>	2721315	56
<b>1996</b>	2858115	59
<b>1997</b>	3064646	61
<b>1998</b>	3201969	62
<b>1999</b>	3397224	65
<b>2000</b>	3525049	65
<b>2001</b>	3646293	66
<b>2002</b>	3807622	67
<b>2003</b>	3989648	69
<b>2004</b>	4181410	70

As shown in table 6.2, waste recovery increased from 56 % in 1995 to 70 % in 2004, a 25 percent increase in 10 years. This substantial increase also explains the change in the national target from 75 to 80 % waste recovery. 80 % was seen to be within reach.

The above figures are commented the following way on the official web-page of “State of the Environment Norway”:

The quantity of waste recycled has risen so much that the amount of waste landfilled and incinerated has declined, despite the rise in the total amount of household waste generated. Waste volumes from industry have been somewhat reduced over the last few years. This is largely due to improved waste-minimizing production processes.<sup>59</sup>

As revealed in table 6.1, the waste volumes from industrial waste increased between 2002 and 2005. This does not, however, change the overall picture. Although waste volumes in Norway increase, an increasing percentage of the waste is recovered.

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<sup>58</sup> Source: Statistics Norway. State of the Environment Norway  
[http://www.environment.no/templates/status\\_\\_\\_3889.aspx](http://www.environment.no/templates/status___3889.aspx)

<sup>59</sup> [http://www.environment.no/templates/themepage\\_\\_\\_2120.aspx](http://www.environment.no/templates/themepage___2120.aspx)

So, what is the problem? What is seen as the problem, we argue, is dependent upon on the perspective taken, that is, which sustainable development strategy one adheres to.

Taking the discussion in chapter 2 as the starting point, we see that the first national waste management goal is most easily placed in cell 3 in table 2.1. The growth in the volume of waste that is generated should be significantly lower than the rate of economic growth. In other words, it is the OECD approach of *decoupling* environmental pressures from economic growth which is expressed in the target. It is less clear, however, if the target should be understood as a target of absolute or relative decoupling. Recalling from chapter 2,

Absolute decoupling is said to occur when the environmentally relevant variable is stable or decreasing while the economic driving force is growing. Decoupling is said to be relative when the growth rate of the environmentally relevant variable is positive, but less than the growth rate of the economic variable (OECD, 2002:4).

Although relative decoupling is necessary, the question is whether this is sufficient for a sustainable development path. OECD (2002:11) seems to argue that, in most cases, “absolute changes in environmental pressures are of fundamental concern”. Understood as a goal of absolute decoupling, the national target seems ambitious. How the wedge between future economic growth and the growth in the volume of waste is to be reached and by which policy instruments, is not easily detectable. The shift from waste reduction to waste optimisation that occurred in the re-negotiations of the packaging waste agreements in 2002 can be seen as an acknowledgement of the argument that there are in fact practical limits as to how much the packaging materials can be minimised without running into other problems like breakage. Thus, there seem to be a tension between efficiency and consumption levels in the current waste management regime. This, to some extent, is detectable in the work of the Committee on Waste Prevention which was appointed by the Ministry of Environment in 2001.

The Committee’s mandate was to look at measures to reduce the amount of waste. The Committee had broad representation from industry, state and municipalities. The Committee’s report was delivered 7 November 2002 (NOU 2002:19) and contained a number of proposals which were directed towards waste prevention rather than waste reduction. The report also discussed the voluntary agreements for packaging waste, with rather mixed conclusions, but the report has not yet been followed up by the Ministry of Environment.

The Committee argued that one should concentrate on waste prevention rather than waste reduction. Waste prevention, it was argued, concerns quality of life, consumer awareness and “closed-loop-thinking”. The starting point of the report was that of industrial ecology, defined as the study of material and energy flows in relation to industry and consumption, and of the influence of economic, political regulatory and social factors on the flow, use and transformation of resources (NOU, 2002:19, paragraph 8.4). It was argued that all supply of material from nature sooner or later ends up as waste. It is therefore possible to prevent waste only by reducing the throughput of materials in the economy. In principle, this could be done by (NOU 2002:19, paragraph 1.2):



1. Changing behaviour and preferences on the demand side (reduced consumption of resource intensive products)
2. Change the production and product design of goods and services (use of recovered materials, increased life time of products, design for recovery)
3. Satisfying different functions with less use of materials (de-materialisation, increased intensity of use)
4. Develop a closed loop society through the further development and establishment of collection and recycling systems (waste as input resources)

Furthermore, the report explicitly stated that “the world faces real resource problems seen in relation to a growing population”, and that the distribution of wealth in the world should be changed so that the material consumption of the poor people in the world is raised. This would increase resource use globally and increase the pressure on natural resources (including energy resources) and the Earth’s ability to absorb waste.

The conclusions drawn by the Committee was that sustainable development required political will to redistribute resources (globally), increased focus on quality of life and less focus on material consumption in the rich part of the world. Thus, the report placed itself within a strong sustainability approach, and to what Dryzek (1997:129) has termed the core story-line of sustainable development:

The core story line of sustainable development begins with a recognition that the legitimate developmental aspirations of the world’s peoples cannot be met by all countries following the growth path already taken by the industrialised countries, for *such action would over-burden the world’s ecosystems*. Yet economic growth is necessary to satisfy the legitimate needs of the world’s poor ... Economic growth should therefore be promoted but guided in ways that are both environmental benign and socially just. Justice here refers not only to distribution within the present generation, but also to distribution across future generations. Sustainable development is not just a strategy for the future of developing societies, but also for industrialised societies, which must reduce the excessive stress their past economic growth has imposed upon the earth.

At the same time, the Committee pointed at some contradiction in national policy goals. On the one hand, the Long-term Planning Document envisages strong increases in private consumption and on the other hand reports to Parliament state that the rise in consumption is not compatible with a sustainable development path (NOU 2002:19, paragraph 3.4.3). One important proposal from the Committee was therefore that future productivity gains should be taken out as leisure or spare time, rather than as increased purchasing power. This combined with a shift in consumption towards more resource efficient products would have long lasting impacts on production and consumption, with real waste prevention effects. Moreover, the political leadership in Norway should develop a policy for increased quality of life and reduced resource consumption (NOU 2002:19, paragraph 7.2).

As mentioned, the Committee addressed the voluntary agreements with a somewhat mixed message. On the one hand, it was clearly stated that the future cooperation between the authorities and business should focus even stronger on packaging

optimisation. This would secure that packaging was seen in relation to the whole chain of production and distribution of products (NOU 2002:19, paragraph 7.2). On the other hand, the Committee argued that the voluntary agreements (and the Extended Producer Responsibility (EPR)), did not directly lead to waste prevention in households. This could, however, be achieved by designing products with longer life-time and the re-use of components, but the extent to which this was achieved was uncertain. The Committee therefore argued that the voluntary agreements should be arranged so that a higher degree of waste prevention could be achieved (NOU 2002:19, paragraph 5.5.1).

In addition, it was argued that despite many positive results from the voluntary agreements, one could not help but notice that the focus and the results primarily had been addressing recycling rather than waste reduction or waste prevention. This was considered a weakness, and the Committee therefore suggested that the ambitions in voluntary agreements regarding waste prevention measures should be strengthened, and that parts of the collected fees should be used for this purpose (NOU 2002:19, paragraphs 8.4.5 and 8.5.3). The industries effort in relation to waste minimisation was described as “not satisfactory” (NOU 2002:19, paragraph 9.3.1). Still, however, it was pointed out that the voluntary agreements for packaging waste were the only agreements which specifically included the target of waste reduction, and these paragraphs the Committee argued, should be used as a model for other agreements as well.

On request from the Committee, Bruvold and Bye (2002) from Statistics Norway delivered a report to the Committee called “An assessment of the contribution of waste policy to the solving of resource and environmental problems”. In the report, many of the assumption which the Committee based their conclusions on were challenged. It was argued by Bruvold and Bye that the environmental problems associated with the waste sector were relatively small. Therefore, they warned that too much attention on waste and too little attention on other sectors could impose extra costs in solving the total environmental problems.

The argument presented by Bruvold and Bye was that the issue that should be addressed was not waste reduction as such, but the environmental and resource problems one wanted to solve by addressing waste. The question they raised, therefore, was which problems waste reduction was supposed to solve. In their discussion, they challenged the assumption in the report from the Committee on Waste Reduction. While the report from the Committee explicitly stated that “the world faces real resource problems seen in relation to a growing population”, Bruvold and Bye argued that this assumption did not hold for the resources linked to packaging materials. The Committee’s view implied that the resources used for packaging materials are actually scarce, but according to Bruvold and Bye they are not.

In its report the Committee judged the situation differently. Although demand and supply for single resources did not necessarily show any signs of resource scarcity at present, the need for increased consumption in developing countries (as demanded also by sustainable development) and nature’s ability to absorb waste streams was not reflected properly through the prize mechanism. Therefore, utilising resources better and reducing the use of virgin material through recycling was of the utmost importance

(NOU, 2002:19, paragraph 3.5.4). Thus, waste prevention based on Life-Cycle-Analysis (LCA) and closed loop thinking was the preferred way to address the issue of waste from a sustainable development perspective (NOU 2002:19, paragraph 3.6).

The contradictory views between the Committee and Bruvoll and Bye can be seen as a conflict between a weak and a strong approach to sustainable development. The dispute, however, is also related to the question of the importance of waste for sustainable development.

### **6.2.3 Is waste a sustainable development issue?**

As we have argued earlier, a third way to link voluntary agreements and sustainable development is to ask what kind of environmental problems the voluntary agreements actually address, and furthermore, whether or not these problems can be linked to critical natural capital or critical ecological problems. To be an effective policy instrument for sustainable development, it is not enough for the voluntary agreement to perform well. The voluntary agreement must address environmental problems that can be related to critical natural capital (and hence sustainable development).

If we take the ranked list of sustainable development issues and their importance presented in chapter 2 as the point of departure, it is possible to make the argument that the question of whether waste is a sustainable development issue or not is dependent upon its relevance for the satisfaction of human need, in particular the essential needs of the world's poor, climate change (and the energy), loss of biological diversity, pollution (PCB, radioactive pollution, acid rain etc.) and food security.

Depending upon whether one takes a weak or strong approach to sustainability, the relevance of waste in relation to these issues will vary. However, one way to address the problem of waste from the perspectives of both weak and strong sustainability is to link waste to clean energy and the deponic capacity of the Earth for greenhouse gases as scarce resources. Doing this would make waste more relevant, even from a weak sustainability perspective, although some – focusing directly on the consumption of energy and emissions of greenhouse gases – would still argue that other measures would be better than doing it indirectly (by focusing on waste and consumption in general).

If we relate the agreements that we have addressed to the above discussion, the packaging waste agreements will probably still be viewed somewhat differently by the proponents of weak and strong sustainability perspectives. With strong sustainability as the point of departure, closed loop thinking and waste prevention would imply that the packaging waste agreements are highly important for sustainable development. With weak sustainability as the point of departure, scarcity concerns and policy measures directed directly at the problems to be solved would imply that the packaging waste agreements are less important for sustainable development. Both perspectives would probably see the agreement on PCB containing double-glazed windows as highly relevant for sustainable development. PCB is simply not something which should be released in nature. The position on PCB is simple not related to the dimensions of weak and strong sustainability or efficiency gains versus reduced consumption.

Looking at the further discussions on packaging waste in the report from the Committee on Waste Reduction, however, there are several propositions which are directly related to the question of the importance of packaging waste from an environmental and sustainable development perspective.

In paragraph 9.3.3, it is argued that an important question is if an increase in packaging materials is to be regarded as a serious environmental- and resource problem or not. The answer is in accordance with the principle of optimisation. The environmental impact of an increase in packaging materials is regarded as “relatively small”, especially if compared with breakage, which means that it is much worse with too little than too much packaging. In addition, paragraph 9.3.4 contained the following conclusion:

Another important element is that increased use of packaging materials in itself is no problem if arrangements are made for and a high degree of material recovery is achieved ... it is not the production and use of packaging which represents the largest environmental- and resource problems, but the extraction and processing of virgin materials. If virgin materials are replaced fully or partly by recovered materials, the environmental impact per tonne of packaging will be relatively low (NOU 2002:19, paragraph 9.3.4).

Seen together, the conclusions drawn by the Committee on Waste Reduction are rather mixed and somewhat contradictory when it comes to the issue of waste prevention and reduced levels of consumption. In fact, it is not clear at all from the above proposals what business should do in order to reduce packaging waste besides the optimisation of packaging materials, and it is equally confusing why they should do so.

It is also highly uncertain if it is possible to achieve waste reduction from packaging materials within the existing waste management regime and the current voluntary agreements. Besides strong economic growth, which is the prime driver for increased consumption, the family structure, among other things, has changed during the last decades, with more single person households. This has led to the production and consumption of more but smaller units, which increases the use of packaging materials.

The last report from the “Business Committee for Packaging Optimization” (NOK, 2007), to the Norwegian Pollution Control Authority (SFT), point to the same drivers. Demographic changes and changes in life-styles increase the use of packaging waste. In the responding letter from SFT to NOK, SFT conclude that the report from NOK fulfils the reporting demands under the voluntary agreements. The increase in packaging waste by 7 % between 2005 and 2006 is also seen by SFT as primarily reflecting life-style changes. SFT ends the letter the following way: “SFT still hopes that NOK through rethinking and effective work will show good results in the future”.

Seen from the perspective we have chosen for the discussion, one may conclude that there are few measures in the national waste policy regime which address the issue of waste reduction and waste prevention from the perspective of reduced consumption. Waste generation is to a large extent driven by economic growth, demographic changes and life-style changes. The voluntary agreements, therefore, seem ill-equipped to address these issues. It is also highly questionable if the voluntary agreements are the right place to address the issue, given the above description of the environmental impacts of packaging waste.

The problem, however, remains. How can the political goal stating that growth in the volume of waste that is generated should be significantly lower than the rate of economic growth, be reached? Or in other words, how is this wedge between future economic growth and the growth in the volume of waste to be achieved? In a sense, it implies policies which challenge the core of capitalism, economic growth.

The main differences between weak and strong sustainability can be summarised as follows: At one end of the spectrum, the argument would go as follows. As long as we create a system which collects and recycles waste within the limits of what makes sense environmentally and economically, the system as such can be seen as sufficient to secure the contribution of waste management to a sustainable development path. There are limits to how much packaging materials can be minimised without creating others and more severe environmental problems.

At the other end of the spectrum the argument would go as follows. Sustainable development is first and foremost about reduced consumption in the rich part of the world. More effective use of packaging materials and optimisation effects are no doubt good, but it will not be enough to secure a sustainable development path. Reducing consumption is therefore an utmost necessity in order to reduce environmental loads. Accordingly, changes in life-styles are necessary.

Seen together, these two positions differ in what they see as necessary changes and the magnitude of change which is seen as necessary to realise a sustainable development. Or in other words, the magnitude of change they consider as necessary for the reconciliation of the concerns for the economy and the environment.

### 6.3 Concluding remarks

In the above discussion we have linked voluntary agreements to the wider context of sustainable development. The discussion of different types of linkages between voluntary agreements and sustainable development demonstrates that the conclusions vary, depending on the perspectives one chooses as the points of departure for assessments. As we have seen, choosing the strong version of sustainability implies that fundamental questions regarding the whole economic system need to be discussed. In that respect our *empirical* analyses of the voluntary agreements on packaging waste and double-glazed windows with PCB have had a more limited scope. However, in another respect we have *widened* the scope. Several studies of voluntary agreements apply strategic perspectives, and strategic perspectives only, on negotiations. In our study we have widened the scope by including more communicative perspectives.

No doubt self interests and strategies are involved in negotiations on voluntary environmental agreements. However, as pointed out in Chapter 1, we believe that focusing on strategic elements only is too narrow-minded. Communicative perspectives should be taken into consideration as well. The theoretical perspectives should open up for the possibility of a more genuine dialog where the parties seek a common understanding of the problem and its solutions. Consequently, in Chapter 3 we presented three types of negotiations based on theoretical considerations: strategic bargaining, deliberative negotiation and deliberation.

Our empirical analyses clearly demonstrate the fruitfulness of broadening the perspective on negotiations. Our cases show that the negotiations are not only a matter of strategic bargaining based on threats and promises. Negotiations run through different phases and they may change character from one stage to another. As the parties learn more about the environmental problem, they change their perceptions and consequently their preferences. As an informant in one of the business associations told us: “In the beginning we knew little about PCB. However, gradually we understood how dangerous PCB is and consequently we had to try to convince our members that we have to take the problem seriously and do something about it”. In other words, we may say that some of the people who were supposed to be spokespersons for the interests of the members of the organisation became, to a certain degree at least, spokespersons for the environment.

The mixed character of both the environmental problems and the negotiations on voluntary agreements that has been revealed in our empirical studies demonstrates that there is a need for further theoretical development in order to fully understand these processes.

## References

- Beckerman, W. (1994). “‘Sustainable Development’: Is it a Useful Concept?”. *Environmental Values* 3 (3): 191-209.
- Beckerman, W. (1995). “How Would You Like Your Sustainability, Sir? Weak or Strong? A Reply to my Critics”. *Environmental Values*, Vol. 4, No. 1: 169-179.
- Bemelmans-Videc, M-L. and E. Vedung (1998). “Conclusions: Policy Instruments Types, Packages, Choices, and Evaluation”. In: M-L. Bemelmans-Videc, R. Rist and E. Vedung, *Carrots, Sticks and Sermons. Policy Instruments and Their Evaluation*. New Brunswick: Transaction Publishers.
- Bjerk, J. (2005). “Verdens beste returordning?”. *Miljøstrategi*, No. 6, 8-9.
- Blowers, A. (1998). “Power, participation and partnership”. In: P. Glasbergen (ed.), *Co-operative Environmental Governance. Public-Private Agreements as a Policy Strategy*. Kluwer Academic Publishers.
- Bohman, J. and W. Rehg (1997). *Deliberative Democracy*. Cambridge, Massachusetts: The MIT Press.
- Brink, P. T. (2002). *Voluntary Environmental Agreements. Process, Practice and Future Use*. Greenleaf Publishing.
- Bruvoll, A. and T. Bye (2001). *En vurdering av avfallspolitikken bidrag til løsning av miljø- og ressursproblemer*. Notater 2002/36. Statistics Norway.
- Cabugueira, M. F. M. (2001). “Voluntary Agreements as an environmental policy instrument – evaluation criteria”. *Journal of Cleaner Production*, 9 (2001), pp. 121-133.
- Cederlöf, J. M. (2001). *Ecological Modernisation and Market-Based Policy Instruments. The use of new instruments in environmental policy in Finland and Sweden*. Helsingfors: Publications of the Swedish School of Economics and Business Administration, No. 101.
- Chidiak, M. (2002). Lessons from the French experience with voluntary agreements for greenhouse-gas reduction”. *Journal of Cleaner Production*, 10, 121-128.
- Common, M. S. (1996). “Beckerman and his Critics on Strong and Weak Sustainability: Confusing Concepts and Conditions”. *Environmental Values*, Vol. 5, No. 1: 83-88.
- Christoff, P. (1996). “Ecological Modernisation, Ecological Modernities”. *Environmental Politics*, Vol. 5, No. 3, pp. 476-500.
- Daly, H. E. 1995. “On Wilfred Beckerman’s Critique of Sustainable Development”. *Environmental Values*, Vol. 4, No. 1: 49-57.
- Daly, H. E. (1996). *Beyond Growth. The Economics of Sustainable Development*. Boston: Beacon Press.

- Daley, D. M. (2007). "Voluntary Approaches to Environmental Problems: Exploring the Rise of Nontraditional Public Policy". *Policy Studies Journal*, 35:2, 165-180.
- Dobson, A. (1998). *Justice and the Environment. Conceptions of Environmental Sustainability and Theories of Distributive Justice*. Oxford University Press.
- Dobson, A. (ed.) (1999). *Fairness and Futurity. Essays on Environmental Sustainability and Social Justice*. Oxford University Press.
- Dryzek, J. S. (1997). *The Politics of the Earth. Environmental Discourses*. Oxford University Press.
- EEA (1997a). *Environmental Agreements. Environmental Effectiveness*. Copenhagen: European Environment Agency. Environmental Issues Series No. 3 – Vol. I.
- EEA (1997b). *Environmental Agreements. Environmental Effectiveness. Case Studies*. Copenhagen: European Environment Agency. Environmental Issues Series No. 3 – Vol. II.
- Elster, J. (1991). "Constitutionalism in Eastern Europe: an introduction". *The University of Chicago Law Review*, 58: 447-482.
- Farsund, A. A. (2005). *Miljøtiltak i jordbrukspolitikken – avgifter, forhandlinger og planer*. RF-2005/217. Stavanger: RF-Rogalandforskning (now IRIS).
- Glasbergen, P. (1998). "The Question of Environmental Governance". In: P. Glasbergen (ed.), *Co-Operative Environmental Governance. Public-Private Agreements as a Policy Strategy*. Dordrecht: Kluwer Academic Publishers.
- Habermas, J. (1984). *The Theory of Communicative Action*. Boston: Beacon Press.
- Hagem, C. (1996). Joint Implementation under asymmetric information and strategic behavior. *Environmental and Resource Economics*, (8): pp. 431-447.
- Hajer, M. A. (1995). *The Politics of Environmental Discourse. Ecological Modernization and the Policy Process*. Oxford: Clarendon Press.
- Hanks, J. (2002). "Introduction. Voluntary agreements, climate change and industrial energy efficiency". *Journal of Cleaner Production*, 10 (2002), pp. 103-107.
- Hawken, P., A. B. Lovins and L. H. Lovins (1999). *Natural Capitalism. The Next Industrial Revolution*. London: Earthscan.
- Helby, P. (2002). "EKO-energi - a public voluntary programme targeted at Swedish firms with ambitious environmental goals". *Journal of Cleaner Production*, 10, 143-151.
- Hjellnes COWI (2000). *Avtaler om reduksjon, innsamling og gjenvinning av emballasjeavfall*. Oslo: Hjellnes COWI AS.
- Howlett, M. (1991). "Policy instruments, Policy Styles and Policy Implementation". *Policy Journal Studies*, Vol. 12, No. ½, pp. 1-21.
- Innst. S. nr. 256 (1999-2000) *Innstilling fra energi- og miljøkomiteen om Regjeringens miljøvernpolitikk og rikets miljøtilstand og om tilleggsmelding til St.meld. nr. 8 (1999-2000)*.



- Jacobs, M. (1995). "Sustainable Development, Capital Substitution and Economic Humility: A Response to Beckerman." *Environmental Values* 4: 57-68.
- Jänicke, M. (1997). "The Political System's Capacity for Environmental Policy". In: M. Jänicke and H. Weidner (eds.), *National Environmental Policies. A Comparative Study of Capacity-Building*. Berlin: Springer.
- Jansen, A-I. and O. Osland (2007). "Ecological Modernization Revisited – Its effectiveness and legitimacy". *Paper submitted to the workshop "The Legitimacy and Effectiveness of Global Environmental Governance" at The 8. Nordic Social Science Research Conference (8.NESS), Oslo 18th – 20th June 2007.*
- Johannsen, K.S. (2002). "Combining voluntary agreements and taxes. An evaluation of the Danish agreement scheme on energy efficiency in industry". *Journal of Cleaner Production*, 10 (2002), 129-141.
- Jordan, A., R. K. W. Wurzel and A. R. Zito (eds. 2003). "*New" Instruments of Environmental Governance? National Experiences and Prospects*. London: Frank Cass.
- Klausen, J. E. and H. Rommetvedt (eds. 1997). *Miljøpolitikk. Organisasjonene, Stortinget og forvaltningen*. Oslo: Tano-Aschehoug.
- Krarpup, S. and S. Ramesohl (2002). "Voluntary agreements on energy efficiency in industry – not a golden key, but another contribution to improve climate policy mixes". *Journal of Cleaner Production*, 10 (2002), pp. 109-120.
- Langhelle, O. (2000). "Why Ecological Modernisation and Sustainable Development Should not be Conflated". *Journal of Environmental Policy and Planning*, Vol. 2, No. 4, December 2000.
- Langhelle, O. (2005). "Harvesting the fruits of corporatism? Voluntary agreements as a policy instrument in waste management in Norway". *Paper presented at NOPSA XIV, Nordisk statskundskabskongress, 11 – 13 August 2005, Reykjavik, Iceland.*
- Lijphart, A., and M. M. L. Crepaz (1991). "Corporatism and Consensus Democracy in Eighteen Countries: Conceptual and Empirical Linkages". *British Journal of Political Science*, 21, 235–256.
- Lindén, A. L. and A. Carlsson-Kanyama (2002). "Voluntary agreements – a measure for energy-efficiency in industry? Lessons from a Swedish programme." *Energy Policy*, 30 (2002), pp. 897-905.
- Lundquist, L. J. (1996). "Environmental Politics in the Nordic Countries: Policy, Organisation, and Capacity". In: P. M. Christiansen (eds.), *Governing the Environment: Politics, Policy, and Organization in the Nordic Countries*. Nord 1996:5.
- McManus, P. (1996). "Contested Terrains: Politics, Stories and Discourses of Sustainability". *Environmental Politics*, Vol. 5, No. 1, pp. 48-73.
- Murcott, S. (1997). *Appendix A: Definitions of Sustainable Development*. <http://www.sustainableliving.org/appen-a.htm>.

- Meadowcroft, J. (1998). "Co-operative management regimes: a way forward?" In: P. Glasbergen (Ed.), *Co-operative Environmental Governance*, Kluwer, Dordrecht, Netherlands (1998), pp. 21–42.
- Nilsson, B. (1998). *Using Voluntary Agreements in Environmental Policy. A Reinforcement of the Dialogue with Industry*. A Report from: The Nordic Council of Ministers, Stockholm.
- Nispen, F. van and A. Ringeling (1998). "On Instruments and Instrumentality: A Critical Assessment". In: G. Peters and F. van Nispen (eds.), *Public Policy Instruments*. Cheltenham: Edward Elgar Publishing.
- NOU 1990:28. *Avfallsminimering og gjenvinning*.
- NOU 2002:19. *Avfallsforebygging*.
- OECD (1995). *OECD Workshop on Sustainable Consumption and Production: Clarifying the Concepts*. Rosendal, Norway, 2-4 July, 1995, Final Report. Paris: OECD.
- OECD (1999). *Voluntary Approaches for Environmental Policy. An Assessment*. Paris: OECD.
- OECD (2002). *Sustainable Development. Indicators to Measure Decoupling of Environmental Pressure from Economic Growth*. SG/SD(2002)1/Final. Paris: OECD.
- OECD (2003). *Voluntary Approaches for Environmental Policy. Effectiveness, Efficiency and usage in Policy Mixes*. Paris: OECD.
- Opedal, S. and A. A. Farsund (1997). "Miljøhensyn og lokal sysselsetting. Avgiften på engangsemballasje". In J. E. Klausen and H. Rommetvedt (eds.), *Miljøpolitikk. Organisasjonene, Stortinget og forvaltningen*. Oslo: Tano-Aschehoug.
- Pearce, D. (1993). *Blueprint 3. Measuring sustainable development*. London: Earthscan.
- Pearce, D. (1995). *Blueprint 4. Capturing global environmental value*. London: Earthscan.
- Pearce, D. And Barbier, E. B. (2000). *Blueprint for a Sustainable Economy*. London: Earthscan.
- Pearce, D. and G. Atkinson (1998). *The Concept of Sustainable Development: An evaluation of its usefulness ten years after Brundtland*. CSERGE Working Paper PA 98-02.
- Pearce, D., A. Markandya and E. B. Barbier (1989). *Blueprint for a Green Economy*. London: Earthscan.
- Pezzey, J. (1992). "Sustainable Development Concepts: An Economic Analysis". *World Bank Environmental Paper Number 2*. Washington, DC: The World Bank.
- Ramesohl, S. and K. Kristof (2002). "Voluntary agreements: an effective tool for enhancing organisational learning and improving climate policy-making?" In: P. T. Brink, *Voluntary Environmental Agreements. Process, Practice and Future Use*. Greenleaf Publishing.

- Reitan, M. (1998). *Interesser og institusjoner i miljøpolitikken*. Oslo: Institutt for statsvitenskap, Universitet i Oslo.
- Rietbergen, M. G., J. C. M. Farla K. and Blok (2002). Do agreements enhance energy efficiency improvement? Analysing the actual outcome of long-term agreements on industrial energy efficiency improvement in the Netherlands". *Journal of Cleaner Production*, 10 (2002), pp. 153-163.
- Rokkan, S. (1966). "Norway: Numerical democracy and corporate pluralism". In R.A. Dahl, *Political Opposition in Western Democracies*. New Haven: Yale University Press, 70–115.
- Rommetvedt, H. (2005). "Norway: Resources Count, But Votes Decide? From Neo-Corporatist Representation to Neo-pluralist Parliamentarism". *West European Politics*, 28:4, 740-763.
- Rommetvedt, H. (2006). "The multiple logics of decision-making". *European Political Science*, 5:2, 193-208.
- Røine, K. (2005). *Industrial implementation of extended producer responsibility in an industrial ecology perspective*. Doctoral Theses at NTNU, 2005:237. Trondheim: NTNU.
- Røine, K. and C-Y. Lee (2005). "With a Little Help from EPR? Technological Change and Innovation in the Norwegian Plastic Packaging and Electronics Sectors". *Journal of Industrial Ecology*, Vol. 10, No. 1-2, pp. 217-237.
- Schmitter, P. C. (1979). "Still the Century of Corporatism?". In P. C. Schmitter and G. Lehmbruch, *Trends Toward Corporatist Intermediation*. London: Sage, 7–51.
- Serafy, S. E. (1996). "In Defence of Weak Sustainability: A Response to Beckerman". *Environmental Values*, Vol. 5, No. 1: 75-81.
- Siaroff, A. (1999). "Corporatism in 24 industrial democracies: Meaning and measurement". *European Journal of Political Research*, 36:2, 175–205.
- Skolimowski, H. (1995). "In Defense of Sustainable Development". *Environmental Values*, Vol. 4, No. 1: 69-70.
- St.meld. nr. 46 (1988-89.) Miljø og utvikling. Norges oppfølging av verdenskommisjonens rapport.*
- St.meld. nr. 44 (1991-92). Tiltak for reduserte avfallsmengder, økt gjenvinning og forsvarlig avfallshåndtering.*
- St.meld. nr. 8 (1999-2000). Regjeringens miljøvernpolitikk og rikets miljøtilstand.*
- St.meld. nr. 24 (2000-2001). Regjeringens miljøvernpolitikk og rikets miljøtilstand.*
- St.prp. nr. 1 (1994-95). Statsbudsjettet medregnet folketrygden for budsjetterminen 1995.*
- St.prp. nr. 1 (2005-2006). For budsjettåret 2006. Skatte-, avgifts- og tollvedtak.*
- Sunnevåg, K. J. (ed. 2000). *Seven Essays on Voluntary Agreements*. Bergen: Foundation for Research in Economic and Business Administration (SNF).

- Torvanger, A. (2001). "Frivillige avtaler i miljøpolitikken", in A. Ø. Røvik (ed.). *Energi og miljø ved et tidsskille – samfunnsfaglige perspektiver fra forskningsprogrammet SAMRAM*. Oslo: Norges forskningsråd.
- Torvanger, A. and T. Skodvin (1999). *Implementing the Kyoto Protocol. The role of environmental agreements*. Report 1999:4. Oslo: CICERO.
- Tsutsumi, R. (2001). "The nature of voluntary agreements in Japan – functions of Environment and Pollution Control Agreements". *Journal of Cleaner Production*, 9:2, 145-153.
- Vedung, E. (1998). "Policy Instruments: Typologies and Theories". In: M-L. Bemelmans-Videc, R. Rist and E. Vedung, *Carrots, Sticks and Sermons. Policy Instruments and Their Evaluation*. New Brunswick: Transaction Publishers.
- Wackernagel, M. and W. Rees (1996). *Our Ecological Footprint. Reducing Human Impact on the Earth*. Gabriola Island: New Society Publishers.
- World Commission on Environment and Development (WECD) (1987). *Our Common Future*. Oxford University Press.
- Weale, A. (1992). *The new politics of pollution*. Manchester University Press.
- Weizsäcker, E., A. B. Lovins and L. H. Lovins (1998). *Factor Four. Doubling Wealth, Halving Resource Use*. London: Earthscan.
- Ørbeck, M. and H. Birkelund (1997). *Miljøavgifter på emballasje*. ØF-rapport nr. 09/1997. Lillehammer: Østlandsforskning.

## Appendix: Informants

<b>Name</b>	<b>Organisation</b>	<b>Year of interview</b>
Rudolf Meissner	Stavanger kommune	2005
Tord B. Tjelflaat	IVAR	2005
Erik Askautrud	Dagligvareleverandørenes Forening	2005
Pål Spillum	SFT	2005
Helge Fredriksen	NHO	2005
Ellen Hambro	Ministry of Environment	2005
Kjell Olav Maldum	Dagligvarehandelens Miljø og Emballasjeforum	2005
Rolf Marstrander	Norsk Hydro	2006
Jan Bjerk	Editor of the journal "Miljøstrategi. Tidsskrift for miljøledelse og miljøteknologi"	2006
Gunnar Moen	Emballasjeretur AS	2006
Bernt Ringvold	SFT	2007
Isabelle Thelin	SFT	2007
Erik Wormstrand	Ruteretur	2007
Tore Gran	Norske Trevarefabrikkers Landsforbund	2007
Arne Slettebø	Foreningen Næringseiendom / Ruteretur	2007
Rannveig Ravnanger Landet	Byggenæringens Landsforening	2007
Arne Sverre Hansen	Glassbransjeforbundet i Norge	2007