Katrien Van Dingenen

GGS Milieudeskundige

Faculteit Geneeskunde en Farmacie

AN IN-DEPTH EFFICIENCY ANALYSIS OF EUROPEAN ENVIRONMENTAL POLICY IN THE FIELD OF PACKAGING WASTE

PROPOSALS FOR MORE EFFICIENT DECISION-MAKING & EFFECTIVE REGULATION

Tutor: Prof G. Van Hoorick

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Foreword

Though a wide range of people contributed to the realisation of this thesis, there are some people to which I would like to address my gratitude explicitly. First of all, I would like to thank my tutor Prof. Dr. G. Van Hoorick because he gave me the opportunity to examine under professional guidance one of the most interesting issues within my post-graduate studies of Environmental Scientist (VUB) and European Economics (ULB). Thanks to this thesis, I expanded significantly my knowledge about the different aspects of European environmental policy applied to packaging waste, a research field that I really want to continue to explore during my professional career. Furthermore, this thesis taught me to analyse critically and thought me to handle a mass of data in an efficient and effective way.

A special word of gratitude goes also to Mr Julian Carroll and Steve Anderson (respectively managing director and chairman of Europen), who, despite their very busy agendas, made some time to answer my 'long and complex' (as stated by Mr Carroll) list of questions; thereby clearly explaining their views on the packaging waste problem. Not having any professional experience, this interview imparted me to some very interesting aspects of packaging waste at industry's level that I never thought of or that, in spite of my economical background and the bulk of literature I read, I didn't think of in the accurate way. Furthermore, Mme Rosalinde van der Vlies and Mr. Otto Hinher (both members of the Commission, DG XI) communicated me some interesting viewpoints at the level of EU-decision-making, which also helped me a lot to compare what has been written about these procedures several years ago and what actually goes on within one of the most important European institutes. Finally, I would also like to thank Mr. Joachim Quaden (Secretary General of Pro Europe) for his very constructive answers to my questions.

I hereby also want to thank enormously all citizens, national authorities, commissioners, Members of the European Parliament and firms who answered my surveys, which contributed significantly to a wider personal acquaintance of some major consumption patterns; (dis-) advantages of packaging waste management systems; environmental awareness among citizens, industry and civil servants; administrative and political procedures and a whole range of other petty facts about all the different stakeholders within the packaging waste chain.

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Executive summary

An effective packaging waste policy prevents inefficient consumption and production patterns with the aim of reducing -where possible- environmental impacts and economic costs brought about by packaging and packaging waste. In this thesis, we examined how well the European packaging waste legislation and other initiatives succeed in both guaranteeing sufficient environmental protection and fair trade within the European Market. Therefore, past environmental and packaging waste policy at European and national level have been critically analysed in order to detect possible bottlenecks to efficient and effective environmental policy, both with respect to policy-making procedures and to its outcomes (the environmental targets and instruments).

First, we found that some basic 'requirements' for effective environmental policy like increased integration, clear communication and a high level of stakeholders' involvement in early stages are apparently very hard to achieve. While integration of 'environmental reflexes' into other policy domains and consumer patterns requires a strengthened green and European identity, the two latter issues (communication and participation) have an apparent opportunity to be improved in the short term. After all, high-quality data, uniformly established among different Member States and organisations can entail better-founded packaging waste policies, correct and fast compliance and effective control. Moreover, reliable and comprehensive information contributes significantly to sound environmental investment decisions and (more) sustainable consumption patterns. Moreover, the general goal of improving the democratic image of the European Union and the profound necessity to facilitate implementation make a clear case for a wider (yet more transparent) use of the knowledge and opinions of various interest groups and stakeholders in early stages of decision-making. Finally, in order to ensure that this cooperative approach contributes to an effective and efficient packaging waste policy, it needs also to consider the broader context of the packaging, demanding a far more holistic approach than is currently the case.

Furthermore, we discovered that the widely recognized ambiguity of the subsidiarity principle has indeed achieved the goal of reconciling a wide range of national interests, but it makes EU's environmental policy extremely complex, requiring long discussions before legislative steps in the field of environment can be initiated and effectively implemented. Moreover, the development of the EU environmental policy showed us that, more than other sectors, this policy is susceptible to changes and individual preferences in the wider political and economic climate. Therefore, robust mechanisms are needed to ensure the compliance of the legal acts at Community level, for which we proposed a more harmonized (yet diversified) and market-based approach, including self-sustaining producer responsibility, national and regional waste-

minimisation programmes (supported by a European information network) and European landfill- and eco-taxes.

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Introduction

Environment used to be considered as a minority interest for well-meaning nature lovers – but nothing could be further from today's reality. Since the 1970s, citizens, industry and politicians began to realize that we depend on our environment for our survival and that effective action is needed to ensure and improve the quality of people's life. In consequence, environmental protection has increasingly developed economical en political dimensions, leading to the application-pressure of common standards across the Union. Nevertheless, the EU possesses only limited authority to intervene in the internal affairs of its member states, particularly with respect of the methods used to implement individual environmental policies[1]. The task of the Community is thus to balance the development of an effective environmental policy programme in accordance with its founding Treaties (like shielding the 'European Market' from serious trade distortions) ànd with the maintenance of a sufficient degree of member state sovereignty.

The aim of this thesis is to examine the extent to which this balance act is (and can) realistically being achieved within EU environmental policy. Including many policy fields, this task received already broad academic interest, where the focus is frequently on the very basis of environmental policy, like integration and sustainable development. However, the proposals to achieve these goals cannot always realistically be obtained or do not offer basic solutions to the problems encountered. Also much has been written on the (legal) possibilities of Member States to apply their own environmental measures, mostly in the context of the legal and practical implications of the subsidiarity issue. With the growing 'undemocratic' image the European Union gets from the average politician and citizen, the importance of the involvement of a wider range of stakeholders within policy-making at a European level is also widely discussed, most of the times concluding that (more) active participation of those involved can both significantly diminish the implementation problems the Union nowadays faces and increase the democratic accountability of the European institutes. Furthermore, the use of economic instruments to promote environmental behaviour is put forward by an increasing number of authors and policy makers, indicating the general belief that such instruments need adequate consideration when putting an environmental policy into practice. Several studies are currently finished/underway to assess the feasibility of such instruments, and possibilities to adapt the newly amended Directive to the Thematic Strategy on the (..) Prevention of Waste are also being examined.

We will complete this research on several points. Firstly, we will analyse the consequences of the implementation of various environmental measures in the Member States on trade in the Internal market, thereby not focusing on the legal aspects, but rather on the consequences on the (costs of

[1] Collins and Earnshaw, 1993.

the) firms. Next, where most authors take this variety of measures as given, we will tackle also the basic questions, like 'why taking different measures if some noteworthy difficulties are encountered by doing this?' and if no satisfactory response is found, we will seek whether the harmonization of environmental measures in the field of packaging waste is desirable and feasible, both on political and practical grounds. With respect to the causes and the proposed solutions for the implementation problems of European environmental law, we will check what has been done with these proposals, trying to find the 'underlying' factors that hinder these solutions.

In order to situate EU's environmental policy within the general concept of policy-making at European level and to be able to learn from the faults the EU made in the past, we will first make a short overview of the actions taken by the European Union, the arisen problems and the following results, both covering the general principles and the measures with respect to packaging waste. To clear out the practical consequences of the problematic nature of the transposition and enforcement issues, we will also take a closer look at the packaging waste-measures taken by the most progressive member states in the second chapter. We will thereby examine the structure; the effectiveness and the overall costs of the systems concerned and the impact of these systems on the other Member States. As an effective environmental policy at European level requires full public support of the Member States, we will explore the most important aspects (and obstacles) of the establishment of the environmental policies (in particular with respect to the role of the Member States within the decision-making process) in the third chapter. We will also look for possible deficiencies in the decision-making and control-processes through a judicious assessment of the principle of subsidiarity and the implementation mechanisms.

The insights obtained from the past and present experiences analysed in the first three chapters will then be used to take a look into the future with a feasibility study of the new Packaging Waste Directive and the packaging waste-objectives of the 6th environmental action programme. In particular, we will propose some solutions for a more efficient and effective EU - packaging waste policy, both with respect to decision processes at European level and to possible (harmonised?) packaging-waste-reduction-instruments.

Objectives and focus

In this thesis, we will try to find out to what extent the Community succeeds in both guaranteeing sufficient environmental protection ànd fair trade within the Internal Market, taking into account some significant 'political barriers' like the subsidiarity principle. Therefore, possible bottlenecks to efficient and effective environmental policy will be detected, examining the earlier efforts on their capability to offer a solution to these problems. Policy making structures, procedures, legal acts and programmes will be subject to this analysis, both at European and at national level. As such, we return to the basis of environmental policy, in order to offer some fundamental proposals for a more efficient and effective environmental policy at European level.

This thesis uses as its context the packaging waste problem because of three reasons (apart from a very strong personal interest in packaging waste).

1. Firstly, waste in general presents our society with a twofold environmental challenge. Besides that all waste has to be recovered or disposed of through industrial operations (which inevitably have significant environmental impacts and economic costs), waste can also be a symptom of inefficient consumption and production patterns (in the sense that materials may be used unnecessarily),[2] which jeopardises the aim of sustainable development[3]. This manifold challenge requires thus an integrated policy approach at all levels of society, which is currently one of the major obstacles to efficient environmental policy.

2. Secondly, the recently amended Packaging and Packaging Waste Directive (2004/12/EC) has extensive provisions for the use of economic instruments within national implementation strategies, a method widely advocated by the latest environmental action programmes for improving the integration of environmental considerations within the market systems of the member states.

3. Finally, from the point of view of evaluating policy effectiveness, the Directive is especially interesting because it is one of the few pieces of legislation that contain directly measurable quantitative targets.

In general, an optimal waste management strategy includes a combination of waste prevention, material recycling, energy recovery, and disposal options (for example landfill or incineration). In this thesis, we will focus on the prevention and recycling of packaging waste, following the guidelines of the discussed Directive.

[2] COM (2003) 301

[3] This aim is introduced in the Treaty in 1998 and became as such one of the major goals of the EU.

Abbreviations

CoR	Committee of the Regions
DSD	Duales System Deutschland AG
EAP	Environmental Action Programme
(6EAP	Sixth Environmental Action Programme)
ECJ	European Court of Justice
ECR	Reports of the European Court of Justice
EEA	European Environmental Agency
EP	European Parliament
ESC	Economic and Social Committee
IMPEL	Implementation and Enforcement of Environmental Law
JRC	Joint Research Centre
LCA	Lifecycle assessment
MEP	Member of the European Parliament
MSW	Municipal Solid Waste
PAYT	Pay-As-You-Throw
PEHD	Poly Ethylene Hexamethylene Dicarbamate
PEI	Packaging Environment Indicator
PET	Polyethylene Terephthalate
PRN	Packaging waste Recovery Note
PVC	Poly Vinyl Chloride
QMV	Qualified majority voting
SEA	Single European Act (1987)
TEC	Treaty establishing the European Community (Treaty of Rome, 1957)
TEU	Treaty of the European Union (Maastricht Treaty, 1992)

1 EU's environmental policy & packaging waste measures

1.1 Introduction

Improving waste management is recognised as a major environmental challenge at European level, as it is generally agreed that, in the absence of additional policy measures, waste generation in the EU is likely to increase for the foreseeable future[4]. After all, each inhabitant of the EU Member States produces between 250 and 620 kilograms of household waste per year, of which about 25 to 30 percent is packaging waste[5]. The European Union addresses this challenge already several decades, developing some major guiding principles, which were (and are) meant to lead (inter alia) to a better packaging waste policy.

In this chapter, we will therefore analyse the main pillars of European environmental policy as a framework for the packaging waste initiatives at EU level, trying to detect possible deficiencies to the European (packaging) waste management policy. Therefore, we will give a short overview of the history of Community environmental policy, after which the discussed policies and measures will be subject to a critical analysis, in order to learn from the faults and deficits of the European policies up to now. After framing the European packaging waste policy through an overview and analysis of the general environmental EU policy, we take a closer look on the specific initiatives taken at European level with respect to packaging waste.

1.2 EU's environmental policy: a quite recent but dynamic phenomenon

1.2.1 Phase 1 (1957-72): An unidirectional focus on the Internal Market

During the first fifteen years of the European Union (1957-1972), environment was of little concern for the European policy makers. With the goal of the establishment of a good-working common market, the Treaty of Rome (1957) placed economic integration at the forefront of European policies, leaving environmental issues in the dark. In contrast to this lack of environmental policy at European level, more and more (very different!) measures were adopted for the preservation and protection of nature at national level[6]. As this variation in national policies and measures brought about significant barriers to trade, business competition and the free movement of goods, the Community could rely on Articles 100 and 235 of the Treaty of Rome to introduce the first environmentally related directives, as such harmonising the environmental results to be achieved[7]. After all, these Articles prescribe that *"the Council shall*

[4] European Environmental Agency (EEA), 2003

[5] www.pro-e.org

[6] Jepessen, 2002

[7] Directives are implemented centrally by the EU but are binding only as to the result to be achieved, leaving it to the member states to choose the form and the methods to transpose the directive into national law.

issue directives for the approximation of the laws, regulations and administrative provisions in the member states which directly affect the establishment or functioning of the internal market" (art 100 TEC, the legal basis for harmonization measures) and that "*action by the Community should prove necessary to attain, in the course of the operation of the common market, one of the objectives of the Community*" (art 235 TEC), where the necessity was judged (unanimously) by the council[8]. As such, directives regulating permissible sound level and exhaust systems in motor vehicles (70/157/EEC), motor vehicle emissions (70/220/EC) and the composition of detergents (73/404/EEC)[9] were 'legally' established to this aim.

1.2.2 Phase 2 (1973-86): The environmental revolution

Besides this growing use of existing (but limited) legal bases of the Treaty for the development of barrier-lifting directives at European level, citizens paid (in the early 1970s) more and more attention to the environmental pollution, which made the alarming consequences of economic growth a political reality not only for national- but also for European authorities[10]. Furthermore, the UN conference on the environment held in Stockholm in 1972 called for international cooperation for and on the environment, focusing on science and technology as possible solutions to environmental problems. As a consequence, it was decided at a summit meeting of the heads of state and government of the Member States in Paris the same year that environmental protection should be added to the Community agenda[11].

Subsequently, the first environment action programme (EAP)[12] was adopted, covering the period from 1973 tot 1976, based on a vertical and sectored approach to ecological problems[13]. As does the second EAP (1977-1981), it elaborates a detailed list of the actions necessary to take in order to control the vast quantity of problems brought about by the increasing pollution-level. Eleven principles were stipulated, including the precautionary principle, the 'polluter pays' – principle and the principle of rational utilization of natural resources. They also underlined the importance of close cooperation with the OECD, the UN and the Council of Europe on environmental issues, and called for a significant improvement of scientific knowledge, education and a long-term vision of national environmental programmes[14]. The third EAP (adopted in 1983) supported a global strategy with a strong focus on prevention (instead of control ex post) of pollution and

[8] Lenaerts, Koen in Abraham et. al, 1995
[9] Hildebrand, 1992
[10] EC, 1996 ; EC, 2000
[11] Lindström, C. (1998).
[12] An action programme is a policy document from the EC which aim to provide strategic guidance and orientation for the work programmes and actions of the principal actors within the EU (EEA, 1995).
[13] EC, 2000
[14] EC, 1996 ; Lindström, C. (1998).

integration of the environmental issues into other policies of the European Union, both major elements for a more efficient environmental policy.

In the period between 1973 and 1986, lots of new environmental legislation were established at European level, and several new 'environmental' institutions were set up, like for example 'the Environment & Consumer Protection Committee' (DG III) and 'the Committee on the Environment' in the European Parliament (both created in 1973), followed with the establishment of a separate Directorate General XI (Environment) in 1981.

1.2.3 Phase 3 (1987-92): The establishment of Legal Competence

The fourth EAP (1987 - 1992) emphasizes once again the need for effective integration, taking into consideration four specific activity domains, being the complete and efficient application of Community law, the control of the impact of all possible pollution sources, the accessibility of accurate information for all citizens/industry and employment creation[15]. However, as the EAPs don't have any legal force, they can only suggest the actions to be taken. Consequently, one needs directives, acts and treaties in order to make these suggestions hard. As such, the entry into force of the Single European Act (SEA) in 1987 (the European Year of the Environment) is acknowledged by the European Commission as the turning point for the environment at European level, as it introduced a specific environmental chapter (Title XVI) in the Treaty, and giving the Community explicitly the authority to adopt common environmental legislation. It extends qualified majority voting to environmental proposals[16] and, for the first time in European history, the integration of environmental policies into other policies was settled down in a legally binding text[17] (ex Article 130s –now Art 175-)[18].

The tables below (table 1 and 2) show respectively an extract from this new chapter and a summary of the main differences between article 100 and 130s TEC. As can be seen from the institutional and instrumental differences between the two legal bases (table 2), it is clear that the choice of the legal basis is the pivot on which the balance of 'federalism' (the balance of power between the Community and the Member States) turns[19], as such playing a very important role in the decision-making at European level. Also the basic environmental objectives and principles were incorporated into the Treaty (art 130r TEC –now art 174- ; see table 3 at page 13 and Annex I). At the same time however, the importance of national sovereignty and subsidiarity was also laid down in this chapter (art 130 r & t TEC –now art 174 & 176-), limiting as such the

[15] EC, 1996

[16] In this way, the European Parliament (EP) can exercise more influence, which is a positive evolution, as environmental concerns tend to be better represented in the EP than in other institutions (Peterson & Bomberg, 1999).

[17] EC, 2002c

[18] This Article constitutes the legal basis for environmental Directives

[19] Abraham et al, 1995.

power of the European institutes to act 'freely' with respect to environmental legislation/measures (see the next chapter for a deeper analysis on this issue).

Table 1: Environment included as a new competency for the European Community.

Title	Issue	Article	Right of initiative	Council voting rule	Parliament involvement
XIX Environment	General environment policies	175 (1)	Commission	QMV	Co-decision
	Taxes, development plans etc	175 (2)	Commission	Unanimity	Consultation
	Environment action programmes	175 (3)	Commission	QMV	Co-decision

Source: Extract from the treaty establishing the European Community, part III (Community policies)

Table 2: Differences between article 100 and 130 TEC

Article 100 TEC	Article 130s TEC
Full harmonization of standards	Minimum standards
Member States cannot take or maintain stricter measures (exception: art 100a(4))	Member States may take or maintain stricter measures
Decision-making done by the Council and the Parliament in the co-decision procedure (qualified majority in the Council)	Decision-making done by the Council in the cooperation procedure by qualified majority*
To be applied particularly in the case of environmental legislation relating to products	To be applied particularly in the case of environmental legislation concerning installations
Economic considerations come first (elimination of distortions in the internal market)	The objectives of the measures must clearly and predominantly promote environmental protection

Source: Demmke & Schröder, 1999, p. 90.

** This provision is altered by the Maastricht and Amsterdam Treaties (see next sections)*
*** See Cases 300/89 and 155/91 (see annex V) for the distinctive use between these two articles.*

To follow up the implementation and enforcement actions of the Member States, the European Union Network for the implementation and enforcement of Community environmental law (IMPEL) has been established in 1992. It is an informal network of the environmental authorities of the Member States and the Commission, and has the objective to create the necessary impetus in the European Community to ensure a more effective application of environmental legislation. Although it has no formal legal base, this network organisation produces work of a very high quality[20], as such providing vital information for policy makers.

[20] EC, 2002b.

1.2.4 Phase 4 (1993-1999): Consolidation

The 5th EAP (1993-2000), which was the EU's principal response to Agenda 21 (one of the major outcomes of the Rio Conference on Environment and Development (1992)), sheds light upon the sustainability issue, as it reconciles economical and political development with environment. Sustainable management of natural resources and a continued battle against pollution by means of preventive action and integrated environmental policy were the main elements[21] put forward in the 5th EAP[22]. In the wake of this EAP (and at international level, the Brundlandt rapport of 1987), the entry into force of the Maastricht Treaty (Treaty on the EU, TEU) in 1993 brought further progress on several fronts of environmental policy, as it added the concept of 'sustainable and non-inflationary growth respecting the environment' to the European Community's (legal) tasks (see preamble of TEU, 7th recital; Amendment of art 2 TEC: "(..) respecting the environment"), and introduced the precautionary principle of the first two EAPs in law[23].

On the other hand, the subsidiarity principle was moved forward (from Art 130r to Art 3b TEC), becoming as such a 'more important' issue to consider in environmental policy-making (see infra). Moreover, the TEU added to Art 130t that "more stringent protective measures must be compatible with the TEU and shall be notified to the Commission", in order to prevent any closing off of national markets[24]. Legal efforts to require better integration between the concerned policies however were missing in this Treaty. Moreover, at the time the Maastricht Treaty was finally ratified (1993), environmental concerns appeared to become less salient as the (depressed) state of the economy became the most pressing issue for many voters. Support for ambitious new environmental legislation diminished and new popular doubts about the European project made up another reason for the Santer Commission to try to 'do less but do it better'[25] (see infra, section 1.3.1).

In this context the Amsterdam Treaty (1997)[26] is considered to be an important step forward, as it 'promoted' the principle of sustainable development and the -only once mentioned- principle of integration (see SEA, Art 130s) into one of the basic principles in the opening parts of the Treaty. Calling for 'a harmonious, balanced and sustainable development of economic activities' (Article 2 of the Treaty) and for 'an integration of environmental protection requirements into the definition and implementation of the Community policies […] in particular with a view to promoting sustainable development' (Article 6 of the Treaty), it made environmental policy a

[21] Only those elements, which are important for the issue of waste management, are mentioned here.
[22] EC, 1996
[23] EC, 2002c.
[24] Lenaerts, Koen in Abraham et. al, 1995
[25] Peterson & Bomberg, 1999.
[26] Following the SEA and the Maastricht Treaty, the Amsterdam Treaty was the third revision of the TEU and the TEC, simplifying and consolidating these treaties through the merging and a renumbering of the provisions.

key political objective of the Union ànd its Member States. Moreover, the Cardiff Integration Process (a process launched by European heads of state and government in June 1998) requires the different Council formations to integrate environmental considerations into their respective activities. Agriculture, transport and energy were the first sectors identified in June 1998. Industry, development and internal market followed in December 1998 and economic and financial affairs, general affairs (foreign affairs and trade) and fisheries in June 1999.

To respond to the need for independent and detailed scientific and technical information, the European Environmental Agency (EEA) was set up in 1993 on the basis of EC Regulation 1210/90[27]. It is the hub of the European Environment Information and Observation Network (EIONET, established at the same time as the EEA)[28], which links 660 green organisations across the continent[29]. The EEA delivers the information needed to follow progress with respect to a whole range of environmental issues and supports the review of the related policies and strategies and assures public information and participation[30]. Increasingly the EEA has been asked by the European Parliament, the European Commission and its member countries to report and advise not only on the state of the environment but also on the effectiveness of environmental policies and their implementation[31].

1.2.5 Phase 5 (2000-…): A new - sustainable - environmental revolution?

The current phase of Community environmental policy is marked by continuing efforts to realize a sustainable development via, among other means, a far-reaching implementation of the integration principle. The Lisbon strategy (2000) for example focuses on sustainability in the much quoted target to be "the most competitive and dynamic knowledge-based economy in the world capable of *sustainable* economic growth with more and better jobs and greater social cohesion" in 2010[32]. Also the EU Sustainable Development Strategy and the 6th Environmental Action Programme (2000-2005/2010) were dominated by the pursuit of the relevant principles on the integration issue. We should thereby not neglect the impact of the ten-year review of the Rio Conference on Environment and Development (The Johannesburg Summit, 2002) at international level, which stressed the importance of an effective global partnership for sustainable development and a better integration of environment and development at the international level[33]. This is translated into the 'Johannesburg Declaration', which can be regarded as a political

[27] This Regulation was adopted in May 1990 and came into force on 30 October 1993
[28] For more information, see http://eionet.eu.int/
[29] EC, 2002a.
[30] Jiménez-Beltrán, 2001.
[31] McGlade, J., 2004
[32] http://europa.eu.int/comm/environment/integration/integration.htm
[33] http://europa.eu.int/eur-lex/en/com/cnc/2001/com2001_0053en01.pdf

declaration mirroring the will of the international community to move towards sustainable development.

1.2.5.1 The EU Sustainable Development Strategy

The transition towards more sustainable development has become a strategic goal for the European Union. Nevertheless, this is a long-term process requiring structural changes in our economy and society, but also in the way we develop and implement policies. In order to succeed, this will require the active participation of all sectors and groups (Community institutions, the Member States, private and non-governmental sectors and local authorities)[34], in the future even more than what has already achieved up to now. The promotion of sustainable growth, by implementing the strategy for sustainable development adopted in Gothenburg, is still one of the European Union's priorities. The Council's objectives include protecting the environment in the interest of growth and employment. In order to achieve this objective, the Council set out some targets which were to be taken in the past twelve months, like for example breaking the link between economic growth and resource use and environmental degradation; reaching an agreement in order to adopt the Directive on environmental liability; implementing the Aarhus Convention and achieving the objectives set in the Millennium Declaration and at the Johannesburg Summit. A review on this topic began on July 30th, 2004 and will be concluded in October of this year (2004).

1.2.5.2 The 6th environmental action programme

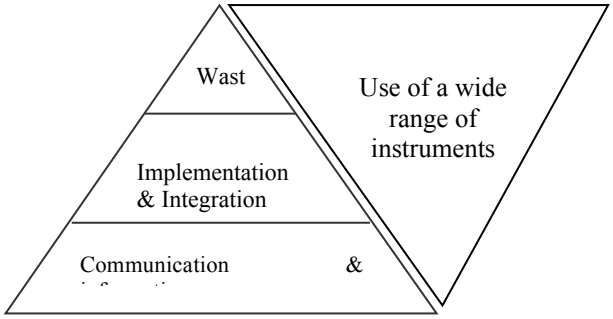
The importance of integration and effective implementation of existing Community law was reaffirmed in the 6th EAP (see Annex IV for the main articles), thereby focusing on seven thematic strategies, including the sustainable use of resources and a more effective waste management (see Article 8 of this decision). To achieve a more effective (packaging) waste management, one needs better implementation and more policy integration, which in turn requires better information on environmental issues as well as more interaction with all stakeholders, thereby using a blend of (legal, economic,..) instruments.

Figure 1 visualises the summary of what the 6EAP includes with respect to waste prevention and recycling. Most importantly, the 6EAP decision calls for a number of measures to be adopted to further promote waste prevention and recycling, including a thematic strategy on the recycling of waste and initiatives in the field of waste prevention. In particular, article 8(2)(iv) calls on the Commission to propose new or revised legislation "including inter alia construction and demolition waste, sewage sludge, biodegradable wastes, packaging, batteries and waste shipments, clarification of the distinction between waste and non-waste and development of

[34] http://europa.eu.int/comm/sustainable/pages/strategy_en.htm

adequate criteria for the further elaboration of Annex IIA and IIB of the Framework Directive on Wastes"[35]. Moreover, it seeks to promote more sustainable waste management, by minimising the environmental impacts of waste while also taking into account economic and social considerations[36].

Figure 1: Structure of the objectives of the 6th Environmental Action Programme



Source: Own interpretation

As we will see in the next chapter, implementation problems cannot always be solved by the existing structures and mechanisms in the member states. The 6th Environmental Action Programme (6EAP) therefore clearly states that the full application, enforcement and implementation of all existing Community environmental legislation are a strategic priority for the European Union[37]. Vigorous legal action through the European Court of Justice (ECJ) should therefore be combined with support for best practices and a policy of public information[38] and open communication.

In the next section, we will examine to what extent these issues are effectively tackled, focusing also on the basic elements of a successful environmental policy: quality legislation and institutions, a high degree of policy integration and a widespread promotion of sustainable development.

1.3 Lessons learnt from the past: an evaluation of the European environmental policies up to now

Academic literature mainly focuses on the national deficiencies with respect to implementation and enforcement to analyse the effectiveness of Community environmental policy. However, the institutions of the European Community also have some major tasks in order to achieve the goals established in the Treaties, programmes and conferences. In this part, we will therefore take a closer look on the (present and absent) actions of the concerning institutes related to these

[35] Decision N° 1600/2002/EC laying down the Sixth Community Environment Action Programme
[36] 6EAP : COM (2001) 31
[37] EC, 2002b
[38] 6EAP : COM (2001) 31

‘words’, abstracting from the actions to be taken at national level (see next chapter), and focusing on those aspects which play an important role in the packaging waste policy. To have a clear view on what has been said in the previous part, its contents are summarised in the table below (table 3).

Table 3. Environmental principles, objectives and the elements to consider for EU environmental policy.

Principles and objectives of EU environmental law	
Principles	**Objectives (art 174 (1))**
Integration at European and national level (Art 6)	Preserve, protect and improve the quality of the environment.
High level of protection (taking into account the diversity of the regions and allowing for more stringent measures at national level) (Art 2, Art 95 (3), Art 174 (2.1))	Promote measures at international level to deal with regional and global pollution problems
Polluter pays (Art 174 (2.2))	Rational utilization of natural resources
Rectification of environmental damage at source (Art 174 (2.2))	Contribute to the protection of human health
Preventive action (Art 174 (2.2))	
Factors to take into account in environmental policy	
General principles of EU law	**Other elements** (art 174 (3))
Supremacy of European law (C-6/64)	Available scientific and technical data
The Member States are the Masters of the Treaty (art 48)	Environmental conditions in the various regions
State liability of Member States (art 10)	Potential benefits and costs of action or lack of action
Enumerated competences (art 5)	
Direct effect of European law (C 26/62)	
Subsidiarity (art 5)	
Sustainable development (art 2 and 6)	

Source: Own summary on the basis of the data in Demmke & Schröder, 1999 & Lindström, 1998.

1.3.1 Legislation and institutionalisation

In the period between 1973 and 2003, hundreds of new environmental legislation acts were established at European level, and several new 'environmental' institutions were set up. However, the rate at which the Council adopted new directives and legislative measures tended to slacken off between 1978 and 1984[39], which was seen by many authors as a rather negative evolution. Though, if less legislation is linked with better legislation, one could say that this could be a positive trend. For the improvement of legal acts to happen, however, we had to wait until the beginning of the nineties, when the Commission made the slogan 'legislating less to

[39] Johnson, S. & Corcell, G. (1995)

legislate better' hers (partly due to lack of human resources to follow the increasing legislative needs[40], but also due to a lack of public support for a far-ranging environmental policy at European level[41]), concentrating much more on the quality than on the quantity. As poor legislation is one of the major causes of implementation problems (see infra, chapter two), this 'adaptation' can only be welcomed. Having technical matters increasingly being based on the recommendations of national experts (within committees and working groups –see chapter 3 for more information on this kind of decision-making-) is a second element that contributes to a higher quality of legal acts. However, much work has still to be done to obtain high quality legislation in all environmental domains. In this context, EU commissioner Mevr. van der Vlies told us that *'sometimes European legislative instruments are adopted without taking into consideration the future problems with transposing these provisions into the national laws of the Member States. Sometimes, provisions are deliberately vague as the result of a politicial compromise, which does not solve the problem, but transfers the problem to the implementation phase'* [42].

With respect to the institutional aspect of EU's environmental policy, one cannot complain about the number of environmental institutions and organisations set up to provide the necessary information and studies for environmental policy making at European level. The most important ones to be mentioned are the EEA (with 5 Topic Centres like 'The European Topic Centre on Waste and Material Flows' (ETC/WMF), the EEB, the Institute for European Environmental Policy (IEEP)[43] and the different Joint Research Centres (JRCs) on environmental matters (like the one in Ispra, Italy on Environment and Sustainability). The data and findings of DG Environment, Eurostat and all European research centres related to the environment and other environmental organisations at European level are centralised at the European Information and Observation Network (EIONET, see supra), providing as such an indispensable source of data for effective decision-making. As will be shown further however, this (statistical) information has not always the quality decision-makers need so badly…

On the other hand, when we take a deeper look into the very basis of environmental policy making, it becomes clear that DG XI faces some real obstacles within the European institutes, and even the Commission itself when trying to initiate environmental laws. The Commission indeed has important powers to set environmental policy, but the influence of DG XI is highly circumscribed, as DG XI's priorities and loyalties are often at odds with those emerging from other (more core-) DGs, like Internal Market (DGIII) or Agriculture (DG VI) [44]. Moreover, DG

[40] Demmke & Schröder, 1999.
[41] Peterson & Bomberg, 1999.
[42] Mevr. van der Vlies works in DG4 (sustainable production and consumption) of DG XI of the Commission.
[43] See http://envirocom.com/ieep/index.htm
[44] Peterson & Bomberg, 1999.

XI disposes of only a restricted number of permanent staff[45], making it dependent of experts and officials on secondment from national capitals, other EU institutions and private organisations to get its information and influence[46]. This 'extra help' can undoubtedly be interesting as second source, but certainly not as the only one...

1.3.2 Integration and sustainable development

> *"EU environmental policy has made large and confident strides since 1973, but it is hard to escape the conclusion that the really difficult work - that of greening policy areas regarded as central to the integration project, namely trade, agriculture, and the internal market - has hardly begun."* (Jordan, 1999: 15).

Indeed, much has been written about this 'greening of the European Union'[47], but little has been achieved up to now in this –so important- domain of environmental policy. Despite some promising organizational and procedural efforts to this aim, the European institutions still cope with significant problems on the integration issue.

The European Commission showed itself to be eager to reform by translating the integration principle into its organization, by appointing 'environmental correspondents' in most directorates-general (DGs). These 'reflector units' have the task to advise the DG concerned on environmental matters within the framework of an environmental impact and cost/benefit analysis of proposals with significant effects on the environment (thus helping them to establish a Strategic Environmental Impact Assessment). Moreover, an Integration Unit has been set up to report to DG XI (environment) about the developments in the other DGs. However, environmental policy is -despite the introduction of these measures- an obvious example of the fragmentation and absence of adequate coordination mechanisms in the Commission. The measures taken so far can be considered to have failed, in particular competition (DG IV), agriculture (DG VI) and transport (DG VII)[48]. By requiring the sectored formations of the Council to produce their own strategies for integrating environment into their work, the Cardiff process has undoubtedly contributed to raising the political profile of integration, the latter now being regularly discussed at the highest political level – i.e. European Council. The Cardiff process has also generated a sense of ownership of environmental integration in some Council formations – with positive knock-on effects on other EU institutions and member states[49].

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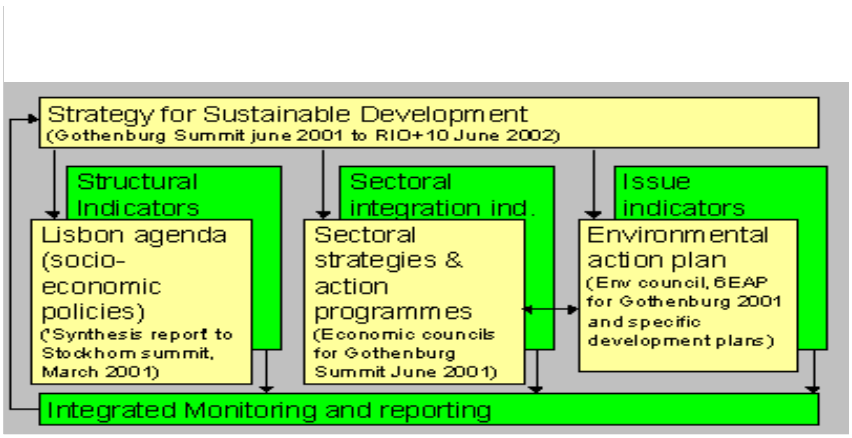
[45] Survey of some Commission's members (DG XI).
[46] Peterson & Bomberg, 1999 & Evans, 1996, p. 601.
[47] See for example, Lenshow, 2001.
[48] Demmke & Schröder, 1999.
[49] http://europa.eu.int/comm/environment/integration/integration.htm

With respect to the broader integration between environment, economic and social factors (sustainable development), it is striking to see that, while the Maastricht treaty added the concept of 'sustainable and non-inflationary growth respecting the environment' to the European Community's (legal) tasks, little systematic progress had been made until the 1998 Cardiff summit. This was due to many reasons, but there is one standing out: the action programme was an environmental agenda, having little credence or understanding in the sectored policy making fields, the cause of most environmental pressures in the first place. This affected not only the progress in improving environmental quality (apart from a few easily recognised issues caused by point source pollution), it also hindered the assessment of environmental problems, their causes and effects, and the collection of appropriate information and identification of indicators, all vital elements for effective policy-making[50].

Cardiff changed this problematic issue, by putting sustainability thinking into a faster track. Also the Gothenburg summit in 2001 launched a better basis for a strategy for sustainable development, as the Presidency conclusions of this European Council stated that "The European Council agreed a strategy for sustainable development which completes the Union's political commitment to economic and social renewal, adds a third, environmental dimension to the Lisbon strategy and establishes a new approach to policy making." From an operational point of view, this merging of the economic and social dimensions with the environmental dimension brings us to a "three corridors" model (see figure 2) mirroring roughly the long preserved idea of sustainable development as being supported by three pillars (social, economical and environmental) . The Gothenburg conclusions provided thus a more efficient framework for policy action and the timely review of progress has been established, which has broad consequences for all European bodies effectively introducing a formal requirement for "joined thinking" across all policy fields.

Figure 2: The three corridors model to follow progress in sustainable development



[50] Jiménez-Beltrán, 2001.

Source: Jiménez-Beltrán, 2001, p. 6.

The only step that is needed now is to compromise on the policy headlines and indicators (ecological 'convergence criteria') to assess progress. 'If we know where we want to go, and have a way to check that we are heading in the right direction, we may get there'[51]. Therefore, the Barcelona summit (March, 2002) should have established a limited number of indicators and targets; however, it did not address further the processes of environmental integration[52].

1.3.3 Public participation, information and communication

The Convention on access to information, public participation in decision making and access to justice in environmental matters (Aarhus Convention, 1998) sought to strengthen the role of members of public and environmental organisations in protecting and improving the environment for the benefit of future generations. An increased transparency and accountability of government, the possibility for citizens to express opinions and concerns (which are taken into account) and public access to judges and review procedures are the main elements to this aim[53]. All (15) EU Member States signed the Convention, but not all Member States have ratified the Convention at the time of writing[54]. When we take a look at the European Institutes and its environmental policy, lots of information on environmental issues is available via the EU website[55]. Also the data of the EEA, IMPEL and other organisations are widely available via the Internet. However, as we will show in the third chapter, the complexity (and thus non-transparency) of the decision process at European level presents a significant barrier to public participation and involvement, which needs improvement as a matter of urgency. Also public access to the ECJ is not always guaranteed (or is too expensive)[56], which makes the call for better enforcement means even more important.

Similarly, in an effort to simplify administrative procedures and improve relations with industrial stakeholders, the Commission's Environment Directorate (DG XI) placed in the beginning of the nineties a new emphasis on 'voluntary negotiations' and 'cooperative corporatism', or directing governments to set targets, but allowing industry to help determine what those targets should be and how to meet them best[57]. The Packaging and Packaging Waste Directive perfectly reflects

[51] Jiménez-Beltrán, 2001.
[52] EEA, 2002a.
[53] EC, 2002c.
[54] Only Belgium, Denmark, France, Italy, Portugal, Denmark, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland and Czech Republic have ratified the Convention so far.
[55] See, for example europa.eu.int/comm/secretariat_general for the Commission's code of conduct, to download a standard complaint form (when a Member State did not comply with Community law); also the sites of EUR-lex, Celex, Prelex, Oeil, Rapid, SCADplus, ECLAS etc on http://europa.eu.int provide a whole range of official documents.
[56] Course Van Hoorick (VUB, Environmental Expert), G. & Lord, C. (ULB, European Economics) (2003-2004).
[57] Peterson & Bomberg, 1999.

this kind of 'cooperative' legislation, as it leaves it up to the industry and national authorities to choose the best method to meet the material-specific-targets.

In order to see what the EU has done to realise the goals described above with respect to packaging waste, we now take a critical look at the packaging waste initiatives of the Community.

1.4 European packaging waste - initiatives

1.4.1 European packaging waste policy: an overview

Packaging waste policy at European level began initially in 1975, when the oil and energy crisis of 1973 –1975 highlighted the importance of avoiding any waste of natural resources, leading to renewed interest in recovering raw materials and energy through the re-use and recycling of wastes. These favourable circumstances allowed for the adoption in 1975 of a framework Directive on waste[58]. This framework Directive lays down basic requirements for Member States with regard to handling waste and defines what is meant by "waste" (including the definition of packaging waste and packaging waste management). It states that Member States must ensure that the disposal and recovery of waste does not present a risk to water, air, soil, plants and animals. Furthermore, they must not allow waste disposal to constitute a public nuisance through excessive noise levels or unpleasant odours, or to degrade places of special natural interest. Member States must prohibit the dumping or uncontrolled disposal of waste; they must establish an integrated and effective network of waste disposal plants, prepare waste management plans, ensure a proper handling for those who store waste, and ensure that waste treatment operations receive a permit (a license). Waste collectors must have special authorisation to operate or to be registered. Companies carrying out waste collection or disposal must also keep records of the waste that they handle and will undergo periodic inspections[59].

Ten years after the establishment of the Framework Directive, the Community first introduced measures on the management of packaging waste with Directive 85/339/EEC on the packaging of liquid beverage containers intended for human consumption. Nevertheless, the contents of this Directive were far too vague to bring about the necessary harmonisation of national packaging waste policies. As a consequence, diverging national legislation appeared in several member states, creating serious market distortions. Moreover, the significant drop in landfill capacities in Europe[60] was an extra stimulus for the Commission to come forward with a Proposal for a Council Directive on Packaging and Packaging Waste in 1992. Following a prolonged

[58] Directive 75/442/EEC ; Johnson & Corcell, 1995.
[59] Council Directive 75/442/EEC on waste, as amended by Directive 91/156/EEC.
[60] www.pro-e.org.

discussion in the European Parliament and the Council of Ministers, Directive 94/62/EC was adopted[61]. This Directive (which was to be transposed into national law by the member states by 30 June 1996) aims to harmonize national measures in order to prevent or reduce the impact of packaging and packaging waste on the environment ànd to ensure the functioning of the Internal Market (Art 1 of the Directive). On the whole, the Directive covers all types of packaging (paper, board, glass, plastic and metal) and lays down measures aimed, as a first priority, at preventing the production of packaging waste and, as additional fundamental principles, at reusing packaging, at recycling and other forms of recovering packaging waste and, hence, at reducing the final disposal of such waste. It also calls for lifecycle assessment (LCA) techniques to be used to justify a clear hierarchy between reusable, recyclable and recoverable packaging. In particular, the Directive sets targets for both the recovery and recycling of waste, which had to be achieved by 2001 (2006 for Greece, Ireland, and Portugal). The Directive also requires member states to ensure that 50 to 65% (by weight) of all waste is recovered from the waste stream and between 25 and 45% is recycled, with a minimum of 15% of each type of material being recycled[62]. The legislation also stipulates that Member States should take the necessary steps to set up systems capable of handling the return, collection, reuse or recovery of waste[63]. Several decisions relating to identification systems, formats for databases and reports, derogation clauses and reference standards with respect to this Directive followed its issue (see Annex V).

In December 2001, the Commission issued a Proposal to amend Directive 94/62/EC on packaging and packaging waste[64], laying down new, more ambitious targets for recovery and recycling, to be met by 30 June 2006 (or 2009 for Greece, Ireland and Portugal –see Table 4-).

Table 4: Packaging Waste Recovery and Recycling Targets of the initial and amended EU Packaging & Packaging Waste Directive 94/62/EC.

	1994 Directive	2001 EC Proposal	Final agreement (02/2004)
Deadlines	EU 12: 2001 GR, IRL, P: 2005 Acceding States: varying transition periods (Accession Treaty)	EU 12 : 2006 GR, IRL, P: 2009 Acceding States: to be addressed after end of accession negotiation	EU 12: 2008 GR, IRL, P: 2011 Acceding States: individual deadlines, ranging from 2012 to 2015
Recovery target	Min: 50% Max: 65%	Min: 60% Max: 75%	Min: 60% (no maximum; incineration with energy recovery may be counted)
Recycling target	Min: 25%	Min: 55%	Min: 55%

[61] http://europa.eu.int/comm/environment/waste/packaging_index.htm

[62] This percentage is set up in order to make sure that all materials were taken in consideration, and not only the "easy" (heavy) ones (like glass for example).

[63] Directive 94/62/EC on packaging and packaging waste

[64] COM (2001) 729

	Max: 45%	Max: 70%	Max: 80%
Material (minimum) targets	All materials 15%	Glass 60% Paper 55% Metals 50% Plastics 15% Wood --	Glass 60% Paper 60% Metals 50% Plastics 22.5% Wood 15%

Source: Site RAPID (IP/03/1671 on 08/12/2003), updated with the data in the amended Directive.

The proposal also signaled the need for new definitions of "raw material" and chemical recycling and includes an interpretation of the definition of packaging[65]. The European Parliament and the Council and many other stakeholders discussed this text for two years since her issue. In order to conclude these discussions in a constructive way, reconciliation proceedings were set up in September 2003, which were finished in February 2004[66]. This reconciliation brought about the postponement of implementation data for both existing and new Member States (see Table 4) and the fact that the recovery targets now explicitly cover waste incineration with energy recovery.

As mentioned before, also the 6EAP focuses explicitly on the issue of (packaging) waste. The Commission's communication 'Towards a Thematic Strategy on the Prevention and Recycling of Waste' (COM (2003) 301) is a first contribution to the development of a thematic strategy that covers both waste prevention and recycling[67]. The Thematic Strategy on the Sustainable Use of Natural Resources on the other hand, aims to 'decouple pollution from economic growth'. In a communication on this strategy the Commission pointed out its view on this issue as well, stating that 'contrary to the beliefs of 20 years ago, scarcity of non-renewable resources is not a special threat to sustainable development. More important is to examine which resources and use patterns have the potential to improve the environment'. These thematic strategies are part of a new environmental policy at EU level (see Articles 3 and 4 of the 6EAP –Annex IV-), working more through long-term overarching objectives, helping to make sure that detailed policies all point in the same overall direction[68].

To complete this overview, it has to be noted that the IPPC (Integrated Pollution Prevention and Control) -Directive (1996) is also an integral part of the packaging waste legislation, as it aims to 'reduce the cumulative environmental impact of products over their whole life-cycle'. It lists among the basic obligations of the operator that waste production is avoided in accordance with the Framework Directive on waste. For example, the use of low-waste technology is listed among the considerations of the IPPC Directive, thereby stating that they should be addressed as

[65] http://europa.eu.int/scadplus/leg/en/lvb/l21207.htm

[66] From 18 August 2005 the EU Packaging and Packaging Waste Directive 94/62/EC will be changed into Directive 2004/12/EC (OJ L 47, 18.2.2004, p.26).

[67] The Community Strategy for Waste Management was adopted in 1989 (see SEC (89) 934 final of 18 September 1989) and was reviewed in 1996 (see COM (96) 399 final of 30.7.1996).

[68] Report of the Conference "Packaging our Futures", held in Brussels on March, 1 & 2, 2004.

part of the definition of Best Available Techniques (BAT)[69]. Although it is not yet possible to estimate the impact of this Directive due to its early stage of implementation, its influence on packaging waste prevention should not be underestimated as most significant industrial producers of waste are submitted to its scope[70].

1.4.2 European packaging waste policy: a critical view

The very beginning of EU's packaging waste efforts, namely the Framework Directive on waste, was a favourable and promising start, both on the qualitative and quantitative levels, as it required the Member States to take appropriate steps to encourage the prevention, recycling and reprocessing of waste. This is in strong (positive) contrast with the modest orientations of the 1st EAP (1973) regarding waste management, which focused only on cross-border toxic and non-degradable wastes. This good start of the Framework Directive has yet been integrated and extended in the 2nd EAP (1977), as it broadened the field of application of environmental waste actions with 3 objectives, namely the prevention and reduction of quality of non-recoverable waste; recovery, recycling and re-use of waste for raw materials and energy; and the proper management and harmless disposal of non-recoverable waste. However, the proposal to introduce a unique Packaging Environment Indicator to improve the assessment of packaging waste management systems, is not happily accepted by the industry, because of its risk to divert the focus on *packaging*, which is in strong contrast with the aim of IPP and of the 6th Environmental Action Programme to focus on overall *resource* efficiency. Although PEI purports to be life cycle based, it fundamentally ignores the functional requirements of packaging, considering it only as a resource consumption and emissions issue. PEI critically fails to assess the benefits of packaging such as minimising or reducing consumption by controlling dosage and avoiding product wastage (by avoiding spoilage etc)[71]. This is of particular importance, since the greater part of the total environmental impact of the entire product chain is caused by farming. Therefore, it is important that the food in the packaging is consumed and does not go to waste[72]. Developing packaging of the right size and type (for example, packaging that can be resealed after opening) is thus not only in the interest of consumer, but also of the environment... This illustrates once again that environmental impact assessment (and thus policy integration) is very complex, requiring taking into account *all* possible impacts of the whole product or activity concerned.

When we take a look at the initial Packaging Waste Directive, Carroll (1998) found that, with respect to the legislative procedure of the Packaging Waste Directive, 'many of the necessary

[69] Council directive 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control
[70] COM (2003) 301
[71] Europen, 2003a.
[72] Europen, 2002.

follow-up decisions called for in the Directive, had not been agreed in 1998. These decisions concerned fundamental matters as agreement on the scope of the definition of what is packaging and the methods to be used by member states to calculate packaging use, its recovery from the waste stream and the management of packaging waste. Failure to clarify these points resulted in a proliferation of different national interpretations of the legislation and created new barriers to trade within the single market'[73]. However, when one takes a look at the Directive, a –in our view- clear definition of scope and definitions can be found in articles 2 and 3, without a call for further agreement decisions on these issues. On the other hand, it is true that only the presentation of the data has been harmonized by a decision on the format on these data (Decision 97/138/EC), and that no calculating methods are proposed, which indeed can cause serious interpretation problems. As most organisations dealing with packaging waste[74] still call for a fully harmonised database, it seems that this issue needs to be tackled in a far more effective way…

Concerning the contents of the Packaging Waste Directive, the first thing that caught my eye is the fact that, although the prevention of packaging waste production is said to be a priority aim (see Annex II of the Directive)[75], neither the initial Directive nor the amended version set targets to limit the amount of packaging waste put on the market[76]. As it does not make sense to reward a country that recovers 55% of 200 kg of packaging waste per capita and to penalise another country that recovers 'only' 45% of 100 tons generated packaging waste per capita, this seems to me an important deficiency of the Directive. After all, it is the absolute amount of packaging waste that is disposed off that harms the environment (which is in the first case 90kg per capita and 55 kg in the second). Moreover, studies show that recycling generally creates less harm than disposal options, but all these methods do have environmental impacts[77], thus also recycling and recovery.

Consequently, a recent report of the European Environmental Agency[78] states that 'waste prevention should have the highest priority in waste strategies, as this is the only way to stop the growth of the amount of waste and reduce the loss of resources'. Another report of the EEA states that only where the production of waste is unavoidable should recycling and reuse of waste be encouraged[79]. However, if we look at data from 1997 to 2001 (see figure 3), one can see that

[73] Carroll, Julian (1998). *A View of the EU Packaging and Packaging Waste Directive.*

[74] Like for example the EEA, PRO Europe and Europen (information from interview).

[75] This annex constitutes the Essential Requirements of packaging waste, including the prevention aim (see annex III of this thesis).

[76] We must however bear in mind that (as will be shown in the 4th chapter) such target setting is a very complex task, as most of the 'driving forces' for increased packaging waste put on the market lay not within the hands of those who make the products (and consequently produce the packaging)…

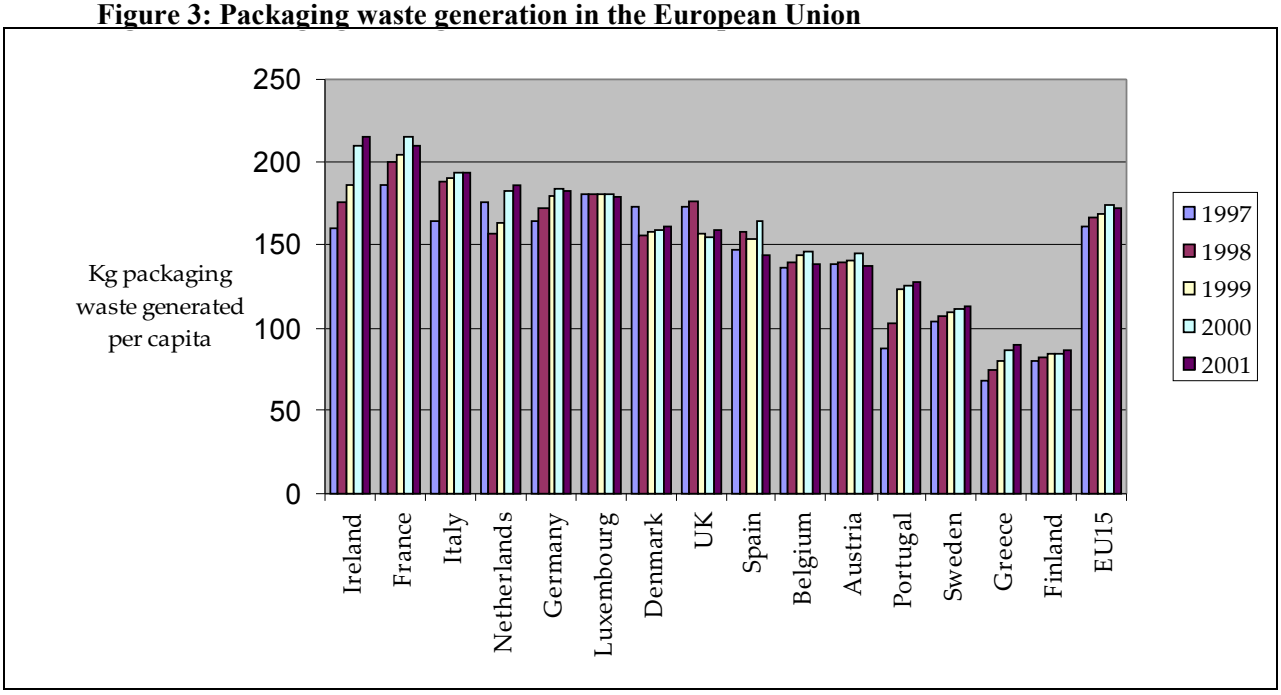
[77] McGlade, 2004.

[78] EEA, 2002b. Case studies on waste minimisation practices in Europe, p. 5.

[79] EEA, 2004.

packaging waste generation grew in 9 of the 15 EU countries during this period; in the EU as a whole, the amount increased by 7%. And there are no indications that waste generation will be stabilized in the near future. On the contrary, several studies clearly indicate that the quantities of municipal waste will continue to increase in the near future if no additional waste prevention measures are taken[80]. These are quite alarming evolutions, which have to be tackled as a matter of urgency, thus in a far more effective way than it was the case up to now. As the (amended) Directive does not contain any targets with respect to this problem[81], the environment relies on the goodwill of the Member States, which does not really constitute the source of speed and effectiveness the environment needs so badly...

Figure 3: Packaging waste generation in the European Union



Source: EEA, 2004, p.15.

On the other hand, we must bear in mind that attempts to define packaging waste prevention targets at EU level have to face the unsatisfactory status of current statistics about waste generation. As mentioned in the Commission's communication 'Towards a thematic strategy on the prevention and recycling of waste' and various EEA reports, it is very clear that the lack of appropriate and exhaustive waste stream data is a significant obstacle for policymaking, which also needs to be remedied pressingly. These shortcomings entail that it is not yet possible to propose any operational, quantified waste prevention targets based on a comprehensive

[80] EEA Technical report n°28, 1999. Baseline projection of selected waste streams: development of a methodology; McGlade, 2004.

[81] The future might shed a light on this issue, as the will to strengthen prevention of packaging in the EU is reflected in the Common Position No. 18/2003 on the Revision of the Directive, asking the Commission to present a report by June 2005, covering several aspects of the prevention issue (extra measures, plans,..).

environmental and economic analysis. Moreover, in the absence of reliable statistics and a robust baseline scenario for future waste generation, monitoring eventual progress is almost impossible. Estimates concerning the total waste generation and the contribution of different sectors to it should be interpreted with caution, since the weight or volume of waste generated is not necessarily the most appropriate indicator of the environmental burden of waste. In practice, the relationship between the generation of waste and the latter's environmental impacts is more complex and depends on a number of factors, including the nature and composition of the waste concerned[82], which calls urgently for detailed, complete and verifiable waste data.

Another issue is the newly established incineration-stipulation, where incineration with energy recovery can be counted as packaging waste recovery. This policy change deteriorates the whole issue, as –new- material (and thus natural resource) use will rise due to a diminished degree of 'real' material recovery[83]. What has happened here is a switch between different non-renewable resources to serve as an energy source, which is *in se* not a bad thing to do, but in our view, a maximum incineration percentage should be set up when talking about recovery. The incineration option would then enable companies to choose the best alternative (too high recycling/recovery targets are proved to be not desirable from both an economic and an environmental point of view); and the maximum percentage would make sure that not all valuable resources are burnt.

Concerning the targets that *were* set up (recycling and recovery targets), it is true that, once adopted, they provide the legal certainty and stability necessary to allow the recycling industry to programme investments in the knowledge that there will be a demand for recycling services[84]. However, it is interesting to see at what point these targets are the subjects of debate during the adoption process. For example, when the initial Directive was discussed, Germany, Denmark and the Netherlands voted against the Directive on grounds that the targets were too low, but lost their case [85]. On the other hand, European industry (as expressed by Europen's view) estimated that "even under the most optimistic improvement scenarios, nothing higher than 50% recycling is likely to be achievable in larger member states by 2008"[86]. In this context, it is surprising to read the comments of Europen on this 55%-target, dated at March, 2003, stating that "recent analysis and forecasts, based on year 2000 data, indicate nothing higher than 50% recycling is likely to be achievable in larger member states by 2008, even under the most optimistic

[82] COM (2003) 301

[83] Also the release of noxious gasses resulting from these incineration processes is doomed to increase *if* this energy source would replace nuclear energy (which is a real possibility if countries like Belgium pursue in their intention to ban all nuclear energy). Following to Europen, this energy source will mainly replace other incineration-based energy sources (like oil), which comes down an equal situation qua noxious emissions.

[84] COM (2003) 301

[85] Bongaerts et al, 1996.

[86] Europen, 2003b.

improvement scenarios"[87]. Such contradictory outcomes can find its cause in two reasons: recycling rates in 2000 were significantly less than in 2001 (which is rather unlikely in my opinion; I don't see why Europen should use 'outdated' research if more recent evidence states the contrary at the time of writing); or two different data sets were used to measure the recycling rates achieved in the Member States, leading to two totally different results. Given the problematic issue of the quality and uniformity of the disposable waste data (see supra, 1.3.3), one can assume that our findings here are a perfect example of this data problem, rendering policy-making in the field of packaging waste an extremely difficult task… In general, it is remarkable that the evolution of the Directive (and its revision) has been characterised by political conflict between those member states where separate collection and recycling systems had already been developed and the other member states[88]. The establishment of the Directive will be discussed in more detail in the third chapter, but here we would like to point out the different opinions between the countries (in particular between Northern/Southern EU countries), which most probably will be linked with the efforts and the measures used to implement the Directive (we will look upon this issue in detail in the next chapter).

1.5 Conclusion

When looking back at the European environmental policy during the last decades, one can say that it is a quite recent but dynamic phenomenon, with quite strong positive results. Although it took more than 15 years to introduce the issue of environment into Community policy, the political basis for addressing environmental questions was set in her starting block in 1972, leading to several ambitious and wide-ranging environmental action programmes. Also many important environmental principles were set up, supported by numerous strategies, communications, the establishment of some basic environmental institutions and a growing number of legal acts in the environmental sector. This growing environmental concern was reflected by all treaty revisions since the Single European Act in 1987. It is now agreed upon that the EU's economic activities should promote sustainable development and that environmental protection should be a component of the Community's other policies[89]. However, some basic 'requirements' for effective environmental policy (like integration, communication, participation…) are apparently very hard to achieve. Reforms were not sufficient and appear to be more settled down in words than in practice. With respect to packaging waste, innovating and ambitious targets were imposed to all Member States, with a strong focus on recycling and recovery of this kind of waste. Nevertheless, the amendment of the Packaging Waste Directive only includes a 'review' of the targets and definitions, not (yet) tackling basic problems like the

[87] Europen, 2003c.
[88] EC, 2001. European Packaging Waste Management Systems
[89] Jepessen, 2002

prevention of packaging waste. On the whole, this could mean that the EU did not learn much from its past, or that it did so, but that it could/did not (yet) react in a proper way[90]. It is clear that the Directive was intended to minimize differences in national provisions concerning the management of packaging waste, which tend to distort competition, affect the free movement of goods and give rise to differences in the level of protection of the environment. To value the impact and effectiveness of this Directive in the Member States with respect to its dual goal of protecting environment and trade, we now take a closer look at the measures taken by the individual Members.

[90] In the third chapter, we will try to find out why the European Union could (or just did) not react in a proper way with respect to the 'everlasting' basic policy problems like implementation and integration.

2 Packaging waste measures at national level

2.1 Introduction

As the practical part of the packaging waste problem has to be tackled at national level, we will examine in this chapter how (and when) European legislation is implemented in the Member States, comparing a few important examples of national packaging waste management systems on their results and their impact on the Internal Market. To be able to select the most interesting examples, we will first analyse the performance of all the (15) Member States since the Packaging Directive came into force. As the implementation of European directives at national level is not as easy and obvious as one might think, we will first examine the possible causes for deficient implementation of European directives at national and regional level.

2.2 From EU-directives to national measures: the implementation issue

The step between European and national legislation and –practices is a widely discussed subject. In this context, Krämer expressed the following –rather painful- reality:

> *"There are only a few areas of Community law in which the difference between the written law and the practice is as great as in the case of Community environmental legislation"*.
> Krämer, L. (1996), p. 7.

In this section, we will look deeper into this issue, by giving an overview of the implementation problems encountered in the environmental sector, and by analysing the major causes. To that aim, both the transposition and the enforcement acts will be tackled, for which we will use the term 'implementation', covering the two elements. As the establishment of far-ranging environmental measures brought about already some major discussions and court trials, we first see to what extent Member States actually are allowed to set up such systems.

2.2.1 The adoption of more stringent measures by EU-Member States

At Denmark's and Germany's insistence, the SEA included a clause allowing 'greener' Member States to adopt tougher environmental standards, even if they restricted trade, as long as the goal was truly environment protection and not simply protectionism[91]. However, this distinction is tricky and often has to be adjudicated by the ECJ (like for example the Danish bottle case; see C – 302/86 in annex V)[92]. The conditions under which Member States can introduce more protective measures have considerably changed with the Amsterdam Treaty, stated in two articles: article 176 and 95 of the Treaty (ex art 130t and 100a TEC). The former requires that the

[91] Peterson & Bomberg, 1999.

[92] Here, the ECJ upheld the Danish law (requiring that all beer bottles had to be recyclable) on the grounds that, while the law did restrain trade, it had legitimate environmental protection aims and thus should be allowed to stand.

'basic' rules must be adopted under art. 175, that Member States may adopt 'more stringent' but not 'different' measures, that these measures must be compatible with the Treaty and secondary legislation, and that they first have to be notified to the Commission before being adopted. The latter (art 95 (4) and (5)) requires additionally for the introduction of new legislation (§5) that after the Community has adopted a 'harmonisation measure' (under article 95), it is necessary that the measure is based on 'new scientific evidence', that the problem is specific to the Member State concerned and that the problem has arisen after the adoption of the harmonisation measure (see Cases 43/93; 203/96 and 194/94 –see annex V- for some examples of application of these requirements) [93].

2.2.2 Main causes for national implementation problems

Causes of implementation deficits are legion, ranging from differences in interpretation to political reasons and financial problems. The most important reasons for the transposition deficiency is the fact that national legal and administrative structures are becoming more and more diverse and decentralized (on the whole and in particular with respect to environmental policy); that some measures are considered to be too innovative and sometimes the domains to be regulated are thought to be completely out of the competence of European institutes by national authorities. Furthermore, the quality of the legal texts is often too poor because of too little flexibility, too rapid changes, a lack of hierarchy between different legislative acts, too broad derogation clauses, etc[94].

This last one reflects the growing 'compromise nature' of the legal texts owing to the growing influence of national administrations in the formulation of Community law and the emergence of networks and partnership approaches (which reduced the authority of DG Environment in environmental matters)[95]. As this growing influence enhances the public support for European legislative acts, there is no case for reversing this trend. Efforts are made to make things better at other levels (see section 1.3.1 on this issue), though many directives and regulations need still some major improvements to tackle this deficiency. However, European legislators need much more political support from the Member States to increase the quality of new and existing legal acts than is currently the case, which is an evolution that is not likely to happen in the near future…

2.2.3 Implementation of the packaging Directive 94/62/EC

For reasons stated in the previous section, transposition of European Directives into national law goes often a hard way. Knowing that the packaging Directive had to be transposed into national

[93] Demmke & Schröder, 1999.
[94] Demmke & Schröder, 1999
[95] Demmke, 2001.

law by June, 1996, the fact that even today, the correct implementation of the Directive by all member states is still not complete[96] leaves us no doubt: also the legislation on a -seemingly easy- issue like packaging waste is a trying subject. One year after the implementation-deadline (in October 1997), the Commission[97] decided to start infringement proceedings against all member states except Austria, which was the *only* state to have established a planning system for waste management[98]. One year later (in 1998 -more than twenty months after the transposition-deadline-), only about half of the member states had fully completed the transposition process. Moreover, in some of those which are regarded as having done so, there is, in industry's view, clear evidence that some of the Directive's requirements are being misinterpreted and misapplied and in the worse cases, blatantly ignored[99]. In 2000 the Commission continued court against Denmark, Germany, France, Ireland, Spain and Italy and brought new court actions against Greece, Luxembourg and the United Kingdom. The reasons for these infringement procedures were various: Greece, for example, had not yet transposed it into national law whereas the relevant Danish and German legislation were challenged by the European Commission because of the too far-ranging implications of the national measures they introduced to achieve (and going beyond) the goals of the Directive (bringing about severe market distortions).

With respect to more stringent measures in the case of packaging waste-related measures, Article 6 of the Directive states that 'the Member States which have, or will, set programmes going beyond the targets (of the Directive) and which provide to this effect appropriate capacities for recycling and recovery, are permitted to pursue those targets in the interest of a high level of environmental protection, on condition that these measures avoid distortions of the internal market and do not hinder compliance by other Member States with the Directive' (Article 6.6 of 94/62/EC). Moreover, Article 15 of the Directive authorises Member States to introduce national "economic instruments" (taxes or levies) to achieve its objectives, provided any such instruments are in compliance with the Treaty (i.e. provided they do not create barriers to trade). The internal market, in particular, imposes several restrictions on national environmental policies, as stricter national policies can disturb a well-functioning internal market through unequal competition-conditions for firms[100].

[96] For example, The Netherlands has entered into a covenant (i.e. a voluntary agreement) with industry whereby new one-way packaging for soft drinks and beer can only be admitted on the Dutch market after having undergone a procedure resembling an authorisation process. This violates a provision of the Directive under which free access must be granted to packaging from other Member States (europa.eu.int/rapid).

[97] EC, 2002b.

[98] Article 14 of Directive 94/62/EC requires special plans for packaging waste (see Annex III).

[99] Carroll, 1998.

[100] Jepessen, 2002

In the fourth section of this chapter, we will therefore sketch and analyse the environmental policies of Member States that took some particular measures in the field of packaging waste[101], examining the costs, results and the impact on the Internal Market of each system. To determine which countries should be analysed so as to focus on the 'good examples', we first check out what the Member States achieved during the nineties up to the deadline of the initial Directive.

2.3 Overall results of the waste management systems in the Member States

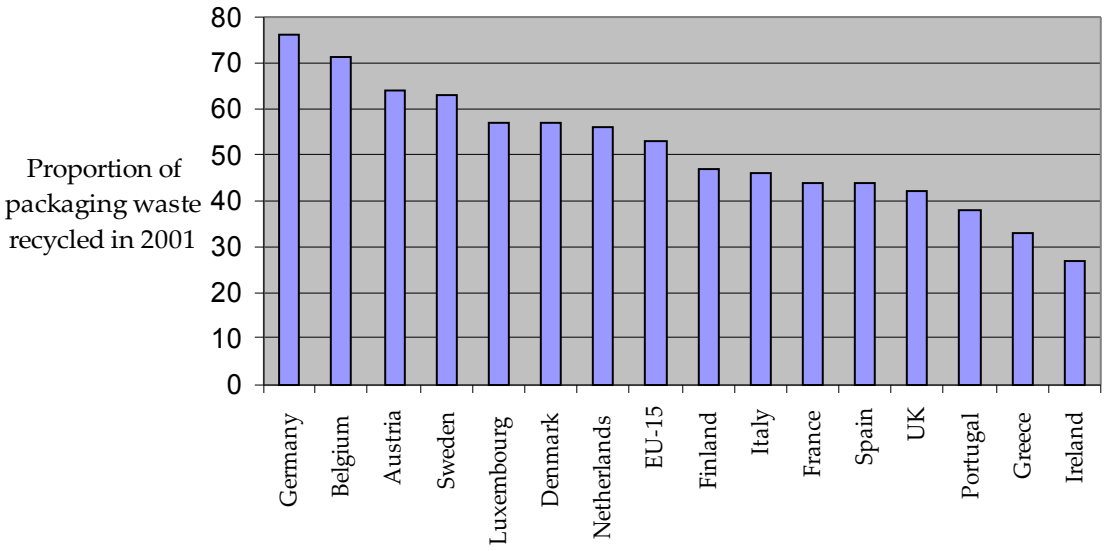
A first consideration to take into account when looking at the results of the different Member States is that they started from vastly different waste management conditions at the time the Directive came into force. While in some Member States national regulations on packaging waste were already in place (sometimes already having a long tradition in separate collection of certain materials), in other countries landfilling was the predominant waste management option. Accordingly, some Member States (like Denmark, Germany or Austria) had "merely" to adopt their existing waste management infrastructure, whereas other countries (like Spain and Portugal) had to establish a new system[102]. The impact of the packaging waste Directive on the national packaging waste management systems is therefore quite ambiguous between those countries. For example, the Austrian waste management system, having 'analogous' targets as the Directive, was already in place before the Packaging Waste Directive (and before Austria joined the EU), so the Directive did not have a major effect on packaging waste management in Austria. An initial analysis[103] suggests that for some countries (like Italy and Ireland) the directive has had a positive impact on the implementation of packaging waste management systems.

In 1999, an interim report concerning the "practical experience gained by the Member States in the pursuance of the targets" was published by the Commission so as to enable the Council and the Parliament to examine the systems set up by the national authorities. At that stage (1999), one third of the packaging for soft drinks, mineral water and wine in the European Union were reused. The packaging materials concerned by reuse are mainly glass and PET (Polyethylene Terephthalate), where some Member States had reuse systems in the milk products sector, though Directive 94/62/EC does not set targets in that area. The report also noted that 'reuse systems are available to a much greater extent in the northern Member States than in the southern Member States'. Regarding recycling, it said that 'the targets set by the Directive have proven realistic, with only slight geographical differences. The only material for which the recycling rate is still

[101] The descriptive part of this text is taken from the report of the EEA (2002b): 'Case studies on waste minimisation practices in Europe', which is completed with more recent data and a personal critical analysis.
[102] EC, 2001.
[103] ETC/WMF (2003); *Evaluation analysis of the implementation of packaging waste policies in five EU countries,* interim report.

low is plastic'[104]. As we can see from figure 4, all EU countries met the target of minimum 25% recycling by 2001 (the deadline of packaging waste directive 94/62/EC)[105]. In fact, seven countries have already met the 2008 target of 55% recycling at that time.

Figure 4: Recycling of packaging waste in EU15 in 2001



Source: McGlade, 2004.

Basing our reasoning on the data of McGlade (as these are supported by several other sources)[106], one can say that this is very good performance in terms of target achievement, which is of course good news for the environment. But it raises the important question whether countries and stakeholders are not focusing narrowly on reaching the recycling and recovery targets at the expense of economic efficiency and waste prevention. From an economic perspective, the marginal economic cost of increasing recycling is generally higher the more is recycled already. Therefore, at some stage countries may reach a point where recycling becomes economically inefficient compared to other solutions[107]. Moreover, studies[108] showed that achieving recycling and recovery targets results in lower environmental impacts than mere landfilling, but one has also to take into account the environmental impacts of the manufacturing, transport (of empty bottles/cans) and (re)use of packaging materials. Consequently, on must not lose sight of the waste prevention objective, and this seems to be exactly to be happened in most Member States. After all, the discussion of paragraph 1.4.2 showed us that the amount of packaging waste

[104] COM (1999) 596 final

[105] The minimum recycling target of the Directive was even already exceeded in 1997 by 11 of the 12 Member States who had to fulfill this target by 2001 (data on Luxembourg were not available at that time) (EC, 2001).

[106] See for example, EC, 2001 and EEA, 2002a.

[107] Interview Europen (see annex VII for the question list).

[108] See study stated in 1.4.2. p. 22

generation (see figure 3 p. 22) grew in 9 of the 15 EU countries between 1997 and 2001. Only in Spain, Austria, Denmark, United Kingdom and Luxembourg the amount of packaging waste put on the market has remained constant or has been reduced. Where different national definitions of packaging waste can impede clear-cut comparisons between countries, trends within one country are not biased/reversed by this definition problem, so it is difficult to draw any other conclusion from this than that the EU and most Member States have so far failed to meet the waste prevention objective of the Packaging Waste Directive[109]. We must however bear in mind that waste is still strongly linked with economic growth[110], which makes a waste-prevention policy extremely complex (as it can put a halt to innovations and welfare-improving investments)[111].

As Germany, Belgium & Sweden scored very well on the recycling issue, we will analyse some of their packaging waste management systems in the next section[112]. The United Kingdom will be analysed on its packaging waste prevention initiatives (a more exhaustive overview of national waste management systems can be found in annex VIII).

2.4 Description of the most progressive systems

2.4.1 Taxes and fees: Denmark & Belgium

By introducing taxes on land filling (and in a few cases on incineration) of waste, some EEA member countries (Belgium, Denmark, but also The Netherlands, Finland, France, Italy, Sweden and the UK)[113] are attempting to encourage waste minimization, by motivating the waste producers (industry and households) to recycle and/or prevent the generation of waste. As taxation of the least preferable alternative makes the market actors change their behaviour in an attempt to avoid the tax, such economic measures are generally effective to regulate single actors in a market[114]. As in most Member States the landfilling/incineration is done by special organisations, these extra costs will be counted in the bill of their 'clients' (the households and the industry), who, at the end, will pay the tax according to their waste behaviour and consequently, are encouraged to change this conduct.

One example to get the amount of tax from the concerning waste producers (in this case the households)[115] is the 'pay-per-house fee'-system of Denmark, where some Danish municipalities introduced the 'polluter-pays-principle' towards the households. The initiative is based on

[109] McGlade, 2004.

[110] Breaking this link is one of the major objectives of the current EU sustainable development strategy - Thematic Strategy on the Sustainable Use of Natural Resources (see supra, 1.2.5.1 en 1.4.1).

[111] Remark of Mr. Anderson during a personal interview with Europen.

[112] The Danish system is also included in the analysis because of its interesting results (see infra, 2.5.1.1).

[113] Europen, 2000.

[114] EEA, 2002b.

[115] We focus here on household waste, as this is more complicated to collect and recycle, since it arises in small quantities from many waste producers (in contrast to the homogenous waste of the industry) (EEA, 2002b).

weighing the dustbin (with *mixed* household waste) when it is emptied in the compacting truck, wherefrom a fee payment system automatically calculates the individual account for each household. The more waste you put in the bag (instead of recycling it), the more you pay, as such motivating households to bring recyclable waste to special containers[116]. Another system is charging a higher price for dustbins for mixed household and lower (normal) prices for those that contain sorted materials. This system is used in some municipalities[117] in Belgium (f.ex. Leuven) and is based on the same principle as the 'pay-per-house fee' system of Denmark.

Next to taxes on landfilling, many countries have introduced the so-called 'eco-taxes', which are taxes paid by producers of certain products (and thus included in the price of a product), expressly intended either to discriminate against particular products or, through the possibility of exemptions, to affect industry policy and purchasing choices. In Belgium, an eco-tax on beverage containers was introduced in advance of legislation implementing the Packaging and Packaging Waste Directive[118]. A beverage producer does not have to pay the eco-tax in respect of refillable containers, and the tax is payable on non-refillables only if the prescribed recycling targets are not met. This exemption is granted to all beverage producers in membership of the FOST Plus recovery organization. In France, a similar system was set up, with the difference that the penalty for non-compliance in France the system is administered by trading standards authorities (where it is up to the authorities to catch companies not complying with the law), whereas in Belgium it is administered by the tax-authorities, with companies still being taxed unless they can prove exemption (which is of course far more effective).

Also in Central Europe, such taxes are introduced: in Estonia[119], packaging is exempt from a 'beverage container tax' if a specified percentage of beverage container material is collected and reused, recycled, or used as a fuel; and in Hungary[120], companies are exempt from the packaging tax if a particular percentage of packaging material is collected and reused or recycled. In Latvia[121] on the other hand, there are eco-taxes on *all* packaging for consumer goods, though with no possibility of exemptions[122].

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[116] This system can be regarded as a Pay-As-You-Throw (PAYT)-scheme, a system that has become increasingly popular (COM (2003)301).

[117] However, in some municipalities, households still have to pay a relatively high price for their 'sorted' waste, or have to bring them to waste centres (which are sometimes for free, but most of the times one has to pay for every sort of waste), lessening significantly the incentive to sort (Survey of European citizens; Flanders).

[118] Belgium: Law of 16 July 1993 aimed at completing the Federal State Structure, as amended.

[119] Estonia: Packaging Excise Duty Act of 19 December 1996.

[120] Hungary: Act LVI of June 1995 on Environmental Product Fees, and environmental product fees of individual products, as amended

[121] Latvia: Natural Resources Tax Law of 14 September 1995, amended 20 June 1996.

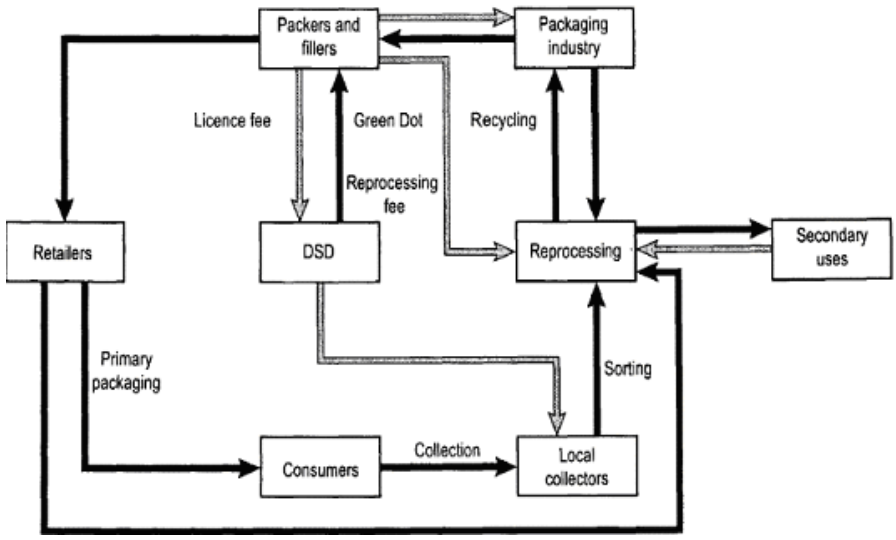
[122] Europen, 2000.

2.4.2 Producer responsibility: Germany & Sweden

2.4.2.1 Duales System Deutschland

To reduce the quantity of packaging waste, and thereby of overall municipal solid waste (MSW), Germany introduced in 1991 a far-reaching legislation to reduce waste based on the producer's responsibility principle. The former Environment Minister Töpfer submitted a law proposal in 1989 that, in the case of packaging, would oblige producers and retailers to take back (and recycle) the transport and sales packaging of their products. However, industry was given the option to set up a third party organization which would carry out the collection and sorting of sales packaging for care of manufacturers and retailers. Thus, in response to this 'Töpfer Regulation', some 600 companies created "Duales System Deutschland" ("Dual" because it meant creating a second collection system in parallel to the existing waste collection system of the local authorities). The main aim was to increase recycling of sales packaging waste[123] from private households and thereby to minimise the amount of waste going to landfills.

Figure 5: The structure of the German Dual System



Source: Michaelis, P. (1995), p. 236

DSD organises the collection, sorting and recycling of sales packaging materials. Plastics, composites, aluminium and tinplate are put together in the same yellow sack, container or bin, and the materials are collected by the kerbside. In some regions, paper is also collected in this

[123] DSD only takes care of sales packaging, but the packaging ordinance is also dealing with transport packaging. The handling of transport packaging is organised by other companies.

system. The yellow sack requires subsequent sorting by hand or machine. Glass, cardboard and paper is collected by means of a 'bring system', where the consumers bring the materials to containers in the district. The system is financed by means of licence fees (see figure 5): the producers of the goods pay a licence according to the weight/volume of the packaging used for the products, whereupon they obtain the right to mark their products with 'the green dot' symbol. This symbol is then printed on consumer goods, which indicates that they will be collected by DSD[124].

As many companies in different countries started to use more and more a likewise ‘green trademark’, several national recovery/recycling organisations[125] founded in 1995 the "Packaging Recovery Organisation Europe s.p.r.l." (PRO Europe), taking over "The Green Dot" symbol as common label among all members. Since this date, "the Green Dot" symbol on packaging means that for such packaging a financial contribution has been paid to a qualified national packaging recovery organisation that has been set up in accordance with the principles defined in European Packaging and Packaging Waste Directive 94/62 and the respective national law. Today, self-help-organisations in twenty-two countries are using the Green Dot as financing symbol to finance the organisation of the collection, sorting and recovery of used (mainly household) packaging[126].

2.4.2.2 Sweden

A Swedish ordinance on producer responsibility for specific commodity groups was passed in 1994, applying to producers of packaging, paper, tyres and cars. The goals and the means are analogous to Germany’s DSD-system: reducing the use of packaging and increasing recycling by giving producers and importers the responsibility for collection of packaging waste (used for their products) for recycling, where producers and importers are released from their individual take-back obligations by joining the system. Nevertheless, there are some variations between the Swedish system and Duales System Deutschland: the different types of packaging are collected separately and not in the same bag/bin; the packaging waste is brought to collection banks in the district (by the households) instead of kerbside collection; the collection of packaging waste at the collection banks is carried out by municipal or private operators/contractors having a contract with the material companies (who are responsible for the siting, collection/emptying and cleaning of the recycling stations) and no green dot or other symbols are used. With respect to the financing system, producers/importers pay also licence fees calculated on the basis of the

[124] Kranendonk & von Schoenberg, 1995.
[125] PRO Europe has been established by Der Grüne Punkt - DSD, Eco-Emballages S.A., asbl FOST Plus vzw and Altstoff Recycling Austria AG.
[126] www.pro-e.org

weight of the packaging material, but here they are paid to Reparegistret AB (REPA), a central organisation that is responsible for the registration and administration of the packaging fees[127].

It is interesting to note here that the environmental activities taking place within Swedish industry are aimed at long-term sustainable development and are based on a lifecycle approach that involves many players, both within and outside the company. A holistic approach is used when establishing environmental measures, with the goal of making lean use of resources and reducing the total environmental impact from raw material to recycling and recovery. Also the packaging industry, which has faced many demands from society, was already basing its environmental activities on a holistic approach by the early 1980s, with a strong focus on all stages of the production chain. It makes use of new knowledge and tools, such as lifecycle analyses and environmental management systems based on voluntary co-operation between many different players. With the aid of these tools, it was possible to integrate the demands made by final consumers into the early stages of the production chain, resulting in significant savings in resources and reduced environmental impact. Moreover, the forestry and packaging industries have spent many years developing a methodology that provides a structured description of environmental performance and valuable information for reporting, leading to a high-quality communication with the world around in the form of environmental and sustainability reports and various types of product-related environmental information[128].

2.4.3 Tradable permits and information programmes: United Kingdom

The UK has adopted a unique approach to fulfill of the European Union's packaging waste recovery and recycling targets, with information, compliance assistance and market forces as basic elements of its strategy. It has also developed a concept of "shared producer responsibility", where the responsibility for recovery and recycling of packaging waste is divided among the commercial enterprises, which form part of the "packaging chain": raw material producers, packaging manufacturers, packer/fillers and sellers. The recovery and recycling targets are to be met according to a certain percentage obligation associated with the economic activity. The system is based on the Packaging waste Recovery Note (PRN) concept, which was developed as a means of providing evidence of compliance and as an economic instrument to stabilise the recycling market. The reprocessors sell the PRNs to compliance schemes and individually obligated producers. In principle, the Packaging Recovery Notes, to be purchased by the businesses concerned, should cover all costs incurred for the collection, recovery and reprocessing of the various packaging materials[129]. This system can be compared with the system of tradable permits for CO^2 - emissions, but with the difference the PRNs really cover the costs of

[127] EEA, 2002b.
[128] Europen on IPP, 2002.
[129] EC, 2001.

waste management, where the price of tradable permits for CO_2 are determined by pure market forces (demand versus offer).

In 2000 the Department of Trade and Industry (DTI) and the Department of Environment, Transport and the Regions (DETR) also have set up a waste information programme 'Envirowise', a marketing programme backed up by strong technical information specifically tailored to help overcome different barriers to undertaking waste minimisation. In the context of a special waste minimisation programme (Integrated Pollution Control), Envirowise also promotes the establishment of local and regional waste minimisation clubs, which have the task to help associated companies to reduce the use of raw materials and the production of waste. These clubs try to introduce an improved waste management of the companies via issuing publications with technical information and examples of successful practices, giving seminars and free advice from consultants and by establishing a telephone help line to give immediate advice when necessary[130]. This system gave an impetus to waste minimisation through the logic that higher standards of environmental performance need not mean higher expenditure for the firms concerned. After all, waste is what it says and minimising wastes means minimising costs[131]. To raise awareness about the environmental and economic benefits of waste minimisation practices[132], the clubs use several communication means, like traditional mail, e-mail, seminars, conferences and workshops[133].

2.5 Comparative analysis

In order to analyse the effectiveness of national measures, one needs to determine whether or not the systems applied in each country promote the environmental objectives of the EU programme (and more specific, the Packaging Waste Directive), and whether they have threaten free trade in the single market[134]. In this section, we will subject the described systems to this twofold examination[135]. As data are not always comparable (being mostly provided by national authorities/ organizations, which are not always using the same definitions and calculations for recycling rates of packaging waste)[136], we will not compare the percentages and tons provided by these institutes, and just examine the individual results, seeking for some real and possible (when implementing the system in another country) deficiencies in the field of trade and environment.

[130] Each club is organised locally and funding comes from a variety of sources, including the member- companies (Envirowise does not provide any funding for those clubs!).
[131] Patten, 1990.
[132] Most companies underestimate the cost of waste, and consequently, also the economic benefits of better waste management.
[133] EEA, 2002b.
[134] Bailey, 1999
[135] As a comparison of costs between Member States is very difficult due to lack of transparency of these costs -particularly with regard to collection- (EC, 2001), we are precluded to do this interesting exercise.
[136] The German system for example, distinguishes between transport and sales packaging (including only the latter into their data), whereas most other systems include 'all' packaging waste.

2.5.1 Results

2.5.1.1 Taxes and fees

A study carried out by the Danish authorities[137] (to examine the results of their 'pay-per-house' system) indicated that consumers don't make reflections about the waste phase of a product in the purchase situation, as there was no evidence of a different buying behaviour between households in municipalities with weight-related collections schemes and the others (without such schemes). Consequently, such fees do not seem to be efficient to *prevent* the production of packaging waste (if the demand stays the same, producers won't change their 'offer' without other external pressures). On the other hand, there was significantly higher collection efficiency for paper and cardboard in the former municipalities, indicating a considerable impact of fees on *recycling* behaviour. The Belgian system has the same (dis) advantages concerning buying behaviour and recycling efforts, but with less administrative and operational costs. The problem however in Belgium is that this system is not applied in all municipalities, creating huge cost differences between municipalities (even on a short distance), sometimes leading to 'extraterritorial disposal' whereto it is the cheapest to do so[138].

When we take a look at this kind of economic measures, it is important to point out that such measures are only effective, and should only be applied, when alternative ways of waste management/disposal are possible, otherwise, the system just adds costs and does not contribute to the environment. Another precondition for the establishment of a tax on landfilling of waste is that there is an effective public control of the waste streams. Otherwise, taxes and high fees can lead to increased illegal disposal of the waste[139]. Contrary to our findings[140], the Commission[141] found that "most communities that have introduced PAYT schemes have *not* experienced large and sustained increases in illegal dumping". In this context, the European Commission has funded a research project in this field, the objective of which is to provide a comprehensive analysis of the drivers, barriers and potentials of PAYT to identify workable ways for a successful introduction of such systems by urban decision-makers[142]. As the information we found on this project mainly focused on the maintenance of the system concerned, it doesn't seem that many inconveniences (like illegal dumping as a consequence) were found. However, many citizens who answered our questionnaire did mention the increased 'incentive' to get rid of their waste in an illegal way (thus, dumping it somewhere), which is –regretfully- understandable

[137] See MiljØstyrelsen (2000): 'Fordele og ulemper ved gebyrdifferentierede indsamlingssystemer for husholdningsaffald', MiljØprojekt n°576.
[138] Survey of European citizens (here: Belgium: Flanders versus the Walloon provinces), see Annex VII.
[139] EEA, 2002b.
[140] Survey of European citizens (here: Germany), see Annex VII.
[141] COM (2003) 301, § 5.3.4.
[142] For a description of the project, see http://www.payt.net/

if costs become too high. Consequently, in our point of view, this threat of illegal dumping is a hard reality that should not be neglected, and some caution about the success of this system should be preserved.

When comparing the aims of the systems set up in the discussed countries, it was clear that while the Belgian legislators made it clear that they would be happy if the eco-tax yielded no revenue at all (the aim was to provide an economic incentive for behaviour changes), in Central Europe there is a clear incentive to set unreachable recovery targets so that the eco-tax can provide a revenue stream for the Government[143]. As too high targets risk to bring about undesirable results both from an economic and from an environmental point of view (see infra –f.ex. the early stage of the DSD system- for evidence on this statement), this strategy can not be supported: ambitious targets always need to be supported by sufficient recycling/ recovery capacity to be a positive element in a packaging waste policy.

2.5.1.2 Producer responsibility

Traditionally, manufacturing companies have been concerned with making goods, and not with what happens to them after they have been sold. With the producer responsibility system, a whole industry sector is made responsible for the entire life cycle of its products[144], which can only have positive results with respect to waste minimisation. Indeed, we can see from table 5 that the amount of sales packaging collected & recycled by DSD has significantly increased since the establishment of the German system (in 1990), meeting the targets of the packaging ordinance with sufficient margins. Furthermore, the amount of packaging waste put on the market is significantly reduced (leading to a stagnation of the increase of household waste).

Table 5: Packaging collected and recycled by DSD (quantity in 1 000 tonnes)

Packaging material	1992	1993	1994	1995	1996	1997	1998	1999	% in '99	Ordinance targets until 1999 (%)
Glass	510	2 390	2 470	2 570	2 690	2 740	2 700	2 710	82	75
Paper/ cardboard	300	970	1 180	1 260	1 320	1 370	1 420	1 480	169*	70
Plastics	41	281	461	504	535	567	600	610	108*	60
Tin	29	249	354	259	302	312	375	322	105*	70
Aluminium	>1	9	29	32	36	40	43	37	88	60
Composites	5	52	78	296	445	420	345	391	66	60
Total	920	3 940	4 570	4 920	5 320	5 450	5 480	5 550	98	

Source: http://www.gruener-punkt.de

** Percentages above 100% indicate the presence of non-green dot-waste items in DSD bins*

[143] Europen, 2000.
[144] Kranendonk & von Schoenberg, 1995.

However, the German Ordinance and DSD have been criticised from all sides of the political spectrum, both in Germany and abroad. On a fundamental level the system is blamed for placing too much emphasis on recycling and not enough on waste avoidance. Furthermore, the green dot is seen as misleading consumers to believe that it signifies environmental friendliness. Other critics said that the high material recycling targets of the Ordinance were premature, especially for plastics and composites for which processing capacity did not exist in the early nineties. As a consequence, at the start-up of DSD Germany, it had neither capacity nor any useful experience with material recycling of plastics. Therefore, in the first years it had to store the plastic waste and generously pay the recycling companies that were willing to take their waste. As this was becoming increasingly expensive, they chose to 'export' a large share of packaging waste, which was eventually being illegally dumped in Indonesia, Rumania, in the oceans and even in France instead of being recycled (discovered by the head of Greenpeace's waste campaign -Andreas Bernstorff-)[145]. Another unexpected cost factor was the sorting-out of waste without the green dot that had landed in the yellow bin (see percentages above 100% in table 5). Finally, many companies (50%) did not pay their license fees or paid them late, making the system yet more costly than it already is, which in the end comes down to higher consumer prices. After all, the 'polluter pays' principle means that consumers share the cost burden with industry, as disposal and recycling costs (thus the licensing fees) are integrated in the product price[146]. As a consequence, the consumer pays for the activities of 'illegal' producers, which asks for better control mechanisms.

Table 6: Recycling rates in Sweden in the period from 1996 to 1999 (%)

Packaging material	1996	1997	1998	1999	Targets until June 2001
Glass	72	77	83	84	70
Plastic	15	18	19	34	30
Corrugated cardboard	81	84	85	84	65
Steel	54	64	71	62	50
Aluminium	19	12	27	**34**	**50**
Cans	-	-	87	**85**	**90**
Waste paper	74	78	79	79	75

Source: 'Har producenterna nått målen? Uppföljning av producentansvaret för 1999', Naturvårdsverket, 2000.

If we look at the targets of the Swedish ordinance for 2001 (see table 6), we see that those for plastics are considerable less than the German targets for 1999 (but still higher than those

[145] Since then, DSD has become stricter in selecting it's recycling partners and has the TÜV (official environmental assessment agency) verify that the recycling capacities that these recyclers claim to have actually do exist (Kranendonk & von Schoenberg, 1995).
[146] Kranendonk & von Schoenberg, 1995.

required in the Packaging Waste Directive), suggesting a better knowledge about this problematic issue when establishing the ordinance (1994). Moreover, thanks to the fact that the waste is not kerbside-collected in Sweden (but brought to district collection banks by the householders), the total costs of the Swedish system are significantly less[147].

Speaking for both systems now, it is clear that the fact that companies have to pay license according to weight (and volume in the case of DSD) in both systems can make an incentive to reduce the weight of their packaging, which *can* end up as a waste minimization effort through redesigning the product and/or the packaging. However, this system of 'producer responsibility' is not airtight (with respect to environmental results): after all, paying less can *also* be achieved by changing (a part of) the material concerned, thereby reducing weight but possibly increasing toxicity and environmental impact. Only when producers don't just try to conform to the law in the cheapest way possible (thus only when environmental benefits are a part of the strategy), this system will contribute to the aim wherefore it is established. Secondly, these systems also only function with dedicated cooperation from the part of consumers, which must conscientiously separate between the different types of waste[148] to make the system work without excessive costs.

Here we have to point out that while the Swedish 'bring-system' has the advantage of being cheaper to organise (with respect to the DSD-method), it also demands far more efforts for the citizens to make it work, which requires other 'national efforts', focused at sensitising their citizens. Another important element for the success of such a system is the number of deposit centres, as not everybody has the possibility (car, time)[149] to transport their waste to the other side of their village or city, jeopardizing the whole system. It also became clear from our survey in Germany that the system is regarded to be non-transparent (and thus too complex), which can also seriously damage the motivation of citizens to 'do their part of the job': "*Was mir nicht gefällt ist, dass es wirklich nicht sicher ist, in wie weit dieses Trennen wirklich Sinn hat und man öfter in den Medien zu hören bekommt, dass der Müll im Nachhinein doch wieder zusammen auf das Fliessband kommt. Was geschieht mit dem Müll, wie viel wird wirklich recycelt, etc. Die transparanz in dem System ist noch zu niedrig! Es muss den Leuten deutlich gemacht werden, warum soll ich trennen, wem nützt es und warum!"*[150]. We also learnt from the surveys that citizens don't always know the meaning of the widely used 'Green dot' symbol (thinking that it is just 'recyclable' or 'produced in an environmental friendly way', which is clearly not always the case). Public environmental awareness and clear information is thus a 'conditio sine qua non' to make the producer effectively responsible...

[147] EEA, 2002b.

[148] Kranendonk & von Schoenberg, 1995.

[149] Un-adapted (f.ex. only during working hours) opening hours of such waste centers are a much cited frustration of the citizens surveyed in Belgium and Sweden.

[150] Citation of the survey of European citizens (here: Germany, Berlin).

2.5.1.3 Information programmes

The UK information programme 'Envirowise' presents very persuasive results with respect to environmental and economical benefits. Large reductions in landfilling and in the use of dangerous substances, better source separation, etc. are some of the general characteristics of the results[151]. Also the economic effects of both programmes are very good. Altogether the participating companies are annually saving more money than the total governmental funding of the programmes. The UK waste minimisation programme has some additional interesting aspects, such as the 'waste minimisation clubs' and the 'helpline' function. These initiatives have reduced the material use of over 240 000 tonnes per year and reduced waste disposal by more than 1 million tonnes per year. This indicates that information programmes can be very effective tools in environmental as well as in economic terms in the efforts to reduce waste generation. Another positive point is that information programmes do not require specific regulation (and control mechanisms), since the participation is completely voluntary for the companies.

2.5.1.4 Tradable permits (PRNs)

Packaging Recovery Notes (PRNs) – work well as a mechanism for demonstrating that companies have met their recovery and recycling obligations, and such a market-based system will select in a natural way the most effective waste treatment companies, which is in the interest of all. However, as (individual) companies or (collective) 'compliance organisations' have to obtain PRNs each year to meet their share of the annual recovery and recycling targets laid down by law, they will focus attention on today's market price (for compliance) rather than on building infrastructure for the future. Consequently, they are rather ineffective as a way of channelling funds into infrastructure investment. But the fundamental problem is that the system attempts to rely upon market mechanisms to meet an objective that is essentially anti-market. The recycling rates produced by market forces are the recycling rates that prevailed before legislation was introduced. After all, given that the Directive exists, its targets can only be met by a free market approach if the existing local infrastructure is compatible with that approach (i.e. in Denmark -where the extensive provision of district heating means that energy recovery facilities were already in place- and the Netherlands -where the shortage of suitable landfill sites, and therefore the high cost of landfilling, results in a relatively low recycling cost). To meet the targets laid down by the present Directive on packaging and packaging waste, mechanisms are needed to ensure that all players with obligations under the legislation play their part in meeting the targets, and this requires a certain amount of central direction. Therefore, it would help if there were just

[151] The environmental gains from the programme are hard to summarise, as they are very different from project to project depending on the specific scope, but these results can be regarded as a 'common' result.

one ‘compliance scheme’ operating alongside companies obtaining their own PRNs ("individual compliers"), instead of the current variety of rival schemes[152].

2.5.2 Implications for the internal market

2.5.2.1 Differences in measures and financial responsibility

As can be seen from the few examples we gave (and from annex VIII), some Member States comply with the targets; some have set their own higher targets; and some have derogations. Some apply taxes or charges on packaging; some have (mandatory) deposit systems; an increasing number of Member States apply landfill and incineration taxes and some authorities and companies arrange (voluntary) agreements with the relevant parties. With the exception of Austria and Germany, Member States usually restrict the collection to bottles and flasks made of PEHD, PET and PVC. In Austria and Germany, all sorts of plastic packaging are collected, even small items. However, this approach is very cost-intensive[153], and is bared almost totally by the industry. Consequently, one can say that the packaging sector is confronted not so much with the Packaging Waste Directive itself as with the various different ways in which national authorities have implemented it[154].

In all Member States, economic operators within the packaging chain (manufacturer, packer/filler, distributor, importer) are responsible for the management of their packaging waste, and for providing data on the amount of packaging put on the market. However, differences in the extent of implementation of the concept of producer responsibility arise mainly with regard to the financial responsibility for packaging used by the households. It ranges from covering the costs for recovery of glass and paper-cardboard only, to systems where industry is bearing the complete costs of collection, sorting, and recycling/recovery for municipal packaging waste[155]. Consequently, firms face totally different (packaging waste) costs in the ‘Internal Market’ of the European Union. However, the interview with Steve Anderson and Julian Carroll (Europen) thought us -in contrast with our initial view- that the costs related to different packaging waste management systems in each country don’t cause major cost differences of the product as a whole, with this cost representing only a few percentages of the total product price. Consequently, as competition mainly takes place at national level (almost no citizens cross the border to get the product in another country, as price differentials are not enormous for most manufactured goods), these differences don’t bring about severe competition distortions. After

[152] Europen, 2000.
[153] EC, 2001.
[154] McGlade, 2004.
[155] The coverage of costs between private actors (compliance scheme) and public sector (municipalities) is mainly a result of the balance of power between these actors.

all, all companies are treated the same way in each country, and that is what competition really is about...

2.5.2.2 Barriers to free trade

National packaging waste systems can nonetheless be a cause of significant trade barriers, a statement that is –regretfully- proved by some serious market distortions due to a specific sort of measures that took place in the European Union in the late nineties. Denmark for example, had banned marketing of beverage cans (the so-called 'Can Ban' of Denmark), a measure that goes against the spirit of the Directive, as it breaches the principles underlying the single market. The Danish deposit system violated Article 28 EC (stating that *'quantitative restrictions on imports and all measures having equivalent effect shall be prohibited between Member States'*), and the Advocate General opposed against the Danish argument of 'environmental protection, preservation of resources and waste limitation' that 'there has to be a balancing of interests between the free movement of goods and the environmental protection'[156]. Regarding the difference between the Belgian and the French eco-tax-control-system (see supra, 2.4.1), it is clear that the Belgian system is a much more effective defence against "free-riders" than the French system (taxing a company unless the latter can prove to be conform with the recycling targets), but the Belgian tax applies only to beverage producers. Packers and fillers of other packaged products are controlled in the same way as in France (where the burden of proof –to tax- lies within the tax authorities). It is hard to see the justice in this, unless beverage containers can be shown to have a greater environmental impact than other types of packaging, which is certainly not the case[157].

Also the scope and extent of recycling targets, mainly referring to beverage packaging, and generally aiming to support and/or protect already existing reuse systems[158], vary widely. National quantitative recovery and recycling objectives impose different requirements on economic operators responsible for packaging. In this context, mandatory deposit systems in Germany en Denmark (where non refillable containers for beverages bear a refundable deposit) lead to trade barriers and indirect discrimination against distant suppliers to the market[159], as only local producers can deliver (and take back) refillable containers in a competitive way[160]. Moreover, such deposit systems are also proved to be quite harmful with respect to the

[156] Jepessen, 2002 ; Common Market Law Reports, 21 March 1989, p. 629
[157] Europen, 2000.
[158] EC, 2001.
[159] www.europen.be ; EC, 2002b.
[160] This problem is even worsened by the European regulation on mineral waters (requiring that all mineral waters are bottled at the source).

environment, as such take-back obligations entail greater fuel consumption and traffic congestion[161] (transporting it from source to consumer and back).

2.6 Conclusion

Requiring specific national measures to be successful, the Packaging Waste Directive relies on the fast and correct transposition of its stipulations into national law and its effective practical execution. However, due to numerous reasons (ranging from administrative difficulties at national level to –sometimes conscious- misinterpretation of the contents of the Directive), the implementation of this Directive has proved not to be the exception on the rule that states that differences between written law and the practice are the highest in the environmental sector. Although Member States are explicitly required and encouraged to adopt preventive measures and to introduce reuse systems, the question remains what room for manoeuvre the Member States actually have (and optimally must have) for setting up systems such as mandatory quotas, deposits or eco-taxes on disposable packaging. From the systems used in the different Member States, we selected those with the most promising results with respect to recycling and recovery for a critical examination.

Summarizing our main viewpoints, we can say that we are not very supportive of the widely used PAYT-schemes (which can seem evident and fair -and they are-), but the environmental risk of illegal dumping is far too high to be too enthusiastic about this system. In this context, a transparent system of producer responsibility (with producers integrating their waste management costs into the product price), supplemented by a continuous sensitisation of the citizens, seems to be a much better solution. When looking at the prevention aim of the current packaging waste strategy, the experiences in the UK show us that information programmes on waste minimisation seem to be very effective at company level to this respect, as information and experiences on waste minimisation is made easily available for all companies, with cost minimisation as main –and obviously successful- driver. Consequently, a combination of those systems would have our greatest support, with a clear focus on economic incentives rather than relying solely on legal prescriptions.

It is true that some economic instruments can generate additional costs for the packaging industry, but these costs can significantly be reduced when common approaches are chosen in Europe[162]. Therefore, it is interesting to examine to what extent it would be possible to establish such a common approach throughout the European Union. As this both requires the political will from the Member States to ‘delegate’ more powers to the European institutes in a more

[161] Europen, 2003.
[162] McGlade, 2004.

cooperative structure ànd a strong belief in the instruments concerned, we examine these issues in the following chapters. We will first take look at the possibilities of such a supplementary harmonisation, where after we will use the insights of the first three chapters to develop our own ‘Thematic strategy on waste minimisation’ in the last chapter of this thesis.

3 European decision-making and enforcement

3.1 Introduction

The environmental policy of European Union has been established over the recent decades hand in hand with the understanding of the environmental threats. When recognizing the serious pollution of air, water and soil, the exhaustive use of natural resources, the extinctions of animals, birds and plants and the growing menace of the climate change, it has been clear for EU that it has to activate all its political, negotiation, intellectual and technological power to hold back this alerting course of development[163]. In this chapter, we will examine whether this 'activation of powers' in the EU is sufficiently well structured to tackle the packaging waste problem effectively.

We concluded in the first chapter that the decision-makers of the European Union apparently did not learn enough from the faults and deficiencies of its past environmental policy, or that it did so, but that it could/did not react in a proper way. In this present chapter, we will try to find out why the European Union could (or did) not react in a proper way with respect to basic policy problems like implementation and integration at the level of decision-making. Moreover, we will examine to what extent it would be possible to set up a more common, market-based approach for EU's packaging waste policy. As will be seen from the third section of this chapter (3.3.2.2), no common wish exists at national level to harmonize even more European legislation than it now already does. As the reasons for the reticence of some countries are very different among the Member States concerned (Britain being rather against more EU-integration and Germany seeing harmonization as a barrier to implement stricter measures), we first take a look at what the Treaty says about this controversial issue.

3.2 European policy-making at national level: a contradiction in terms?

3.2.1 National sovereignty and subsidiarity

When the Community has not adopted harmonized measures in a specific area, Member States are free to determine their level of environmental protection and enact the appropriate measures in that domain, compatible with the Maastricht Treaty[164]. This national sovereignty concerning environmental measures is considerably diminished where European directives (like the discussed packaging waste directive) exist, as those regulative acts have to be transposed and enforced by the Member States. Nevertheless, national authorities usually have a possibility to

[163] Scott et al., 199?

[164] Exceptions are defined in Article 30EC and the case law of Dassonville & Cassis de Dijon, which represent ceilings above which the member states are not entitled to regulate (Jepessen, 2002).

derogate from the harmonized measure, depending upon the legal base of this measure. This margin is called the 'residual competence', which leaves some play for some directives, in particular those who are based on Article 176 TEC concerning EU environmental policy and those based on Article 95 TEC concerning the internal market (the latter facing more limits than the former). Directives based on the Treaty, but not on the above-mentioned articles, are uniform measures, which are leaving *no room* for member states to determine measures with a higher (or lower) level of environmental protection than the level prescribed by the EU measure[165]. As Directive 94/62/EC on packaging and packaging waste was adopted under Article 95 of the Treaty (see annex II), its legislative basis is therefore as a single market completion directive. As measures regarding Directives based on this Article consciously have to take into account Internal-Market-concerns, it is interesting to elaborate here upon the question of subsidiarity.

The current division of authority within EU policy, set out in the principle of subsidiarity, was first incorporated into Art. 130r, §4 (now Art 174) of the amended Treaty of Rome (SEA) applying only to environmental measures, before being included as a general principle (thus applying to all Community matters) by the Maastricht Treaty in 1992[166]. This Article establishes that "in areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, *only if and in so far as* the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be *better* achieved by the Community" (Art 3B of the Treaty). Subsidiarity must be respected as to this article, which contains both the legal basis requirement (division of powers) and the proportionality requirement (limitation on the exercise of the powers held by the Community)[167]. As 'better' is a rather vaguely defined concept, one can expect various interpretations of this principle. Indeed, the basic results of some authors who examined this question in detail[168] are that the principle of subsidiarity produced an ambiguous balance between respect for local conditions and efficiency of Community action by its vagueness. Whereas these authors take '*efficiency'* as concept to interpret 'better', other authors[169] talk about *effectiveness* instead of efficiency as major 'subsidiarity'-test, which are quite different concepts, showing once again that even in academic literature no consensus exists on the issue. Moreover, as 'subsidiarity has been variously interpreted as both inviting and fending off federalist government from the EU'[170], 'this ambiguity can be seen as a major cause

[165] Jepessen, 2002

[166] The Maastricht Treaty did not add many new articles to the environmental field, but it developed the institutional and legal base for environmental policy previously introduced by the SEA (Jepessen, 2002).

[167] Lenaerts, Koen in Abraham et. al, 1995.

[168] See, for example, Golub, 1996 ; Bermann, 1994 and Peterson & Bomberg, 1999.

[169] See for example, Lenaerts, K. in Abraham et. al, 1995.

[170] Van Kersbergen and Verbeek, 1994. Indeed, as 'better' is not defined clearly, both the Member States and the Community can derive from the principle that *they* are the party to 'act better'.

of the inefficiency of arbitrating disputes over the allocation of competence between the EU and the member states'[171], leading to even longer decision processes for environmental legal acts. Nevertheless, this principle has become a key principle guiding the implementation of EU environmental policy, which -together with the fact that the majority of environmental legislation is adopted in the form of directives- allows national governments to retain considerable control of domestic implementation within an agreed EU agenda[172].

3.2.2 The role of the Member States[173] in EU environmental policy

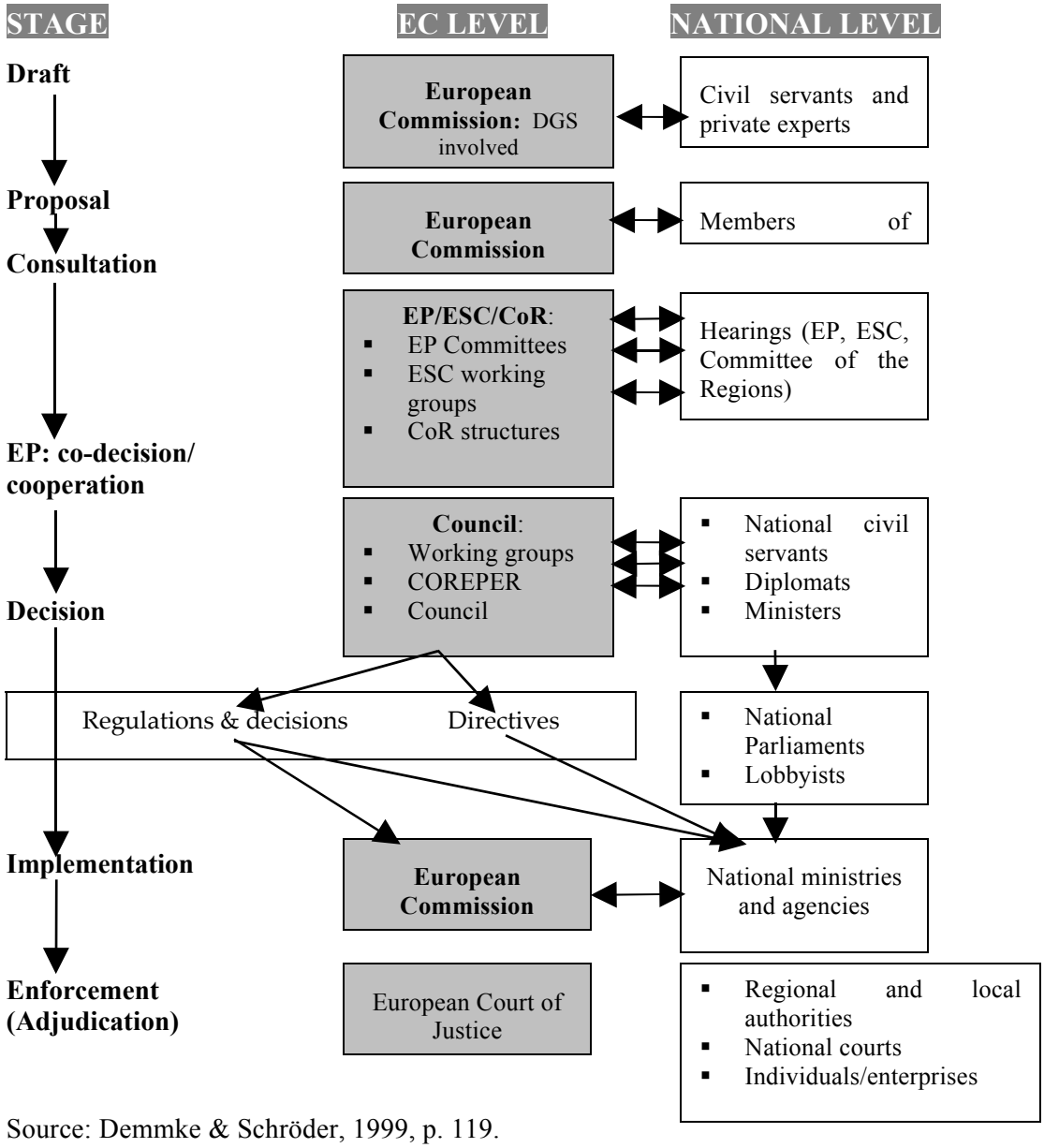
When we take a look at the Treaty contents on the functioning of the European bodies, we see from art 213 (2) that 'in the performance of its duties, the European Commission shall neither seek nor take instructions from any government or other body'. On the other hand, each Member State must respect this principle and not seek to influence the members of the Commission in the performance of their tasks. This article thus supports the view that the Commission is a distinguished and closed body. However, this view is not supported by the majority of researchers and academics. Brinkhorst for example, noted that 'the allocation of responsibilities between the Community and the Member States tends to be not so much a separation but rather an intermingling of powers'[174]. This is confirmed by a (more recent) statement of Demmke (1999), stating that 'over the last few years there has been a significant trend, particularly within the European Union, towards a mutual interweaving, intermixing, interlinking and fusing together between the national and Community levels'. Consequently, 'policy developed at the European level permeates down through the administrative tiers of the Community, mutating as it touches and interacts with national traditions and practices. The flow of influence can be seen to be reciprocal: states seek to affect the process of integration to suit their particular circumstances but in doing so are affected by it'[175]. The question is of course to what extent this 'affection' can be seen as a lucid reality, whether it is indeed 'reciprocally' and who is involved in the 'administrative tiers of the Community' at national level.

In this context, it is interesting to examine the role of civil servants and national experts within the decision-making process, for example, though this subject has received very little attention from the scientific sector up to now. The reason for this lack of interest relates partly to the structure of the Treaty itself, as it neglects the role of such experts within committees, and even such committees in the environmental sector are not mentioned in the Treaties[176]. Nevertheless,

[171] Jepessen, 2002.
[172] Bailey, 1999
[173] With 'Member States', we mean national civil servants as well as industrial organisations, environmental NGOs and other 'national' stakeholders (as opposed to members of the European institutes).
[174] Brikhorst, 1993.
[175] Jordan, 1999: 13.
[176] Demmke, C. Decision-making in practice, in: Demmke & Schröder, 1999.

we think that an enforcement of national -expert- influence at European level can significantly strengthen national public support for European law (and as such, ease the implementation process), and therefore, it is interesting to look upon the different sorts of committees, analysing their real and potential 'decision-influencing' power. We distinguish here three stages within the procedure of policy-making (see figures 6 and 7), namely the preparation stage (which ends when the Commission finishes its proposal), the stage of decision-making (the period in between the proposal and the final resolution) and the implementation stage (where the final decision is to be put into practice).

Figure 6: National influence on EC decision-making



Source: Demmke & Schröder, 1999, p. 119.

3.2.2.1 Preparation

Once a decision to start on a legal instrument is taken, a first draft of a text is prepared by officials working in technical units. The Commission then digests these initiatives and calls upon a variety of Expert committees (which constitute of Member State officials and experts from interest groups, see Annex VI) to advise and assist in shaping a proposal. It is remarkable that very often, those same officials who attended (as experts) the meetings organized by the Commission to prepare the proposal are also on the Council working groups to establish the final legal act. The dense web of expert committees and technical working groups which prepare dossiers allows allied groups of specialized technicians or technocrats opportunities to control the policy agenda[177], which is of crucial importance within the process of policy-making[178]. In theory, these experts do not have to come exclusively from the environmental administrations of the Member States, but in practice, the majority of all those who attend are government officials, the 'independent expert' element thus having been lost almost completely[179]. However, this coin has also a positive side: the more the Commission calls upon these 'experts', the higher the chance of obtaining a consensus in the Council later on[180], which is a very desirable outcome from both the efficiency and from the effectiveness point of view. According to DG XI, one hundred expert groups on environmental policy were established in the nineties[181]. Krämer[182] noted in this context that 'parallel to these meetings with (government) experts, discussions with organizations from trade and industry and environmental organizations take place'. However, we have to be careful about the meaning of 'parallel', as these discussions (further called 'lobbying') take only place in further stages of decision-making (thus after the proposal has been drafted). One must clearly bear in mind that the preparation stage, only civil servants and experts participate, where industry and environmental organizations only can play a role when they are 'invited' to participate in such a special working group[183].

3.2.2.2 Decision-making

National influence at the level of European decision-making begins with the composition of and the procedures within the European institutions itself. As the European Council consists of representatives of each Member State at ministerial level (art 203 of the Treaty), this is the most

[177] Peterson & Bomberg, 1999.
[178] Lord, 2003-2004.
[179] Krämer, 1996.
[180] Consensus within the Council working groups and COREPER is directly related to consensus within the Council of Ministers (see infra, 3.2.2.2).
[181] EC, 1996.
[182] Krämer, 1996.
[183] Europen for example, could participate only once in this stage; as one of the fifteen members of the Expert Committee on Packaging Waste.

important formal 'national impetus' when it comes to taking (and sometimes even proposing)[184] legislative decisions. The Council consults and co-decides with the Parliament when taking such decisions; the procedure applicable is determined by the issue concerned (see table 7 for an example on environmental instruments). The Council is assisted by numerous working groups and Permanent Representatives (COREPER), the latter being responsible for preparing the work of the Council, and for carrying out the tasks assigned to it (art 207); the former (which is composed of national experts from the Member States or from COREPER) will examine the legislative proposals from the Commission in assistance to COREPER. Issues on which there is agreement within COREPER (COREPER I for environment) will be placed on the 'A list' and will be adopted without discussion in the Council. If no agreement is possible within COREPER, items are put on the 'B-list', indicating that debate and decision by the Council are required or the matter has to be sent back to the working group concerned. Members of the European Parliament (MEPs) have access to most of the documents concerning the proposal for which they have to vote (or to propose amendments), and set up frequently specialized committees on a specific issue, where a limited number of MEPs examines the subject and discusses the contents of the (initial) proposal with their colleagues[185]. The increased use of co-decision strengthened considerably the power of the Parliament in the decision-making process, where actors often must decide which of the different identities –national, party, institutional- should determine their position. On issues like packaging waste for example, MEPs clearly defied the interests of their party group or Member State to side with their particular (cross-'border') coalition[186].

Table 7: Decision procedures related to different instruments to introduce

Instruments	General procedure
Financial instruments (subsidies, art 87 and 88)	LIFE : Co-decision* (art 175) Other: Consultation** (art 89)
Eco-taxes	Consultation (art 93 and 175)
Regulatory instruments (bans, prohibitions, environmental standards,..)	Generally: Co-decision (art 95 and 175) Exceptionally: Consultation (art 88–competition- ; art 37 –agriculture- ; art 133 (5) –external trade-)
Integrated instruments (environmental impact assessment, eco-audit,…)	Co-decision (art 175)
Information, education	Co-decision (art 175)
Environmental action programmes	Co-decision (art 175)

Source: Demmke & Schröder, 1999.

[184] Westlake estimated in 1995 that approximately 30% of all Commission proposals are initiated by the Council.
[185] Demmke & Schröder, 1999.
[186] Peterson & Bomberg, 1999.

* Under the **Co-Decision Procedure** (see article 251 of the Treaty), the Council and the Parliament are jointly responsible for the final adoption of legislation. This procedure allows for the convening of a 'Conciliation Committee' in which at the final stage differences between the Council and the Parliament may be resolved and allows the Parliament, as a last resort, the right to reject the proposal outright by an absolute majority.

** **The Consultation Procedure** requires the Council to obtain the opinion of the European Parliament (and sometimes also the opinions of ECOSOC and the Committee of the Regions) before adopting legislation. However, neither the Council nor the Commission is obliged to accept the amendments contained in the Parliament's opinions and it is only by refusing to give an opinion that the Parliament can exert pressure. Once the Parliament has given its opinion, the Council can adopt the proposal non-amended, adopt it in an amended form, or be unable to agree. In the last case the proposal remains "on the table" (Cassidy, Bryan, 1998)

Council members (national ministers), those working groups and MEPs are thus a first possible contact point for industrial associations and environmental NGOs to 'communicate their viewpoints', and significant lobbying efforts take place within these institutes and working groups[187]. As decision-making involves several Commissions' draft-proposals after the initial one, it is also interesting for industrial and environmental organizations to direct their lobbying efforts as well on this institute in further stages of the process. Although DG XI is generally considered to be more open to lobbyists than any other Commission service[188], one may ask himself whether this lobbying happens with equal 'influencing power' of all parties. In this context, Commissioner Mme van der Vlies told us that *'normally all interests groups are consulted/and represented at institutional level (not only in the EP, but also in the consultative bodies, like the European Economic and Social Committee and the Committee of the Regions)'* [189] , and that *'the influence depends on the interest group and how they are organised'*.

Looking at the contents of the amended Packaging Waste Directive (where economic considerations are clearly taken into account), we could think that influence from industry is stronger than that of environmental organizations. In this context, Peterson & Bomberg (1999) stated that 'the openness of environmental policy networks should not be confused with equal influence, as resource imbalances occur within even fairly accessible networks'. During an interview with a senior Commission official responsible for waste management policy, these authors discovered that apart from contacts with national administrations, '90% of the contacts is with trade and industry'. Indeed, during the development of the 1994 packaging waste Directive, the initial influence of environmental advocates was soon overshadowed by the superior resources and access of industry representatives[190]. Hearing the other side (via a personal interview with Europen), we learnt that formal 'real life'-discussions with industrial stakeholders are rather limited, as industrial influence mainly happens through voluntary and unidirectional

[187] Survey of national authorities, personal research within the course 'Economic politics' (ULB, 2003-2004).

[188] Peterson & Bomberg, 1999.

[189] See also Communication from the Commission on consultation of third parties, http://europa.eu.int/eur-lex/en/com/cnc/2002/com2002_0277en01.pdf

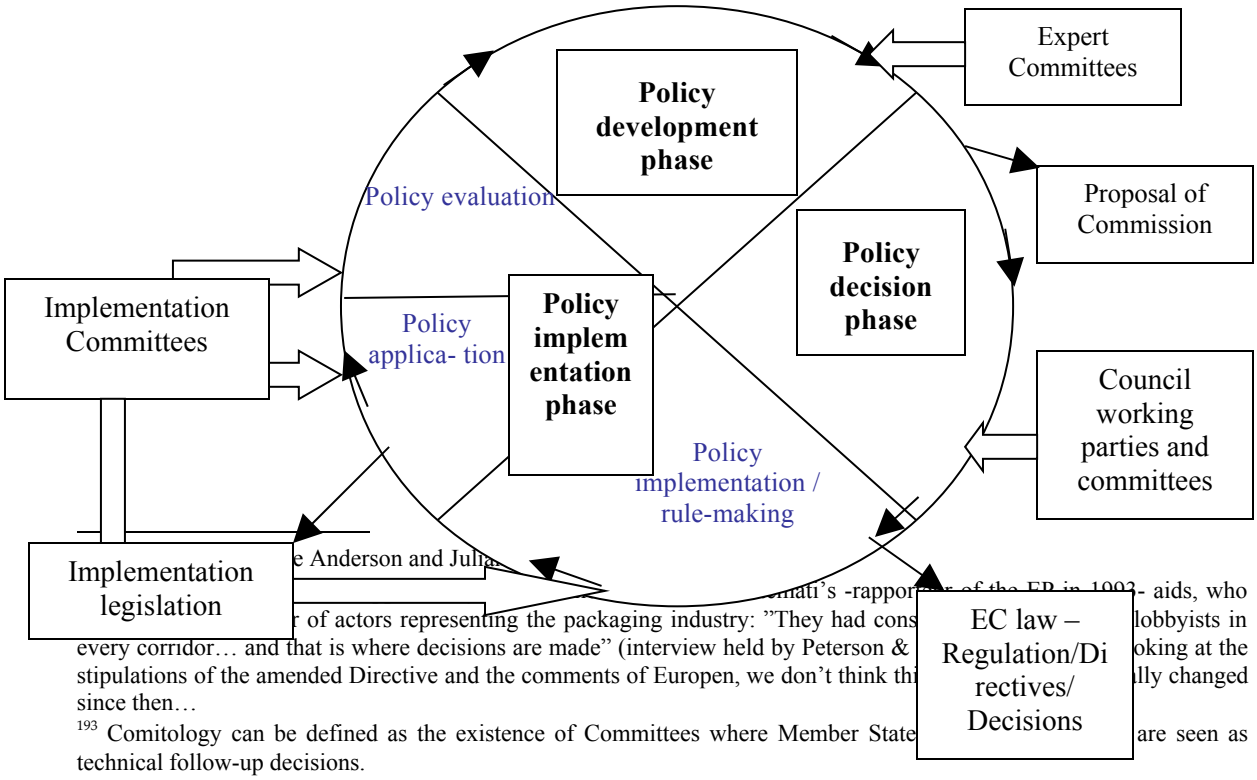
[190] Peterson & Bomberg, 1999.

written communications between the organization or firm concerned and the Commission, where industry is almost never invited to participate in working groups[191]. Nevertheless, Europen did not only participate in the Expert Committee (see supra), but also in a special Working Group on Packaging. Moreover, they admitted to know very well the persons they had to 'address' informally within the European institutes, which constitute all quite valuable 'gateways' to clear out its viewpoints in a fairly effective way[192]…

3.2.2.3 Implementation

Once approved by the European Parliament and the Council, the detailed procedures for implementing directives are worked out by special committees of (2) representatives per Member State, normally civil servants (the Implementation Committees, see also annex VI). This committee process is known as 'comitology'[193], and several studies on comitology committees show how the working procedures are clearly geared towards consensus. Statistically, voting patterns indicate that over 90% of all opinions expressed were favourable towards the Commission's position[194]. This implies that the Commission tends to make proposals acceptable for the Member States, and that the comitology committees do not want to rely on the Council to intervene [195] (which is necessary if the committees don't agree among themselves). The figure below (figure 7) visualises the role of the different committees within the three policy stages.

Figure 7: Committees in the EC policy cycle



e Anderson and Julia… …mati's -rappor… …of the EP in 1993- aids, who … of actors representing the packaging industry: "They had cons… …lobbyists in every corridor… and that is where decisions are made" (interview held by Peterson & … …oking at the stipulations of the amended Directive and the comments of Europen, we don't think thi… …lly changed since then…

[193] Comitology can be defined as the existence of Committees where Member State… …are seen as technical follow-up decisions.

[194] Falke, J. 1996.

[195] Wessels, W. 1998.

Source: Demmke & Schröder, 1999, p. 123.

The role of these committees, meeting behind closed doors and without publishing minutes, has long been a bone of contention between the European Parliament, the Commission and the Council. In theory, the Commission consults directly interested parties who are listed in its Directory of Interest Groups. In practice however, Member State governments are supposed, through their own machinery, to consult interested parties within their own countries. In this context, 'comitology' can be regarded as a major cause of the so-called democratic deficit since it is subject to the democratic scrutiny of neither the European Parliament nor national parliaments[196]. Moreover, very often, comitology committees only exist when it comes to voting on a formal proposal. Both representatives of European interest groups and environmental groups are generally invited to participate in those committee sessions, though they are rarely present[197].

Also IMPEL (the European Union Network for the implementation and enforcement of Community environmental law, see section 1.2.3) plays an important role in this stage of policy-making. All Member States and the Commission are represented at IMPEL, making it as such 'a very useful informal instrument for the improvement of implementation, inspection and enforcement, inter alia through exchange of information and experiences on different administrative levels, as well as through training and in-depth discussions on environmental issues and enforcement aspects'. Moreover, 'in the future, the IMPEL network should also play an important role during the other stages of the regulatory chain and could particular give advice (on request or on its own initiative) on general questions regarding implementation and enforcement as well as on new draft proposals for community legislation, in particular where the input of practical experience is necessary'[198]. This increase in potential influence of IMPEL is probably the reason why the Commission proposed (in its white paper on governance)[199] to promote, among other things (like an increased co-regulation with private partners, more use of the framework-directive instrument and the creation of regulatory agencies), 'the abolishment of the Comitology' (see infra, section 4.3.1.3). Nevertheless, this (rather drastic) measure should

[196] Cassidy, Bryan. (1998)
[197] Demmke & Schröder, 1999.
[198] The Council Resolution of 7th October 1997 on the drafting, implementation and enforcement of Community environmental law.
[199] http://www.europa.eu.int/comm/governance/white_paper/index_en.htm

only be put through if national experts still can play a role in the implementation of European directives within the framework of IMPEL or other (transparently structured) organizations…

3.3 The bottlenecks of European policy-making

3.3.1 An overloaded environmental agenda with a democratic bookmark

The most common suggestion is that the EU decision-making process has become inordinately slow, suffering from an excessive load of business and increased gridlock[200]. It is true that since the 1970s, legislative activity in the environmental field of the European Union has expanded greatly in both scale and scope (see chapter 1). This continuous expansion of EU legislative activity has been accompanied by periodic changes of the EU's institutional framework, such as the introduction of qualified majority voting for a number of policy areas by the Single European Act (to increase the efficiency of the decision-making process) and the possibility for the European Parliament to influence legislative outcomes (to enhance the democratic level within the European institutions), both extended and strengthened by the Treaty on European Union (1993). The question is whether these reforms are sufficient to enable the EU to deal efficiently with an expanding legislative agenda, in particular with respect to the environmental issue.

As it is of key importance not to delay (anymore) environmental issues (and certainly not the problem of packaging waste), the time lag between a Commission proposal and a Council decision can be used as the central indicator of EU decision-making efficiency to assess this ability. Empirical analysis, performed by Schulz & König[201], provided strong support for some interesting hypotheses in the field of institutional reform and issue-dependent efficiency. With respect to the institutional reforms of 1987 and 1993, they found that the use of qualified majority rule decreases the proposal-decision time lag but that participation of the Parliament increases the duration of the decision-making process. Putting the two elements together, the authors concluded that 'the introduction of qualified majority voting illustrates that the EU is capable of an effective institutional response to an expanding legislative agenda. The effect of Parliamentary participation, by contrast, suggests that decision-making efficiency is not the only goal guiding EU institutional reform and that Member States are willing to tolerate a decrease in decision-making efficiency in order to achieve other goals, such as reducing the EU's 'democratic deficit'. This confirms the earlier statement of Scharpf, who stated that 'the institutional reforms culminating in the Single European Act failed to reduce the inefficiency and inflexibility of European policy making'[202]. The introduction of qualified majority voting, he argues, 'may not make much of a difference in practice'. Stated otherwise, the introduction of

[200] See for example, Wessels 1991 and Nugent 1994.
[201] Schulz & König, 2000.
[202] Scharf, 1988.

qualified majority voting may be an effective response to an overloaded environmental agenda, it is far from being a sufficient one…

As regards to the issues of efficiency and transparency, some observers argue that the system of committees should be seen as enhancing the efficiency of the Community' institutional structure in that it provides a link between the Member States and the Community administrations, as such speeding up the decision-making process through networking effects. Although this observation is certainly true, the complexity of the different committees ranging from advisory committees to regulatory committees and the various complicated procedures could be seen as a bureaucratic mechanism which is robbing the Community decision-making process of its last vestiges of democratic accountability[203].

3.3.2 Conflicting interests

3.3.2.1 ... between different issues

We already pointed out in the first chapter (see the evaluation of the integration principle, 1.3.2) that the diverse tasks (and thus interests) of the different DGs and Council meetings sometimes lead to conflicting situations. This makes the integration of environmental issues into other policies a demanding task, where the 'own' interests sometimes need to be watered down in order to respect the environment of the Community. With respect to the issues to be discussed and regulated, Schulz & König found that measures pertaining to policy areas that constitute the functional core of the EU have shorter time lags than measures in other issue areas, which suggests that 'preferences of member states regarding measures establishing the internal market, agriculture, competition, and trade (= functional core) are relatively homogenous. However, this relative homogeneity of preferences can not be assumed for other issue areas (..) like the environment, where distributional consequences are often substantial and certain'[204]. As internal market and environment both come into play when establishing targets and measures for packaging waste, one could say that measures could be biased towards (or dominated by) the former, being a 'stronger' issue at European level.

On the other hand, these authors discovered that regulations and decisions have on the whole shorter time lags than directives, which is rather surprising given the greater impact of regulations over directives on the Member States. However, this can be explained by the grounds on which the initial choice between regulations and directives is based: where regulations generally concern 'easier' issues like health or consumer protection, directives are chosen when

[203] Demmke, C. 1999. The secret life of Comitology or the role of public officials in EC environmental policy. In: Demmke & Schröder, 1999.
[204] Schulz & König, 2000.

it comes to more innovating and far-reaching measures, a category under which the environment tends to fall almost always.

3.3.2.2 ...between different Member States

In a widely cited article, Scharpf[205] argues that *"the EU is unable to increase the efficiency of the decision-making process because the need for compromise among member governments makes effective institutional change impossible"*. Requiring a compromise to set up an environmental policy is unquestionably crucial to make the policy work; however, conflicting interests within the European Union render this task extremely difficult. In this context, we can divide the Member States into four categories with respect to their ecological interests. The first category, which covers the ecological countries (being the most advanced when it comes to environmental protection), includes Germany, the Netherlands, Sweden, Finland, Denmark and Austria. These countries have mostly an increasing tendency to consider that Community Environmental policy does not go far enough and that it represents a slowing influence in comparison with the stricter environmental protection measures which they would wish to introduce in their countries (see for example Case – 233/94 (annex VIX)). The second category, which covers the countries that could be classed as 'neutral', includes France, Luxembourg, Italy and Belgium. These countries generally accept the proposals of the Commission without any particular enthusiasm, but without causing any particular difficulties either (depending on the issue concerned)[206]. The third category, made up of the United Kingdom and Ireland, has frequently shown a certain reticence with regard to over-restrictive and over-harmonized Community solutions in environmental matters. The last group, including Greece, Spain, Portugal and all the new Member States experienced (and in some cases continue to experience) certain difficulties in respecting and applying the whole of Community legislation, as is illustrated for example by the dispensations granted to almost all of them (except for Spain and including Ireland) regarding the (initial and amended) packaging waste directive (see table 4 p. 19). Over the years, the first three countries (Greece, Spain and Portugal) have tried to turn Community Environmental policy towards a less normalizing and legislative approach, wanting to direct it towards more specific actions and (financial) interventions on the ground[207]. This four-tiered distinction is somewhat crass, as the preferences of Member States vary across time as well as across issues[208], but the categorization does highlight sharp variations in levels of environmental protection and awareness across the EU's Member States.

[205] Scharf, 1988.
[206] Sbragia, 1996.
[207] Johnson & Corcelle, 1995.
[208] For instance, the UK has taken a lead role in pushing for eco-audits, while Germany has resisted such measures (Weale, 1996).

In this context, it is also important to bear in mind that also the environmental problems (and thus priorities) significantly differ from country to country. As we saw in the first chapter (see figure 3, p 23, section 1.4.2), not all countries cope with the same ecological problems, with -for example- packaging waste generation being less problematic in Greece and Finland than in the more 'ecological countries' and Ireland. As such, it is normal that the former countries want to spend more resources on -for example- coastal protection and less on the recycling of their 'relative little amount' of packaging waste in comparison to the latter.

With respect to the differences between pro and contra 'European Integration' - Member States, it is clear that the EU (and its institutes) is still often associated with a significant loss of sovereignty of the Member States, centralization of tasks and competences in 'Brussels', bureaucratisation, long and complicated decision-making processes and over-regulation through thousands of (unnecessary) regulations and directives which the Member States have to implement and apply. Throughout Europe, 'Brussels' has become an easy target for almost every problem. In Britain and Germany, 'Europe' is accused of over-regulation, manic harmonization and addiction to subsidies. In France, on the contrary, 'Brussels bureaucrats are attacked for ultra-liberalism, the dogmatic promotion of privatisation and addiction to laisser-faire economics'[209]. The Member States are thus till regarded as the 'powerless victims' of what is decided in Brussels[210], where almost every Member State wants to maintain as much power and independency as possible[211].

As neither the ecological nor the European interests of the current Member States are to be changed significantly in the near future, these national differences will result (with the current packaging waste provisions and decision-making structures), just like in the past (and probably even more with the accession of the 10 new Member States), in long and inefficient decision-making and different and trade-distorting environmental packaging waste-efforts…

3.3.3 Complexity of policy procedures

Whereas formal structures and Treaty provisions constitute the 'basic' guidelines to follow when deciding how to allocate responsibilities and decision power, Community's policy is far more complex than these guidelines, both with respect to procedures and to those involved.

3.3.3.1 Dynamism of the EU policy process

A vast amount of authors made several attempts to sketch the policy procedures at EU level, and many of them succeeded relatively well in this quite complex task. However, the dynamic nature

[209] 'Europe's mid-life crisis', The Economist, May 31st 1997, p. 3.
[210] Demmke, C. Decision-making in practice, in: Demmke & Schröder, 1999.
[211] Survey of some national and regional authorities in the European Union.

of these procedures imposes a significant barrier for this literature to remain a good source of reference for interested stakeholders. In this context, several authors found that the relation between a supranational legal system and its components is never static: 'while the Community has very few exclusive powers, the exercise of a parallel or concurrent competence or power can lead to a rapid transformation of the respective powers in the regulated area'[212]. Finally, McCormick also stated that "attempts to theorize the process of European integration and to develop explanatory models for the European policy process are handicapped by the unprecedented nature of the European Union as an institution or process, and by its constantly changing character"[213], which shows us that this 'phenomenon' is (and probably will be) one of all times.

Moreover, even within one timeframe, 'the institutional balance of power in environmental policy is constantly shifting, and decisions rules are manipulated in the struggle'[214]. Consequently, environmental decision-making is argued to be not simply a process that reflects dominant coalitions of Member States (like in many other domains)[215] pushing their own national style of regulation, as national concerns should be 'displaced onto a higher level'[216]. The point is that environmental policy debates are not merely about the political practicality of standards (where one would expect to find disagreement), but also about ostensibly 'neutral' questions concerning measurements and scientific methodology[217], tackled in cross-border committees. However, we must bear in mind that most of the environmental legal acts are in the form of Directives, enabling the Member States to get a 'fast' consensus on some basic stipulations (and choosing the 'national way' to work them out). This 'displacement of national concerns' can thus seem to be a lucid reality with respect to regulations in other domains, but they clearly appear when environmental Directives are to be implemented…

3.3.3.2 Lack of transparency

One of the most conspicuous features of environmental decision-making is the influence of a wide array of non-institutional members and interests, particularly in the early 'shaping' stages. In addition to national and EU officials, the formulation of environmental policy usually brings together scientific experts, business interest groups and environmental non-governmental organizations (NGOs), with frequently changing memberships (depending on the issues). This

[212] Ziegler, 1996.
[213] McCormick, 2001, p. 5
[214] Peterson & Bomberg, 1999.
[215] Personal research on the procedure about tobacco advertising (ULB, Economic Politics, 2003-2004) has proved that 'national elements' are strongly reflected in the voting behaviour of both the members of the Council and the EP during the whole decision-making process.
[216] Weale, 1996.
[217] Peterson & Bomberg, 1999.

crowded nature of the environment policy-making process means that policy-shaping usually takes place within loose (almost messy) 'issue networks', which often feature a range of actors who have radically different views of the policy problem as well as the desired policy outcomes[218].

Figure 8: The formal policy-making system

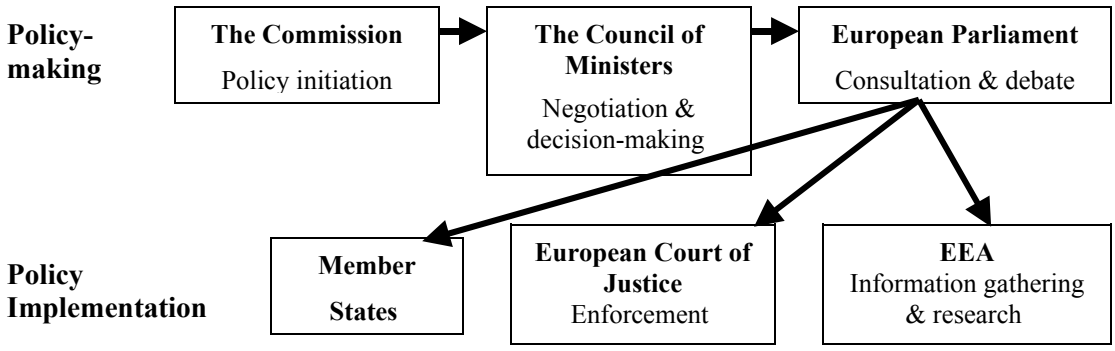
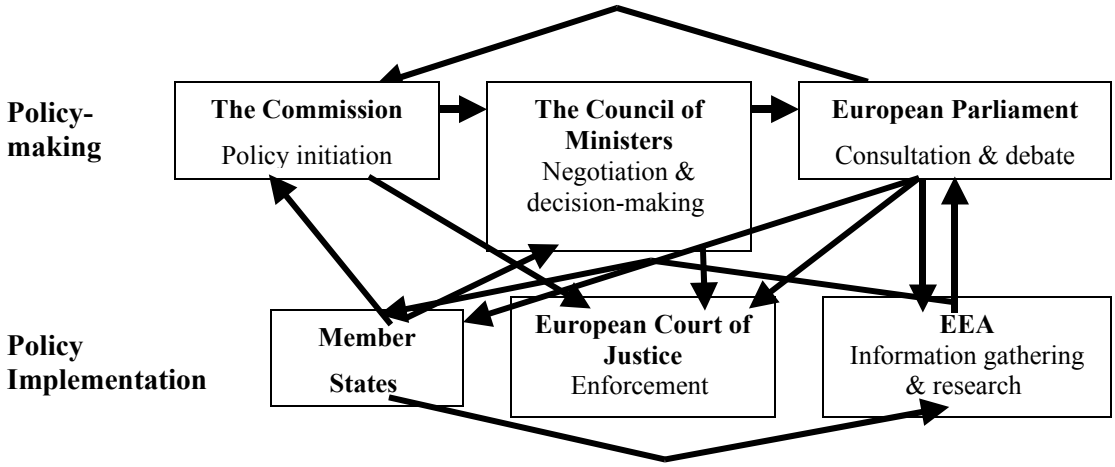


Figure 9: The informal policy network



Source: McCormick, 2001.

In this context, McCormick stated that "it is important to understand the formal [.] policy system, but much more important to appreciate the cumulative role of informal meetings, exchanges of favours, unspoken understandings,… (..) the sharing of intelligence in hallways and cafeterias,… ."[219] (see figures 8 and 9 for a visual illustration of this statement). Where this networking is a positive point with respect to active national involvement in the European policy-making procedure, it is a significant barrier to transparency, thus jeopardizing democratic decision-making. After all, policy decisions are increasingly the result of negotiations within informal or

[218] Peterson & Bomberg, 1999.
[219] McCormick 2001, p. 96

formalized networks[220], without providing a clear image about who played a role in it and how these parties influenced those decisions. Consequently, Member States often don't realize how much influence they actually have via all these expert groups, committees, working groups etc., leading to a belief of 'European dominance' where national experts significantly feed the decisions concerned.

3.4 Conclusion

Member States frequently complain about over-regulation, yet they are relatively strong represented at every stage of decision-making, and their approval is required for most Commission proposals before those become European law. It has become clear in this chapter that the current decision-making process is far more complex than one would imagine as it cannot be described by simply focusing on the institutions in Brussels. After all, the political decision-making process has become a networking process of mutual interweaving between the national and Community levels, as such becoming ever more labyrinthine. European integration is moving increasingly from an institutionalised and centralized one towards a 'bottom-up', informal partnership approach. As such, the growing importance of the European integration process is developing in parallel with the growing influence of the Member States in 'Brussels'[221] . This is illustrated by the growing number of comitology committees in the environmental sector, whose decisions have an enormous impact on the national legal, political and economical systems of the Member States. Both the Council and the Commission rely more and more on the support of national civil servants and experts because they increasingly lack the resources to respond to the needs of environmental policy at European level.

However, this 'national involvement' currently happens despite the transparency of the decision-making procedures, which is only one reason for the fact that national authorities don't always realise how much influence they (can) have at European level when it comes to environmental policy making. Next to this 'perceived lack of national influence', also the differences in ecological interests between the Member States make up another reason for the reticence of national policy makers to further harmonise packaging waste measures at European level. After all, the will to maintain (and where possible to strengthen) national sovereignty is very strong in the Member States, leading to 'overuse' (or do we have to say 'abuse'?) of the subsidiarity principle. As we have seen in chapter two, these differences bring about a variety of packaging waste measures, sometimes leading to serious market distortions, which was the very reason to try to obtain a higher degree of harmonisation in the first place. So it seems that we ended up in a vicious circle, with European firms and our environment as major victims.

[220] Demmke & Schröder, 1999.
[221] Golut, J , 1996b.

With the current organisational procedures, it is indeed a vicious circle, but there is some hope: an organizational and administrative reform at European and national level, focusing mainly at increasing significantly the transparency of the procedures concerning environmental decision-making. As Winter put it already 8 years ago: 'the issue of committees and comitology needs a combined (and not separate) answer to the question as to how the European Union addresses the question of effectiveness, efficiency, transparency and –within its context- democracy'[222]. Raising political –national- support (and thus collaboration) through transparent procedures and more national expert influence at the preparatory stage is thus an urgent necessity to achieve an effective and 'sustainable' environmental policy...

[222] Winter, G. 1996.

4 Packaging waste in the 21st century: proposals for a better European packaging waste policy

4.1 Introduction

"Environmental policy is one of the success stories of the European Union – thanks to European Union legislation we have made significant improvements such as cleaner air and safer drinking water. But we still face some real problems"

(Margot Wallström, Commissioner for the Environment, at the presentation of the Commission's proposal of the 6EAP)

As can be derived from the research done in the previous chapters, these problems are related to both organisational and instrumental aspects of European environmental policy, which ask for an in-depth reviewing and –eventually- reforming at European as well as at national level. Firstly, the problem of environmental governance[223] at European level has to be tackled. In this context, the Commission presented in July 2001 its "White Paper on Governance" as the Community's response to the lack of public support for the functioning of the European Union[224]. In this chapter, we will look deeper into the issues tackled in this paper and look for some complementary solutions to make European environmental policy more effective, and this in the context of the –changing- situation in the current century. Another question to address is how to best combine the most effective tools to move towards the goals of a more sound resource, waste and recycling policy, with the aim of attaining more environmental benefits with lower legislative and administrative requirements. Therefore, we will discuss the practical implications of the most effective (see chapter two) instruments in the last part of this chapter.

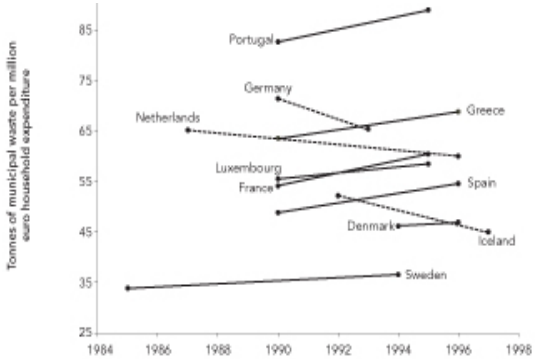
4.2 Challenges of the 21st century

4.2.1 Increasing packaging waste quantities

As already mentioned in the second chapter (section 2.3), one of the greatest challenges with regard to waste management is the continuous increase in waste generation in almost all Member States in the European Union. It is obvious that growth in waste quantities can be difficult to avoid in periods with significant economic growth. However, it is noticeable that waste quantities in most countries are growing faster than the growth in private consumption[225] (see figure 10). This figure shows us that for all countries, except for the Netherlands, Germany and Iceland, waste generation per euro spent in the household is increasing.

[223] Governance is defined as "rules, processes and behaviour that affect the way in which powers are exercised at European level, particularly as regards openness, participation, accountability, effectiveness and coherence".
[224] COM (2001) 428 final. A white paper on European governance.
[225] EEA, 2002b.

Figure 10: Municipal waste generation compared with household expenditure



Source: EEA (2000). Environmental signals 2000, p. 72.

Increased amounts of packaging waste find their cause thus not only in economic growth, but also in smaller family sizes, higher incomes, a higher number of products, an increased consumption of ready meals[226] and a rising emphasis on health and food safety[227], all bringing about (directly or indirectly) an upsurge in the use of packaging. As these trends are hard –and even not desirable- to reverse, waste management authorities at all levels face the big challenge to put in place policies that are effective in decoupling waste generation from growth. In this context, the European Council meeting in Göteborg (June 2001) concluded that "the relationship between economic growth, consumption of natural resources and the generation of waste must change. Strong economic performance must go hand in hand with sustainable use of natural resources and levels of waste […]"[228]. This theme is further developed in the Community's 6th Environmental Action Programme with the overall aim of achieving "better resource efficiency and resource and waste management to bring about more sustainable production and consumption patterns, thereby decoupling the use of resources and the generation of waste from the rate of economic growth and aiming to ensure that the consumption of renewable and non-renewable resources does not exceed the carrying capacity of the environment"[229]. These are indeed desirable outcomes, but concrete measures are apparently harder to find, as these are not yet formally proposed at European level. One might think here about new, waste-minimizing technologies and the establishment of an increased environmental awareness at all levels of society. The former should be used to enhance the quality of the packaging (in the sense that it is more environmental friendly to produce and easier to treat afterwards); widespread sensitization

[226] A study produced by Pira and the University of Brighton found that since 1971 the number of people living alone has doubled in the UK, that the average disposable income has risen by more than half in real terms, that there are twenty times as many products in supermarkets today than there were in the 1960s en that twice as many ready meals are consumed today than just ten years ago (Pira & Brighton, 2004).

[227] EEA, 2004.

[228] See the Presidency Conclusions at http://ue.eu.int/en/Info/eurocouncil/index.htm (§ 31).

[229] Decision N° 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme, OJ L 242, 10.9.2002, p.1. ; COM (2003) 301

should aim at making environmental-friendly products more profitable (see sections 4.3 and 4.4 for an elaboration of these proposals).

4.2.2 Further enlargement of the European Union

> *"The environmental situation in most applicant countries is rather catastrophic, and the Central and Eastern Europe Countries (CEECs) give much more priority of wealth creation and economic development"* (Peterson & Bomberg, 1999, p. 185).

> *"110 billion €... the estimated costs the candidate countries have to pay in order to become compliant with the EU's environmental policy"*. (Sciberras, 2002, p.1)

The implementation of the Community's environmental legislation was (and still is) thus a major task for the candidate countries, supported by Community funding programmes[230] like the Priority Environmental Programme for Accession (PEPA), which was established by the commission's technical team in 1999. This programme aimed to get the less developed countries among the accession countries into environmental political processes effectively and equitable, while ate the same time rewarding industrial innovation and investment[231]. However, EU support and other external assistance meet only a very small proportion of the total needs for full implementation of the environment acquis. Fortunately, what all the countries realize is that these steps are important for the individual country and ultimately for the well being of their citizens. During the last decade, the 10 new Member States (Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia) have made huge efforts over recent years to adopt EU environmental legislation in time for their arrival[232]: the vast majority of the new Member States undertook a national environmental planning and priority-setting exercise, resulting in National Environmental Action Programmes with a whole list of specific actions and investments[233].

Consequently, these countries (who until recently were considered to being backward in their environmental policies) are slowly but surely catching up, possibly making their countries of a more protected environmental haven in a faster way than the countries of the EU15. After all, in contrast with the 'founding members', the new Member States have the opportunity to make progress towards an economic development that is sustainable and to avoid the type or scale of environmental problems now faced in Western Europe[234], as the principle of durability came here far behind the first signs of economic development.

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[230] 6EAP : COM (2001) 31
[231] Patten, 1990.
[232] http://europa.eu.int/comm/environment/enlarg/index_en.htm
[233] Sciberras, 2002
[234] 6EAP : COM (2001) 31

On the other hand, the widely encountered disagreement among (EU15-) Member States with respect to targets, measures and other aspects of environmental policy-making risks to become more severe with the eastern enlargement[235] this year, as such jeopardizing the hardly needed increase in efficiency en effectiveness of environmental decision-making.

4.2.3 Ensuring fair trade

4.2.3.1 The internal market (of the European Community)

The EU's sustainable development strategy applies to all fields of policy, including the internal market. The key factor when it comes to integrating environmental concerns into the EU's internal market policy is the need to find a balanced approach between the free movement of goods and environmental protection. The increasing openness of the market is sometimes perceived as a threat to the quality of Europe's environment. By the same token, environmental standards are often seen as barriers to market access. Finding a way to integrate these two policy areas is the main challenge facing Europe's policy-makers. The EU's internal market integration strategy, adopted in 2001 and setting out a series of objectives, actions and indicators, was the first step towards this goal. The strategy is implemented through existing EU legislation in areas such as standardisation, public procurement, eco-labelling, taxation, environmental agreements, state aid, and industry and product policy. Other important initiatives include a review of the Community framework for state aid for environmental protection and the European Commission's Interpretative Communication on public procurement and the environment. This examines and clarifies the possibilities offered by existing rules for improving environmental protection in public procurement. Based on these findings, the Commission is also currently preparing a handbook on how to 'green' public procurement[236].

4.2.3.2 The international context

The world community faces today a number of inherently global challenges. Advances in a range of ecological sciences continue to unveil new threats to the "global commons" that deserve attention at all levels of decision-making. It is clear that transboundary spillovers of pollution due to the production and treatment of packaging waste (such as emissions of noxious gasses drifting downwind; contamination of shared rivers and soils…) and risks of overexploitation of 'common resources' cannot be adequately addressed at the national scale. This cross-border pollution[237] eventually will lead to 'market failures', resulting in allocative inefficiency in the economic sphere and substantial environmental degradation. Thus, some sort of functioning

[235] Peterson & Bomberg, 1999.
[236] http://europa.eu.int/comm/environment/integration/integration.htm
[237] Such uncontrolled environmental impact is further denoted as 'externality'.

global environmental regime becomes an economic as well as an ecological necessity. Because environmental problems are diverse and arise at different scales, a governance structure must similarly be multi-tier in structure. What is therefore needed is a "nesting" of institutions – a framework of local, regional, national, and international policy mechanisms for a comprehensive, effective and integrated approach to environmental governance[238].

In an effort to promote this goal of global sustainable development, the EU is taking steps to integrate environmental concerns into its external relations and trade policies. Particular emphasis is put on including environmental issues in the enlargement process, on developing stronger global co-operation on environmental issues through an enhanced United Nations system and on finding a greater balance between liberalised trade rules and multilateral environmental agreements[239].

4.3 The key to an efficient and more effective packaging waste policy: possible solutions and practical implications

Knowing the problems arising when making and implementing European packaging waste legislation (cfr the previous chapters), and taking into account the growing challenges of this century, we will select now the most important elements of a 'best packaging waste policy practice' for the near future, analysing some obvious and controversial solutions with respect to their feasibility.

4.3.1 More reliable and widespread information

Sound environmental decision-making hinges on the availability of data, information, and analysis. Development and systematic review of a core set of environmental indicators is central to good environmental decision-making. Shared information allows best practices, technologies, and policies to be identified, highlighting the opportunities for laggards to learn from those at the leading edge[240]. However, we saw in the first chapter that packaging waste statistics currently lack the accuracy and comparability policy makers hardly need, as uncertainties arise from the different methods of data collection and compilation in Member States, which are described insufficiently in several of the country reports to the EC. The implementation of a comprehensive accounting system is still under way in some Member States and statistics reported by these countries needs further consolidation. In addition, inconsistencies in data are caused by different understanding of the definition of reuse, recycling and energy recovery[241], confirming the comments of Julian Carroll about lack of good definitions in the Packaging Waste Directive (for

[238] Esty & Ivanova, 2001.
[239] See http://europa.eu.int/comm/environment/integration/integration.htm
[240] Esty & Ivanova, 2001
[241] EC, 2001.

which we thought they were exaggerated, see 1.4.2). Consequently, policy makers need high-quality data and definitions, uniformly established among the different countries and organisations concerned. Achieving this was the main goal of the Waste Statistics Regulation[242], established two years ago, which intended to close the gaps in our knowledge of waste generation and provided a legal basis for a complete statistical data collection on waste generation and treatment in the Community.

Nevertheless, as data collection will only take place every second year, starting with this year (2004) as the reference year, the first set of statistics will be made available to the Commission as late as in 2006. Consequently, a satisfactory knowledge of waste generation and treatment patterns at EU level will be available within two years at the earliest. However, trends cannot be estimated on the basis of data of one single year. Therefore, a first assessment of trends in waste generation across the EU will only be possible in 2008, when the second set of statistics collected in the context of the Waste Statistics Regulation will become available[243]. Unfortunately, little can be done in order to fasten up this process, as we are already two years behind the decision date, being in the middle of the first data collection year. One can ask why this decision has been set up at the very late date of 2002, knowing already for over two decennia that adequate information is indispensable to set up targets and to detect trends in waste evolution. Here we can point out that the establishment of the European Environment Agency in 1994 had (and has) the information gathering, analysing and distributing-role we seek for. Nevertheless, as her duties were too far ranging in comparison with the (human and financial) resources she disposed of, this agency faced the same 'lack of information'-problem to present correctly all waste evolutions in the European Union. In its latest assessment, the European Environment Agency devoted a whole chapter to this problem[244], probably written at the same moment as the decision on the Waste Statistics Regulation. But also reports from this agency in earlier stages of her life (1995 & 1998)[245] included overviews of the (strengths and) weaknesses of environmental information, which should have entailed faster (and more effective) action. This reflection doesn't help much to solve the current information problem, but it can (and must) be regarded as a lesson for other domains of EU's environmental policy.

Next to the indispensable information for establishing well-founded legal acts and programmes, structured programs of financial, scientific, management, and technical assistance will also be needed for firms and civil servants as an indispensable form of compliance assistance at

[242] Regulation (EEC) N° 2150/2002 of the European parliament and of the Council of 25 November 2002 on waste statistics, OJ L 332, 9.12.2002, p.1
[243] COM (2003) 301
[244] EEA (2003), Chapter 14 : Information gaps and needs.
[245] EEA (1995). Europe's environment: The Dobris assessment & EEA, 1998, Europe's environment: The second assessment.

European level, mobilizing both public and private resources and expertise[246]. These information sources should be well organized, exchanging best policy practices all over the European Union. With respect to packaging waste, one can take the 'waste minimization clubs' in the UK (see chapter two) as a perfect example of the opportunities of such information networking.

Finally, also individual citizens need useful information to allow them to choose environmentally benevolent products, as they make daily decisions that directly or indirectly impact the environment, thus driving the market of 'greener' products. Many authors and policy makers see eco-labelling as the right instrument for giving clear and correct information to consumers (which has indeed the possibility to achieve this goal), but our surveys thought us that even the widely used 'green dot' symbol and the European 'green flower' is not recognized by consumers for their exact connotation. For this awareness and comprehension to be increased, one needs both comprehensible indications of the meaning of the symbols on the packaging itself àndmassive, cross-border sensitisation via other media channels like television, radio, newspapers etc. After all, only when consumers really know what is behind the emblem on the packaging, they can make the right choices and drive the market into a greener production pattern…

4.3.2 Improvement of legal acts and justification of the targets

From the point of view of the national administration charged with applying the legal acts, constant adaptation and amendment of directives and regulations contributes considerably to the fragmentation of law and poses immense problems for the civil servants in the Member States who have to implement and apply them[247]. Robust and simple legislation and long-term decision-making are some basic requirements for civil servants to implement European legal acts in an effective an efficient way. Moreover, *'when adopting new legislative instruments at European level, the implementation into the national laws of the Member States should be taken into consideration. This implies that the provisions should be clear and unambiguous and that the time-frame to transpose the provisions into the national laws should be realistic'* (Mme van der Vlies' comments) on this issue. Another problem is still that many rules appear to overlap one another (like the Packaging Waste Directive and de Landfill Directive) or that they focus on only one aspect of a specific problem, disregarding other major elements to be tackled in the same way. For example, while Community legislation requires recycling of paper and cardboard from packaging, there is no analogous requirement for paper from other sources, e.g. office paper or newsprint, while paper from these sources is often appropriate for recycling from both an economic and environmental point of view. Similarly, while Community legislation requires the recycling of plastic packaging and, in practice, plastics from some other regulated waste streams

[246] Esty & Ivanova, 2001.
[247] Demmke & Schröder, 1999.

(like end-of-life vehicles (ELV) and waste electrical and electronic equipment (WEEE)); there is currently no Community requirement for recycling of plastics from other important applications, e.g. construction materials. Targets focusing on specific materials rather than solely on a particular waste stream are thus more than welcome…

It is clear that better and faster implementation can be reached, besides through *simplification* of environmental legislation, also by means of a clear *justification* of the new targets settled down in the amended packaging waste directive. This justification will entail also deeper reflection in earlier stages of decision-making, leading to a sound packaging waste policy and feasible targets. As this reflection requires detailed and sound scientific knowledge about the technologies available and the current (and future) consumer patterns, one needs constructive dialogues between the different stakeholders, where all aspects of packaging and packaging waste are taken into account.

4.3.3 Better cooperation between and involvement of different stakeholders

Broad involvement of all stake-holders can indeed generate the necessary sound scientific knowledge and economic assessments, reliable and up-to-date environmental data and indicators that will underpin the drawing-up, implementation and evaluation of environmental policy[248], *if* this involvement happens in an efficient and effective way (thus in the early stages of decision-making). Moreover, enhanced cooperation and participation of those involved in the implementation of packaging waste measures creates the indispensable link between implementation and preparation[249], bringing about sounder policies and increased support from these parties, facilitating implementation considerably[250]. In this context, the White paper on governance seeks increased dialogue with citizens' organizations, helped by a code of conduct and possibly an increased role for the Economic and Social Committee (ESC). It also looks for contractual arrangements between the Commission, Member States and authorities at regional and local levels, in helping to better implement EU policies and intends to promote increased co-regulation with private partners, more use of the framework-directive instrument, creation of regulatory agencies, and eventually the abolishment of the 'Comitology'-networks[251] (probably in

[248] 6EAP : COM (2001) 31

[249] Demmke, 2001.

[250] For example, the initial targets in 1992 (90% recovery, 60% recycling) were decreased significantly 'due to industrial dominance' (Peterson & Bomberg, 1999), but the catastrophic experiences in Germany in the beginning of the nineties (see 2.5.1.2) shows us that such targets would have been far too high (bringing about the same environmental and economic problems as in Germany). This 'dominance' should thus be seen as constructive instead of destructive; one has to take into account the feasibility of the targets, which has eventually (and fortunately!) happened. Due to the fact that this 'influence' happened only in later stages of the establishment of the Directive, environmental NGOs regarded this lowering of the targets as a 'loss' (hindering further negotiations), whereas it is apparent now that this 'economic approach' was a clear win-win situation.

[251] EEB, 2001.

order to be able to create more transparent implementation committees; see supra, section 3.2.2.3).

As reasoned in section 4.2.3.2, such a cooperative governance structure should (also) be multi-tier in structure, with nested institutions within a framework of local, regional, national, and international policy mechanisms to achieve a comprehensive, effective and integrated approach to environmental governance[252]. As increased participation of various interest groups and stakeholders *within the current structures* at European level necessarily will diminish transparency, one could favour the establishment of more formal structures, where specific procedures are followed strictly in order to ensure clarity and accountability (and thus the democratic level). However, a high level of formalization of working group- and committee procedures could entail a huge bureaucracy[253], leading to decreased efficiency and (even) slower decision-making, which is to be avoided at all times (certainly when one takes into account the call of several Commissioners to ease the current administrative burden)[254]. In our view though, gathering different opinions in a transparent way doesn't necessarily need to increase the administrative burden of the European institutes, if this happens in a uniform way, where statements are formulated briefly and to the point (in contrast with the voluminous reports of various interest groups which prevail today). 'Streamlining' the hundreds of different rules of procedures[255] by providing for clearer and standardized procedures should be another step in the good direction to solve the problem of non-transparency. Furthermore, the Commission should publish an overview of the different types of Committees in the environmental sector, their composition, their tasks, competences, etc[256], as none of these committees have a clear statute (because they are not mentioned in the Treaties or secondary legislation).

Moreover, the variety of measures in the European Union show us that the Member States as a whole spend a lot of time and efforts to seek for the most effective and efficient policy, leading to a whole range of different (and sometimes very inventive) ideas. However, public authorities and national experts charged with the setting up of such a packaging waste management system do not always use the experiences of other countries[257], with the risk of reinventing 'the wheel' sometimes. As some of the measures taken by the individual member states present promising results, national environmental policies should act as an inspiration source for future initiatives in

[252] Esty & Ivanova, 2001.

[253] Comments of Julian Caroll during an interview at Europen's offices.

[254] Mevr. Rosalinde van der Vlies (Member of DG XI) found the too high quantity of administrative rules as the major (even the sole!) reason for inefficient decision-making.

[255] For the procedures: see minimum guidelines on consultation at http://europa.eu.int/comm/secretariat_general/sgc/consultation/index_en.htm

[256] Demmke, C. 1999. The secret life of Comitology or the role of public officials in EC environmental policy. In: Demmke & Schröder, 1999.

[257] Julian Carroll (Europen) ascribed this trend to the 'Not Invented Here' (NIH)-syndrome, which apparently prevails very strongly in almost every Member State.

other European countries. Continuous cooperation of technological and organizational practices is needed to reach progress in the field of packaging waste. In this context, the Council Resolution of 7th October 1997 on the drafting, implementation and enforcement of Community environmental law (see 3.2.2.3) invites Member States to encourage the creation of national coordination networks involving the main relevant authorities at different levels of public administration. Utilizing each other's experiences (rather than to find new solutions) is thus a major challenge for the EU member states, as not all initiatives can easily be transferred from one country to another[258].

4.3.4 Strengthening the green & European identity

As effective environmental protection requires the consideration of environmental consequences in all 'technical planning and decision-making processes' both at national and at Community level, integration of environmental 'reflexes' in other policies got already attention at Stockholm (eco-management) and in the 1st EAPs[259]. However, from our analysis in the first chapter (section 1.3.2), it was clear that more efforts were made to write whole books, programmes and legal acts about integration and sustainability than to actually achieve some results with respect to this issue. In our view, the problem needs to be tackled far more fundamentally, aiming at the core of environmental integration and sustainable development: identity. After all, strengthening and creating both a strong green and European identity is a rather obvious solution to make the integration principle being put into practice. Creating or enforcing such identities are nevertheless hard to realize (certainly when one takes into account the recent enlargement of the European Union and the fact that environmental concerns tend to be influenced significantly by the economic and social situation at a particular time –see supra, 1.2.4-). Firstly, many Member States have for a number of years been lamenting the over-regulated nature of their legal systems and the inefficiency of the detailed control, which admittedly relies on obedience to the law instead of self-motivation[260]. An enhanced green awareness of both citizens (as they can considerably exert pressure on policy-makers) and politicians will certainly contribute to this kind of 'destructive passivity'. Here again, the importance of getting the right information with the right persons is of key importance, where all forms of media have to be used.

Secondly, in the Member States EC environmental legislation still continues to encounter a climate 'which is influenced by a kind of xenophobia against the 'imported' environmental rules, by indifference or by the view that the standards laid down in 'Brussels' are too strict, too lax, too different or that they do not fit into the national legal system'[261]. Consequently, subsidiarity

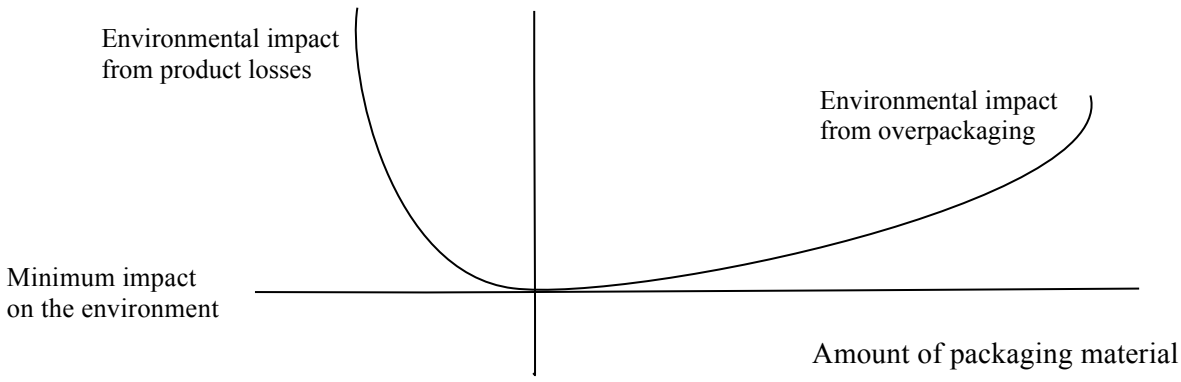
[258] EEA, 2002a
[259] Lenshow, 2001.
[260] Demmke, 1997.
[261] Krämer, 1996b.

became a much-used argument for Member States who failed to transpose European Directives (cfr chapter three) and 'as a protection of the national-prerogatives instead of using it as a question of making sure that the one best placed to act, will act'[262], jeopardizing the whole EU environmental policy. Nevertheless, several authors already found that most of the EU-Member States are extremely focused on national benefits, without expressing any hope for this tendency to be reversed in the near future. We are also realistic about this 'ideal solution'; while relying on a fast-growing European identity to improve efficiency and effectiveness would indeed be a harsh thing to do, supporting a likewise evolution (for example, via the establishment of a European media channel) is an imperative one…

4.3.5 Consideration of the packaged product, the consumer and the broader environmental context

Packaging is not a stand-alone product and its impact has to be considered in the context of the total product life cycle it supports. In particular when we talk about food packaging, one must consider consciously the benefits of the packaging with respect to food waste (as the greater part of the total environmental impact of an entire product is caused by farming; see chapter one). After all, more packaging does not mean necessarily mean more *total* waste, as the increased consumption of ready meals decreases significantly the amount of food waste produced[263]. This reasoning can be extrapolated for other packaged products that risk to be damaged when transported from the producer to the consumer, which makes 'holistic' approaches for packaging waste management systems even more imperative. As visualised in figure 11, packaging thus balances the need for preventing product waste and packaging waste, and both elements have to be taken into account when talking about packaging and packaging waste.

Figure 11: Balance between product losses and the necessary amount of packaging material



[262] Brinkhorst, 1993.

[263] Pira & Brighton (2004) found that thanks to the use of ready meals, ten times less food waste is produced.

Source: PPCG, 2000. The importance of paper and board packaging, p.4

In addition to its basic function of containing, protecting and preserving the contents, packaging must also respond to changing consumption patterns and social needs[264]. After all, our surveys carried out to learn more about consumers' preferences showed that consumers frequently believe that environment is a very important issue (with many among them wanting the packaging waste problem to be tackled more effectively), but most of them give high packaging comfort almost an equal or even a higher priority when comparing with environmental friendly products. As the market is the main driving force for major environmental efforts, these patterns and needs deserve appropriate attention, both in legal texts and in national and regional environmental programmes and measures.

Packaging has also to be considered in its broader environmental context, including *all* possible environmental impacts it produces. Here, we enter the field of LCA-analysis, which tries to detect the environmental burden of a specific product from its creation to final disposal (including production, transport and treatment of the packaging waste concerned). As such, LCA is a perfect means for getting a good image of a particular waste stream as it identifies trade-offs between variables and allows specific value/impact assessment, helping to prevent problem shifting (thus contributing to the integration principle). However, as LCA 'merely' points out options and trade-offs, it rarely produces "winners" and losers". Moreover, it gives us only a snapshot fixed in place and time, and on a case-by-case basis, without taking into account economic and social factors[265]. For example, the current discussion of possible PEI (Packaging Environment Indicator, see1.4.2) -models[266], based on LCA, only considers environmental impact whereas a good indicator should factor in also the economic and social factors[267]. Therefore, LCAs are not suited as sole instrument to support global policy decisions, and need to be combined with other tools (with information provided by industrial, environmental and social actors) in order to be used as a basis for sound, sustainable environmental policy. In order to value environmental damage of a product in a proper way, one should work out a common framework which takes into account all (in) direct environmental, economic and social impacts, so as to getting the product prices 'right', tackling as such the problem at its source. However, this is a very complex task, where arbitrary choices have to be made, as such raising the question of equity among the different stakeholders.

[264] Europen, 2004.
[265] http://www.europen.be/issues/lca/lca_at_a_glance.html
[266] See for example, the Interim Report of Ecolas/PIRA Study on Implementation of Directive 94/62/EC.
[267] Europen, 2004.

4.3.6 Harmonizing packaging waste measures

Although different packaging waste measures don't necessarily bring about severe competition distortions, there are some major reasons to support a more harmonised approach with respect to packaging waste management systems in the European Union. Firstly, all differences imply (administrative & technical) costs, which certainly can be seen as a 'wasted' cost, thus to be avoided at all times. Secondly, the German and Danish experiences showed us that various interpretations of the Directive's stipulations (depending on the country's ecological aims) do bring about competition distortions, sometimes leading to (even only temporary until the system is convicted and abolished) economic and environmental disasters (see for example the evaluation of mandatory deposit systems in section 2.5.2.2). Finally, environmental efforts depend very strongly on the resources of the country[268] or firm[269] concerned, rendering environmental concerns to a luxury product for those who can pay it. Therefore, we strongly hold up for a more harmonized system of a commonly agreed set of packaging waste measures, and disagree with the view of Ziegler (1996), stating that *"cases in which the optimal protection of the environment requires the intervention of Member States set a limit to harmonization at Community level"*[270]. In our view, harmonized national intervention is *not* a contradictio in terminis, but rather two complementary forces for a more effective packaging waste policy…

4.4 European packaging-waste reducing instruments in practice

The multiple reforms in the field of European legislation (cfr supra, section 2.2) made it clear that the disadvantages of a too voluminous and too detailed legislation can outweigh the advantages with respect to uniform implementation and enforcement. This has to be born in mind when new legislation is adopted, trying not to make the same fault. Both legal and economic instruments need therefore a thorough analysis (ex ante as well as ex post), and that is what will be done in the present section for the measures that are, in our view, the most effective ones to achieve the goal of the 6th EAP and the amended packaging waste Directive[271].

4.4.1 Prescriptive instruments

When aiming for a more harmonized approach to tackle the packaging waste problem, one needs a clear and robust legal background that takes full account of the complex and dynamic context of packaging and packaging waste, considering thus the holistic methodology (as advocated above). Targets need to be economically, environmentally and technically founded, aiming to minimize the *total* environmental impact of the material or product concerned. Although it is

[268] Jepessen, 2002 p 96
[269] Comment of Julian Carroll during an interview at Europen's offices.
[270] Ziegler, 1996, p. 6.
[271] See chapter two for our arguments on this issue.

questionable whether weight or volume indicators are always the most appropriate ones to assess the environmental burden of waste, most previous attempts to define waste *prevention* targets have focused on the weight or volume of waste generated. Nevertheless, given the complexity inherent in any attempt to develop composite indicators of the environmental impact of waste, there does not currently appear to be a practical alternative to using weight or volume to express waste prevention targets. In that context, it is important to recognize that to maximize the results a direct link between waste prevention and IPP has to be established. Consequently, the first step towards a global strategy for waste prevention should be strengthening the coherence between all available instruments[272]. Furthermore, prevention targets must take into account the importance of packaging with respect to the environmental impact of the packaged product, as visualised by figure 11 in section 4.3.5.

In contrast to waste prevention, target setting is both better established and less complex in the field of *recycling*. In this context, it is most remarkable that both the initial and amended packaging waste Directive foresees that all member states should achieve the same recycling target (at one point in the future). However, the question is legitimate whether this uniformity in targets is most effective from both an environmental and economic point of view. From an environmental point of view, it is more important to optimise collection and recycling in the Community as a whole than whether this takes place in a particular member state. From an economic point of view, it is more important to create fair competition within the Internal Market rather than achieve the same level of collection and recycling everywhere. This could be reflected in an *overall* recycling target at Community level and letting market forces determine which recycling facilities can achieve the objective in a most cost-effective manner. However, such an approach would require a more market-oriented legal framework. Providing price incentives and aiming to achieve social and environmental objectives in a flexible and cost effective way are more likely to succeed[273], legislation can be used to mandate changes in behaviour, but as long as price signals run counter to legislative objectives[274]. An incentive thus exists to circumvent the latter, thus requiring ever more complex mechanisms necessary to implement and control the application of legislation[275]. Therefore, we will now select and analyse the instruments that provide –in our view- the opportunity to achieve these goals.

[272] EC (2003) 301

[273] Here, we must bear in mind that it is likely that such an approach will only be feasible if the environmental standards for recycling facilities were more harmonized across the Community than is currently the case. Such a legal framework would also have to include a clear distribution of responsibilities and an appropriate system to generate information on achievements to ensure that it is enforceable (COM (2003) 301).

[274] Recycling has a significant cost disadvantage compared to other waste treatment options.

[275] COM (2003) 301

4.4.2 Economic instruments

Waste generation trends are driven by several factors, including economic activity, demographic changes, technological innovations, life-style and, more generally, patterns of production and consumption[276]. As a consequence, achieving significant progress towards waste prevention requires modifying behaviours of households, producers and all other actors in the economy[277]. Such behaviour modification goes beyond the reach of current waste legislation, explaining the lack of success of existing policies to promote waste prevention in general and setting waste prevention targets in particular.

As prices for packaging materials, food and other packaged goods have a major influence on the behaviour of the users in question, it is clear that 'economic instruments'[278] (which reflect environmental impacts in the product price) are a perfect way to achieve the desired behaviour modification, both for producers as for consumers. The Packaging Waste Directive therefore specifically asks the Council to adopt economic instruments to promote the implementation of the Directive's objectives. Nevertheless, current prices of packaging, packaged goods, and waste treatment methods do not always reflect the environmental (and thus social) impact of the resource/good concerned, frequently bringing about environmentally sub-optimal market choices about waste management options. As such, the main barrier to progress towards higher recycling rates is in many cases the unfavourable economic situation facing recycling, as land filling and incineration are often 'cheaper' (not taking into account all the externalities of this treatment option). This suggests that internalisation of these costs, via Community measures, is an important step forward to a better environmental policy, reflected very clearly in Article 3 (4) of the 6EAP (see Annex IV).

4.4.2.1 Landfill-taxes

We saw in chapter two that landfill taxes increase the cost of landfilling over alternative waste treatment methods (for example recycling), thus changing the relative costs of different waste management options, which can bring about the desired behaviour change of the parties concerned. However, experiences with such instruments[279] thought us that landfill taxes need to be complemented by other instruments so as to avoid diverting mixed waste in bulk towards incineration. In particular, the effect of landfill taxes needs to be assessed taking into account the variations of costs of alternative waste treatment operations. Moreover, the uncoordinated

[276] OECD, 2002
[277] COM (2003) 301
[278] For the purposes of this paper, an economic instrument is defined as "a mechanism designed to affect the relative cost of various forms of packaging, packed products or packaging waste management so as to discourage packaging, products and activities deemed to carry higher environmental burdens than certain alternatives" (Europen, 2000).
[279] Surveys of European citizens; chapter two.

introduction of landfill taxes could create difficulties where neighbouring countries or regions introduce taxes at very different levels. The same reasoning goes for eco-taxes, which are in the ability to push consumers to buy more environmental friendly products. Nevertheless, we face here an extra difficulty, as environmental impact assessments (via LCA or other methods) are don't always are clear-cut conclusions, which risks to discriminate as such –unintentional- between producers of 'equal' (from an environmental point of view) products.

Therefore, we support the establishment of a common framework for setting up such taxes. As this sort of measures has to be agreed unanimously (see table 1 in section 1.2.3) and no political will exists to harmonize these taxes (as these taxes are part of the state revenues), this seems to be a rather impossible solution. Decreasing the percentage of the GDP to be contributed to the European treasury and including eco-taxes as 'European tax' (which is currently the case for the VAT) would be one possible way out, but one needs still political agreement…

4.4.2.2 Producer responsibility

Producer responsibility is the first of the three elements to be addressed in the context of the recycling strategy according to the 6EAP decision (see Art. 8.2, § iii; Annex IV). From the point of view of the Commission, the first directive to be addressed in this context is the Packaging and Packaging Waste directive. Contrary to the more recent directives on End-of-Life Vehicles and Waste Electrical and Electronic Equipment, this directive does not contain an obligation to introduce producer responsibility. Given that most member states have implemented the directive through some form of producer responsibility, it is a fair question whether this should not be harmonized at Community level. Whereas the Commission is rather reluctant to adopt a harmonized producer responsibility approach[280], we think of it as a major step forwards to tackle the packaging waste problem in an fair and effective way.

4.4.2.3 Information programmes

Looking at the very positive results of the UK programme 'Envirowise', we would just like to point out that such programmes have our broadest support for being implemented at European level. After all, information programmes do not require specific regulation, since the participation is voluntary for the companies. It is however clear that effective information programmes on waste minimisation require strict guidance of the programme and the companies. This personal guidance preferably takes place at national or regional level (the closest the consultants are, the better they know the regulations and circumstances of the region), with a central European 'hub' to gather general experiences and sector-specific information. Since

[280] See for example the comments in COM (2003) 301 final, which focus primarily on the disadvantages with respect to different waste streams and other existing systems in the Member States.

effective information programmes require substantial financial support, it is also important to make some considerations concerning financing of the programme[281], as it can be hard to obtain enough money from the companies in the beginning of the programme. A solution could be to link the programmes with a form of taxation (for example, a national tax on landfilling of waste and/or an eco-tax to finance the efforts at European level), rendering the initiative cost neutral. As revenues from such taxes diminish (due to the 'positive' results of the programme) and waste costs of firms are reduced, a shift could be established towards the latter source (where a percentage of the total benefit could be contributed to the programme).

4.4.2.4 Tradable certificates

Tradable certificates have been widely used in environmental policy[282]. However, they are a relatively new concept in the field of waste management[283], with only the UK having experience with this kind of economic measure. From an economic point of view, tradable certificates are generally favoured as providing the most cost-effective means to implement environmental objectives[284]. In contrast with the comments of Europen (see section 2.5.1.4), the Centre for European Policy Studies[285] found that they give a long-term price signal that directs investment in new technologies. Tradable certificates could also be a way to implement recycling targets at a Community level, for example in the context of a producer responsibility scheme. They would allow companies to fulfil their obligations by buying certificates both nationally and in other countries, either freely on the market or from recycling organizations. This would be one way to create an incentive to separately collect and recycle more waste at a lower cost by putting into competition the various recycling organizations and other actors involved in the recycling chain. While a system of tradable certificates is in principle feasible and cost-effective in this context, several practical aspects would need to be defined before it can be implemented. These include the scope of the scheme and the means of allocating recycling obligations. Effective monitoring and enforcement mechanisms would also have to be established, including penalties for non-compliance. Simplicity of the system would be an asset to promote the use of tradable certificates and to deter fraud[286].

4.5 Conclusion

Packaging waste policy in the 21st century has to take into account the dynamic and complex context of its grounds: economic growth, smaller family sizes, higher incomes, a higher number

[281] EEA, 2002b.
[282] For a review, see OECD, 1999.
[283] See OECD, 2001.
[284] See Pearce & Turner, 1990.
[285] See, for example, Egenhofer & Legge, 2002.
[286] COM (2003) 301 final.

of products, an increased consumption of ready meals and a rising emphasis on health and food safety are some major (and almost irreversible) trends causing a continued increase of packaging waste quantities; an enlarged European Union makes European policy makers face the challenge of ensuring the environmental *acquis* in (and finding agreement among) almost the double of the Member States in the previous century. Additionally, as economy grows, trade does also increase, entailing a higher risk of environmental policy measures. Consequently, packaging waste policy makers at both European and national level have to consider increasingly its implications on the Internal Market of the European Union at very early stages of decision-making, in order to prevent major economic and environmental catastrophes. Following the widespread globalisation trend, the European Union and its Member States need also consider the broader, worldwide context of their measures, preferably within open and clear global environmental networks.

In order to guarantee well-founded policy-, investment- and consumption-decisions, reliable and comprehensible data and analyses need to be assured as a matter of urgency. Data gathering and reporting within a harmonised reporting and database-system among the different Member States and institutions would also significantly facilitate the exchange of experiences and information, which contributes to a constructive spread of the most interesting practices. Other imperative elements for a sound packaging waste policy, is the extended use of the knowledge and opinions of interest groups and stakeholders at the preparation stage of decision-making, thereby using a far more holistic and harmonized approach than is currently the case for packaging waste.

This more harmonized approach needs to be robust and yet flexible to changing circumstances. Therefore, there is growing interest in the use of economic instruments in environment policymaking, which would complement the targets and ambitions set up in legal acts. Considering the experiences of our cases studied in the second chapter, we strongly support a system based on producer responsibility with integration of recovery and treatment costs (as opposed to PAYT schemes), complemented by a pan-European network supporting national and regional waste-minimisation programmes; which could be financed by landfill- and eco-taxes at levied European level.

Conclusion

It was clear from our short overview that the EU's involvement in environmental policy is relatively recent, as the Treaty of Rome made no reference at all to the environment or environmental policy. Yet today, the EU's environmental policy *acquis* is substantial and wide-ranging, including over 300 pieces of legislation related to environmental quality or to environmental aspects of internal market measures, responding to pressure both from above (international negotiations and treaties) and from below (public opinion and Member States). Also an increased recognition of the transnational nature (even at global level) of environmental degradation legitimised much of EU's environmental legislation, and will demand even more efforts in the near future. Yet perhaps the most important reason for the increased activity of the EU in environmental issues had less to do with rising green awareness or the salience of global environmental issues than with eliminating trade distortions between Member States in the Internal Market, as a whole range of differing national rules on industrial pollution created considerable competition distortions. Moreover, the significant decrease of new legislative acts in the beginning of the nineties (due to less public support and a lack of sufficient financial/human resources) suggests that, more than other sectors, EU environmental policy is susceptible to changes in the wider political and economic climate.

Within this broad policy framework of European environmental policy-making, a variety of contrasting views of the different Member States (as elaborated in the second chapter) have been accommodated in the history-making decisions, defining the broad direction of environmental policy. The inclusion of the environment Title in the SEA was undoubtedly the result of a tacit bargain between northern Member States seeking higher environmental standards, and the southern states seeking more aid and less onerous environmental requirements. In these negotiations the principle of subsidiarity was inserted to reassure both sides: for Member States pushing for more EU action, subsidiarity enforced the belief that most environmental issues could be better addressed at EU level, whereas for others, this principle represented a safeguard for national sovereignty and regional policy-making. The widely recognized ambiguity of this principle has thus succeeded in reconciling the various national interests, but it makes the balancing act of EU's environmental policy (between national, European, environmental and Internal Market concerns) extremely complex, requiring long discussions before legislative steps in the field of environment can be initiated.

Intergovernmental bargaining thus reflects basic disagreements over not only the importance of environmental protection, but also the means –the best policy solution. As the Directive on Packaging Waste leaves open this latter issue, a whole range of different national packaging

waste systems were set up during the past decade, sometimes with very encouraging results; but distorting competition and/or creating unnecessary (administrative, operational and at times even environmental) costs in other cases. In order to prevent these unnecessary (adaptation) costs, duplicated efforts and environmental and economic disasters in the future, we advocate deeply a more harmonized (yet diversified) approach with respect to packaging waste systems at national level.

Based on the academic and practical wisdom gathered during this research, we tried to put forward some basic elements to be fulfilled in order to achieve the new ambitious recycling and recovery targets and prevention objectives in the field of packaging waste. Knowing that the driving force behind the introduction of many environmental management systems has primarily been the demands of the market for structured and progressive environmental activities, we support the case for more market-based approaches in environmental policy. In our view, a combination of producer responsibility where recovery and treatment costs are integrated in the product price; national and regional waste-minimisation programmes (supported by a European information network) and European landfill -taxes could offer some major opportunities to achieve the goals of the amended Packaging Waste Directive and the 6th Environmental Action Programme. Of course, one also needs high-quality data, uniformly established among different Member States and organisations to ensure not only sound packaging waste policies, correct and fast compliance and effective control; but also well-founded environmental investment decisions and (more) sustainable consumption patterns. Moreover, the knowledge and opinions of various interest groups and stakeholders should be used in a more transparent way at the earliest stages of decision-making (in order to improve the democratic image of the European Union and implementation efforts), thereby taking into account environmental as well as economic and social considerations…

In sum, the success of current and future packaging waste policy in the European Union will depend on to what extent policy makers are able (and willing) to increase efficiency and the use of cooperative mechanisms within their policy procedures and to implement some basic but constructive solutions with respect to packaging waste measures. (More) effective packaging waste policy eventually needs the aptitude to turning current and future packaging waste challenges into environmental, social and economical opportunities; a key objective that needs the active participation of all of us…

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Annexes

Annex I

Development of environmental decision-making

(Source: Demmke & Schröder, 1999, p. 88.)

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Annex VIII

European Packaging Waste Management Systems

Packaging waste management systems

Member States have established distinct systems to comply with the requirements set out in Directive 94/62/EC, both in terms of legislative provisions and implementation strategies, taking existing national waste policies into account.

Preventive measures and reuse systems

With regard to prevention and reuse the Packaging Directive contains provisions that leave certain latitudes for regulation to Member States. The Netherlands, Finland, Spain and Belgium have introduced targets for the prevention of packaging. However, different approaches were followed, aiming at quantitative prevention through either the reduction of packaging consumption growth or the packaging waste arising. Percentage of prevention and the reference year differ from country to country.

Reuse targets are introduced in Denmark, Germany, Portugal, Finland and Austria. The scope and extent of these targets, mainly referring to beverage packaging, and generally aiming to support and/or protect already existing reuse systems, vary widely. A combination of reuse-recycling-recovery targets exists in Finland and Austria. Germany has set a refill quota for beverage packaging and in Portugal different reuse targets for different types of beverage packaging are in force. In Denmark voluntary agreements include the increase of reuse or recycling of PET bottles, transport packaging of cardboard, paper and plastic, as well as of glass and PVC. Furthermore, beers and soft drinks may only be marketed in Denmark in refillable packaging. Although Member States are explicitly required and encouraged to adopt preventive measures and to introduce reuse systems the question remains what room for manoeuvre the Member States actually have for setting up systems such as mandatory quotas, deposits or eco-taxes on disposable packaging.

Mandatory global and material specific recycling targets

Member States have introduced different material specific recycling targets and different concepts of "global targets" which cover different packaging waste flows such as municipal packaging waste, sales packaging and drink packaging. Recycling targets applying to specific packaging waste materials (e.g. PET-bottles, aluminium cans, transport packaging made of cardboard) have been introduced in the majority of Member States, however these targets and the packaging materials affected differ between Member States.

Targets for different packaging waste streams, in particular for municipal packaging, have a fundamental effect on expenditure for compliance. The collection and processing of municipal packaging waste is more cost intensive than from industrial sources, and, for some materials, results in lower quality of secondary material. In countries where no provisions exist regarding the recovery of packaging waste from domestic sources, the compliance with recovery obligations is met primarily by the recovery of industrial packaging waste, which is usually cheaper.

In summary, the national quantitative recovery and recycling objectives impose different requirements on economic operators responsible for packaging.

Systems of compliance

In all Member States economic operators within the packaging chain (manufacturer, packer/filler, distributor, importer) are responsible for packaging waste management, and for providing data on the amount of packaging put on the market. Except for Denmark, the industry has build up organisations in all Member States to comply with the obligations imposed by national packaging regulations on behalf of the individual businesses affected. However, economic operators generally have the option of transferring their obligations to an external organisation (hereafter called compliance scheme) or fulfilling their obligations by themselves.

In eight Member States a "green dot" system has been established. By contracting with the green dot system, the companies responsible for producing packaging entrust their take-back obligation to the scheme in return for an annual fee based on the types of packaging materials used, and on the amount of packaging put on the market.

The UK has adopted a unique approach to fulfilment of the European Union's packaging waste recovery and recycling targets. The UK concept of "shared producer responsibility" for packaging waste refers only to the industries which produce or use packaging. Responsibility for recovery and recycling of packaging waste is divided among the commercial enterprises which form part of the "packaging chain": raw material producers, packaging manufacturers, packer/fillers and sellers. The recovery and recycling targets are to be met according to a certain percentage obligation associated with the economic activity.

Collection systems

Separate collection of municipal and industrial packing waste is carried out in all Member States, but to a very different extent. With regard to municipal packaging waste, the systems established vary widely, the main differences being the extension of the system and the materials focussed upon.

The collection of municipal plastic packaging is still in the process of development. With the exception of Austria and Germany, Member States usually restrict the collection to bottles and flasks made of PEHD, PET and PVC. In Austria and Germany, all sorts of plastic packaging are collected, even small items. However, as this approach is very cost-intensive, collection and recovery modalities are currently being discussed.

The major part of paper/cardboard packaging in terms of quantity is used for grouped and transport packaging in industry. Most countries concentrate their recycling activities on these materials, as the collection is more cost-effective than collection from households and the quality of the collected material is higher.

In all Member States collection of disposable glass packaging is done mainly through bottle banks. An essential prerequisite for efficient glass recycling is the source-separation according to colour, and a low content of disturbing materials such as ceramics, porcelain, metals and others. Most Member States have therefore established systems where glass is at least sorted according to non-coloured and coloured glass.

Metal packaging is recovered by separate collection, by deposit-based take-back systems or magnetic separation from incineration feed or slag or from composting plants. Separate collection is constantly increasing especially in Southern Europe and Scandinavia.

In order to improve the quality of separate collection the collected and/or sorted packaging materials have to comply with technical specifications in most countries, mainly regarding the contents of impurities, and non-compliance results in lower reimbursements. Another regulative encouraging high quality of collected materials is the market price for these materials. While the collected materials are sold to reprocessors according to market price in the **UK** generally, different mechanisms are applied in other countries. These are subsidies or reimbursements for sorting and recycling, and contracts with guarantors to take over predefined amounts of packaging.

In general, it has to be considered that Member States started from vastly different waste management conditions. While in some Member States national regulations on packaging waste were already in place, separate collection of certain materials had a long tradition, and waste incineration capacities were available, in other countries landfilling was the predominant waste management option. Accordingly, some Member States had "merely" to adopt their existing waste management infrastructure, whereas other countries had to establish a new system.

Share of activities and costs

With regard to definite packaging waste management activities, the responsibility is shared in the majority of Member States between municipalities and industry. While collection and sorting of municipal packaging waste is predominately undertaken by the public sector, the collection of industrial packaging waste and the recovery and recycling of both municipal and industrial packaging waste is a privately organised domain.

In Austria and in Germany, obligated economic operators are explicitly required to organise the collection and sorting of domestic packaging waste and to comply with recycling targets for this waste stream. The packaging regulations in these countries set out criteria for the collection system, inter alia capacities and distances between collection points, extensions of the collection system. The

compliance schemes in Austria and Germany conclude contracts with municipalities (and private operators) for the services necessary in the context of separate collection and sorting of municipal packaging waste.

In other countries the collection (and sometimes also sorting) of municipal packaging waste is either not explicitly regulated or the targets to comply with are less high. In practice, separate collection is exclusively carried out by municipalities, and the compliance schemes negotiate the conditions and extent of separate collection, and the reimbursement per material and per region with the municipalities.

The work of the compliance schemes is financed by fees collected from companies wishing to transfer the obligations imposed on them to the scheme.

In UK, the Packaging waste Recovery Note (PRN) concept was developed as a means of providing evidence of compliance and as an economic instruments to stabilise the recycling market. The reprocessors sell the PRNs to compliance schemes and individually obligated producers. In principle, the Packaging Recovery Notes, to be purchased by obligated businesses, should cover all costs incurred for the collection, recovery and reprocessing of the various packaging materials.

Comparison of costs between Member States is very difficult due to lack of transparency of costs particularly with regard to collection. There are a number of factors which influence the economical impact of compliance with the Packaging Directive and by the same time impede the direct comparison of costs, such as:

- general approach of packaging waste regulation
  - industrial value-based approach (e.g. the Netherlands),
  - market-based approach (e.g. the UK),
  - administrative approach (e.g. Germany)
- scope of national targets
  - material specific recycling targets
- scope of regulation of different packaging waste flows - recovery targets applicable to
  - household packaging,
  - sales packaging,
  - drink packaging,
  - all packaging

Generally, three different types of systems can be broadly distinguished regarding the financing of non-industrial packaging waste management activities:

• Industry is fully responsible for covering all costs; municipalities can be involved in separate collection on behalf of the industry	Austria, Germany, Sweden
• Industry and municipalities share responsibility, the industry covers costs of sorting and recycling; municipalities are in charge of separate collection and their costs are (completely or partially) reimbursed.	Belgium, Denmark, Finland, France, Ireland, Italy, Luxembourg, Portugal, Spain,
• Industry and municipalities share responsibility, the industry covers the costs of recycling; municipalities are in charge of separate collection and receive revenues through selling the collected materials.	United Kingdom, the Netherlands

Differences in the extent of implementation of the concept of producer responsibility arise mainly with regard to the financial responsibility for packaging used by households. It ranges from covering the costs for recovery of glass and paper-cardboard only, to systems where industry is bearing the complete costs of collection, sorting, recycling/ recovery for municipal packaging waste. The coverage of costs between private actors (compliance scheme) and public sector (municipalities) is mainly a result of the balance of power between these actors.