The Revision of the Direction on the Deliberate Release of Genetically Modified Organisms (GMOs) into the Environment

EUROPUB Case Study (WP2)

Final Report

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Table of contents

Introduction

This report was prepared in the framework of the EUROPUB project 'The European Public Sphere; Assembling Information that Allows the Monitoring of European Democracy'. It presents and analyses the revision of the EU Directive on the Deliberate Release of Genetically Modified Organisms (GMOs) into the Environment (Deliberate Release Directive, DRD). As part of Work Package 2 "Institutional Opportunity Structures for Effective Contestation in Policy-Making" of the project, the report specifically addresses the role of societal actors, in particular environmental NGOs, in EU decision-making and relevant political debates.

The revision of the DRD was initiated in the early 1990s by a closed industrial policy community which regarded the provisions of the original DRD as an obstacle to improving EU economic competitiveness. Yet, when the revised DRD was eventually adopted in 2001 it contained significantly stricter provisions than the original Directive. In addition, the EU adopted relatively strict complementing and implementing legislation for example on GM food and feed and on labelling and traceability of GMOs in the following years. The report looks at the political processes at the EU level and in the seven EUROPUB countries which led to this outcome. Special attention is given to the impact of environmental NGOs on public debates and EU decision-making.

The report was compiled by a team of researchers working in the EUROPUB countries, e.g. Austria, France, Germany, Spain, Sweden, the Czech Republic and the UK. The various country teams worked on the basis of common guidelines which can be read in the Annex of this report and which provided the basis for document analysis, expert interviews and media investigations. The synthesis of the research was carried out by Ecologic, Institute for International and European Environmental Policy, which provided additional research on several countries and was also in charge of the fieldwork in Germany and at the EU-level.

The report is organised in three main chapters as well as a concluding remarks. Following this introduction, the first two chapters provide a detailed analysis of the political process which led to the adoption of the DRD. Chapter 1 first describes the role of actors, in particular the main EU institutions and societal actors, who are active at the European level and then analyses the openness of the European-level decision-making process with respect to participation of societal actors and the availability of relevant information. Chapter 2 focuses on the role and positions of national governments with respect to the revision of the DRD and analyses the relevant broader national debates on agricultural biotechnology and GM food. Paying special attention to the impact of environmental NGOs, in particular Greenpeace, on the revision of the DRD, Chapter 3 synthesises the findings of the first two chapters. The report ends

with concluding remarks on some of the implications of the findings for European democracy.

1 Interactions at the EU-Level

The first main part of this chapter looks at the role of actors, in particular the main EU institutions and societal actors, who sought to influence the revision of the DRD at the European level. The second main part analyses the openness of the European-level decision-making process with respect to participation of societal actors and the availability of relevant information.

1.1 Actor involvement

Actors used both formal and informal channels to influence decision-making at the EU-level. The Co-decision Procedure was the formal legislative procedure on which the adoption of Directive 2001/18 was based. The Procedure was first introduced by the 1992 Maastricht Treaty. It reinforces the role of the EP *vis-á-vis* the Council and the Commission - among other things by giving the EP the right to veto legislation. There are two readings in which the EP and the Council can amend the legislative proposal prepared by the Commission. If the EP and the Council do not agree on how to amend the Commission's proposal, the two readings are followed by a conciliation procedure between the two institutions. The proposed legislation is adopted if the EP and the Council support the outcome of the negotiations in the conciliation committee in a third reading. The Co-decision Procedure usually requires the EP to adopt a decision by an absolute majority of its members. In the Council most decisions must be supported by a qualified majority.

The formal legislative rules only provide a framework for decision-making. Influence also depends on informal capacities and resources. For example, although the Commission's formal influence under the Co-decision Procedure is relatively small, its real influence is much larger. This is partly due to the Commission's role as "process-manager" who has the networking capabilities which are necessary to keep track of the prolonged and highly complex legislative process. The Commission's presence in important committees, such as the Council working groups, is an important element of this role. Despite the EP's formal influence under the Co-decision Procedure many observers and participants in decision-making on Directive 2001/18 therefore seem to view either the Commission or the Council as more influential than the Parliament.

The interests and strategies pursued by EU institutions are strongly mitigated by the fact that they are not unitary actors. The institutions are made up of influential constituent actors such as MS representatives, the Commission's DGs, and the political party groups and sectoral committees in the EP. These constituents interact with each other and are influenced by numerous outside actors which thereby become part of the policy community. For example, differences of opinion among the Commission's DGs are endemic. These differences tend to improve the conditions for societal actors, such as producer associations or NGOs, to gain access to the Commission because societal actors can pick the DG which is most sympathetic to their point of view. Even if societal actors fail to gain access to the Commission, they may try to influence the EP or particular Member State governments. Indeed, this will often be necessary as effective influence frequently requires access to several state actors and at different stages of the legislative process.

Besides these "standard" formal and informal factors, the opportunity structure for influencing decision-making was also shaped by "comitology", e.g. the EU committee system. More specifically, the so-called Art.21 regulatory committee had a significant impact on decision-making. The Committee was established under Directive 90/220 to facilitate implementation. Approval of the Committee is needed if one or more Member States object to the placing on the market of a product. However, as illustrated further below, several Member States blocked the approval procedure, thereby they exerted considerable pressure on those interested in the commercial application of agricultural biotechnology in the EU. This pressure also had a significant effect on the process in which Directive 2001/18 was adopted.

1.1.1 State actors

The main state actors involved in decision-making were those formally foreseen in the Co-decision Procedure, e.g. the EP, the Council of Ministers, and the Commission, as well as their constituents (Member State governments, Members of the European Parliament etc.). The national competent authorities, which are responsible for the implementation of Directive 90/200, were represented in the Art.21 Committee.

1.1.1.1 The Commission

The Commission's position on the revision of the DRD was not obvious because there were sharp divisions among the various DGs: Whereas DG Environment - which was the lead DG/"chef de file" for the revision of Directive 90/220 - and DG Consumer Protection (now: SANCO) mostly favoured relatively stringent regulations, more powerful Commission services, in

particular DGs Industry (now: Enterprise), Trade, and Research, advocated a flexible regulatory approach (cf. interview 6, see also fn. 3). Despite these internal splits, it is safe to assume that in the absence of strong pressure by several Member States, the Commission would have opted for significantly less stringent regulations than the ones that were eventually adopted. Several factors support this view. Most importantly, the 1993 Commission initiative to revise Directive 90/220 clearly aimed at deregulation. The initiative was part of the Commission's White Paper on Competitiveness, Growth and Employment, which argued that stringent biotechnology safety regulations put the EU at a competitive disadvantage *vis-à-vis* the U.S. and Japan. In the early 1990s the Commission underlined its commitment to promoting biotechnology by establishing the high-level Biotechnology Steering Committee (initially: Biotechnology Co-ordination Committee (BCC)) headed by the Commission's Secretary General.[1] The Committee was created to provide leadership within the Commission, in particular with respect to dissenting views in DG Environment, which was reluctant to subsume safety issues under the "competitiveness frame" favoured by Industry Commissioner Bangemann and Commission President Delors. As demonstrated by various Commission communications, the reference to competitiveness has since remained the dominant frame in the Commission.[2]

Although the Commission intended to relax safety regulations, its much delayed February 1998 legislative proposal for the revision of Directive 90/220 was more balanced: Some provisions reflected a liberal approach, but others sought to introduce significantly more stringent requirements. Rather than the Commission's original position, the proposal reflected pressure by a growing number of Member States which had reinforced the position of DG Environment (cf. FoEE 1997d, pp. 1-2). DG Environment had therefore been able to push for the inclusion of several stricter provisions in the Commission's proposal, despite the continuing dominance of the competitiveness frame within the Commission.

In the years before the Commission had published its legislative proposal, considerable pressure by some Member States for more stringent regulations had already emerged during the approval procedure for GMOs under Directive 90/220. After the first applications for placing on the market of GMOs had been submitted to the Art.21 Committee, the Commission therefore complained in 1995 that "no single product has so far been given consent to without an objection [from one or more Member States] being raised" (quoted in FoEE 1995, p. 3). Member States cited both safety concerns and inadequate labelling of GM products as reasons for their objections. In 1996 resistance to

[1] The Committee usually meets twice a month. Biotechnology is also regularly discussed by the College of Commissioners (cf. interview 6).

[2] See 1995 and 2002 Commission Biotechnology Communication, EC (1995 and 2002).

Commission proposals to authorise GM products increased. The most important case concerned a GM maize variety developed by Ciba Geigy (now: Novartis). After seven Member States had opposed, or abstained from voting on, the Commission proposal to approve the maize in April 1996, the proposal was submitted to the Environment Council where it was only supported by France – the country which had submitted the original application to the Commission (Germany abstained). However, according to the Regulatory Committee Procedure used for decision-making in the Art.21 Committee, a rejection of the Commission proposal would have required a unanimous decision by the Council. Given the overwhelming opposition by Member States, the Commission nevertheless hesitated to immediately approve the maize and decided to first consult its scientific committees on food, animal nutrition and pesticides. Once the committees had delivered positive opinions, the Commission finally went ahead with the authorisation in December 1996. However, Austria - joined by Luxembourg and Italy – reacted by invoking the "emergency" clause of Art.16 of Directive 90/220 which allows a Member State to temporarily suspend the sale of a GMO on its territory. After the Commission's scientific committees had dismissed the arguments submitted by the three countries in support of their national bans, Italy lifted its ban and, in November 1997, the Commission proposed to the Art.21 Committee to also lift the two remaining bans. However, the initiative failed to win a qualified majority; in addition to the Member States concerned, it was not supported by the representatives of Belgium, Denmark, Ireland and the UK.

Additional events, in particular the reversal of the French position, also demonstrated to the Commission that its original plans for relaxing the provisions of Directive 90/220 would probably not be accepted by the Member States. Until the mid-1990s France had always been a staunch supporter of agricultural biotechnology. However, the French position began to change radically in early 1997. Following the Commission's authorisation of the Ciba Geigy GM maize - as mentioned above, France had submitted the original application - the French government declared that the sale and import of the maize would be authorised, but cultivation would not be permitted due to new scientific findings (cf. Varnier, Assouline and Joly 2001, p. 43; FoEE 1997c, pp. 4-5). A few months later, in November 1997, the new left wing government reversed this decision by authorising cultivation of the GM maize for a period of three years and under a special "biovigilance" monitoring programme. However, at the same time the government also announced what amounted to a moratorium on GM crops with wild relatives, such as rape, "until scientific studies show that there is no risk to the environment and a public debate has been conducted" (quoted in FoEE 1997e, pp. 2-3; see also Marris 2001, p. 8).

These developments in the years and months preceding the publication of the Commission's proposal for the revision of Directive 90/220 had a strong influence on the proposed legislation: Whereas previous drafts almost exclusively focussed on measures to ease the regulatory burden for companies

and researchers, the Commission's final proposals also introduced several new and stricter requirements, such as an obligation for monitoring of authorised products, a time-limit of seven years for product authorisations, and stricter criteria for risk assessment.[3]

Despite these concessions, the Commission came under even stronger political pressure in the months following the publication of the legislative proposal. Most importantly, in June 1999 the Environment Council announced the so-called *de facto* moratorium on the authorisation of products under Directive 90/220. The decision meant that product approval was put on hold until the revised DRD had been adopted. As the Commission had pointed out in the run-up to the moratorium, this decision amounted to a breach of Directive 90/220 (FoEE 1999a, pp. 9-10).

The Commission's gradual loss of control over the approval process already became increasingly clear in 1998. One important factor was the French government's open challenge to the Commission's authority in July 1998 when it reaffirmed its decision not to authorise GM crops with wild relatives. The French announcement increased the political pressure on the Commission in two ways: First, in contrast to the Austrian and Luxembourg bans which only affected these two countries, the French decision had Community wide implications. Unlike Austria and Luxembourg, France had submitted marketing applications for GM crops to the Commission, including for crops which now fell under the French ban. Following the Commission's approval of the applications, it was therefore up to the French authorities to grant the final - Community-wide - authorisation for these crops. Second, besides failing to process any new marketing applications for GM crops, the French government did not invoke the Art.16 "safety clause" which Austria and Luxembourg had used to provide a legal basis for their bans. However, as Directive 90/220 does not provide any alternative provisions which could be used to justify a unilateral ban, the French position was in open contravention to the Directive (cf. FoEE 1998b, p. 4). These challenges to the Commission's authority were further aggravated by the fact that the Commission made no progress in lifting the Austrian and Luxembourg bans. After the Environment Council had failed to take a decision on the issue, the initiative reverted back to the Commission in late 1998. However, fearing a strong political backlash, the Commission eventually refrained from initiating legal proceedings against the two countries (cf. FoEE 1999c, p. 4).

[3] Apparently, the final draft had been prepared by the Cabinet of Environment Commissioner Bjerregard rather than by the Biotechnology Unit of DG Environment which had been „captured" by DGs Industry and Research. Given the growing pressure by Member State government, Bjerregard was able to push her proposals through the Commission not only against DGs Industry and Research but also against the Biotechnology Unit in her own DG (cf. interview 5).

In addition to these challenges to the Commission's authority, announcements by the British and Danish governments of plans for "voluntary" moratoria on the cultivation of GM crops contributed to the Commission's loss of control of the approval process. The British initiative was a particularly significant setback for the Commission: Like France, the UK had so far also strongly supported agricultural biotechnology. However, in October 1998 the Environment Minister declared that the government had reached an agreement with producers on a moratorium of one year on planting of herbicide resistant GM crops and three years on growing of insect resistant GM crops. Thereafter, GM crops would be subject to "managed development". Relying on restricted cultivation of GM crops, the application of a special safety code and monitoring, this approach was similar to the French practice of "biovigilance". In November 1998 the Danish government also announced that it had reached an agreement with producers on a one year moratorium. Further complicating the Commission's position, in October 1998 Greece followed the example of Austria and Luxembourg by invoking Art.16 to ban a GM oilseed rape developed by AgrEvo.

In late 1998 Commission officials in DG Environment were not only frustrated that "the Member States are now refusing to adhere to legislation that they themselves have already sanctioned", but also that "some Member States do not even bother to inform the Commission of action they are taking *vis-à-vis* bans, moratoria or restrictions on releases of GMOs" (FoEE 1998c, p. 2). Against the background of this highly intransparent situation, the adoption of the *de facto* moratorium in June 1999 clarified the situation to some extent. It thereby allowed the Commission to concentrate its energies on restarting the approval process by working towards a quick adoption of the revised DRD. However, this strategy also forced the Commission to largely ignore issues of economic competitiveness because it required important additional concessions to those Member States which supported the moratorium and called for the adoption of significantly stricter regulations. In particular, the Commission agreed to abandon its original legislative proposal in favour of the Common Position which had been informally agreed by the Environment Council in tandem with the *de facto* moratorium in June 1999. Because the Common Position contained a large number of new elements, the Council had decided that Directive 90/220 should not be amended, as had been proposed by the Commission, but needed to be replaced by an entirely new Directive. Besides introducing numerous new and more stringent requirements, the Common Position also eliminated some of the Commission's original proposals which aimed at introducing a more flexible regulatory approach.

As a result of the adoption of the Common Position, the major elements of the revised DRD had been agreed by mid-1999. However, before the new regulatory framework could come into force, the EP had to agree to the new Directive. Subsequently, it was up to the Member States to transpose the new legislation into national laws. In addition, implementing legislation - in particular on labelling and traceability of GMOs - also needed to be adopted and

transposed. Because the Commission expected these processes to take several years, it launched two initiatives in 2000 to end the *de facto* moratorium and restart the approval process. In particular, the Commission announced a plan to enter into voluntary agreements with producers of GMOs which would allow for an application of the new regulatory framework before it had been formally adopted. However, the initiatives eventually failed due to disagreements with producers and resistance by some Member States.

1.1.1.2 The Council

Whereas the Commission's influence on the revision of the DRD was relatively small, the Council had a very strong impact. This was in spite of the fact that the Council was internally as divided as the Commission. It is possible to identify three basic factions within the Council. First, a number of "progressive" Member States pushed for considerably tougher regulations than the ones that had been proposed by the Commission. This group grew significantly in numbers and influence in the course of the legislative process. Initially, it consisted merely of a few small countries, e.g. Austria, Luxembourg and Denmark. The group's influence increased markedly when France consolidated its new position as a supporter of strict safety regulations in 1998. By the time the *de facto* moratorium was adopted, Greece and Italy also belonged to this group.[4] Belgium and Germany joined later (cf. FoEE 2001c, p. 1). A second group of more "conservative" Member States supported only slightly tougher regulations than the ones that had been proposed by the Commission. The UK, Spain and Ireland belonged to this group. The composition of this group remained relatively stable. Its legislative influence largely derived from the active role played by the UK. Finally, a third group of countries occupied the middle ground between the "progressive" and the "conservative" Member States but had only weak influence. Several countries which initially belonged to this group adopted a more "progressive" position towards the end of the legislative process. Eventually, only the Netherlands, Sweden, and Finland remained in this group.

In particular, two aspects of the position of the Council *vis-à-vis* the Commission were remarkable: First, all Member States (except, perhaps, Ireland) favoured more stringent regulations than those proposed by the Commission. This was an unusual constellation, in particular in the field of environmental protection where the Council usually waters down the Commission's legislative proposals. This situation was caused, on the one hand, by the fact that the original intention behind the Commission's proposal was deregulation (usually the

[4] Countries are classified as „progressive" if they clearly supported the *de facto* moratorium. Austria was classified as „progressive" because of its pioneering role with respect to national bans.

intention is regulation or re-regulation). As pointed out above, due to the continuing dominance of the competitiveness frame in the Commission, there were limits to how far the Commission could adapt its proposal for the revision of the DRD to the emerging shift in the position of Member State governments. On the other hand, powerful Member States, in particular the UK and Germany, which had previously supported the deregulation initiative, either took a somewhat more cautious position or, as in the case of France, even pushed for the adoption of much more stringent regulations.

The role of the Council was also remarkable with a view to a second aspect: the group of "progressive" Member States was able to put strong pressure on the remaining Member States and the Commission. This was to a significant extent due to their ability to block the approval process in the Art.21 Committee. The interest of the "conservative" Member States and the Commission in a quick resumption of product approvals forced these actors to make major concessions to the "progressive" countries. Resembling the disproportionate influence of DG Environment (relative to its weak "intrinsic" power *vis-à-vis* competing Commission services) on the Commission's legislative proposal, the "progressive" Member States had a disproportionate influence in the Council.

The influence of the "progressive" Member States primarily manifested itself in two ways. First, it prevented the Commission from taking effective action against national bans and the *de facto* moratorium. In this case the influence of the "progressive" Member States derived from the fact that, following the Commission's highly controversial approval of the Ciba Geigy maize most, if not all Member States, perceived the Regulatory Committee Procedure used in the Art.21 Committee to decide on product approvals as illegitimate. The approval of the Ciba Geigy maize had demonstrated that, under certain conditions, the Procedure gave the Commission the possibility to approve a product against the will of a large majority of Member States. In fact, such a decision could only be prevented if all Member States - including the one that had already signalled approval by submitting the product application to the Commission in the first place - subsequently voted against approval. The fact that Member State governments no longer accepted this procedure undermined the Commission's efforts to take legal action against national bans, in particular the Austrian and Luxembourg ones, and the *de facto* moratorium – both of which were to some extent tolerated even by the "conservative" Member State governments.

The minority of "progressive" Member States also had a significant legislative impact. In some respects, for example regarding mandatory time limits for product approvals, the Council's Common Position even went beyond what the EP had called for in its first reading of the Commission proposal for the revision of the DRD (FoEE 2000a, p. 1; FoEE 1999b, p. 2). As pointed out above, there was broad agreement among Member State governments on certain more stringent provisions, for example clearer labelling requirements for GMOs and broader criteria for risk assessment. Concerning several other issues, such as

provisions on the phasing out of antibiotic resistance markers and the duration of time limits for product approvals, it is not clear whether acceptance by the "conservative" Member States reflected *ex ante* positions or effective pressure by the "progressive" countries and the EP.

More or less parallel to the adoption of the DRD the Commission started to prepare proposals for three regulations on labelling/traceability of GM products, GM feed/food and GM seeds. Acceleration of the preparations for the adoption of these pieces of complementary legislation probably marked the most important legislative impact of the "progressive" Member States. The strategic significance of this development derives from two main factors: First, in the 1990s the adoption of legislation complementing the DRD, in particular concerning labelling, had given rise to intense political controversies among advocates and opponents of stringent biotechnology regulations. Second, also in the 1990s, there had been several attempts to use "vertical" legislation authorising the placing on the market of specific products, such as food or pesticides, to circumvent the requirements of the "horizontal" DRD, which cuts across product sectors (Homeyer 2002). Against this background, the "progressive" Member States pushed for a quick adoption of traceability/labelling, feed/food and seeds legislation, while they could use the *de facto* moratorium to maintain intensive political pressure on the Commission and the "conservative" Member States (cf. FoEE 2001a, p. 6).

The introduction of the concept of traceability by the French government was key to the acceleration of the preparations for the adoption of complementing legislation. Based on a documentation system relying on unique identifiers, traceability enables tracking of GMOs throughout the whole production chain. Among other things, this allows for labelling of GM products based on the production process rather than the actual GM content. The French government had already announced to push for the adoption of traceability rules when it had confirmed its shift to a more restrictive regulatory approach in July 1998 (FoEE 1998a, p. 2). However, although the general concept of traceability had subsequently been included in the Council's 1999 Common Position, this was insufficient for two reasons: First, rules specifying how traceability was to be implemented were still missing. Second, to be effective, traceability must be ensured at all stages of the production process. Consequently, there was a need to amend relevant product sector legislation, in particular on seeds and animal feed. Supported by several other Member States, France therefore stepped up the pressure by declaring that it would not be willing to lift the *de facto* moratorium until workable EU rules for traceability/labelling were in place (FoEE 2001b, p. 1). To avoid further delays in the adoption of the revised DRD, the Commission agreed to draft a legislative proposal for a regulation on traceability/labelling, which was published in July 2001. At the same time, the Commission was already preparing additional proposals on GM seeds and GM feed/food (cf. FoEE 2001b, p. 3).

1.1.1.3 *The European Parliament*

As was the case with the Commission, the impact of the EP on the revision of the DRD was relatively small, despite the fact that the EP participated in decision-making on the basis of the Co-decision Procedure. Two main factors weakened the influence of the Parliament. First, in the European Parliament elections of June 1999 the European Socialists (PES) lost their position as the strongest party group to the Conservative European Peoples Party (EPP). In the first reading of the Commission's proposal for the revision of the DRD, which was held before the elections, the EP had been in favour of a number of amendments to tighten the regulations. At this stage the EP's position clearly went beyond what the Council was willing to accept. However, subsequently, the increase in the influence of the EPP implied that the positions of the EP and the Council became more similar. Second, the Parliament's influence apparently also suffered from decreasing predictability of the internal coalition building process. Before the elections the PES and the EPP had co-operated closely. In this way they were able to "monopolise" decision-making in the EP although neither party commanded an absolute majority. However, after the elections the growing influence of smaller parties, in particular of the Liberals, appears to have led to a less predictable process of *ad hoc* coalition formation (cf. interview 8).

The first reading resulted in a number of important amendments. Whereas the Commission only partially accepted some of these amendments, in certain cases, for example with respect to the application of the precautionary principle in the implementation of the Directive, there was full agreement by the Council. But the Commission and the Council either rejected or severely watered down several other important amendments. In particular, these amendments concerned liability rules for damage caused by GMOs, banning GM crops containing antibiotic-resistant marker genes, and measures to prevent gene transfer.

The second reading in March 1999 was held after the European elections. Although the EP Environment Committee had agreed on reinstating the three amendments on liability, antibiotic-resistant marker genes and gene transfer, the plenary opted for significantly watered down compromise proposals on each of these issues. These proposals had been worked out shortly before the plenary session by David Bowe, the Socialist Rapporteur on the proposed Directive, and the Conservative Shadow Rapporteur Peter Liese. Apparently, Bowe agreed to the compromise as a fall back position in case of rejection by the plenary of the tougher amendments that had been tabled earlier by the Environment Committee. Two factors contributed to the fact that the plenary eventually adopted the watered-down compromise proposals: First, in contrast to first reading amendments, the adoption of second reading amendments requires an absolute majority, which the amendments tabled by the

Environment Committee failed to achieve. Second, Socialist MEPs voted both for the Environment Committee's amendments and - to ensure adoption of a fallback position - for the compromise proposals. As the compromise proposals were also supported by the EPP, they were eventually adopted (cf. FoEE 2000b, pp. 1-3).

During the final Conciliation Procedure, the EP's influence remained limited. Perhaps the most important changes concerned a further strengthening of risk assessment to include long term and cumulative effects and the adoption of a provision giving the public access to registers of the location of field trials and areas where GMOs are commercially grown. While the amendment regarding risk assessment was not very controversial and had already been accepted by the Commission in its opinion on the EP's second reading, there was significant resistance, in particular by the British government, to the adoption of a provision giving the public access to information on the location of sites. Eventually, a version of the amendment that had been weakened to some extent was adopted. In the case of commercially grown GMOs, Member States were merely required to provide the public with information "in a manner deemed appropriate by the authorities". The three compromise proposals on the controversial issues of liability, antibiotic-resistant marker genes and gene transfer were further watered down. The Commission merely promised to address the issue of damage caused by GMOs in the framework of a more general legislative proposal on environmental liability to be published in 2001; no general ban of antibiotic-resistant marker genes was introduced and the deadlines for phasing out were extended; apart from a provision requiring a case-by-case assessment of potential risks, no measures to prevent gene transfer were adopted.

At least two factors weakened the position of the EP delegation in the Conciliation Committee. First, because the first reading amendments had already been watered down as a result of the second reading, the logic of bargaining apparently forced the EP delegation to sacrifice additional bits of the remaining substance of the amendments in exchange for approval of other provisions, in particular public access to registers of GMO sites. Second, there has always been an internal split within the Socialist party group. While many Socialist MEPs support tough biotechnology safety regulations, others give priority to economic considerations. Apparently, pressure from Green MEPs and environmental NGOs prevented Socialist members of the Conciliation Committee from backing off of the compromise amendment concerning public access to registers of GMO sites (FoEE 2000d, p. 1).

Although the influence of the EP was clearly limited following the 1999 European elections, MEPs exerted more influence before the elections. As pointed out above, several important amendments which the EP had approved in the first reading were subsequently largely or fully adopted by the Council. In addition, the EP actively contributed to the placing of the *de facto* moratorium

on the European agenda. In October 1998 the Environment Committee discussed the Commission's proposal to lift the Austrian and Luxembourg national bans on the Ciba Geigy maize. In this context, a large majority of Committee members instructed Committee chairman Ken Collins and the rapporteur David Bowe to write to Environment Commissioner Ritt Bjerregaard to ask for the withdrawal of the Commission's proposal concerning the Austrian and Luxembourg bans and to "apply a moratorium on new authorisations of GMOs for commercial purposes while the scientific issues are being clarified in the course of the revision of Directive 90/220" (quoted in FoEE 1998c, p. 2). Following this initiative, the Commission raised the issue of a moratorium at the Environment Council in December 1998. However, according to Commissioner Bjerregaard, "Member States did not support the idea of a moratorium nor could they see any legal basis for such a measure" (quoted in FoEE 1999a, p.9). Although the EP-initiative had no immediate success, the developments in the following six months leading to the adoption of the *de facto* moratorium suggest that the it contributed significantly to placing the issue on the European agenda.

1.1.2 Societal actors

The three main European institutions which were directly involved in the legislative process - the EP, the Council, and the Commission - did not interact with each other in a political vacuum. Rather, their positions often reflected those of societal actors. The most relevant societal actors belonged to the political, economic and scientific spheres and can be grouped under three headings: "civil society", "producers and trade associations", and "scientists".

1.1.2.1 Civil society

Environmental NGOs, consumer groups and political parties were the most relevant organisations falling under the "civil society" heading. These actors appear to have had a particularly strong impact on the legislative process. However, the degree of influence differed widely among the various types of organisations. More specifically, environmental NGOs were significantly more influential than consumer groups or political parties. In addition, one environmental NGO - Greenpeace - appears to have been particularly effective.

Environmental NGOs and consumer organisations

Already in the first half of the 1990s, environmental NGOs tried to influence EU-level decision-making on biotechnology safety regulation. However, they were not very effective. Initially, three organisations stood out: Friends of the Earth (FoE), Greenpeace, and the European Environment Bureau (EEB). While all of these actors have offices in Brussels, their organisational structures vary widely.

The EEB represents more than one hundred environmental NGOs at the EU-level and receives significant funding from the European Commission and some Member State governments. Although Commission and Member State funding and the large number and diversity of EEB members provide the EEB with a considerable degree of independence from its member organisations, its political influence is limited by the fact that its budget is relatively small and it largely depends on its member organisations for mobilisation of political support.

FoEE is the Brussels office of Friends of the Earth (FoE) – a decentralised consortium of national level environmental NGOs. FoE has member organisations in all EU Member States. It started to campaign for tough biotechnology safety regulations in 1991 with the creation of the "Biotechnology Clearinghouse", a mechanism to collect and disseminate relevant information. In late 1995 the organisation broadened its activities by introducing the FoEE Biotechnology Programme under the responsibility of the Bundesverband Umwelt- und Naturschutz Deutschland (BUND), the German FoEE member organisation.

Finally, Greenpeace is a well funded (1999 budget: € 27 Mio.; 2,5 mio. members world-wide), centralised organisation which runs offices in the capitals of most Member States. Although Greenpeace was already involved in activities to push for the adoption of stringent biotechnology safety regulations at the EU level in the first half of the 1990s, 1996 marked a turning point as the organisation transformed more or less sporadic activities into a full-blown, multi-annual campaign (Behrens 1997, p. 79). The significance of this move is illustrated by the fact that Greenpeace only operates around 6-7 campaigns at a time (cf. interview 9). Subsequently, Greenpeace became the most influential societal actor pushing for stringent EU biotechnology regulations.

As illustrated further below, the strong influence of Greenpeace can largely be attributed to the fact that the organisation was able to orchestrate a highly effective, Europe-wide campaign against the use of GM technology in agriculture, which was primarily aimed at influencing the mass media. However, Greenpeace was also more directly involved in the legislative process at the EU level. This occurred in three ways. First, Greenpeace lobbied the European institutions, including the Parliament, the Commission, the Council and, occasionally, even the European Court of Justice. In the context of the revision of the DRD, the most important lobbying activities probably concerned the approval of the Ciba Geigy maize and the adoption of the *de facto* moratorium, rather than the revision of the DRD as such.

In the case of the Ciba Geigy maize Greenpeace extensively lobbied Member State governments and the Commission to reject approval (ref. to an Interview with Mrs. Gale from 1996) While the impact on the Commission was weak, Greenpeace seems to have had a significant influence on the position of many

Member State governments. In particular, Greenpeace lobbied simultaneously in Brussels and in the national capitals in advance of the crucial meeting of the Environment Council in June 1996, when an overwhelming majority of Member States rejected the Commission proposal to authorise the maize. Subsequently lobbying on the issue continued until the Commission appeared to have given up on the possibility of initiating legal proceedings against the Austrian and Luxembourg national bans of the Ciba Geigy maize. In the context of legal proceedings which Greenpeace had initiated to reverse the 1997 decision by the Socialist government in France to authorise the Ciba Geigy maize, the organisation also lobbied the European Court of Justice (GP 1999b). Greenpeace also had a strong influence on the adoption of the moratorium. In particular, Greenpeace lobbied the Greek environment minister to formally propose the moratorium at the June 1999 Environment Council (cf. interview 9).

Greenpeace also lobbied the European Parliament on the revision of the DRD and related issues (e. g., see GP 2000). In doing so Greenpeace co-operated closely with the Green party group in the EP which employed special staff focussing on issues of biotechnology safety regulation (in the mid- and late 1980s the Greenpeace GMO campaign co-ordinator Benny Härlin had himself been a Green MEP). Concerning lobbying of the Commission, representatives of Greenpeace took part in early consultation and frequently submitted position papers and demands directly to Commission staff. These lobbying activities included the revision of the DRD (Homeyer 2002), in particular measures to prevent gene transfer and to ensure producer liability. However, rather than the relatively abstract provisions of the framework legislation that is the DRD, the main focus of the lobbying activities tended to be on more concrete issues of immediate concern, such as specific labelling requirements for GMOs or the adoption of immediate measures against the import of GMOs that had not been labelled or were unauthorised.

Besides lobbying, Greenpeace contacts to the European institutions also served the purpose of information gathering. In particular, Greenpeace sought to obtain important documents ahead of official publication or which were not intended for publication. This strategy created opportunities for Greenpeace to provide the first public interpretation of the respective documents and to heighten media interest. For example, in November 1996 Greenpeace obtained an internal Commission document indicating that the Commission would authorise the Ciba Geigy maize. Greenpeace used the document to argue that the Commission had decided to approve the maize although the Commission's scientific committees had not yet given their opinion (GP 1996). Similarly, in 2002 Greenpeace obtained a report on scenarios for co-existence of GM and conventional crops which had been prepared by the Commission's Joint Research Centre (JRC). Greenpeace claimed that the Commission had delayed publication of the report because it was not happy with some of the conclusions.

Finally, Greenpeace also staged several actions which were designed to exert direct pressure on EU decision-makers. For example, at a meeting of the Environment Council in Luxembourg in October 1997 Greenpeace activists displayed a cartoon showing the Statue of Liberty with then Commission President Santer's face. Against the background that the Environment Council was scheduled to discuss the Austrian and Luxembourg bans of the Ciba Geigy maize, the cartoon criticised the Commission's position which, according to Greenpeace, primarily reflected U.S. trade interests (GP 1997a). A few weeks later Greenpeace sent "chocolate Santa Clauses containing a surprise" to the Commission and the Member States' Health and Consumer Affairs Ministers. The action aimed at highlighting "the Commission's failure to come up with a genetech labelling policy" (GP 1997b). At another meeting of environment ministers in June 1998 which again discussed the issue of the Austrian and Luxembourg national bans, Greenpeace activists with a large banner held by two helium balloons declaring "Council of ministers; stop Novartis transgenic maize now!" (GP 1998). When environment ministers gathered in Luxembourg in June 1999 to decide on whether to adopt a moratorium on the commercial release of GMOs, Greenpeace activists dressed as butterflies demonstrated outside the building (GP 1999a). The butterfly motive alluded to research that had just been published, indicating that certain GM maize varieties may harm butterflies.

Friends of the Earth Europe (FoEE) also influenced the adoption of EU biotechnology safety regulations. However, its influence was significantly weaker than the impact of Greenpeace. There are two main reasons for this: First, in contrast to the centralised Greenpeace campaign, FoEE activities were only loosely co-ordinated with FoE national member organisations which are largely autonomous (cf. Interview Härlin). This is illustrated, among other things, by the fact that only seven out of fifteen national member organisations in the EU ran a GMO campaign. Second, the FoEE strategy focussed more on the provision of information and lobbying of decision-makers than on symbolic actions (cf. interviews Spendler, Carrasco in: Spanish report). As pointed out above, in 1991 FoEE started its activities at the EU level with the Biotechnology Clearinghouse which was converted into the FoEE Biotechnology programme in 1996. The main activity of the Programme consists in the publication every six weeks of a detailed and well-researched newsletter, the FoEE Biotech Mailout, which primarily focuses on developments in EU biotechnology regulation policy. Rather than reaching out into the broader public sphere via the mass media, the FoEE information activities therefore were primarily directed towards other actors within the specialised network dealing with environmental policy issues, in particular at the EU level.

While the provision of timely and detailed information on EU biotechnology regulation policy most likely had an indirect effect on the revision of the DRD, FoEE also engaged in direct lobbying – an activity which benefited from the information gathered in the framework of the Biotechnology Programme. Like

Greenpeace, FoEE participated in the Commission's early consultations on the revision of the DRD. In addition, the organisation provided detailed comments on various initiatives during the legislative process. Lobbying also extended to the European Parliament. For example, during the Conciliation Procedure in late 2000, FoEE intervened successfully together with additional NGOs and Green MEPs to prevent MEPs from backing off of an already weakened proposal for public information on GMO sites (FoEE 2000d, p.1). Further illustrating close links between FoEE and the Green group in the EP, Dan Leskien, one of the leading FoEE staff working on the Biotech Mailout newsletter later became a political advisor to the Green group specialising in issues of biotechnology safety regulation. (Jens Katzek, another important collaborator on the Mailout, subsequently "switched sides" and worked with biotechnology companies and related organisations, including the German Industrial Biotechnology Association (DIB)). As was the case in the early Commission consultations on the revision of the DRD, FoEE lobbying activities at the European level were occasionally supported by other FoE members, such as the Austrian environmental NGO Global 2000.

Although FoEE had lobbied for the adoption of strict EU biotechnology regulations since the early 1990s, these activities had not been part of a broader campaign. This changed in January 2000 when FoEE started their European GMO campaign. However, whereas Greenpeace had acted as an agenda setter when the organisation initiated its campaign in 1996, the start of the FoEE campaign was more reactive. More specifically, the FoEE campaign to a large extent appears to have been a reaction to, first, the broad public debates in the UK and other Member States in the late 1990s. Second, the campaign also reacted to the increasing number of cases of "GMO contamination", in particular of accidental import and planting of unauthorised GM seeds and of gene transfer. However, this reaction to the emerging problem of GMO contamination also had a proactive aspect in that it paved the way for the closely related debate of co-existence of conventional and GM crops which arrived at the agenda of EU policy-makers in 2002.

Besides lobbying the FoEE European GMO campaign also attempted to attract broader media attention. For example, the campaign used visual symbols such as a bee - bees may pollinate conventional crops with GM pollen - and actions such as the October 2002 Brussels trolley parade to protest genetic contamination of food. Although the parade nominally addressed EU policy makers, an important aim was to attract media attention.

Of the three main environmental NGOs, the European Environment Bureau (EEB) focussed most on lobbying activities and least on influencing the media and the broader public. The influence of the EEB on the revision of the DRD was weak, not least because the EEB was not strongly involved in the issue of biotechnology safety regulation. In fact, the EEB subsumes the issue under the broader heading of environmentally sustainable agriculture. Nevertheless, the

EEB produced various position papers, participated in the early consultation exercises held by the Commission and in lobbying of the European institutions.

Although the influence of direct lobbying of European decision-makers by environmental NGOs was secondary to the impact of campaigning and the resulting media attention, lobbying was a significant factor. This is demonstrated by the examples provided above, for instance, the role of Greenpeace in lobbying the 1999 Council Presidency to formally propose the *de facto* moratorium. Similarly, representatives of FoEE had a considerable - though far from exclusive - influence on the position taken by the EP. Among other things, this influence resulted from a string of meetings with David Bowe, the parliamentary rapporteur on the revision of the DRD (cf. interview 5).

Influence also benefited from co-operation between environmental NGOs. For example, in 1995 Greenpeace, FoEE, the EEB and the British NGO Green Alliance boycotted a related consultation meeting with the Commission on the revision of Directive 90/219 on the Contained Use of Genetically Modified Micro-organisms. This move seems to have strengthened the position of environmental NGOs in subsequent lobbying efforts regarding the revision of the DRD (Homeyer 2002, pp. 273-275). Environmental NGOs also co-operated with other like-minded EU-level NGOs and associations. Consumer organisations, such as the Bureau of European Consumer Organisations (BEUC) and the European Association of Consumer Co-operatives (Euro Coop), were probably most important in this respect. In the framework of the revision of the DRD co-operation with consumer organisations focussed primarily on the provisions for labelling of GMOs. Towards the end of the legislative process when issues of "GMO contamination" had gained some prominence, there was also increasing co-operation with organic and small farmers' associations, such as the *Confederation Paysanne* (CP).

European Political Parties

The direct influence of European political parties on the revision of the DRD was largely limited to their role within the EP. While the parties had a significant influence on decision-making within the EP in the context of the Co-decision Procedure and beyond, their overall impact was nevertheless limited. This may be attributed to three factors: First, in contrast to many other instances of EU environmental policy-making, following the 1999 European elections the positions of the EP and the Council were similar. Consequently, even if the Council had accepted all major EP amendments, only a few aspects of the revised DRD would have changed fundamentally. Second, there are large incentives for the two largest party groups, the PES and the PPE, to co-operate. This results from the fact that co-operation between these parties can most easily muster the absolute majority of MEPs which is necessary to adopt an

amendment in the second reading under the Co-decision Procedure.[5] Third, the party groups in the EP have difficulties in enforcing party discipline among MEPs. Party groups cannot discipline MEPs by reference to the need to keep the government in power because the EP does not elect the EU executive, in particular the Commission. In addition, MEPs not only are divided by party affiliation but also by cross-cutting national cleavages (e.g. national delegations).

Concerning EP decision-making on the revision of the DRD, the lack of party discipline and the incentives for co-operation between party groups had four major implications: First, as mentioned above, the PES was internally split. Given the position of the PPE this implied, among other things, that the EP favoured less stringent provisions on the duration of product authorisations than the Council. Second, although industry heavily lobbied the PPE to oppose provisions on time limited product authorisations, liability, gene transfer, and antibiotic resistance markers, there were sufficient incentives for the PPE and the PES to agree on compromise amendments on these issues. This enabled the EP to adopt amendments (albeit heavily modified) on these issues also in the second reading. Third, the Green party group in some cases enjoyed disproportionate influence: As MEPs were not strictly bound by the official positions of the party groups, they were relatively open to Green arguments. The Greens could therefore use their expertise and resources - which reflected their special interest in the field - more effectively. Finally, the impact of the Liberals increased after the 1999 European elections, in particular with respect to the adoption of legislation complementing and implementing the revised DRD. However, the Liberals were also internally split on the issue of biotechnology safety legislation.

In particular after the 1999 European elections, the EP oscillated between two positions as a result of the factors mentioned above: when the Greens failed to exert a significant influence on the Liberals and at least some of the Socialist MEPs who otherwise tended to emphasise the economic aspects, the EP's overall influence *vis-á-vis* the Council and the Commission was relatively weak because its position tended to be similar to the position of the Council. This was frequently the case with the revision of the DRD. Conversely, a stronger influence of the Greens tended to increase the legislative impact of the EP. This was primarily the case with the adoption of some of the legislation complementing and implementing the DRD, for example the Regulation on Labelling and Traceability (cf. interview 8; see also Europe Environment 2002, p.IV.1.). In these cases the majority of the PPE was outvoted by a coalition

[5] As noted above, the 1999 European elections weakened the incentives for co-operation to some extent, because of the strong position of the PPE and, in particular, of the smaller parties.

between the PES and most of the smaller party groups across the left-right spectrum.

1.1.2.2 Producers and trade associations

Although the main producer groups and trade associations had a considerable influence on the revision of the DRD, their influence declined in the second half of the 1990s. As a result, the overall impact of these actors, who mostly favoured weak biotechnology safety regulations, was not as strong as the influence of environmental NGOs. Several factors explain the relative weakness of producers and trade associations: First, while producers largely succeeded in lobbying the European Commission, their record on the EP is more mixed. Second, interests differed between various producer groups: While "upstream" chemical and seeds companies were strictly opposed to more stringent regulations, the reaction of "downstream" retailers to the rejection of GM food by consumers and NGO campaigning was significantly more sensitive. Most importantly, however, the main producer groups and trade associations failed to prevent the Environment Council and Member State governments from taking an increasingly cautious position. The main reason for this seems to be that, despite efforts, producers did not persuade the broader public of both the existence of substantial benefits of agricultural biotechnology and the absence of significant risks.

Relevant producer groups and trade associations include the seeds and chemical industries, small and medium sized biotechnology companies, farmers' associations, the food industry and retailers. Concerning the revision of the DRD, the seeds and chemical industries have been particularly influential. Over the past decades, these two industries have become closely linked as large, multinational chemical companies have bought up many seed producers.[6] In 1989 the chemical and seeds companies established the Senior Advisory Group Biotechnology (SAGB) as an elite lobby group at the EU-level with particularly close contacts to the Commission. In the early 1990s the SAGB, which then Commission President Jacques Delors "described [...] as the most influential Euro group" (Greenwood and Ronit 1995, p. 81), persuaded the Commission to establish the Biotechnolgy Co-ordination Committee (BCC). Headed by the Commission's Secretary General, the BCC co-ordinated the activities of various Commission Directorate Generals (DGs). One of the main purposes of the establishment of the BCC was to reign in DG Environment and to deregulate EU biotechnology safety regulations on contained use and deliberate release of GMOs, including the DRD (Homeyer 2002). In 1996 the

[6] Chemical companies have the resources and expertise necessary to develop and market GM seeds; In addition, they have an interest in selling the pesticides and herbicides which must be used with GM herbicide and pesticide resistant crops.

SAGB was re-branded EuropaBio, which also incorporated the European Secretariat of National Biotechnology Associations (ESNBA), representing the interests of small and medium sized biotechnology companies. While EuropaBio is probably the most influential biotechnology related producer association at the European level, the large chemical and seeds companies also enjoy good individual contacts to the Commission (ibid., pp. 207, 273). For example, in 2000 several leading companies (Monsanto, Syngenta, Du Pont, Nestlé, Unilever) met with eight Commissioners to discuss the evolution of the biotechnology regulatory framework (Rosendal 2003, p. 14).

Four factors go a long way in explaining why the influence of the chemical and seeds industries remained limited, despite excellent high and highest level contacts to the Commission: First, from the mid-1990s on the BCC's ability to reign in DG Environment was significantly reduced by growing Member State pressure on the Commission to adopt stricter biotechnology safety regulations. Second, once the *de facto* moratorium was in place a quick adoption of the revised DRD emerged as the main priority of large chemical and seeds companies. Producers hoped that this would end the moratorium. To this end, industry lobbying focussed on the most crucial aspects only, such as the duration of authorisations and rules for the use of antibiotic resistance markers (cf. interview 10) Third, the chemical and seeds companies were more successful in lobbying the Commission than in influencing the EP. Although intensive lobbying of MEPs partly succeeded with respect to some provisions, for example the restrictions on using antibiotic resistance markers, producers had to accept a host of other requirements. This was not least due to the fact that parliamentary rapporteur David Bowe listened extensively to both producer representatives and environmental NGOs (cf. interview 5). Fourth, producers failed to exert a strong influence on the position of the majority of Member State governments. As argued further below, this was mainly the result of the failure to persuade the broader public at national level.

Additional producer groups and trade associations, such as the Association of the Food and Drink Industry of the EU (CIAA), also exerted significant influence, in particular towards the end of the legislative process and concerning provisions on labelling and complementary legislation on GM food and feed. The fact that two out of the five participants in the 2000 meeting, mentioned above, of biotechnology industry representatives with Commissioners represented food companies (Unilever and Nestlé) illustrates the growing influence of large food producers. Similarly, the influence of retailers, such as the European retailers' association Eurocommerce, increased in the late 1990s.

When the first GM products entered the European market in the mid-1990s the various European producer and trade associations did not support the introduction of stricter regulations. However, in the following years significant splits emerged between associations representing "upstream" and "downstream" industries: Unsurprisingly, downstream industries, in particular

retailers, were much more sensitive to consumer rejection of GM food and the campaigning of environmental NGOs than the upstream chemical and seeds producers. In particular, downstream businesses soon supported calls for "practicable" labelling and traceability of GM agricultural products. By contrast, the position of upstream producers remained much more ambivalent.

Representing national farmers associations at the European level, COPA/COGENA is one of the most powerful European interests groups. However, there are several reasons why COPA/COGENA's influence on the revision of the DRD was weak. First, while some COPA/COGENA members support agricultural biotechnology, others tend to be critical. For example, along with farmers' organisations, seed producer associations representing the interests of large biotechnology companies such as Monsanto and Syngenta, also belong to COPA/COGENA. In addition, the positions of large national farmers' associations on GMOs differ. For example, while the German main association, the Deutscher Bauernverband, tends to support agricultural biotechnology, the largest Italian farmers' association, Coldiritti, is opposed. Consequently, it has been difficult for COPA/COGENA to agree on a position on relevant issues of biotechnology regulation.

The second reason for COPA/COGENA's relatively weak influence is related to the first: Partly reflecting the difficulties of agreeing on a common position, COPA/COGENA entered the debate late, e.g. when its core interests were affected by the formulation of implementing legislation on strict labelling provisions and the emerging debate on co-existence. In contrast to COPA/COGENA, the small, left-leaning European Farmers' Coordination (CPE), which represents small farmers' interests, already called for a moratorium on agricultural biotechnology in 1997. National associations of organic farmers', such as the British Soil Association, also called for strict EU biotechnology safety regulations.

1.1.2.3 Scientists

Of the main societal actors - civil society organisations, producer and trade associations, and scientists - the last group had the least influence on the revision of the DRD. There are several reasons for this: First, concerning the revision of the DRD, no major common concern of the scientific community was at stake because the group of scientists with a strong interest in biotechnology safety regulations - molecular biologists doing research in plant biotechnology - was a minority within the scientific community as a whole. In addition, the majority of these molecular biologists opposed stricter regulations. Consequently, their position was effectively (though indirectly) represented by well organised industries and their representatives, such as EuropaBio.

Second, the credibility of scientific expertise suffered from the BSE crisis and similar events. This was particularly true for the EU scientific committees which had for a long time supported the British government position that BSE presented no danger for human health. Consequently, the opinion of the Commission's scientific committees carried relatively little weight, in particular in the case of the Austrian and Luxembourg ban of the Ciba Geigy maize. The credibility of scientists also suffered from a perceived lack of independence because many scientists in the area of plant biotechnology are partly or fully dependent on industry for funding of their research. In addition, while the majority of experts in the field appears to be opposed to strict regulation, studies by "dissident" scientists have repeatedly questioned this position (Gordon 1991; see also Rowell 2002). There are also disciplinary differences: For example, ecologists usually seem to call for stricter biotechnology safety regulations than molecular biologists.

Third, within the Commission DG Research represented the interests of scientists who opposed stricter biotechnology regulations. However, as mentioned above, the internal position of DG Research and other Commission services opposing stricter regulations was weakened by increasing pressure from Member State governments calling for stricter regulations. Consequently, DG Environment was able to push many of its proposal through the internal decision-making process of the Commission despite resistance by DG Research and similarly minded services (cf. interview 2).

1.2 Openness

The degree of openness relates to the opportunities for citizens and societal actors to feed information into the EU decision-making process as well as to the availability of information on EU the decision-making process to societal actors and the broader public. Opportunities to feed information into the decision-making process are linked to structures for participation of citizens and societal actors in decision-making which encourage consultation and allow for lobbying of policy-makers. The second aspect of openness - the availability of information on the decision-making process - has two main aspects. The first aspect relates to the ease with which citizens or societal actors who have an *ex ante* special interest in the decision-making process can find relevant information. Frequently, such actors may be "stakeholders", such as environmental NGOs or industry associations. The second aspect of openness concerns the availability of information to the general public.

1.2.1 Participation

Openness of the decision-making process with respect to participation may be analysed in terms of the policy community/policy network distinction: A policy community corresponds to restricted participation of a relatively small number of actors holding similar cognitive and normative beliefs. By contrast, a policy network includes a large number of actors who are only loosely integrated. Participation in policy communities also tends to be more stable over time than policy network participation. Obviously, real-world decision-making processes are usually located somewhere along the continuum between a closed policy community and an open network.

As illustrated in the previous Chapters, societal actors influenced the revision of the DRD in various ways: the Commission engaged in formal and informal consultation exercises; political parties represented in the European Parliament participated in decision-making; the parliamentary rapporteur dealing with the revision of the DRD maintained close contacts to interested societal actors, and societal actors lobbied the Commission, the Council, and the European Parliament. How should each of these activities be assessed in terms of the effectiveness and inclusiveness of participation? Did these activities correspond more to an open policy network or to a closed policy community?

1.2.1.1 The European Commission

Between 1995 and 1997 the Commission organised three stakeholder consultations on the revision of the DRD. The Commission also published a report on the review of the original DRD and its respective legislative intentions before tabling the proposal for the revision of the DRD. However, for two reasons these exercises hardly enhanced participation. First, the agenda for the revision of the DRD had already been set long before the consultations took place, e.g. by the Commission's 1993 White Paper on Competitiveness, Growth and Employment and a follow-up Communication focussing specifically on biotechnology. Second, several highly significant parts of the Commission's legislative proposal of February 1998 appear to have been prepared by Environment Commissioner Bjerregard's Cabinet rather than by DG Environment which had organised the consultations and prepared the review report (see fn. 3). In addition to participation in the consultations, environmental NGOs also attended meetings of the Working Group on Risk Assessment established by the Art. 21 Committee. However, NGO participation in this technically oriented body suffered from lack of expertise on the part of NGOs and low compatibility with the political character of NGOs.

The Commission held the first two consultation meetings with environmental NGOs in November 1995. Discussions focussed on whether and how to revise the original DRD and February 1996. Each consultation exercise took two days of which the first was devoted to producer representatives, such as the SAGB, and the second to environmental NGOs. In addition to DG Environment, which

had organised the meetings in its function as “chef de file” for the DRD, the Commission was represented by DGs Industry and Research. On the side of NGOs, Greenpeace, the EEB, Global 2000 (the Austrian member of FoE) and FoEE participated. Besides criticising the Commission’s intention to deregulate the DRD, NGO again complained that the consultation documents were too vague. At the second meeting they also expressed disappointment “that comments made during the first round table [...] appeared not to have been taken into consideration at all” (FoEE 1996a, p. 4). After the Commission had published its report on the review of the original DRD in December 1996, DG Environment held a third round table meeting in April 1997 to discuss the weaknesses of the original DRD as identified by the report. NGOs repeated the complaint that their arguments had not even been mentioned in the report. They added that the “Commission was extremely reluctant to enter into any debate on specific amendments” (FoEE 1997b, p. 4). As FoEE summed up the NGO experience: “Since 1994, the Commission has been working on its [review]. Numerous advance versions of the report were circulated and discussed with industry and even NGOs [...]. However, from the very beginning it was clear that the review was to lead to a deregulation of the Directive” (FoEE 1997a, p. 1).

The perception of NGOs that the most important decisions had already been taken in advance of the consultations is supported by the fact that the review of the original DRD was part of the implementation of the Commission’s 1993 White Paper on Competitiveness, Growth and Employment. Reacting to pressure from the SAGB, German industry and the German government, a biotechnology chapter had been included in the White Paper in what appears to have been a secretive process, involving David Williamson, the Commission’s Secretary General, German Industry Commissioner Martin Bangemann, and selected staff from DG Industry. Other Commission services, including DG Environment, only learned of the existence of the biotechnology chapter a few days before the release of the White Paper. By framing the issue of biotechnology regulation primarily in terms of economic competitiveness, the White Paper set the agenda for the revision of the DRD in that it - and in particular the Commission’s follow up communication - implied that deregulation was necessary (cf. Homeyer 2002, pp. 214-215).

In terms of substantive decision-making outcomes, the failure of the consultations with NGOs eventually turned out to be largely irrelevant. The DG Environment proposals for the revision of the DRD, which had been the subject of the consultation meetings, were subsequently heavily amended by Environment Commissioner Ritt Bjerregard’s Cabinet. This unusual procedure reflected the growing influence of the Environment Commissioner whose position benefited from calls by some Member State governments for the adoption of stricter regulations. Environmental NGOs had a much more favourable view of the final legislative proposal for the revision of the DRD than of the proposals which had been discussed at the consultation meetings.

In late 1995 the Commission also invited NGOs to participate in its Working Group on Risk Assessment. However, the experience in the working group and in the other consultations and "round table discussions" appears to have been somewhat sobering for NGOs. A FoEE representative criticised the dominance of technical considerations over socio-economic aspects in the discussions, which tended to obscure issues of great concern for many NGOs. He also felt that participation by NGOs was unlikely to affect concrete decisions, such as product authorisations, and that participation threatened to drain scarce resources from other, more effective NGO activities (FoEE 1996b, pp. 6-7). More generally, NGOs were afraid that the Commission would use consultations to legitimise its decisions. In 1997 FoEE therefore "urged the Commission to indicate very clearly in future documents that the fact that such consultations [...] had taken place does in no way imply that the consulted groups are in favour of any amendments proposed by the Commission" (FoEE 1997b, p. 4).

From 2001 on, the Commission also organised consultations on its proposals for legislation to implement and complement the revised DRD, such as the labelling and traceability Regulation and the GM food and feed Directive. In general, NGOs seemed to be more satisfied with these consultations than with the ones on the review and revision of the DRD itself (cf. interview 5). This is hardly surprising because the decision-making process within the Commission was more open as it was no longer determined by a predefined deregulatory agenda. Although the Commission continued to perceive biotechnology regulation primarily as an obstacle to economic competitiveness, its most urgent concern was to end the *de facto* moratorium. Consequently, the Commission was prepared to consider a range of measures, including the adoption of stricter biotechnology regulations, to persuade Member State government to lift the moratorium.

However, in early 2003 the issue of co-existence of conventional and GM crops once again sparked dissatisfaction with the Commission's consultation practice among environmental and other NGOs. More specifically, the Commission argued that co-existence should not be regulated at the EU level. Against this background, NGOs suspected that the Commission would attempt to portray a scientific expert roundtable on co-existence, which had been organised by DG Research, as a proper stakeholder meeting. This, they feared, would subsequently allow the Commission to avoid further consultations with a wider and more balanced spectrum of societal actors of the broader political options to deal with co-existence, including the adoption of regulations at the European level. As the Commission did not reply to a letter by FoEE and other NGOs which raised these concerns, NGOs carried out their threat to boycott the roundtable meeting (cf. FoEE et al. 2003; EU 2003).

1.2.1.2 *The European Parliament*

Although a large majority of EU citizens was opposed to agricultural biotechnology and GM food, the position of the European Parliament was determined more by the party groups and other societal groups, in particular environmental NGOs and trade and producer associations, than by public opinion. The positions of the party groups were broadly similar to those of comparable national parties. On the one hand, left wing party groups tended to call for stricter biotechnology regulations than more centrist and right leaning groups, such as the PPE, but also a considerable number of Socialists. Consequently, the 1999 European elections, which significantly strengthened the conservative PPE, eroded some of the parliamentary support for stricter regulations. On the other hand, the traditional left-right dimension of political conflict was weakened by national cleavages and by what appear to be "postmaterialist" orientations of some party groups and factions within party groups. For example, Austrian conservative MEPs and some of the smaller right wing parties supported strict biotechnology regulations.

Producers and environmental NGOs both lobbied MEPs - and were consulted by them. The parliamentary rapporteur on the revision the DRD, David Bowe, was probably the most influential single MEP. Bowe consulted all sides extensively. Spearheaded by German MEP Hiltrud Breyer, the Green group in the European Parliament took a special interest in biotechnology regulation. For example, in 1996 Green and similarly minded Socialist MEPs together convened a workshop on biotechnology regulation and public participation. In 2003 the Green Group organised a hearing on co-existence of GMOs and conventional crops shortly after the Commission had held the controversial expert workshop on the subject which had been boycotted by NGOs. Unsurprisingly, speakers at the hearing were predominantly sympathetic to the position of the Greens. But a representative of EuropaBio also gave a presentation.

1.2.1.3 *The Council*

The constellation of national and sub-national actors, for example national industry associations and NGOs, being consulted by, or lobbying the national government, is probably the most important factor determining the influence of societal actors on decision-making in the Council. However, societal actors have also used other, less conventional ways of exerting influence which are more independent of the openness of a particular national government. First, environmental NGOs operating at the European level - in particular Greenpeace - occasionally staged protests at Council meetings. These protests would probably have had little effect if they had been isolated events. However, they were part of a larger European campaign which also included national level

activities. The second “unconventional” way in which societal actors influenced Council decision-making was in fact based on interactions with national governments. However, in contrast to the conventional lobbying at the national level, these interactions were European events taking place in a national context. They were European because they were part of a European strategy. For example, in 1999 Greenpeace looked for a Member State government that would be willing to formally propose a moratorium on the commercial release of GMOs to the Council. Because the Greek government appeared to be the easiest to persuade, Greenpeace focussed its lobbying activities on the Greek Environment Minister (cf. interview Härlin). When Greenpeace subsequently staged protests at the Environment Council meeting in Luxembourg to underline its call for a moratorium, the ground for success had been very well prepared by Greenpeace lobbying at the national level, in this case in Greece.

While producers and NGOs other than Greenpeace interacted intensively with certain national governments (and the Commission and the European Parliament), they were significantly less successful than Greenpeace in using the less conventional, more “European” ways of influencing the Council, e.g. addressing the Council as a whole and resorting to “European” activities at the national level. Many societal actors, such as EuropaBio or FoEE, are less centralised than Greenpeace. These strategies may therefore often be limited by the lowest common denominator of their member organisations’ interests. There may even be rivalries between national and European organisations. Consequently, the capacities of the less centralised actors to strategically co-ordinate European and national level activities across the EU appear to be relatively weak.

1.2.1.4 Participation: policy community or policy network?

In the case of the revision of the DRD participation of societal actors in decision-making at the European level seems to have corresponded more to the model of a relatively open policy network than to a closed policy community. More specifically, a considerable number of environmental and other NGOs as well as producer and trade associations had the chance of influencing decision-making. The overall degree of normative and cognitive integration among these actors was low. Among other things, this may be one of the reasons why the institutional structures which the various actors used to influence decision-making frequently differed. For example, industry associations had particularly close contacts to the Commission, whereas environmental NGOs primarily influenced the European Parliament and the Council. However, contrary to the assumption that policy networks tend to be unstable, participation was relatively stable. In particular, Greenpeace, FoEE, and EuropaBio participated for more than five years in the process of revising the DRD. It seems possible that this apparent paradox of stability despite low normative and cognitive integration may be linked to the protracted character of the EU legislative process: The

completion of the Co-decision Procedure took more than three years; agenda-setting had previously taken another five years and - two years after the adoption of the DRD - the process of formulating and adopting implementing and complementary legislation still needs to be completed.

Although the decision-making process eventually turned out to be relatively open, this was not the case during the agenda-setting phase which was in the hands of the Commission. As illustrated above, the basic thrust behind the revision of DRD initially came from a small and very closed policy community involving the SAGB, additional German companies, Industry Commissioner Bangemann, the Secretary General of the Commission, and selected staff of DG Industry. Essentially, the contacts between environmental NGOs and DG Environment and the consultation meetings were irrelevant for agenda-setting. Against the background of increasing calls by some Member State governments for the adoption of stricter biotechnology regulations, Environment Commissioner Bjerregard eventually challenged the policy community in 1997/98 and substantially amended the proposal for the revision of the DRD. However, this did not yet open up the decision-making process to additional societal actors.

The transition towards a more open policy network started when the legislative proposal for the revision of the DRD had left the Commission. Whereas environmental NGOs had had hardly any influence on decision-making within the Commission, their interactions with the legislative bodies - the European Parliament and the Council - were more effective. While the relatively strong position of the European Parliament in the Co-decision Procedure contributed to this development, the shift in the more general balance of power between the societal supporters and opponents of strict EU biotechnology regulations was probably more important. The growing influence of the supporters of strict regulations on Member State governments - in particular those governments which subsequently supported the *de facto* moratorium - was crucial. The activities of Greenpeace were particularly important in this respect. In the late 1990s, when the Commission began to prepare legislation implementing and complementing the DRD, the shift in the general balance of power even opened up decision-making within the Commission to some extent. This happened although the Commission continued to frame biotechnology regulation primarily as an issue of economic competitiveness.

1.2.2 Information

In addition to institutional opportunities for participation, the openness of the decision-making process also depends on the availability of information. If state actors or a policy community restrict access to important pieces of information, societal actors may not be able to evaluate decisions and articulate their

opinions and interests. The availability of information depends on both the willingness of decision-makers and members of a policy community to share information, and on the availability of societal actors, in particular the media, which access, process, and diffuse the information. If the relevant information is diffused widely to citizens, this can be taken as an indicator for the existence of a public space. A more limited diffusion of information to the members of a policy network indicates the existence of a more restricted sectoral public space.

1.2.2.1 Sharing information

Sharing of information differs significantly among the main EU institutions. The Council is usually regarded as the most secretive institution. Council meetings are not public and despite some improvement in recent years, access to Council documents remains problematic. This also applied to the revision of the DRD. The Commission tends to be significantly more open than the Council. In the case of the revision of the DRD, this applied primarily to the later stages of the decision-making process. As pointed out above, agenda setting was secretive, despite consultation meetings and the publication of the review of the original DRD. However, from the late 1990s on - when it came to the drafting of implementing and complementary legislation - the Commission made more information available through the publication of consultation documents and consultation exercises. Perhaps more importantly, once the initially dominant policy community focussing on economic competitiveness had lost some of its influence, informal ways of sharing information with societal actors gradually gained in significance. For example, societal actors were able to access 18 or 19 different draft versions of the Commission's legislative proposal for the GM Food and Feed Regulation. As one observer put it: "Commission officials were quite shocked at how quickly these things circulate. This is informal transparency" (cf. interview 5). Such leaking of documents often seems to result from internal circulation of these documents that is necessitated by inter-service consultations (ibid.). Given the diverging interests and allegiances of the various DGs, services can improve their internal negotiating positions by leaking documents to societal actors.

The European Parliament is the least secretive of the three institutions. Parliamentary debates and committee meetings are held in public. In fact, due to party competition and the democratic *raison de etre* of the Parliament, MEPs are keen to inform the public on their involvement in the decision-making process as well as the failures of political opponents. But even the Parliament is involved in important non-public negotiations. The meetings of the conciliation committee under the Co-decision Procedure offers one example. However, in these cases party competition may undermine secrecy. This happened in the case of the revision of the DRD when Green members of the Committee alerted environmental NGOs to the fact that the Socialists appeared to back down on

the issue of access of the public to information on the location of GM fields. Because of the resulting interventions of environmental NGOs, the Socialists reinstated their original position.

Despite the low degree of secrecy, the European Parliament suffers to some extent from a largely unintentional lack of transparency which stems from the complexity of the internal decision-making process. For example, coalition building in the Parliament is a complicated, unpredictable process, involving a relatively large number of party groups which may often be internally split. In addition, the Parliament only makes amendments in the course of the legislative process. Even for individual MEPs it is impossible to keep an overview of the usually large number of amendments and their implications.[7]

1.2.2.2 Collecting, processing, and diffusing information

EU institutions, interested parties, such as NGOs and producer associations, and the media collect, process and diffuse information relating to the decision-making process. Each of these actors may be involved in all three of these processes or they may only deal with one or two of them. The extent to which actors engage in the collection, processing, and diffusion of information may also differ. For example, diffusion may be more or less limited to the policy network. Alternatively, it may extend to the larger public.

EU institutions and specialist media

The Parliament, the Council and the Commission issue press releases and organise press conferences to reach out to the sectoral and more general publics. The Commission also publishes communications, White and Green Books which provide information on its plans and intentions with respect to particular issues or policy areas. Specialist media follow, process, and diffuse most of these statements and events. Media focussing on European environmental policy, in particular the *Environment Daily* news service (ENDS) and the weekly *Europe Environment*, appear to have provided the most complete coverage of the revision of the DRD. These information services operate on a commercial basis. However, European and national NGO newsletters focussing on EU environmental policy also provided somewhat less extensive coverage. For example, German and Austrian environmental organisations, such as the Deutscher Naturschutzring (DNR) and the EU-

[7] Party groups in the EP derive a significant part of their influence from the fact that they draw up the voting lists. Although party groups have relatively few means to discipline MEPs who deviate from the voting lists, MEPs usually follow the lists. To a significant extent this is due to the fact that individual MEPs can only keep track of a small number of legislative proposals at any given time (cf. interview 5).

Umweltbüro, regularly issue newsletters on EU environmental policy (the *DNR Europarundschreiben* and the *Europa-Info*, respectively). All of these media covered the major steps in the process of the revision of the DRD. However, FoEE's highly specialised *Biotech Mailout* newsletter, which focuses primarily on issues of EU biotechnology safety regulation, provided the most detailed information. Newsletters, trade journals, and other regular publications focussing on agriculture, food, and biotechnology also covered the EU legislative process, albeit less comprehensively.

The information provided by news services and letters primarily addresses the policy network. Newspapers and magazines which specialise to some extent in European affairs reach a broader, though still limited audience. The most important of these papers is the weekly *European Voice* which also covered key developments relating to the revision of the DRD. Newspapers with a special economic focus, in particular the *Financial Times* (Parau, EUROPUB DRD Report UK, p. 18), but also other papers such as the German *Handelsblatt*, have provided above average coverage.

Although the European institutions have their own websites, the Commission is the only one with special websites on biotechnology. These websites are provided by the various Commission services. For example, DG Research operated the Biosociety website which, among other things, was used for consultations on the Commission's 2002 Communication on Life Sciences and Biotechnology (EC 2002a) and offered an internet discussion forum. The European Parliament also provides online information. For example, the Parliament's Legislative Observatory, which monitors EU legislative processes, followed the adoption of the revised DRD. Additional information was available on the websites of environmental NGOs, in particular FoEE, and producer associations, such as EuropaBio. Although citizens looking for information on EU biotechnology safety regulation can access these websites, they are probably mostly used by members of the policy network.

Against the background of societal opposition against GM food and agricultural biotechnology, the Commission provided funds for improving knowledge among the broader public of biotechnology and its regulation. For example, officials from DG Research participated in the Task Group on Public Perceptions of the European Federation of Biotechnology (EFB). The EFB is an association of mainly European academic and commercial institutions with a stake in biotechnology. It has a long history of close co-operation with DG Research (Homeyer 2002, pp. 101-102, 193). Among other things, the Commission provided funding for several EFB briefing papers on biotechnology which dealt with issues such as potential applications and environmental impacts of biotechnology. The Commission also funded extensive research on European public opinion on biotechnology. Even the FoEE Biotechnology Programme received some financial support from the Commission (Homeyer 2002, p. 193).

Environmental NGOs

As mentioned above, environmental NGOs published various newsletters, some of which covered the process of the revision of the DRD very comprehensively. In addition, there were websites and email lists. While these sources of information were primarily relevant for the members and supporters of NGOs and were unlikely to be widely consulted beyond the environmental policy network, many environmental NGOs also tried to reach out to the broader public. With respect to the European political context in which the DRD was revised, the role of Greenpeace in fuelling and shaping debates in the broader public was particularly important.

The Greenpeace campaign raised considerable attention among the mass media. It was co-ordinated from Germany, where environmental and consumer NGOs had already succeeded in generating some media interest in the issue of labelling of GM food (cf. interview 10, see also Behrens 1997, p. 53). Greenpeace timed the beginning of its campaign to coincide with the first arrival in Europe of unlabelled shipments of soya from the U.S. which were suspected of containing GMOs. In the near absence of GMOs on the European market the debate about labelling of GM food had been largely theoretical up to this point. However, the U.S. shipments provided Greenpeace with an opportunity to stage a series of highly visible protests which attracted considerable media attention. More specifically, from late 1996 on Greenpeace organised a large number of attempts to block U.S. soya shipments from reaching the European market. These protests mostly involved attempts to stop ships from unloading. They led to confrontations with public authorities, arrests of Greenpeace activists, impounding of Greenpeace ships and court proceedings. At the same time, Greenpeace also protested at major sites of multinational food producers, such as Unilever and Nestle, large wholesalers, and retailers. These actions aimed at stepping up pressure on the food industry and retailers to support demands for segregation of conventional and GM crops. The protests were largely successful as more and more retailers, wholesalers, and food producers announced that they would stop selling GM food.

In particular at the early stages of its campaign in 1996 and 1997 Greenpeace framed the GM issue as a European one. Protests took place in many countries, such as Austria, Belgium, the Czech Republic, the Netherlands, Germany, France, Italy, the UK, Portugal, Sweden, Spain, and Switzerland. Although these protests were staged at the national level, they were similar to the Greenpeace lobbying of Member State governments in that they were centrally co-ordinated and frequently aimed at influencing a Europe-wide target group or audience. At a more substantive level Greenpeace also stressed the European dimension of the problem. Greenpeace argued that GM soya imported by one Member State would enter the markets of other Member States. Even the protests that took place in the U.S. often focussed primarily on the implications of U.S. exports of GM soya for European rather than American consumers. In its press releases, which were usually available in English,

Greenpeace also routinely mentions the European or international composition of the teams staging the protest events. For banners and loudspeaker messages Greenpeace frequently used either English or several European languages (GP 1996).

Although the protest events aimed at influencing the broader public, their most direct target group was the mass media, in particular television. Therefore the protests visualised and dramatised opposition, often evoking “David vs. Goliath” symbolism. Examples include Greenpeace activists climbing huge office buildings, chasing large cargo ships with rubber boats or dressing up as bees (as vectors of cross-pollination). Greenpeace used symbols popularised by television to associate GMOs with fear of the unknown. Borrowing a theme from the well-known TV series “The X-files”, which involves supernatural phenomena, Greenpeace decided in 1996 to use a large “X” as the GM campaign logo (cf. GP 1996a). In addition to increasing the attractiveness of the protest events for television coverage, using dramatic effects and broadly understood visual symbols allowed Greenpeace to overcome language barriers. Consequently, the protests appeal to the mass media and audiences in Europe.

To increase media coverage Greenpeace routinely published press releases on protest events and other activities, for example publication by Greenpeace of leaked Commission documents. The press releases were usually published while the protests were still going on or, at least, at the same day. In addition to information on protests and the relevant background, they contained the names and phone numbers of one or more Greenpeace contact person who could provide further information, including pictures or videos. This highly effective approach to the mass media benefited from the professional background in journalism of some of the leading Greenpeace staff involved in the GMO campaign, for example the co-ordinator of the campaign, Benny Härlin.

Towards the end of the 1990s Greenpeace complemented its transnational campaign with stronger involvement in national debates, including co-operation with national groups, such as the Soil Association in the UK and the Confédération paysanne (CP) in France. This development can be attributed to at least three factors: First, partly as a result of the success of Greenpeace’s European GM campaign, national-level NGOs were more successful with their own activities. The attractiveness of cooperation rose because better cooperation promised to further increase the effectiveness of the opposition to GMOs and to benefit both Greenpeace and national-level NGOs more generally. For example, Greenpeace France, which had suffered from declining popularity in the mid-1990s, appears to have significantly increased its popularity as a result of its GMO campaign alongside the CP. Second, in some cases co-operation also resulted in a certain division of labour at the national level. In contrast to the CP (and Greenpeace UK), Greenpeace France did not engage in some of the more aggressive protest activities such as the uprooting of GM fields. Finally, the success of Greenpeace’s European GMO campaign

contributed to the intensification of national-level debates. While the early Greenpeace campaign primarily reacted to European-level events, in particular the first imports of GM soya from the U.S., the intensification of national debates created opportunities for Greenpeace to also exploit national-level events. Examples include the Pusztai controversy in the UK (GP 1999) and Greenpeace assistance to a German farmer who had unwittingly planted a field with seed containing GMOs (GP 2000a).

However, the growing importance of national debates complemented, rather than subsumed Greenpeace's transnational GMO campaign. On the one hand, Greenpeace introduced European aspects into national debates. For example, in the case of the German farmer mentioned above, the Greenpeace press release compared the position of the German government, which had refused to assist the farmer in removing the GM crops, with the positions of the Swedish, French, and British governments (GP 2000b). On the other hand, Greenpeace also transferred national debates to the European level. Taking the case of the German farmer as a hook, Greenpeace "urged the EU agricultural ministers to agree on immediate action to deal with GE contamination of conventional seeds" (cf. GP 2000c). In this way Greenpeace's European GMO campaign created both horizontal links among national debates by comparing the reactions of different Member State governments, and vertical links between national debates and debates among the members of the EU-level policy network. Greenpeace created this second link by referring to events at the national level in its call for EU measures to deal with GM contamination. The fact that Greenpeace is frequently seen as the single most influential actor in the GM debate which constituted the context for the revision of the DRD reflects the success of the Greenpeace GMO campaign (cf. interviews 2, 10, 12)

While Greenpeace successfully collected, processed, and diffused information to the broader public, the activities and effects of other EU-level environmental NGOs remained more limited. As mentioned above, FoEE published the highly specialised Biotech Mailout newsletter which provided very detailed information on the revision of the DRD and EU biotechnology safety regulation in general. FoEE was therefore very successful in collecting and processing information. But although the Biotech Mailout is available on the FoEE website, its narrow focus and limited circulation as well as the high level of detail imply that diffusion mostly remained limited to the policy network.

FoEE also organised some protest events. However, these activities were much more limited and less successful in terms of diffusion of information to the broader public than the Greenpeace GMO campaign. As mentioned above, in October 2002 FoEE organised a "trolley parade" in Brussels which called on EU decision-makers to "keep our food GM free". In contrast to most Greenpeace protest events, which primarily aimed at influencing the media, the "trolley parade" took place at the occasion of a meeting of Member State representatives and MEPs discussing legislation on the labelling of GM food

and feed. In addition to the media, political decision-makers meeting in Brussels were the target group of the trolley parade.

The marked difference between Greenpeace and other European level environmental NGOs in effective communication may be attributed to at least two main factors. First, rather than organising high profile public protests, environmental NGOs such as FoEE focussed primarily on influencing decision-makers directly, e.g. through the provision of information and lobbying type activities. Second, Greenpeace is a much more centralised organisation than other European level environmental NGOs. It is therefore easier for Greenpeace to mobilise resources and organise effective protest events. For example, FoEE had enlisted significant support for its Brussels trolley parade from the British and Dutch FoE member organisations, each of which provided busses for activists wishing to participate in the parade. However, there were no similar offers from the French, German or any of the other FoE member organisations.

Producers and trade associations

Negative attitudes of consumers to GM food and agricultural biotechnology in an increasing number of Member States (cf. Table 1, Annex 6.1) as well as the campaigns by environmental and consumer NGOs, in particular the start of the Greenpeace campaign in 1996, prompted the "upstream" producers of GM agricultural (and medical) products represented by EuropaBio to consider ways of intensifying efforts to influence popular attitudes via the mass media (cf. Programmes for EuropaBio, Burston Marsteller Government and Public Affairs, January 1997). In particular, EuropaBio asked the U.S. public affairs consultancy Burston Marsteller, which specialises in political crisis communication, to prepare a communications strategy responding, among other things "to the urgent circumstances now confronting agri-food bioindustries in Europe" (ibid.).

In January 1997 Burston Marsteller presented a communication strategy that was in many methodological aspects similar to the Greenpeace GMO campaign. The strategy, which was later leaked to, and published by, Greenpeace, advised to "fight fire with fire" by using "symbols – not logic" and focussing on "stories – not issues". These recommendations paralleled Greenpeace's use of symbols and protest events ("stories"). In addition, Burston Marsteller emphasised the importance of "service-based media relations", e.g. of a campaign tailored to the practical needs and constraints of the media. Like Greenpeace in its campaign, Burston Marsteller stressed the key role of downstream industries, e.g. food producers and retailers, because these industries are closest to consumers who are, if anything, most likely to trust product and retail brands. Burston Marsteller argued that "[c]ompanies in the [downstream] food sector must be perceived by the public to have their own independent view [on GM products] [...] They must be seen to have a choice [...]

Food companies must also be seen to ensure that this power to chose is passed on to the consumer. This means 'transparency' - product information made available to the consumer in some form [...] This in itself can largely defuse the sense of powerlessness which in large measure feeds the current climate of resentment and rejection" (ibid.). These recommendations mirrored Greenpeace's focus on the importance of ensuring consumer choice through segregation and labelling of GM products and its successful strategy of stepping up pressure on food producers and retailers to remove GM products from their shelves.

Given the success of the Greenpeace campaign, the efforts by producers to use PR strategies to influence the mass media in an effort to reverse popular attitudes on GM food and agricultural biotechnology appear to have failed. The likely reasons for this failure include the following: Some of the PR recommendations were difficult to implement for EuropaBio and its members. This seems to be particularly true for the recommendations addressing the need to ensure consumer choice. Perhaps most importantly, U.S. exporters were not willing to incur the additional costs associated with measures to ensure transparency through segregation and labelling of GM crops. In addition, the concept of "choice" was interpreted in very different ways by NGOs and producers. Because producers were deterred by the potentially high costs of strict and extensive provisions on labelling and segregation which the definitions of choice favoured by NGOs implied, they remained vulnerable to criticism and NGO campaigning.

Producers also faced more difficulties in using the media to present their case. For example, Burston Marsteller recommended to focus primarily on radio rather than television broadcasts. Among other things, Burston Marsteller argued that "the environment movement deliberately does not target the radio because it is difficult to attract attention i.e., demonstrations rarely get covered by the radio because they can't film them"; radio broadcasts are "verbal and this usually means considerably more cerebral than TV" (ibid.). While Burston Marsteller argued that these characteristics of radio broadcasts constituted an advantage because EuropaBio's messages were best conveyed verbally, this also meant that the campaign was relatively ineffective in directly countering the more visual symbolic messages generated by protest events. For example, in June 1997 Greenpeace upset a carefully staged EuropaBio Conference simply by dumping a truckload of soybeans in front of the entrance to the Conference centre. As the conference PR manager commented: "Now TV stations all over Europe show pictures of a load of beans outside the industry conference. We missed a chance there".[8]

[8] "Biotech industry has slept during classes", Berlingske Tidende, 27 June 1997.

EuropaBio's communication efforts may also have suffered from being less transitional than the Greenpeace campaign. Although EuropaBio operates at the EU level and Burston Marsteller advised to *devise* the communication strategy transnationally, EuropaBio is much less centralised than Greenpeace. In addition Burston Marsteller proposed to *implement* the communication strategy at the national level: "Actual media campaigns [...] will need to be tailored and conducted in target countries. This 'localisation' of the stories is crucial not only to actually connect to consumers but also to overcome the perception that U.S. interests have co-opted an unwilling Europe" (Programmes for EuropaBio, Burston Marsteller Government and Public Affairs, January 1997) However, in addition to increasing the resource requirements of the campaign, this "localised" approach may have rendered implementation more dependent on unreliable EuropaBio members in the various Member States.

Intermediate conclusions: Sectoral and European information

The availability of information on the process in which the DRD was revised improved significantly in the period between agenda setting for the revision of the DRD and the adoption of the Directive in 2001. Whereas agenda-setting was a closed, secretive process, more information became available to the members of the policy network and interested media and citizens once the Commission had published its legislative proposal. After it had become increasingly clear in 1999 that a host of additional implementing and complementing legislation would have to be adopted before the *de facto* moratorium could be lifted, even more information became available. There were two main reasons for this development: First, decision-makers were increasingly willing to share information. After the Commission had presented its legislative proposal, the involvement of the European Parliament in the framework of the Co-decision Procedure was the first stage in this development. MEPs were significantly more willing to share information with a wide range of societal actors than the Commission. But even Commission officials were more willing to share information once it had become clear that the *de facto* moratorium would only be lifted after legislation to implement and complement the revised DRD had been adopted. Against this background of a shift in the general balance of power away from actors supporting deregulation, competing Commission services made information available to societal actors to reinforce their influence in inter-service negotiations on the formulation of implementing and complementing legislation. In addition, discussions in the conciliation committee tended to undermine the secrecy of Council negotiations because parliamentary members of the committee were more willing than Member State representatives to provided information on the ongoing discussions to societal actors.

The second factor which improved the availability of information to sectoral actors and other interested parties was increasing coverage by specialised media of the process in which the DRD was revised. The FoEE Biotech Mailout

provided the most detailed coverage of the process and related events. Commercial newsletters and services focussing on EU environmental policy also supplied very detailed coverage. In addition, the most important events were reported in some newspapers, in particular the Financial Times and the European Voice, which have a business or EU-affairs readership. These sources of information were complemented by various internet sites operated by the European Commission, the European Parliament, NGOs, and producer associations.

Actors with an ex-ante interest, members of the policy network, as well as other interested parties and citizens were the main beneficiaries of the improved availability of information which led to the emergence of a sectoral public space that provided the network members with the information necessary to discuss the relevant policy options and participate in decision-making. This was particularly true after the general balance of power, which had initially strongly favoured actors supporting deregulation, shifted towards those calling for more stringent regulations.

Whereas the actors directly participating in EU-level decision-making on the revision of the DRD were at the core of the sectoral public space, information which reached a broader European audience, in particular citizens with *no ex ante* interest in biotechnology regulation, had a somewhat different focus. This is hardly surprising because the Greenpeace GMO campaign was at the origin of a considerable share of this information. The campaign focussed more on raising awareness for potentially negative effects of GMOs and GM food than on particular stages and aspects of the EU-level decision-making process. Nevertheless the GMO campaign was largely "European" in terms of organisation, methods of communication, framing of issues, and strategic approach:

- Organisation: The GMO campaign was transnational and centrally co-ordinated. At least in the 1990s the primary focus was on the EU. Central co-ordination and transnational implementation allowed Greenpeace to launch the campaign with a series of similar protest events - blocking suspicious crop shipments, "naming & shaming" of retailers and food producers selling GM food etc. - in various, mostly European, countries. The same approach also enabled successful lobbying of Member State governments, most prominently on the approval of the Ciba Geigy maize and the *de facto* moratorium. The campaign's transnational orientation benefited from the fact that leading persons involved in the campaign had a significant background in EU affairs.

- Communication: The European focus of the GMO campaign also benefited from extensive use of transnational symbols that were understood across language barriers. The "X-files" campaign logo and the importance of visual protest events which also provided "media-friendly" dramatic stories -

including physical risk-taking, confrontations with the police, and leaking of confidential documents - exemplify the relevant methods of communication. This approach was supported by English language press releases and additional services, such as audio-visual documentation and background material, which were offered to the media. The Greenpeace campaign also benefited from the professional background of key staff in journalism.

- Framing: Greenpeace frequently used "European" frames. This happened in at least three different ways: First, events at the national-level were often framed as "European" in that Greenpeace focussed on the implications for European, rather than French, British, Austrian etc. consumers and farmers. Examples include the arrival of the U.S. crop shipments in Europe and the string of instances of contamination of seeds with GMOs in several Member States in 1999/2000. Greenpeace further underlined the transnational implications of these events by frequently using multinational activist teams for its protests. Second, Greenpeace "Europeanised" national-level events by placing them into a transnational ("horizontal") European context. For example, in the case of the accidental GMO contamination of a field in Germany, Greenpeace undermined the position of the German government by comparing the lack of a German reaction to the incident with the reaction by other EU governments, which appeared to be more willing to act. Finally, Greenpeace also used "vertical" forms of Europeanisation. This happened when the organisation referred to national events, such as the accidental GMO contamination in Germany, to call for EU political measures.

- Strategy: Although Greenpeace's impact on EU decision-making mostly resulted from the effectiveness of symbolic protests, lobbying was also very important. More specifically, Greenpeace used a two-level lobbying strategy to maximise the effectiveness of its campaign. Concerted lobbying at the national level to achieve EU-level outcomes was the most common strategy. For example, lobbying of Member State governments contributed to the overwhelming rejection of the marketing application for the Ciba Geigy maize by Member State representatives. A similar strategy, in particular targeting the Greek government, had a considerable impact on the decision to adopt the *de facto* moratorium. The two-level strategy also extended to interactions with like-minded NGOs. Despite the fact that the GMO campaign was essentially transnational, Greenpeace increasingly co-operated with national NGOs, including engagement in national-level events, such as the Pusztai affair.

Although the Greenpeace GMO campaign provided an important stimulus for debates on EU biotechnology safety regulations in most Member States and at the EU-level, the breadth and intensity of the debates cannot be attributed to Greenpeace alone. Rather, the Greenpeace campaign was highly effective in exploiting several favourable conditions. Most importantly, the success of the GMO campaign owes much to the strong European dimension of the BSE

crisis, which was widely discussed in most Member States and sensitised the public for issues of food safety. The result was a decline in popular trust in the safety of industrial agriculture and food production as well as in the reliability of scientific advice and governmental oversight (Vogel 2003, p. 17). The coincidence of the BSE crisis with the arrival of the U.S. shipments in 1996 amounted to a "critical juncture" which put EU biotechnology safety regulation policy on a new track – one that no longer balanced safety and competitiveness concerns by reference to the need to guarantee the Internal Market, but that gave priority to safety concerns.[9]

The impact of producers on information reaching the broader public was smaller, more indirect, and less "European" than that of the Greenpeace GMO campaign. The strong influence of producers on agenda-setting in the early to mid-1990s indirectly contributed to the "Europeanisation" of the debate. Assuming that political resistance against deregulation would be weaker at the EU than at the national level, large companies, in particular politically influential German chemical companies, preferred to push for deregulation of EU regulations rather than national legislation.[10] This assumption was initially vindicated by the success of producers in influencing EU agenda-setting. Focussing on deregulation at the EU-level, producers contributed to the shift of decision-making away from the national arena. In turn, this was an important precondition for the "Europeanisation" of the debate.

The influence of EU-level industry association EuropaBio on agenda-setting illustrates that producers had formidable EU-level lobbying capacities. In 1996/97 EuropaBio also reacted quickly to increasingly negative image of genetic engineering and the onset of the Greenpeace GMO campaign. However, the capacity and willingness of producers to run a sufficiently effective public relations campaign in Europe was limited. EuropaBio was both less centralised than Greenpeace and more influenced by non-European (e.g. U.S.) actors. Even if one assumes that EuropaBio wished to fully implement the PR strategy developed by Burston Marsteller, it was not able to enforce such a decision against resistance of one or more of its more powerful members. Unwillingness by EuropaBio or some of its members to implement the strategy probably focused on Burston Marsteller's recommendations regarding improved consumer choice: given mostly absent segregation of conventional and GM crops and food on the U.S. market, and the potentially high costs of the introduction of strict segregation and labelling requirements, it seems unlikely that influential producers, in particular U.S. companies such as Monsanto, were

[9] For an analysis of the "path" of EU biotechnology safety regulation policy along these lines up to the "critical juncture", see Homeyer (2002).

[10] At the time biotechnology research in Germany was probably hindered more by the way in which Germany implemented EU biotechnology regulations as by the EU regulations themselves (cf. Homeyer 2002).

prepared to run the risk of adopting a significantly more supportive stance on the issue of consumer choice.

Several other factors contributed to the failure of EuropaBio's public relations initiatives. For example, Burston Marsteller's advice to concentrate on the benefits of GM food and agricultural biotechnology and avoid the public relations "killing fields"[11] of environmental and safety concerns was difficult to implement. Benefits of GM crops were difficult to communicate to the public because they primarily related to the production and handling processes - higher yields, more durable fruits etc. - rather than the characteristics of the end products themselves. Unlike the Greenpeace protest events, these characteristics were difficult to translate into transnationally understood TV images and attractive stories for the media. In addition, they were associated with the practices and aims of industrial agricultural production which had been discredited by the BSE crisis and other food and health related scandals.

These problems were compounded by at least two other factors: First, given that the benefits of agricultural biotechnology were not obvious to the broader public, Burston Marsteller had recommended "localisation": the "environmental and economic benefits need to be interpreted and portrayed through story-telling in the national and local context, taking into account the cultural, historical and economic characteristics which determine public perceptions on the agri-food issue at those levels" (ibid.). Although the PR campaign was organised transnationally, rather than "European", national or local frames were to be used. This complicated the campaign and made it dependent on decentralised implementation in the Member States. Finally, the fact that the benefits of GM crops and food were not obvious allowed Greenpeace and other critics of agricultural biotechnology to counter the industry campaign with claims that any alleged benefits, such as less use of pesticides and higher yields, did not materialise in practice.

In sum, agenda-setting for the revision of the DRD was secretive and access to information on EU decision-making was difficult for actors outside the policy community. Two factors improved the availability of information from the mid-1990 on. First, as required by the Co-decision Procedure, the European Parliament began to debate the Commission's legislative proposal. Second, Greenpeace started its GMO campaign. Two spheres in which the revision of the DRD and related developments were publicly discussed began to emerge. The first of these spheres was the sectoral public space at the EU level. Debates focussed on the decision-making process and the primary contributors to the debates were the members of the policy network, e.g. the EU institutions, Member State governments, industry and trade associations, and

[11] Cf. Programmes for EuropaBio, Burston Marsteller Government and Public Affairs, January 1997.

environmental and other NGOs. Publications, internet sites etc. operated by the network members, specialised commercial news services, and newspapers focussing on European and economic affairs provided coverage of, and comment on, the decision-making process and the positions of the various actors. However, while the decision-making process was increasingly public, the information diffused via these channels hardly reached people with no *ex ante* interest in biotechnology safety regulation policy.

The second sphere of debate was more similar to what is commonly understood as a public space at the national level in that it included the diffusion of information to the broader public. The Greenpeace GMO campaign was at the heart of this "European" public sphere. Concerning the diffusion of information to the broader public, the campaign was European in several senses: It was transnationally organised, events and their implications were framed as "European", and symbols and protests had a transnational appeal. Two-level national and European campaigning and lobbying further increased effectiveness as well as "Europeanness". As a result of the visual and dramatic aspects of the protest events and their media friendly presentation, the Greenpeace campaign managed to attract considerable media attention. Producers sought to employ PR firms and strategies to counter the campaign. However, these strategies were less "European" and less effective than the Greenpeace campaign. Among other things, this may be attributed to the lack of sufficiently authoritative, centralised decision-making, diverging interests among producers, in particular with respect to the implications of consumers choice, and the fact that the alleged benefits of agricultural biotechnology made it difficult to communicate them to consumers.

In addition to a relatively small number of protests which focussed on instances of EU-level decision-making, more lobbying-type activities connected the Greenpeace GMO campaign to the majority of Greenpeace protest events focussing on the implications of agricultural biotechnology and GM food for consumer choice, the environment, and health, rather than on the EU decision-making process. However, although lobbying was important, the effects of the Greenpeace campaign on public opinion in the Member States appear to have been more fundamental for the influence of environmental NGOs on decision-making outcomes. Against the background of the BSE crisis and other food and health related scandals, the impact of the Greenpeace campaign on national publics led several Member State governments to re-consider their policies. As argued above, the resulting adjustments and reversals in the positions of Member State governments and the related *de facto* moratorium had a strong impact on the revision of the DRD. In particular, despite the decisions taken during agenda-setting, the requirements of the revised DRD were stricter rather than weaker than those of the original Directive. The following part summarises the relevant political developments and debates in Austria, the Czech Republic, France, Germany, the UK, and Spain.

2 Member State governments and national debates

As argued above, Member State governments had the most direct impact on the revision of the DRD. However, there were considerable differences in the positions and influence of the various governments. Although NGO campaigns, public controversies, and increasingly negative popular attitudes towards GM food and agricultural biotechnology frequently influenced the positions of Member State governments, other factors were also relevant. Domestic actors, for example industry and trade associations, and foreign influences, such as pressure by the U.S., were particularly significant. In addition, some Member State governments were more influential than others. The political influence of a particular government depended primarily on the intensity of its specific interests, its power resources in terms of political and economic clout, financial means, expert knowledge etc. and on institutional factors, such as the formal and informal rules which shape decision-making in the Council and other relevant EU institutions. Member State governments exerted influence primarily through their representatives in the Council of Ministers, more specifically the Environment Council, the Art.21 Committee, and their right to ban GMOs according to the provisions of the "emergency" Art.16 of Directive 90/220.

2.1 Member State governments

2.1.1 France

The French government had the strongest impact on the revision of the DRD. The fact that its position changed from strong support of agricultural biotechnology to caution was particularly relevant: "Until 1996 there was essentially no public debate in France about the use of [GMOs] in agriculture and food and French public policy was broadly supportive [...] The media showed very little interest [...] there were no campaigns by French [NGOs] [...] no debate in agricultural circles, no visible controversy among scientists [...] In the period 1996-1999 all this changed" (cf. Marris 2000, p. 3, see also Boy and Cheveigné 2001, p. 181). The unexpected, last-minute decision of then Conservative French Prime Minister Alain Juppé in February 1997 to follow the urgent advice of Environment Minister Corinne Lepage not to authorise cultivation of the Ciba Geigy GM maize - although it had just been approved by the EU at the request of France - marked the beginning of the reversal of the government's position (Marris 2000, p. 3). Up to this point there had been little public debate and - with the exception of the left-wing *Liberation* - the first

imports of GM crops from the U.S. in late 1996 had been hardly discussed in the newspapers (Boy and Cheveigné 2001, p. 181). Rather than reflecting societal pressure, the decision not to allow cultivation of the GM maize therefore appears to have been made relatively autonomously by state actors, partly reflecting a more general re-orientation of French policy.[12] More specifically, in the wake of several health related scandals in the early 1990s - in particular the contamination of blood with the AIDS virus - French policy had become more risk averse. In 1996 the government formally adopted the precautionary principle (Vogel 2002, pp. 23-4, 27) and established the *Comité de la prévention et de la précaution* (CPP). It is against the background of these developments that the French government perceived a number of other issues, in particular the rejection of the marketing application for the Ciba Geigy maize by an overwhelming majority of Member State representatives in the Art.21 Committee and the Austrian, Luxembourg and Italian national bans, the Greenpeace GMO campaign (cf. Joly 2000, p. 30), and the Ecoropa appeal by several French scientists and medical professionals to adopt a moratorium (ibid.) - as sufficiently relevant to block the cultivation of the Ciba Geigy maize, thereby triggering a reversal of French biotechnology safety regulation policy (cf. Brillet, EUROPUB DRD Report France, p. 6).

The perceived inconsistency of the government's decision - and the decision a few months later by the new Socialist government of Prime Minister Lionel Jospin and his "Green" Environment Minister Dominique Voynet to permit cultivation of the Ciba Geigy maize but prohibit cultivation of other GM crops, in particular oilseed rape and beet - caused some confusion among relevant societal actors which subsequently began to mobilise. The government reacted to this mobilisation by announcing measures to improve transparency and public participation and put further decisions on the regulation of agricultural biotechnology on hold until public consultations had been completed. In the first half of 1998 OPECST, the French parliamentary office for technology assessment, heard more than 200 experts, held public hearings and a consensus conference. This, and the delay of decision-making which was caused by the consultations, provided a "new space for debate": "all the major stakeholders mobilised and established their positions more explicitly" (Marris 2000, p. 9). Media coverage as well as public protest events increased dramatically while public perceptions of GM food and agricultural biotechnology deteriorated (cf. Boy and Cheveigné 2001, pp. 184, 187).

[12] It is sometimes argued that the French U-turn was inspired by protectionist motives, e.g. protection of the French farming sector against competition from cheaper U.S. agricultural products. However, as argued by Vogel (2001, pp. 14-15) and others, such an argument seems to be incompatible with the patterns of French agricultural production and trade.

Whereas the decision concerning the Ciba Geigy maize was not primarily a reaction to specific societal pressures, the impact of the mobilisation by NGOs and other societal actors as well as growing media coverage increased strongly during 1997 and 1998. Important decisions, such as strong support by the French government for the *de facto* moratorium, therefore increasingly reflected "highly publicised opinions and the massive NGO-supported movement against products" (Glidas Le Bozec, French Ministry of Agriculture, quoted in Brillet, EUROPUB DRD Report France, p. 6).[13] Although the Greek, rather than French Environment Minister had officially proposed the moratorium to the Environment Council, French backing was crucial (cf. Interview Härlin). If there had been no French support it seems likely that the strong version of the moratorium which, in addition to France, was initially only supported by Denmark, Greece, Italy and Luxembourg, would have lacked sufficiently powerful political backing to block product approval for several years (cf. Brillet, EUROPUB DRD Report France, p. 10).[14] The French government subsequently resisted efforts by the Commission and others to lift the *de facto* moratorium prior to the adoption of legislation implementing the general requirements of Directive 2001/18 on labelling and traceability. France also had a considerable influence on the contents of the revised DRD, in particular with respect to the inclusion of provisions on traceability and monitoring, some of which had already been introduced in France in 1998 (Marris 2001, p. 8; Brillet, EUROPUB DRD Report France, p. 6, fn. 28).

In addition to general factors such as the size of the French economy and the number of French votes in the EU institutions, there were several more specific reasons why French influence was particularly important. More specifically, France not only hosted most experimental releases of GMOs in Europe, but French authorities had also handled more than half of the applications for marketing authorisations under Directive 90/220. This extraordinarily strong involvement underlined the country's long-standing ambitions and critical role with respect to research and commercialisation of agricultural biotechnology in Europe and was probably the main reason why French support was crucial for the success of the *de facto* moratorium.

[13] The fact that the French government continued to view biotechnology as a key technology and did not extent the moratorium to releases of GMOs for research purposes also suggests that the government's position with respect to the revision of the DRD and the moratorium largely reflected societal calls for stricter regulations (cf. Torgersen et al. 2002, p. 67).

[14] Austrian, Belgian, Dutch, Finnish, German, and Spanish representatives supported a somewhat weaker version of the *de facto* moratorium.

2.1.2 United Kingdom

The UK government offered the strongest resistance to the French position, but its overall impact on the revision of the DRD was relatively weak (Parau, EUROPUB DRD Report UK, p. 15). The government's position and its influence largely derived from the fact that the UK, followed by Germany and France, was a leader in biotechnology research in the EU. The British government had already been very intent on defending and commercially exploiting this position in the 1980s and early 1990s (Bauer et al. 1998, pp 162-164). However, although Labour Prime Minister Tony Blair continued this tradition, British influence on the revision of the DRD was weakened by at least four main factors. First, the government was politically split as ministers who were directly responsible for regulating agricultural biotechnology and GM food, in particular the Environment Ministry (DETR) under Michael Meacher, but also the Ministry of Agriculture (MAFF), were significantly more cautious than the Prime Minister (Levidow and Carr 2000, p. 264). Although there appears to have been a broad consensus within the government to strengthen the European regulations to some extent, there was disagreement about the scope of stricter measures and the adoption of additional safeguards. Whereas the position of the Prime Minister reflected considerations of economic competitiveness and strong political pressure by the U.S. and by parts of the scientific establishment and producers, the DETR and MAFF support for relatively strict EU regulations was partly rooted in broader trends underlying British environmental policy (cf. interview 8; Parau, EUROPUB DRD Report UK, p. 12). In general, the political influence of environmentalists had significantly increased since the 1980s. More importantly, the BSE crisis and other food and health related scandals provided critics of GM food with opportunities for drawing analogies, for example with respect to potential deficits in the scientific assessment of GM products and the implications of intensive agriculture. From the early 1990s on, these and other criticisms had raised risk sensitivity in the DETR and MAFF and led to a gradual increase in the transparency and openness of the approval process in the UK (cf. Levidow and Carr 2000, p. 262; Levidow, Carr and Wield 1999 pp. 8; Gaskell et al. 2001, p. 295).

The evolution of the British regulatory approach was punctuated by three events which significantly increased pressure towards stricter rules. First, in 1996 the U.S. exports of GM crops to the EU triggered NGO campaigns denouncing supermarkets for inadequate labelling of GM food. Fear of tarnished brand names and the threat of boycotts eventually prompted retailers and the MAFF to develop a GMO-free crops market and stricter labelling provisions (Levidow, Carr and Wield 1999, pp. 5-6, 25-26; Levidow and Carr 2000, pp. 266-267). Second, in 1997 the Joint Nature Conservation Committee (JNCC) representing statutory agencies such as English Nature voiced concerns over the environmental impact of herbicide resistant GM crops and called for a five year moratorium on the commercial planting of such crops. According to one

observer, the “government could not ignore English Nature’s concern [...] as it would have been against the people the government pays to advise them [...]” (cf. interview with Peter Riley, Friends of the Earth UK, quoted in Parau, EUROPUB DRD Report UK, p. 11). In October 1998, after a further intensification of protests and discussions which was, among other things, triggered by Prince Charles’ call for a broad public debate on agricultural biotechnology and the decision by the House of Commons to ban GM food from its restaurants, the DETR therefore announced a programme of “managed development” of GM crops. Among other things, the new approach included farm-scale and long-term monitoring of a wider range of ecological effects (“indirect and delayed effects”). Finally, the intensifying public debate came to a dramatic head in 1999 over the research and treatment of Dr Arpad Pusztai, a leading food scientist who was forced to leave his position at the renowned Scottish Rowett Research Institute after he had stated in a BBC television documentary that his research suggested that feeding a certain type of GM potato to rats had resulted in negative health effects on the animals (Rowell 2003, pp. 78-102). Reacting to intensive media coverage and the rapidly growing legitimacy crisis which threatened the future commercialisation of GM crops, the UK government announced a moratorium on the commercial cultivation of GM crops until the end of farm scale trials which was scheduled for 2001/2002.

The UK government supported only moderately stricter EU regulations. For example, in 1998 the government played an important role in the adoption of stricter labelling provisions for certain GM crops at the EU level (Levidow, Carr and Wield 1999, p. 28). Given that some aspects of the “managed development” programme were not in conformity with the traditionally dominant interpretation of Directive 90/220, the DETR also supported calls by other Member States and the Commission for the inclusion of similar measures in the revised DRD (cf. Levidow and Carr 2000, pp. 264, 268; Levidow, Carr and Wield 1999, p. 14). However, the UK was the only large Member State which did not support the EU *de facto* moratorium – a position that was only shared by Ireland and Portugal. The lack of British support for the *de facto* moratorium is particularly remarkable given that the government had announced a moratorium at the domestic level. However, in view of Prime Minister Blair’s strong support for agricultural biotechnology it might be argued that the EU decision may in fact have contributed to the British domestic moratorium. After all, once the Environment Council had adopted the *de facto* moratorium, the additional negative economic effects of the domestic moratorium on the British biotechnology industry tended to be relatively small. While the British government could not prevent the adoption of the *de facto* moratorium, it was more successful in opposing several demands for the inclusion of stricter provisions in the revised DRD. In addition to using its votes in the Council, the government also exerted significant pressure on British Socialist MEPs, in particular on, and through David Bowe, the parliamentary rapporteur on the

revision of the DRD (Jean Lambert, UK Green Party, quoted in Parau, EUROPUB DRD Report UK, pp. 13-14).

2.1.3 Austria

Although the French government's political U-turn was the single most important factor pushing EU biotechnology safety regulation policy towards a more restrictive approach, the position of other Member State governments supporting a restrictive regulatory approach had an important impact, too. This is particularly true for the Austrian government, which had a disproportionately large, "cutting edge" (Berger, EUROPUB DRD Report Austria, p. 16) influence, especially during the earlier stages of the revision of the DRD. The government had a sizeable influence on the negotiations which largely reflected the expertise and intense interest of the Austrian delegation. However, its main political impact was less direct. As mentioned above, Austria, together with Luxembourg and Italy, was the first Member State to invoke Art.16 of Directive 90/220, thereby banning the Ciba Geigy maize which had just been approved by the Commission. Italy lifted its ban soon, but Austria and Luxembourg defied the Commission's threats to sue the two countries. In the end, it turned out to be too risky for the Commission to sue Austria as it became increasingly clear that the bans were tolerated by the remaining Member State governments (cf. Torgerson and Seifert 2000, pp. 210-217). This sent a clear message to the opponents of stricter regulations, in particular producers, that the alternative to stricter regulations could be a complete breakdown of the European regulatory regime (cf. interview 12). The prospect of this scenario significantly increased pressure on producers who wished to retain the Internal Market for GM products to accept stricter regulations. Later on, the de facto moratorium reduced the political significance of the national bans as it had similar, but considerably stronger overall effects (cf. interview 10).

The position of the Austrian government was influenced by an intensive, NGO-driven public debate which culminated in a referendum on genetic engineering in early 1997 (Berger, EUROPUB DRD Report Austria, pp. 10-13). Being "the second most successful of its kind ever" (Torgersen et. al. 2001, p. 133), the referendum's clear anti-GMO outcome constrained the government's options. At the same time the economic costs to Austrian producers of restrictive regulations were relatively small, in particular because industry was hardly engaged in agricultural biotechnology (cf. Torgersen and Seifert 1999, p. 8; Berger, EUROPUB DRD Report Austria, p. 23). In addition, due to mountainous geographical conditions and the social structure of the farming sector, biotechnology holds only limited economic promise to Austrian farmers (ibid., pp. 8-9). While these factors motivated the government's push for stricter regulations, the government did not want to completely close the door to agricultural biotechnology, especially not to relevant research. Therefore it did

not fully implement the referendum: while the Austrian regulations were tightened, the 1998 revised genetic engineering law stopped short of banning GMOs (cf. Berger, EUROPUB DRD Report Austria, p. 25). Against this background, the confrontations with the European Commission which resulted from the Austrian import ban for the Ciba Geigy maize provided a good opportunity for the government to publicly demonstrate its will to adhere to the referendum. This was particularly true against the background that NGOs had "reproached the government for following EU regulations against the people's will" (Torgersen et. al. 2000, p. 132) in the run up to the referendum. The fact that, on the one hand, the Austrian government upheld the ban of the Ciba Geigy maize and introduced additional bans in 1999 and 2000 but, on the other hand, withheld support for the stricter version of the *de facto* moratorium until 2001 illustrates the government's somewhat ambiguous position (cf. Berger, EUROPUB DRD Report Austria, pp. 15-16).

2.1.4 Germany

In contrast to its large influence on initial agenda-setting for the revision of the DRD in the early 1990s, later on the German government only played a moderate role in terms of both political influence and its substantive position. This change already occurred while the Conservative government of Chancellor Helmut Kohl was still in office (cf. interview 9). For example, despite its previous strong support for deregulation, Germany joined the large majority of Member States rejecting the French request for marketing authorisation for the Ciba Geigy maize in the Art.21 Committee. Similarly, in 1999 Jürgen Trittin, the Green Environment Minister of the new Social Democratic government, only supported the weak version of the *de facto* moratorium. It took the German government until 2000 - significantly longer than, for example, Austria and France - to impose its first import ban on the basis of Art.16 of Directive 90/220 (cf. Deichmann 2002, p. 5; interview 12). The German delegation also pursued a moderate course during the final negotiations between the European Parliament and the Council on the revision of the DRD in the Conciliation Committee (cf. interview 12).

Several factors contributed to the new role of the German government. Perhaps most importantly, the politically influential German chemical industry which had heavily lobbied for deregulation in the early 1990s adopted a less aggressive stance (cf. Dreyer and Gill 2000, p. 223; Hampel et al. 2001, p. 202; interviews 10 and 12). On the one hand, debates and increasingly restrictive regulations in other Member States reduced both the potential gains from, and the need for aggressive lobbying. Political developments in several Member States implied that deregulation at the EU-level became an increasingly unrealistic prospect, but the same developments could also be expected to reduce competition from producers located in Member States with liberal regulations. On the other hand,

from the mid-1990s and for reasons not related to safety regulations, the situation for the German biotechnology sector, in particular small start-up ventures, visibly improved (Hampel et al. 2001, p. 191). These trends contributed to the fact that the government eventually abandoned its campaign for deregulation at the EU-level. In addition, Germany had in contrast to most other Member States already experienced a highly polarised public debate in the 1980s (ibid.; interview 10). This may explain to some extent why the government was only under moderate pressure from public opinion – despite the fact that Germans remained highly sceptical of agricultural biotechnology (cf. Hampel et al. 2001, p. 200). More specifically, aspects of agricultural biotechnology which were for the first time publicly discussed in countries such as France, had already been debated in Germany in the 1980s. This seems to have dampened NGO engagement, which was limited to a few highly motivated actors, in particular Greenpeace (ibid, p. 192, interview 10). More importantly, the fact that there had already been a public debate seems to have reduced the "news value" of the NGO campaign for the media. In contrast to the debate in the 1980s, the media followed later debates with significantly less fervour (interviews 10; 12). Under these circumstances of only moderate political pressure, the experts of the Robert-Koch-Institute (RKI), the German Competent Authority, had a considerable influence on the German position at the EU-level (cf. interview 9). Perhaps reflecting its engagement in the Gesprächskreis Grüne Gentechnik (GGG), an influential forum which is close to industry (Dreyer and Gill 1999, pp. 11-12; 2000, pp. 221, 224) the RKI initially hesitated to support stricter EU biotechnology safety regulations. However, it soon adopted a more constructive approach to the revision of the DRD, actively promoting the introduction of a number of new requirements (cf. Dreyer and Gill 1999, pp. 29-30).

As mentioned above, in early 2000 Germany for the first time invoked the Art.16 safeguard clause. At the same time, German Chancellor Gerhard Schröder entered into negotiations with producers on a voluntary moratorium on the commercialisation of GM crops that was to be accompanied by farm scale trials – an initiative which closely resembled the British government's strategy. However, in early 2001 the government cancelled the talks against the background of the political crisis caused by several BSE cases in Germany (Verbraucherinitiative 2003). This step marked a certain hardening of the German position, bringing it closer to the French and Austrian stance. The German government also declared that it now supported the stronger version of the EU *de facto* moratorium.

2.1.5 Spain

The Spanish and, as illustrated in the next part, the Swedish government only had a weak influence on the revision of the DRD. The position of the Spanish

government was somewhat similar to the British approach in that both governments broadly supported the Commission's proposals for the revision of the DRD, but mostly opposed the introduction of additional safeguards. The relatively liberal Spanish approach is exemplified by Spain's abstention from the final vote in the Art.21 Committee on the authorisation of the Ciba Geigy maize which contrasted with the negative votes cast by the vast majority of Member States. However, it seems that, at least with respect to the revision of the DRD, Spain's position gradually became somewhat more restrictive than the UK approach (cf. Cardesa Salzmann, EUROPUB DRD Report Spain, p. 4). For example, in contrast to the UK government, Spain supported the weaker version of the *de facto* moratorium in 1999.

Spain's scientific and economic interests in agricultural biotechnology are significant, but not as important as in the UK, France or Germany (cf. Cardesa Salzmann, EUROPUB DRD Report Spain, p. 1-2). But the country is the only Member State where GM crops have been planted to significant extent. More importantly, Spain is one of the biggest importers of U.S. maize and has signed long-term contracts (Todt and Luján 1999, p. 29). This significant but nevertheless limited relevance of agricultural biotechnology for the Spanish economy might explain to some extent why the government took a position at the EU level that was relatively liberal but did not go as far as the British position, although political controversies over agricultural biotechnology were much less intensive than in the UK (cf. Todt and Luján 1999, p. 10). Despite a relatively low intensity of public debate, the Spanish government to some extent tried to accommodated public concerns. For example, the government adopted national provisions requiring monitoring of GM crops in 1998. It also supported the weak version of the *de facto* moratorium (ibid., pp. 4, 6). In the absence of strong political pressure, the Spanish position was largely shaped by the National Biosafety Commission (CNB) (ibid., p. 10), a governmental advisory body with a membership of scientists.

2.1.6 Sweden

The Swedish government did not interfere significantly in regulatory policy-making at the EU level. Although Sweden voted against some applications for marketing authorisation in the Art.21 Committee (Lassen et al. 2002, p. 298), it did not invoke the Art.16 emergency clause. In 1999 Sweden only supported the weaker version of the *de facto* moratorium. It seems that the Swedish government was broadly in favour of the stricter regulatory requirements which were introduced by the revised DRD, but did not push vigorously into a particular direction. Interestingly, this low-key role occurred against a background of strong rejection of agricultural biotechnology and GM Food by

many Swedes (cf. Fjaestad et al. 2001, p. 268; see also Table 1) in the late 1990s and significant scientific and economic interests in biotechnology.[15] However, in spite of this, the extent of the Swedish public debate was limited (Lassen et al. 2002, p. 299; Fjaestad et al. 2001, pp. 268-269) and there was only weak public pressure on the government. This can probably be attributed to at least three factors: First, despite the government's mostly positive outlook on agricultural biotechnology, it advocated a cautious regulatory approach (Lassen et al. 2002, p. 299). Second, fearing consumer boycotts, retailers and food producers were quick in rejecting GM food (ibid., pp. 300-301). Finally, some of the societal associations which were critical of agricultural biotechnology, for example the Swedish Consumers' Association (SKIS) and the National Farmers' Union (LRF), were well integrated in corporatist decision-making structures (cf. Peterson, EUROPUB DRD Report Sweden). This seems to have prevented a more public role of these actors.

2.1.7 Czech Republic

Unsurprisingly, the governments of the Candidate Countries which negotiated entry to the EU, such as the Czech government, only had a very limited influence on the adoption of the revised DRD. However, the Commission regularly invited Czech officials to relevant consultations. This offered the opportunity for Czech officials to contribute to the discussions, although they could not directly participate in decision-making (interview Bláha, Čermák, EUROPUB DRD Report Czech Republic). Nevertheless, it seems plausible to assume that the primary purpose of the participation of Czech officials in the consultations was to enable better preparation for the implementation of the revised DRD in the Czech Republic.

[15] Economic and scientific interests focused primarily on medical applications. However, in 1999 the Swedish-American pharmaceutical Pharmacia-Upjohn (which was itself bought by the U.S. pharmaceutical company Pfizer) bought the U.S. chemical company Monsanto which is heavily engaged in agricultural biotechnology (cf. Fjaestad et al. 2001, p. 271; Lassen et al. 2002, pp. 299, 302).

2.2 National debates

2.2.1 France

As pointed out above, the decision of the French government in early 1997 not to authorise the Ciba Geigy maize for cultivation initiated the U-turn of French regulatory policy. This decision preceded rather than followed the emergence of significant political pressure by societal actors and of a public debate. However, in the wake of the blood scandal and the BSE crisis the French public was increasingly concerned about issues related to the risks of modern agriculture and medicine. In addition, several environmental and agricultural organisations - in particular Greenpeace, and to a lesser extent ECOROPA and the left-wing Confédération Paysanne - had already protested against the release of GMOs. The unexpected concerns of the French government and the perceived inconsistency of its policy finally provided these NGOs with an opportunity to exploit the sensitivities of the public with respect to technological risks in relation to the quality and safety of food to effectively promote their GMO-related agendas.

Greenpeace pursued its European campaign strategy focussing, above all, on the issues of labelling and GM food. For example, protests were held at the Novartis offices in Saint Sauveur (Joly et al. 2000, p. 54) and outlets of the Auchan supermarket chain. In contrast to Auchan, which declared itself unable to offer only GMO-free products, other retailers, including market leader Carrefour, pledged to ban GM food from their shelves. Carrefour was even awarded a prize for its efforts which, among other things, resulted in co-operation with six other major European retailers to establish GMO-free production chains (Brillet, EUROPUB DRD Report France, p. 11). However, despite the success of the Greenpeace campaign, two factors appear to have limited its overall significance for the debate. First, at a relatively early stage, important French retailers appear to have been open to demands for labelling of GM products and the creation of GMO-free production lines (cf. Brillet, EUROPUB DRD Report France, p. 10; Boy and Cheveigné 2001, p. 182). Consequently, the controversies about labelling and consumer choice were more limited in France than in some of the other Member States, such as Germany. Given that Greenpeace focussed primarily on these issues, its impact on the debate was therefore also more limited.

Second, Greenpeace's most important partner, the Confédération Paysanne (CP), appears to have had a stronger impact on the French debate than Greenpeace itself. The CP is a relatively small organisation, led by left-wing activist Jose Bové. It advocates an "idealised vision of the traditional farming

community" (cf. Brillet, EUROPUB DRD Report France, p. 13) and opposes industrial ("productivist") agriculture and "technoscience" which, according to the CP, mostly serves the needs of multinational companies. The CP considerably broadened the appeal of the controversies about agricultural biotechnology and GM food by associating them with more general concerns, in particular food quality as an aspect of French culture (rather than stressing primarily health risks, the evaluation of which requires significant scientific input) and globalisation (ibid. pp. 3-4,12). Among other things, this is illustrated by the fact that, in addition to the destruction of GM crops, CP activists also dismantled a McDonalds outlet under construction. The fast food chain was branded as a symbol of "malbouffe" (junk food) and global U.S. economic and cultural influence (cf. Boy and Cheveigné 2001, p. 182). This CP strategy of using agricultural biotechnology and GM food as a symbol for broader concerns significantly raised the stakes and the size of the audience of the public debate in France. In turn, this seems to have increased media coverage which, as one observer put it, was sometimes seen as being "out of proportion" (Bernhard Chevassus-au-Louis, quoted in Brillet, EUROPUB DRD Report France, p. 4).

In addition to the strategy of turning agricultural biotechnology and GM food into symbols for broader concerns, the way in which the CP staged its campaign also contributed to heightened media attention. On the one hand, the destruction of several fields of GM crops from 1997 on and similar activities led to confrontations with state authorities. The resulting court trials provided a platform for the CP to explain its actions and make its views known to the broader public. These protests had a higher "dramatic" content than the activities of Greenpeace. In contrast to the GM, Greenpeace refrained from activities, such as the destruction of GM fields. In addition, media coverage of the CP campaign benefited from strong personalisation. Attention focussed on the GP leader José Bové. As one paper described Bové's journey to serve a prison sentence: "Sitting on his old red tractor, with two police motorcycles clearing the road ahead, and followed by several other old tractors driven by the ten perpetrators of the McDonald's destruction, while trucks belonging to the Compagnons d'Emmaüs, and press cars and motorcycles followed at the rear," José Bové "enjoyed, at an average speed of around 30 km/h, and in an atmosphere reminiscent of the Tour de France, a little public tour through the villages on the way."[16]

It was critical for the success of the NGO campaign that the strategies and activities of Greenpeace and the CP, but also of other NGOs such as ECOROPA and ATTAC, tended to be complementary (interviews Papon, Gall; Brillet, EUROPUB DRD Report France, p. 13). As illustrated above, the

[16] Laurent Flandre, Bové a garé son tracteur devant la prison, L'Humanité, 20 June 2002, available online at http://www.humanite.presse.fr/journal/2002/2002-06/2002-06-20/2002-06-20-003.html, quoted in Brillet, EUROPUB DRD Report France.

Greenpeace GMO campaign primarily focussed on labelling and banning GM products from supermarket shelves, whereas the CP concentrated on links with broader issues, in particular food culture and concerns about globalisation as formulated by ATTAC. ECOROPA functioned as the main provider of alternative views from the French scientific community. In addition to complementary substantive concerns, the way in which the NGOs staged their campaigns also displayed a division of labour, ranging from the provision of scientific advice by ECOROPA to more lobbying type activities, and public protest events by Greenpeace and the CP. Although this complementarity appears to have evolved spontaneously, co-operation further increased the effectiveness of the NGO campaigns. For example, in 1998 Greenpeace was joined by the CP, ECOROPA, FoE France and three individual citizens in a major lawsuit challenging the French government's authorisation of the Ciba Geigy maize (Marris 2000, pp. 12-13; Joly et al. 2000, pp.40-42. For another example, see French GM Report II, p. 10). Such co-operation reflected the fact that "the positions held by the Confédération Paysanne and Greenpeace are one and the same" (cf. interviews Papon, Gall; Brillet, EUROPUB DRD Report France, p. 13. See also interview Maret in ibid.).

The campaigns also helped to create new opportunities for consultation and participation of societal actors which, in turn, also improved the conditions for campaigning. This is particularly true for the consensus conference which took place in June 1998. The direct impact of the conference on regulatory decision-making was limited (Joly et al. 2000, p. 149). However, press coverage of the event was very high. It strongly exceeded coverage of previous milestones of the French debate, such as the export of GM crops from the U.S. to the EU and the government's decisions concerning the Ciba Geigy maize (ibid, pp. 77, 136). Consequently, the conference improved the conditions for a broad public debate. As mentioned above, the decision-making delay which was caused by the conference also allowed NGOs to mobilise in the wake of the government's decision to ban the Ciba Geigy maize. Institutionalised opportunities for consultation and participation also improved. In February 1998 the government created the *Comité de Biovigilance* to monitor the effects of cultivating the Ciba Geigy maize and to give relevant advice on the regulatory framework. In addition to a broadening expertise to include ecology and population dynamics, half of the committee members were "non-scientists", including representatives from Greenpeace, the CP and the seeds industry. Six months later, the scientific advisory committee, the *Commission du Génie Biomoléculaire* (CGB), was also reformed to include broader expertise, scientists which had voiced concerns over GM crops, and a more active NGO representative (Roy and Joly 1999, p. 9; Marris 2000, p. 19).

2.2.2 United Kingdom

Whereas the debate in France intensified relatively quickly after the U-turn of the government, the process was more gradual in the UK. Nevertheless, by early 1999 the British debate was probably more intense than in any other Member State. As was the case in France, environmental NGOs played an important role, although they faced stronger opposition from industrial producers and the government. More importantly, the NGO campaign was increasingly supported by the media, including the influential British tabloid press. Despite the gradual intensification of the debate, three events appear to have been particularly important. The first event was the arrival in the EU of GM soya from the U.S.. Although the event triggered a significant newspaper coverage (Gaskell et al. 2001, p. 295), the media appear not to have adopted a clear position and the issue was almost exclusively covered by the broadsheet "quality press" (Lassen et. al. 2002, p. 293). However, the event reinvigorated the GMO campaign. Environmental NGOs such as FoE, Greenpeace, the Green Alliance etc. had so far failed to mobilise strong resistance against the introduction of the first GM foods in the UK – the country which dealt with the highest number of requests for authorisation of GM foods in the EU and where some products were already available in supermarkets. Even a consensus conference which was held as early as 1994 had not triggered a broader public debate. However, in 1996 the BSE crisis created a new context for the NGO campaign which allowed Greenpeace and others to dramatise the GM soya imports more effectively, thereby mobilising additional NGOs and citizens. For example, in 1997 the Soil Association, which represents organic farmers and subsequently became an important player NGO campaign, declared that GM crops were not compatible with organic agriculture. Consumer groups, such as the National Consumers Council and the Consumers association, also warned that GM crops may be associated with negative effects of intensive farming, such as an increase in the reliance on chemicals (Levidow, Carr and Wield 1999, p. 5). In the same year activists sabotaged the first GM fields in the UK. One year later the GenetiX Snowball network was formed, which staged protests involving the uprooting of GM crops. In 1999 Greenpeace intensified the "decontamination" of GM fields. Lord Melchett, then head of Greenpeace UK, was arrested during one of these events. The arrest and the resulting court case generated significant additional media coverage.

Although food producers and retailers had already agreed to label GM products, Greenpeace, FoE and others protested, among other things at supermarket outlets, to put pressure on companies to also label highly processed GM products and to make GMO-free alternatives available. However, resistance by companies only decreased once the frozen food retailer Iceland, which was chaired by a board member of Greenpeace, started to offer alternative, GMO-free products in 1998. Together with newly adopted EU regulations on labelling of GMOs, this led to the development of a dual market for GM and non-GM

products (ibid. p. 9-10). In the same year the related issue of co-existence between GM and conventional/organic crops was highlighted by the case of the organic framer Guy Watson who sued the government over a GM experimental field which, he argued, contaminated his organic products. His law suit prompted additional media coverage and was supported by FoE and the Soil Association. Among other things, the case gave NGOs and other organisations, such as English Nature, the opportunity to attack a voluntary code of conduct for regulating co-existence which had been developed by the Supply Chain Initiative (SCIMAC), an association of agricultural producers including, among others, the National Farmers Union and the British Agrochemicals Association (cf. Parau, EUROPUB DRD Report UK, pp. 24-25).

The media rather than NGOs played a crucial role with respect to the third major intensification of the UK debate in February 1999. Controversies had already begun to heat up in the previous weeks, in particular due to a debate in the House of Commons indicating that GM food had for the first time become a party political issue as the government rejected opposition calls for a moratorium (Durant and Lindsay 2000, p. 9). Against this background the publication in the *Guardian* of a letter signed by 20 scientists triggered the "media storm" (ibid., p. 8). The event, which had been prepared by NGOs working "behind the scene" (Gaskell et al. 2001, p. 299), supported Arpad Pusztai, the scientist who was forced to leave his position at the Rowett Research Institute following an interview with the BBC in which he discussed the unpublished results of his research, For the following 8 to 10 days GM food was the lead story in the national press and broadcast media (Durant and Lindsay 2000, p. 1). In contrast to previous media coverage, both the broadsheet and the tabloid press reported intensively. In addition to the volume of information, the press (the main tabloids and several broadsheets) increased its impact on the debate by adopting an anti-GM food/crops campaigning rather than reporting stance. At the height of the media campaign, but also in subsequent weeks and months, newspapers continued to politicise the issue, linking it to the role of multinational corporations, possible conflicts of interests of members of the government, broader issues of agricultural and development policy etc. (cf. Gaskell et al. 2001, p. 295). Adopting this campaigning stance against GMO food/crops competing newspapers primarily attempted to increase their market share by exploiting the widening discrepancy between government policy and the attitude of the British public which, despite an expensive publicity campaign by the company Monsanto (Levidow and Carr 2000, p. 262), was increasingly sceptical of GM food/crops (Durant and Lindsay 2000, pp. 22-23).

The intense public debate and growing scepticism seems to have balanced to some extent the influence of, on the one hand, the advocates of agricultural biotechnology in the government which were led by the Prime Minister and, on the other hand, the less powerful sceptics, in particular Environment Minister Michael Meacher. As a result, the UK supported the inclusion of several important stricter requirements in the revised DRD at the European level.

Domestically, its programme of "managed development" of GM crops was, among other things, coupled with new opportunities for participation of NGOs in regulatory decision-making. First, the expertise represented in the Advisory Committee on Releases to the Environment (ACRE) was broadened to include more agricultural and ecological expertise. Perhaps more importantly, in June 2000 the British government established the Agriculture and Environment Biotechnology Commission (AEBC). Looking at the "broader picture" and taking social, ethical and scientific issues into account, the Committee advises the government on strategic questions relating to the impact of biotechnology on the environment and agriculture. Among other things, the AEBC gives advice on the development of the regulatory framework for agricultural biotechnology and is expected to consult the public. It publishes the minutes of its meetings and has a mixed membership, including representatives from producers and "moderate" environmental NGOs, e.g. Genewatch and a former director of the Green Alliance. In a 2001 report on GM crop trials the AEBC proposed to hold a major public debate on agricultural biotechnology which was concluded in 2003.

Although there was no formal consultation of societal actors on the revision of the DRD by the government, in 1998 the House of Lords Committee on the European Communities Government carried out a public inquiry on agricultural biotechnology and the DRD. Besides producers, scientists and others, the list of witnesses included representatives of several environmental NGOs, including Greenpeace, and of organic farmers, e.g. the Soil Association. Ministries also offered opportunities for informal consultation and lobbying. However, while environmental NGOs had access to the Environment Ministry, there was hardly any such interaction with the Department of Trade and Industry or the Ministry of Agriculture. Whereas environmental NGOs perceived the Environment Minster as "receptive" to their ideas, they heavily criticised the report issued by the House of Lords Committee (Parau, EUROPUB DRD Report UK, p. 10).

2.2.3 Austria

Austria experienced a similarly intensive anti-GMO media campaign as the UK. However, the Austrian debate already started in 1996. In mid-1995 Global 2000, the Austrian member of FoE, decided to launch a GMO campaign (Berger, EUROPUB DRD Report Austria, p. 6). In early 1996 plans for the first release of GMOs in Austria were cancelled due to protests. Supported by the *Konenzeitung* - by far the most important Austrian tabloid - NGOs had collected 30000 objections to the release (Wagner et al. 1998, p. 17-28). Shortly afterwards, Greenpeace also began to campaign (ibid. p. 9) on the issue and a premature and, consequently, illegal release caused a scandal. These two events had already sensitised parts of the public and the media, when the issue of GM soya imports from the U.S. entered the fray. Having managed to block experimental releases of GMOs in Austria, NGOs, in particular Global 2000 and

Greenpeace, exploited this opportunity to campaign for a ban on imports of GMOs. The campaign benefited from several factors: First, the reaction by the government, formed by the two major "established" Social and Christian Democratic (SPÖ/ÖVP) parties, was confused. For example, the Ministries of the Environment and Agriculture publicly had opposed the plans for the first experimental release of GMOs. Shortly afterwards the Health Minister had announced a two year release moratorium, which was revoked by the Chancellor the following day (Wagner et al. 1998, p. 17; Berger, EUROPUB DRD Report Austria). Second, the fact that a ban on imports would breach EU rules enabled the campaign to exploit growing scepticism in the population towards the EU. This was particularly effective given that "Austrian agriculture and environmental standards [...] [had been] crucial questions in the debate over EU membership" (Torgersen and Seifert 1999, p. 8.). Third, the campaign benefited from the fact that, on the one hand, Austrian industrial interest in biotechnology was relatively weak. On the other hand, organic agriculture and small scale farming was much more important than in other Member States. For example, there were more organic farmers in Austria than in the whole rest of the EU (Wagner et al 1998, p. 15). Fourth, the *de facto* alliance between the major environmental NGOs and the *Kronenzeitung*, which had emerged in early 1996 was maintained. This provided the NGOs with an influential media platform for their campaign (Berger, EUROPUB DRD Report Austria, p. 13; Torgersen et al. 2001, p. 135).

Most importantly, however, a coalition of various environmental NGOs (Ökobüro), the Austrian mountain farmers association (Österreichische Bergbauernvereinigung), an animal rights group (Vier Pfoten), and a catholic environmental initiative (ARGE Schöpfungsverantwortung) initiated a referendum calling, among other things, for a ban on the release, sale, production and import of GM products (Berger, EUROPUB DRD Report Austria, pp. 10-11). As mentioned above, the referendum, which was held in April 1997, was the second most successful in Austria. It generated intensive media coverage. For example, in 1997 the major "quality" newspapers *Die Presse* und *Der Standard* carried about three times as many articles on biotechnology as they did in the following year (ibid., pp. 43-45), while coverage in *Die Presse* and the weekly *Profil* had quadrupled if compared to the previous year (Wagner et al. 1998, p. 19). Democratic accountability became the dominant frame (Torgersen et al. 2001, p. 135) and most articles tended to be critical of biotechnology (Berger, EUROPUB DRD Report Austria, pp. 43-45.). However, it was primarily the *Kronenzeitung's* support for the referendum which contributed significantly to its success (Torgersen et al. 2001, p. 135; Wagner et al. 1998, p. 23).

Despite its success, the government did not implement the referendum, which called for a ban of agricultural biotechnology and its products. Rather, it adopted what has sometimes been dubbed the strict "Austrian standard" (Torgersen and Seifert 2000, p. 209). This regulatory approach had been developed by the

Austrian Environment Agency (UBA) since the early 1990s. It emphasises strict precaution and embraces a wide definition of the environment which includes the environmental effects of agricultural practices. The benchmark for evaluating negative effects is organic rather than conventional agriculture (cf. Torgersen and Seifert 1999, pp. 7-8). Under political pressure by the referendum, the Austrian government based the amendment of the genetic engineering law on this approach (cf. Torgersen and Seifert 2000, p. 212). To justify the fact that this measure fell short of implementing the referendum the government argued that an outright ban of GMOs would breach EU law. At the same time, it hoped that its ban of the Ciba Geigy maize and subsequent bans would demonstrate its commitment to the referendum to voters. In this way reference to the EU and EU policy-making allowed the government to pursue its interest in not shutting out agricultural biotechnology once and for all despite the referendum (Berger, EUROPUB DRD Report Austria, p. 25).

Global 2000 and Greenpeace also pressed for the introduction of labelling rules for GM products which would allow for the establishment of a GMO-free market. The NGOs were joined by three major retailers who reacted to the political circumstances with campaigns for GMO-free supermarkets. Retailers, NGOs, and certain food producers, such as organic farmers, founded the Consortium for Genetic Engineering Free Produced Food which developed proposals for practicable labelling provisions. However, while there was close co-operation between NGOs and retailers, their position clashed sharply with the interests of (primarily multinational) food producers (Berger, EUROPUB DRD Report Austria, p. 12; Torgersen and Seifert 1999, p. 25). Given the closeness of retailers to consumers, their alliance with the NGOs is likely to have further reinforced the impact of the GM campaigns on the debate.

2.2.4 Germany

As pointed out above, there was a significant public debate focussing on agricultural biotechnology in Germany. However, controversies were more limited than in Austria, France, and the UK despite a sharp increase in media coverage from 1996/97 on (cf. Hampel 2001: 196). First, in contrast to Austria, the UK, and the previous late 1980s and early 1990s debate in Germany, the media did not adopt a campaigning approach to the issue. Rather, they followed and reported events but did not play any significant agenda-setting role (interview 10). Second, in sharp contrast to France, but also to Austria and the UK, the debate on agricultural biotechnology focussed more narrowly on issues related to GM food, in particular labelling (ibid.). These characteristics of the German debate may be attributed to several factors. The fact that in Germany many safety aspects of genetic engineering had already been discussed in the late 1980s/early 1990s debate seems to have reduced the news value of some of the issues. In addition, in contrast to the previous public debate, the

government and industry adopted a “duck and cover” strategy which was intended to subdue the debate (interview 12). Finally, also in contrast to previous discussions Greenpeace emerged as the primary instigator of public controversies. Except for local grassroots organisations which uprooted GM crops, the broader array of NGOs which had set the agenda in the late 1980s and early 1990s was clearly relegated to a secondary role which did not arouse much public interest. Consequently, Greenpeace’s focus on labelling of GM food and consumer choice dominated the public debate on agricultural biotechnology in Germany (cf. interviews 9, 10).

Although a coalition of Social Democrats and the Green Party replaced the Conservative government in 1998, environmental NGOs and other societal actors had little direct influence on the revision of the DRD. To a large extent this was due to the fact that the Robert-Koch-Institute (RKI), a government agency dealing with public health rather than environmental protection, acted as the German Competent Authority. Following German administrative tradition, the RKI did not consult societal actors such as NGOs (Dreyer and Gill 2000). In addition, political supervision of the RKI was weak. While the Environment Ministry took a political interest in the revision of the DRD, the Health Ministry acted as the lead ministry. However, although the Ministry is entitled to instruct the RKI with respect to its role in EU decision-making, it lacked the political will and the expertise to closely supervise the RKI (cf. interviews 9, 12). The RKI therefore remained free to articulate its own, relatively conservative position at the EU level.

Although the RKI followed the German tradition of independent administration, in practice it was easier for producers than for environmental NGOs to access the RKI. Informal contacts between the RKI and producers arose in the context of scientific expert meetings. As mentioned above, the RKI was also a member in the producer dominated Gesprächskreis Grüne Gentechnik (GGG). Although the talks between producers and Chancellor Schröder on the “managed” introduction of GM crops were not resumed after the crisis caused by the discovery of several cases of BSE in Germany, the initiative shows that producers also had good access at the political level.

The government position on agricultural biotechnology changed as a reaction to the German BSE crisis. First, the crisis provided an opportunity for the Green Party to increase its influence – a development illustrated most clearly by the fact that Renate Künast became the first Green Minister of Agriculture. Second, Chancellor Schröder exchanged his moderniser’s approach on agricultural biotechnology for a more cautious position (cf. interview 12). This corresponded to the highly sceptical opinion on agricultural biotechnology among most Germans which had not changed significantly since the mid-1990s (cf. Hampel 2001: 202).

However, even the German BSE crisis and the new approach of the German government did not significantly intensify public debate. For example, the sudden and possibly illegal decision by the government to block national registration of the Ciba Geigy maize in Germany went largely unnoticed although it offered a certain potential for creating a political scandal (interview 12). Similarly, the government's newly found support for the strict version of the *de facto* moratorium and a consensus conference (Diskurs Grüne Gentechnik) did not lead to significant public debates. The European context in which these developments took place probably had a significant impact on the fact that they were hardly debated in public. After all, the major decisions, such as the imposition of the *de facto* moratorium, had already been made at the European level and. At the same time, even the hardened German position was still more moderate than the position of the Austrian and French governments. Under these circumstances there were relatively few practical implications of the changes in the German position.

2.2.5 Spain

Until 1996 agricultural biotechnology was hardly debated in Spain. Thereafter debate intensified to some extent. However, this development mostly reflected the transformation of a policy community dominated by the scientists in the CNB in conjunction with the government officials who acted as the Competent Authority into a broader policy network that included environmental NGOs, industry, farmers associations, and a labour union. Agricultural biotechnology was debated in many meetings, seminars and, in particular, in a special committee of inquiry established by the upper house of the Parliament (Senate) (cf. Todt and Luján 1999, pp. 4; Cardesa Salzmann, EUROPUB DRD Report Spain, p 17). But the intensity of media coverage, which peaked in 1999, remained moderate. Reporting was somewhat more intensive in *El Mundo*, a centrist paper with populist tendencies (ibid.). This may reflect a certain degree of uneasiness among the population, in particular regarding GM food. However, Table 1 shows that, overall, support for agricultural biotechnology was much higher in Spain than in most other Member States.

Given that agricultural biotechnology was not publicly debated until 1996, the activities of Greenpeace with respect to imports of GM maize from the U.S. and the EU authorisation procedure for the Ciba Geigy maize appear to have contributed significantly to the mobilisation of Spanish environmental NGOs, such as Ecologistas en Acción, FoE Spain and others (cf. Todt and Luján 1999, pp. 4, 23). However, perhaps reflecting the relatively low level of concern among the general population, in Greenpeace Spain did not emphasise the issues of consumer choice and labelling to the same extent. In addition, activities by consumer organisations remained insignificant. Despite the absence of direct protests, several retailers, in particular those owned by

French companies, undertook some precautionary measures to avoid GM products (cf. ibid., p. 6, 25-27). Rather than consumer choice and labelling, environmental NGOs protested more fundamentally against the deliberate release of GMOs and called for a moratorium. In addition to NGOs, the Comisiones Obreras (CC.OO.), one of the two major trade unions, and small farmers associations (COAG, UPA) adopted a critical position on agricultural biotechnology (cf. Cardesa Salzmann, EUROPUB DRD Report Spain, p. 21).

Despite stronger mobilisation since 1996, there were only very selective institutional channels of communication between societal actors and policy-makers. Because the CBN, which effectively functioned as the main policy-making body, was staffed with scientists, the latter societal group was the only major exception. However, even in this case, potentially relevant disciplines, in particular ecology, were not represented in the CBN. Producers also had some access because they were consulted by the CBN on questions such as the feasibility of labelling requirements. One university scientist who became a member of the CBN had been proposed by the CC.OO. trade union which was the only major organisation with a significant focus on issues of participation of societal actions in decision-making (Cardesa Salzmann, EUROPUB DRD Report Spain). Neither the government, including the Environment Ministry, nor the CBN officially consulted environmental NGOs. In fact, at least between September 1997 and October 2002 the government did not involve the official Spanish consultative body for environmental issues, the *Consejo Asesor de Medio Ambiente* (CAMA), due to differences with environmental NGOs and other societal actors about the composition of the CAMA – an issue which led to a complaint by Spanish environmental NGOs to Environment Commissioner Wallström (ibid., p. 14). Nevertheless, *ad hoc* contacts between environmental NGOs and government official took place at occasions such as conferences or workshops. In addition, NGOs lobbied policy-makers. For example, they publicised a letter calling on the government to, among other things, rigorously apply the precautionary principle to genetic engineering (ibid, p. 23). However, Spanish environmental NGOs did not directly lobby on the revision of the DRD. This was left to the Brussels offices of FoE and Greenpeace.

2.2.6 Sweden

The public debate on biotechnology regulation in Sweden both resembled and differed from the debate in Germany. It was similar to the German case in that Sweden had already seen a significant debate in the late 1980s. The news value of the debate in 1996 and the following years therefore seems to have been lower than in Austria, the UK, and France. This may have contributed to the fact that, as in Germany, there was considerable media coverage in Sweden, but the media did not play a significant role as agenda-setters. Put differently, the discussion of biotechnology and its regulation had already

become part of the “normal” news coverage. This interpretation is supported by the fact that news coverage of biotechnology was already relatively high before 1996 and thereafter rose much less abruptly than in the UK and France (cf. Fjaestad et. al. 2001, p. 274).

While the character and intensity of media coverage were somewhat similar in Sweden and Germany, the role of societal actors in the public debate was much less significant in Sweden. Up to 1996 the Centre Party, and to a lesser extent the Green Party, had been the most important political opponents of agricultural biotechnology. In the context of the European imports of U.S. GM soya in 1996, Greenpeace entered the public stage. However, although Greenpeace was by far the most visible environmental NGOs and despite strong opposition against agricultural biotechnology and GM food in the Swedish population, Greenpeace’s role soon began to fade. Subsequently, societal actors other than political parties and the media only played a negligible role in the public debate (ibid., p. 269).

There seem to be three main reasons for the quite limited role of societal actors, in particular environmental NGOs, in the Swedish public debate. First, the government successfully co-opted some of the more established societal actors which were critical of agricultural biotechnology, such as the National Farmers Organisation (LRF) and the SKIS consumers association. To some extent this also applied to critical opposition parties who participated in the Parliamentary Commission on Biotechnology which had been appointed by the government and comprised members of seven parties. The broad composition of the Committee demonstrated the importance which the government attached to the issue (ibid.).

The second reason why societal actors played a limited role in the Swedish public debate is also exemplified by the Parliamentary Commission on Biotechnology. In contrast to the German government’s “duck and hide” strategy, the Swedish government reacted to the controversies in 1996/97, which had placed agricultural biotechnology and GM food on the public agenda, in a more offensive way by appointing the Commission along with three additional commissions which focussed on more specific issues. In addition, public hearings and a consensus conference were held (ibid. pp. 269-271). The government seems to have orchestrated these events in ways which limited the opportunities for opponents of agricultural biotechnology and GM food to express their views (cf. ibid., p. 271; Fjaestad 1998 et al.: 133). Nonetheless the government’s offensive strategy appears to have directed public concerns away from Swedish regulations towards the EU, the U.S. and other countries (cf. ibid., p. 277) and allowed the government to portray the opponents of agricultural biotechnology and GM food as reactionary (Lassen et al. 2002, p. 300). According to Fjaestad, the gulf between public opinion and the critics on the one side, and the largest political parties, senior civil servants, the scientific establishment, and producers on the other was unusual because the

government usually takes public opinion into account (Fjaestad 1998 et al., p. 133).

In contrast to the government's offensive strategy, producers took a much more defensive stance. In particular, in October 1996 fifteen NGO representatives published an appeal to boycott U.S. GM soya in *Dagens Nyheter*, the newspaper with the highest circulation in Sweden. Fearing consumer boycotts, food distributors and retailers were relatively quick in complying with the NGO demands. The combination of the government's offensive strategy with a more defensive approach by producers seems to have enabled the government to contain the public debate in Sweden (cf. Lassen et al. 2002, pp. 298, 301).

2.2.7 Czech Republic

In the Czech Republic the overall intensity of public debate of agricultural biotechnology and GM food appears to have been even lower than in Spain (cf. Interviews Drobník, Piknová, cf. Čermák, EUROPUB DRD Report Czech Republic). Although there were some public protests and the media to some extent picked up on the issue, compared to the majority of EUROPUB countries studied, public protests and media coverage were low (cf. Čermák, EUROPUB DRD Report Czech Republic). The debate on the revision of the Deliberate Release Directive and, to a somewhat lesser extent, the related broader debate concentrated on a small, but diverse network of actors, including government officials from relevant ministries, Greenpeace and several other environmental or related NGOs (the Society for Sustainable Living, the Czech Association of Nature Conservationists (ČSOP)), as well as Biotrin, an organisation dominated by scientists which aims at "popularising" biotechnology. On the one hand, these actors were represented in the government's GMO advisory commission. The only exception is Greenpeace, which had declined an offer to join as it felt that the committee was dominated by biotechnology supporters. On the other hand, they met in various seminars organised by Biotrin and other associations (ibid., pp. 16-17).

The only actors which had a somewhat broader public impact were Greenpeace and Biotrin. Greenpeace organised several protests at a site of field trials of GMOs in the Czech Republic and in front of retail shops. In addition, a GM field was destroyed by anonymous perpetrators. These protests were also reported in the media. Professor Jaroslav Drobník, the head of Biotrin and an outspoken biotechnology advocate, frequently appears in the media (cf. ibid., p. 7). Despite these activities, awareness of agricultural biotechnology and GM food remained low in the Czech Republic. If anything, popular attitudes tended to be negative reflecting, according to some observers, the publicity of the Greenpeace protests (interview Drobník, Čermák, EUROPUB DRD Report Czech Republic).

As pointed out above, in the framework of EU accession the Czech government transposed the original DRD into Czech law. It also prepared the transposition of the revised DRD. Societal actors, including environmental NGOs, were consulted on the draft legislation in both cases. Drawing on professional advice provided by the Environmental Legal Service, a non-profit consultancy, Greenpeace appears to have been particularly active in the consultation process. Illustrating a good relationship with the Environment Ministry, Greenpeace also routinely participated in the consultations on the release of GMOs into the environment (interview Piknová, cf. Čermák, EUROPUB DRD Report Czech Republic).

3 Summary analysis

The revision of the DRD was not itself widely discussed in a broader European or Europeanised public space. Debates focussing specifically on the legislative process were largely confined to what may be called a sectoral European public space which had formed around a lose, diverse, but stable network of European or Europeanised actors. At the same time, however, the revision of the DRD was embedded in, and strongly influenced by, more or less converging and partly Europeanised public controversies on the broader issues of agricultural biotechnology and GM food in several Member States.

The policy network dealing with the revision of the DRD primarily consisted of various sectoral administrative and political actors at EU and national levels, environmental NGOs, and producer and trade associations with a commercial stake in agricultural biotechnology and GM food. However, this diverse network of actors dominated only the later stages of policy-making. In contrast, a much more closed policy community consisting of a small circle of Commission and Member State officials dealing with industrial policy as well as representatives of large chemical companies characterised the initial agenda-setting phase for the revision of the DRD. This policy community initiated the revision of the DRD in an effort to change the political priorities of EU policy-making in the field of biotechnology safety regulation. The aim was to give issues of industrial policy and economic competitiveness priority over environmental considerations.

The coincidence of the BSE crisis and related health scares, in particular in France, with the first U.S. GM crop shipments to Europe in 1996 triggered the transformation of the closed policy community into a much more open policy network. Both events had a strong European dimension. Because the common market makes it more difficult to nationally contain environmental and health threats emanating from agricultural and other products, the BSE crisis and the shipments created a state of common affectedness across Member States. In addition, the emergency situation and Europe-wide high publicity of the BSE

crisis had increased the sensitivity among wide parts of the population for the potential negative effects of intensive agriculture. The coincidence of these two events therefore created a “window of opportunity” for a sufficiently well organised political “entrepreneur” to mobilise the public against agricultural biotechnology and GM food across Member States.

Thanks to its transnational, but nevertheless centralised organisational structure, a relatively high degree of professionalisation, in particular with respect to mass media relations and transnational interaction, Greenpeace was exceptionally well posed to exploit the emerging “window of opportunity”. In particular, with the start of its GMO campaign in 1996, Greenpeace was able to mobilise sufficient resources to launch and co-ordinate a series of highly visible protest events in several Member States before the favourable circumstances created by the U.S. shipments and the BSE crisis had passed. Greenpeace effectively combined national and European level activities as well as media oriented protest events with direct lobbying of policy-makers. This comprehensive approach was supported by a suitable communication strategy which framed the Greenpeace GMO campaign as being about a transnational, European problem. The focus on the issue of consumer choice made it easy for Greenpeace to ground the campaign on the EU-wide common affectedness created by the Internal Market. At the same time the use of transnationally valid symbols, “stories” that could be visualised, provision of information in English etc. reduced the importance of language and cultural barriers.

The effects of the anti-GMO protests on EU policy-making were primarily transmitted via Member State governments. In particular, this is true the initial Greenpeace protests in 1996. More specifically, protests and lobbying had a strong impact on the rejection of the application for the Ciba Geigy maize by the Art.21 Committee. In two senses this was a defining moment for the revision of the DRD: First, it showed that serious concerns about the adequacy of the approach of the original DRD to risk assessment were not limited to countries, such as Austria, which had frequently voted against approval of GM crops. Rather, these concerns were at least partly shared by a majority of Member State governments. Second, the case of the Ciba Geigy maize called the legitimacy of the Art.21 Committee decision-making procedure into question because it clearly demonstrated that the procedure allowed the Commission to approve a product against the explicit will of a large majority of Member State governments. The perception that the Art.21 Committee procedure lacked political legitimacy seems to have contributed significantly to the rejection by Member State governments of proposals by the Commission to sue Austria and Luxembourg for maintaining their national bans, which the Commission deemed illegal. In turn, the persistence of the bans encouraged other Member State governments to invoke national bans and the resulting collapse of the Internal Market for GM crops paved the way for the *de facto* moratorium which amounted to a recognition of the breakdown of the existing regulatory regime for GM crops under the original DRD.

The Austrian and Luxembourg national bans, and in particular the Ciba Geigy maize case, led to a first erosion of the closed policy community which had pushed the revision of the DRD on the EU agenda. More specifically, growing Member State reluctance to approve GM crops under the existing rules provided Environment Commissioner Bjerregard, who had been sidelined by the industrial policy community, with an opportunity to push for the adoption of her own proposals for the revision of the DRD. Against the background of the shift in the positions of Member State governments, the Commission was receptive to her proposals. Bjerregard's proposals were much more likely to be accepted by the Council and the Parliament than the ones envisaged by the members of the industrial policy community.

Until 1998 the disintegration of the industrial policy community primarily affected state actors, in particular the new role of the Environment Commissioner and calls for the introduction of stricter regulations by a growing number of Member State governments. A more open policy network which also included a plurality of societal actors, in particular environmental NGOs, only began to emerge in 1998 after the Commission had submitted its proposal for the revision of the DRD to the Parliament and the Council. Previously, the Commission's consultation exercises in 1994 and 1995 had failed to provide genuine opportunities for societal actors to discuss the plans for the revision of the DRD. By contrast, the official publication of the legislative proposal provided the information necessary for a policy oriented debate. Perhaps more importantly, the Co-decision Procedure applied to the revision of the DRD. This meant that the European Parliament had the opportunity to significantly influence the legislative process. NGOs had previously only indirectly affected the legislative process via the responsiveness of Member State governments to public protests focussing on closely related issues, such as the U.S. shipments of GM crops, and through lobbying of national government to prevent the approval of GM products. Consultations and informal contacts to MEP provided environmental NGOs for the first time with significant direct access to decision-makers. They had good access to Green, some social democratic and liberal MEPs, while industrial producers focussed on lobbying other Social Democrats, Liberals, and in particular Christian Democrats. David Bowe, the parliamentary rapporteur, extensively consulted both groups. Consequently, the Parliament adopted various amendments, many of which were influenced by NGO positions. However, after the Christian Democratic gains in the 1999 European elections, several of these amendments were significantly watered down, reflecting the growing influence of industrial producers.

Until the adoption of the *de facto* moratorium in 1999 there had also only been an indirect link between the approval of GM crops and the revision of the DRD. The moratorium created a direct link in that its lifting was explicitly coupled to the adoption of the DRD. Environmental NGOs had a significant direct and indirect influence on the adoption of the moratorium. Their indirect influence resulted from their contribution to the strong rejection by consumers of GM food

and agricultural biotechnology which, in turn, was probably the main factor why Member State governments supported the moratorium. However, environmental NGOs such as Greenpeace and FoE also lobbied governments at the national and European levels to adopt a moratorium. Once again, the role of Greenpeace appears to have been particularly significant in that Greenpeace had singled out a country, Greece, to officially propose the moratorium to the Environment Council.

These developments meant that in the period 1996-1999 a more open policy network was beginning to emerge in two ways: First, environmental NGOs had direct access to MEPs dealing with the revision of the DRD. Second, they had a significant influence on the adoption of the *de facto* moratorium. However, although the Environment Commissioner had regained some influence on the revision of the DRD from the industrial policy community that had initiated the revision, environmental NGOs seem to have had hardly any direct impact on the role of the Commission during the legislative process. For two reasons this is not surprising. First, once the Commission has submitted its legislative proposal to the Council and the Parliament, its influence under the Co-decision Procedure is usually limited. Rather than consulting societal actors, the Commission tends to concentrate on mediating between Member State governments and between the Council and the Parliament while trying to preserve its original legislative proposal as far as possible. Second, at least initially, the *de facto* moratorium created strong incentives for competing Commission services to present a more united front to outside actors and to focus on the promotion of the Commission's basic institutional interests. More specifically, the lifting of the moratorium became a primary objective of Commission policy behind which the various services could rally because the highly dubious legal foundations of the moratorium posed a threat to the integrity of European law. On the one hand, this meant for Commission services which tended to support the position of industrial producers and scientists, such as DGs Trade, Enterprise, and Research, that they were forced to accept the adoption of significantly stricter regulations as means to end the moratorium. On the other hand, DG Environment had to refrain from exploiting the moratorium as an opportunity to put pressure on competing Commission services in an effort to regain full control of the GMO dossier.

However, in addition to the Parliament and a growing number of Member State governments even the Commission became entangled in the emerging, more open network structures as the *de facto* moratorium dragged on and product specific legislation complementing the revised DRD - for example on GM food and feed – as well as legislation implementing the new provisions on labelling and traceability had to be adopted. Various Commission services, including DGs Environment, Agriculture, Consumer Affairs, and Research, formally and informally consulted societal actors, such as environmental NGOs and industrial and agricultural producers. The increasing openness of the Commission resulted from several factors. First, the Commission had to draft the proposals

for implementing and complementing the revised DRD. This required not only input by technical experts but, due to the politicisation of the issue, also by other politically relevant societal actors, such as environmental NGOs. Second, consultation of environmental NGOs and like minded societal actors was particularly important because the actions of NGOs had an influence on the duration of the *de facto* moratorium. Finally, growing uncertainty and disagreement among the various DGs on the conditions for lifting the moratorium seem to have led to a certain resurgence of institutional competition among Commission services. Competition produced incentives to engage in strategic co-operation with societal actors, for example by leaking confidential information.

The decline of the policy community which had put the revision of the DRD on the EU agenda and the evolution of more open network structures went hand in hand with the emergence of what could be called a European sectoral public space. Essentially, this public space provided opportunities for actors with an *ex ante* interest in the revision of the DRD to obtain relevant information and contribute to debates. While agenda setting for the DRD was mostly shrouded in secrecy, the publication of the Commission's legislative proposal, the greater openness of the legislative process resulting from the strong involvement of the Parliament under the Co-decision Procedure, the political pressure which environmental NGOs were able to exert as a result of the *de facto* moratorium, and the resurgence of institutional competition among Commission services made an increasing amount of information on the decision-making process available to members of the emerging network and the media. Societal groups who were represented in Brussels, in particular FoEE, published detailed information on the revision of the DRD in newsletters and similar formats. Similar information was available from commercial news services and, to a somewhat lesser degree, could also be found in specialised trade journals. In addition, newspapers with a wider readership specialising in economic and European affairs reported on the most important stages of the legislative process. While the increasing openness of policy-making was a precondition for the emergence of the European sectoral public space in that it made relevant information available in the first place, dissemination of the information through specialised media in turn increased the ability of societal actors to follow and participate in relevant debates. In this way the emerging European sectoral public space contributed to further increase the openness and transparency of EU-level policy-making.

Although the emerging European sectoral public space contributed to the development of network structures that provided for better opportunities for a plurality of societal actors to debate and influence the revision of the DRD, the effects of national-level NGO activities and political controversies on the positions of Member State governments at the EU-level was clearly the most important factor leading to the disintegration of the industrial policy community and, subsequently, to the adoption of revised legislation that was much closer to

NGO demands than had been envisaged by the policy community. However, despite the strong impact of national-level controversies on EU-level policy-making, the emergence of these controversies was not a response to the plans to revise the DRD, but primarily resulted from the coincidence of the BSE crisis with the U.S. GM crop shipments that was effectively used by Greenpeace as a hook for its new European GMO campaign. Although protests against the shipments were accompanied by significant, though often short-lived, media coverage in most EUROPUB countries this does not mean that simultaneous, identical political controversies erupted in these countries. Rather, in several countries the protests merely appear to have provided for a level of mobilisation that was sufficient to enable activists to wait for future opportunities that could be exploited for more large scale mobilisation. Depending on the degree of initial mobilisation and the specific circumstances of these opportunities, national-level debates differed significantly among Member States in terms of the timing and intensity of controversies, the key protagonists, the specific substantive issues raised, and government responses.

The most intensive public debates occurred in Austria, France, and the UK. The first highly publicised controversies had erupted in Austria in 1996 even before the U.S. GM crop shipments. In a relatively short period of time a broad coalition of actors who publicly opposed agricultural biotechnology and GM food emerged. Among others, the coalition included environmental groups, parts of the media, most Austrian food retailers, organic farmers, and animal rights groups. Global 2000, which is the Austrian Member of FoE, and Greenpeace were the leading protagonists. However, it seems likely that their political impact would have been much weaker had their campaigns not been strongly supported by the *Kronenzeitung*, Austria's most important tabloid. In 1997 the controversies culminated in a referendum which resulted in a clear rejection of agricultural biotechnology and GM food. Yet, the government opposed a general ban. It preferred tighter national legislation and resorted to Art.16 of the DRD to justify a national ban of the Ciba Geigy maize. The national ban provided an outstanding opportunity for the government to detract from its failure to fully implement the referendum, in particular against the background that opponents of Austria's accession to the EU had argued that there was a danger that Austrian environmental standards would be watered down. Although no general ban was enacted, the Austrian regulatory approach was one of the strictest among EU Member States.

The French debate followed the Austrian one. In fact, it could be argued that the Austrian national ban of the Ciba Geigy maize contributed significantly to the French debate. Following the Austrian ban, the French government, which had so far been strongly supportive of agricultural biotechnology, decided in early 1997 to make a political U-turn and banned the cultivation of the Ciba Geigy maize. In contrast to Austria and most other Member States, the government, rather than societal actors, therefore initiated the French public debate. Later in the year the new Socialist government continued to fan the public debate as it

replaced the restrictions on the Ciba Geigy maize with a moratorium on GM rape and began to prepare a consensus conference which was held in June 1998 and enjoyed wide media coverage. The preparations provided additional opportunities for societal actors to mobilise. This was particularly true for the Confédération Paysanne (CP) and Greenpeace, who entered into a *de facto* alliance. The CP campaign had a particularly strong influence on the French debate because it successfully linked agricultural biotechnology and GM food to wider concerns about French culture and globalisation. Combined with protest events such as the uprooting of GM crops, this approach attracted considerable media coverage.

There was a more gradual build-up to the UK debate which culminated in early 1999. As in Austria, the debate was primarily driven by environmental NGOs and the media, in particular the tabloid press. Initially, environmental NGOs Greenpeace, FoE and others as well as emerging loser activist networks, such as GenetiX Snowball, stimulated debates which focussed on the demand for strict labelling requirements for GM products, protection of biodiversity, and the issue of coexistence of GM and conventional and organic crops. In addition, the Prince of Wales and English Nature, an advisory body to the government, publicly opposed or questioned the merits of agricultural biotechnology. In early 1999 the debate escalated dramatically when a renowned food scientist lost his job after he had revealed in a BBC broadcast that his research indicated that GM potatoes could have negative health effects on rats. A protest letter which had been orchestrated by environmental NGOs and bore the signatures of several scientists sparked a “media storm” that was led by the tabloid press. The British government primarily reacted to the debate by slowing down the introduction of GM crops. It also enacted changes in the structure of its advisory committees which allowed for somewhat broader participation that included environmental NGOs. However, despite the intensity of the debate, Prime Minister Tony Blair did not waver in his staunch support for agricultural biotechnology. In contrast to the vast majority of Member State governments, the British government did not support the *de facto* moratorium and was opposed to many proposals for stricter EU regulations. This position largely reflected the fact that the UK is a European leader in biotechnology research.

In contrast to Austria, France, and the UK, Germany and Sweden had a certain tradition of public political controversy on genetic engineering. In particular in the late 1980s there were significant debates in both countries. Interestingly, this seems to have had a certain dampening effect on debates in the second half of the 1990s. Perhaps reflecting the fact that a number of issues had already been discussed in the late 1980s, the German debate was strongly dominated by Greenpeace and in a somewhat narrow way focussed primarily on the issue of labelling of GM food. Although there was significant media coverage, in contrast to the late 1980s the media rarely adopted a campaigning tone. The behaviour of the government and industrial producers underwent a similar change in that they tried to evade controversies in the manner of a “duck

and cover" strategy. With respect to the revision of the DRD the government adopted what could be described as mainstream positions at the EU-level. However, reflecting the fact that, like the UK, Germany has relatively strong economic and scientific interests in genetic engineering, Chancellor Schröder entered in negotiations with industrial producers on a gradual "managed" introduction of GM crops. These talks ended abruptly when the government shifted towards the position of countries favouring strict regulations after the discovery of several cases of BSE in Germany in 2000.

The debate in Sweden resembled developments in Germany in that, possibly due to the previous public debate in the late 1980s, there was significant media coverage of agricultural biotechnology and GM food which, however, was presented in a relatively detached, routine tone. But in contrast to Germany, the government reacted offensively to controversies following the U.S. GM crop shipments. While supporting a mainstream position on the revision of the DRD at the European level, the government co-opted several societal actors - in particular consumer organisations and opposition parties, some of which were opposed to agricultural biotechnology – and at the same time marginalised other societal actors, such as environmental NGOs, including Greenpeace. Co-optation resulted from the inclusion of societal actors in inquiry committees and consensus conferences which, among other things, also served as instruments of the government to deligitimise those groups that could not participate in these events.

In contrast to the majority of EUROPUB countries, agricultural biotechnology and GM food was only very sporadically covered in Spanish and, in particular, in Czech newspapers. Although Spain was the only Member State in which GM crops were commercially grown, the public mostly remained disinterested. Whereas large parts of the public in the majority of Member States rejected agricultural biotechnology and GM food, opposition was significantly lower in Spain. Nevertheless, triggered by Greenpeace's European GMO campaign, Greenpeace Spain and several other environmental NGOs staged protest events and tried to influence government policy. Yet, in addition to a relatively low level of concern in the general population, their efforts suffered from the particularly tense relations between environmental NGOs and the Conservative government which had led to the breakdown of institutional channels for consultation. Although the government generally tended to side with those Member States, such as the UK, which favoured a relatively liberal regulatory approach, it reacted to protest events and the shifting position of other Member State government by offering support for stricter rules for risk assessment and labelling of GMOs as well as the *de facto* moratorium.

The intensity of public debate on agricultural biotechnology and GM food in the Czech Republic was similarly low as in Spain, although it might be argued that the level of protests, which included activities such as the uprooting of GM crops, was somewhat higher. Perhaps this reflected a somewhat stronger

undercurrent of negative attitudes among the general public. Although various NGOs participated in protests, Greenpeace was the dominant group. In addition to protests, Greenpeace and other environmental NGOs participated in consultation procedures on the transposition of the DRD and the revised DRD into Czech law in the framework of EU accession and on decisions concerning the release of GMOs into the environment. In sharp contrast to Spain, environmental NGOs enjoyed good relations with the Environment Ministry and were represented in the government's advisory committee. Within the policy network and in the broader public an association called Biotrin, which aimed at "popularising" biotechnology and was dominated by scientists working in the field, countered the position of environmental NGOs.

Although not all EUROPUB countries experienced significant public debates on agricultural biotechnology and GM food, five out of seven countries did. In addition, in three countries the debates were very intensive. The Greenpeace European GMO campaign was an important factor contributing to the debates. However, in general several other factors seem to have been similarly relevant. A closer look at the national debates reveals four additional factors: First, it seems unlikely that intensive public debates would have emerged in the absence of the "critical juncture" that resulted from the coincidence of the BSE crisis with the U.S. GM crop shipments which was then exploited by Greenpeace for its campaign. The shipments made the different regulatory approaches and popular attitudes in the U.S. and the EU practically relevant. Second, although the Greenpeace campaign contributed significantly to the emergence of public debates in most EUROPUB countries, more nationally based actors appear to have been equally important in those countries which experienced particularly intensive debates. In Austria Global 2000 and, perhaps more importantly, the tabloid press played a crucial role. The situation in the UK was similar. In France it seems unlikely that an intensive debate would have emerged in the absence of the CP campaign and, to a somewhat lesser extent, the government's political U-turn. Third, the German and Swedish cases suggest that the intensity of national debates was also influenced by whether or not there had been significant previous debates of genetic engineering. In particular, the fact that both countries had experienced earlier debates seems to have reduced the incentives for the media to politicise the debate. Finally, it might be argued that in Spain and the Czech Republic, which are still engaged in an economic process of catching-up with the majority of Member States, it was difficult to initiate a broad public debate on biotechnology and GM food due to overriding economic political priorities in these countries which also appeared to be reflected in public attitudes and media coverage.[17]

[17] Debates in Greece suggest that the country could provide a counter argument. However, among other things, the economic conditions for the exploitation of biotechnology might be particularly difficult in Greece.

Despite the very important, but nevertheless limited role of Greenpeace in stimulating public debates, Greenpeace activities were most crucial for translating public debates and increasingly negative public attitudes towards agricultural biotechnology and GM food into legislative outcomes at the EU-level. Transnationally co-ordinated Greenpeace protests and lobbying of Member State governments at the national and European levels contributed very strongly to the rejection of the application for the Ciba Geigy maize by most Member States and the adoption of the *de facto* moratorium. In turn, these decisions provided the political leverage which the Member State representatives advocating significantly stricter regulations needed to support their demands with respect to the revision of the DRD and the adoption of complementary and implementing legislation.

4 Some implications for European democracy

The revision of the DRD began as a secretive process of agenda-setting but ended as an instance of relatively open EU policy-making which was embedded in broader public debates at the national level. Perhaps most importantly, the case illustrates the potential contribution which national governments in conjunction with well organised, transnational NGOs, such as Greenpeace, can make to improving the links between EU policy-making and national political debates. More specifically, national governments are democratically accountable and, therefore, tend to be more sensitive to national public debates than the European Commission and, arguably, even the European Parliament. However, EU policy-making may frequently escape the eye of the national public (cf. Moravcsik 1994). In addition, public debates in different Member States may focus on very different issues. The activities by Greenpeace to some extent alleviated both problems. First, the European GMO campaign provoked public debates on agricultural biotechnology and GM food on a Europe-wide scale. In this way a certain synchronisation of national debates occurred. To some extent Greenpeace even injected a European perspective into the debates. Second, as a result of its influence on the rejection of the Ciba Geigy maize by the majority of Member State governments and the *de facto* moratorium Greenpeace also contributed significantly to making the national debates relevant for European policy-making and, in particular, the revision of the DRD.

But the case also illustrates the constraining conditions under which Greenpeace was able to provoke a Europe-wide debate and make this debate relevant for the revision of the DRD. First, it seems likely that the Greenpeace GMO campaign would have been much less successful in the absence of the European "critical juncture" that arose from the coincidence of the BSE crisis with the U.S. GM crop shipments. Consequently, the considerable

organisational resources as well as strategic and communicative capabilities which Greenpeace was able to mobilise for its campaign were far from sufficient to guarantee success. The failed attempts by resourceful industrial producer groups, in particular EuropaBio, to counter NGO protests with a professional PR campaign also seem to suggest that the success of efforts to stimulate and direct public debates strongly depends on the broader context of public discourse in which these efforts are necessarily embedded. Although environmental NGOs could hardly provide widely accepted evidence that GMOs were harmful, the context of the BSE crisis in conjunction with the refusal of U.S. crop exporters to label GM crops was sufficient to generate a strong political appeal of NGO calls for stricter regulations shifting the burden of proof towards the producers of GMOs. Conversely, this context of public discourse made it very difficult for industrial producers to make credible claims that such measures were not justified.

Second, the success of the Greenpeace campaign also depended on favourable national level conditions. More specifically, only those Member States experienced very intensive public debates in which the media and nationally embedded societal actors, in particular NGOs other than Greenpeace, strongly supported and complemented the Greenpeace campaign. The German and Swedish cases suggest that these conditions may have been more difficult to meet in countries which had already experienced a significant public debate focussing on safety aspects of biotechnology. Similarly, the absence of broader public debates in Spain and the Czech Republic suggests that it was even more problematic to initiate debates in countries which were trying to catch up economically with the majority of Member States.

Finally, it should be pointed out that the strong political impact of Greenpeace, and to a lesser extent also of other NGOs, raises questions as to the democratic accountability of these organisations (cf. Chapman 2003). Greenpeace is a highly centralised organisation and does not depend on the mobilisation of a large number of people to make its point. However, while such questions are justified, they cannot be adequately assessed in isolation from the policy-making process. After all, powerful groups such as EuropaBio which also tried to influence the revision of the DRD and appear to be even less democratically accountable used similar working methods and strategies as Greenpeace.

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6 Annexes

6.1 Tables

Table 1: National Changes in support for applications of biotechnology 1996-2002

	Genetic Testing			GM Crops			GM Food		
	1996	1999	2002	1996	1999	2002	1996	1999	2002
Belgium	95	90	92	89	74	80	72	47	56
Denmark	91	91	93	68	58	73	43	35	45
Germany	87	90	85	73	69	67	56	49	48
Greece	97	91	92	77	45	54	49	19	24
Italy	97	95	95	86	78	68	61	49	40
Spain	96	94	94	86	87	91	80	70	74
France	96	94	92	79	54	55	54	35	30
Ireland	96	94	94	84	67	77	73	56	70
Luxembourg	91	85	91	70	42	54	56	30	35
Netherlands	93	96	96	87	82	85	78	75	65
Portugal	97	96	93	90	81	84	72	55	68
UK	97	96	95	85	63	75	67	47	63
Finland	95	91	94	88	81	84	77	69	70
Sweden	92	92	93	73	61	73	42	41	58
Austria	74	78	78	39	41	57	31	30	47

(Source: Gaskell, Allum and Stares 2003, p. 18.)

6.2 Interview Partners

Germany (Interviews 1-12)

Hiltrud Breyer; Member of the European Parliament. Group of the Greens / European Free Alliance (EFA), Brussels.

Mark Cantley; Advisor Life Sciences and Technologies, European Commission, DG RTD, Brussels.

Gerard Choplin; Coordination Paysanne Européenne - European Farmers Coordination (CPE), Brussles.

Lorenzo Consoli; Political Advisor EU, Greenpeace European Unit, Brussls.

Prof. Dr. Wolfgang van den Daele; Social Science Research Centre, Berlin.

Hans Josef Fell; Member of the German Bundestag, Green Party, Berlin.

Benedikt Härlin; Public Relations and Cooperation Projects, Future-foundation for Agriculture, Berlin.

Helmut Heiderich; Member of the German Bundestag, Christian Democratic Party (CDU), Berlin.

Dr. Jens A. Katzek; Chief Executive BIO-Mitteldeutschland GmbH, Magdeburg, Germany.

Dan Leskien; Political Advisor on Genetic Engineering The Greens / EFA, European Parliament, Brussels.

Julien Mousnier; European Commission, DG ENV, Brussls.

Geert Ritsema; GMO Campaign Coordinator Friends of the Earth Europe, Brussels.

Austria

Barbara Prammer; SPÖ, former Minister of Consumer Protection (1997/1998/1999)

Sima Ulricke; SPÖ, 1997/1998 genetic engineering expert of Global 2000.

Karin Scheele; SPÖ, Member of the European Parliament since July 1999. Member of the Committee on the Environment, Public Health and Consumer Protection.

Wolfgang Pirklhuber; Greens, Member of the national council since 1999.

Marilies Flemming; ÖVP, Member of the European Parliament since November 1996. Member of the Committee on the Environment, Public Health and Consumer Protection. Between 1987 and 1991, Flemming was Minister of Environment, Youth and Family.

Michael Haas; civil Servant, Section VII 'Strukturpolitik im Gesundheitswesen und Verbraucher Gesundheit" of the Ministry of Social Security and Generation. Head of the department for biotechnology, genetic engineering and other related issues.

Helmut Gaugitsch; Austrian Environment Agency, worked at Sandoz (today Novartis) as laboratory researcher and joined the Umweltbundesamt (Federal Environment Agency) in 1991. He also participated in the Article-21-Committee at EU level.

Herbert Gottweis; vice head of the University Institute for Political Science in Vienna. Policy related research in the field of biotechnology.

Franz Seifert; independent social researcher, participated in the research projects: 'Biotechnology and the European Public' and 'Safety Regulation of Transgenic Crops: Completing the Internal Market?' Both funded by the European Commission.

Andrea Barta; biotechnology scientist, spokeswoman of the platform 'dialog<>gentechnik', Member of the Austrian CA.

Bernhard Wieser; social scientist, works at the IFZ, member of the 'Biotechnology Information Center".

Peter Weish, University Professor for human ecology and ethic of the environment at BOKU Wien, Member of 'Forum österreichischer WissenschaftlerInnen für Umweltschutz".

Werner Müller; Global 2000, Member of the international organisation 'Friends of the Earth", strict opposer of genetic engineering, advocate of a moratorium.

Thomas Fertl; Greenpeace Austria, Member of Greenpeace International.

Petra Lehner; Chamber of Labour (Arbeiterkammer), consumer protection department.

France

Mr. Larmagnac; consumer advocacy group l'Union fédérale des consommateurs-Que Choisir? (UFC Que-Choisir).

Gisèle Rossat-Mignot; responsible for the GMO at the Ministry of Agriculture.

Phillipe Gracien; spokesperson for the group CFS-GNIS-UIPP.

Olivier Clément and **Bernard Forey**; Confédération paysanne (CPE).

Jacques Maret; Green party and co-founder of the CPE.

Gilles-Eric Seralini; scientist and member of both the Comité de recherche et d'information indépendantes sur le génie génétique (CRII-GEN, Independent Research and Information Committee on Genetic Engineering; see above), and the Commission du génie biomoléculaire (CGB, Biomolecular Engineering Commission).

Gildas Le Bozec; Direction générale de l'alimentation (DGAL, the Food and Nutrition Board) of the Ministry of Agriculture.

United Kingdom

Patrick Holden; Soil Association, Director.

Helen Browning; organic farmer, AECB (advisory committee), Soil Association.

Dr Douglas Parr; Greenpeace UK, Chief Scientific Advisor.

Dr Sue Mayer; Genewatch UK, Executive Director.

L. Jopling; Conservative, House of the Lords.

Prof. Richard Macrory Barrister, MA; T H Huxley School of Environment, Earth Sciences & Engineering, Dept. of Environmental Policy & Management.

Dr. Roger Turner; British Society of Plant Breeders (John Innes Centre).

Prof. Sir John Beringer; School of Biological Sciences, University of Bristol, Chairman.

Tom Coles; DEFRA, Biotechnology Policy Advisor.

Mr. Lawrie Quinn; Labour, MEP for Scarborough and Whitby.

Sweden

Jan Ekensvärd; EU issues at LRF (National Farmers' Union).

Jerker Sorenson; EU-affairs, National Food Agency.

Elin Linnarson; National Nature Care Board.

Bengt Ingerstam; SKIS (national co-ordinator of consumer organisations).

Ulrich Nitsch; Professor for Informational Services, University of Agriculture, Uppsala.

Bengt Upström; Researcher at SIK (national institute for biotechnology research).

Jan Eriksson; Economic Advisor to the Farming Movement.

S. Fagerhult; Professor at University of Technology (Chalmers), Göteborg.

Ann-Sofi Sandberg; head of Food Science Research, University of Technology (Chalmers), Göteborg.

Czech Republic

Ing. Karel Bláha, PhD; Ministry of the Environment, Dept. of Environmental Risks, Director.

Ing. Zuzana Piknová; Greenpeace, Coordinator of the GMO campaign.

Ing. Karel Sládek; BIO-EKO (Organsiation of Organic Farmers), Chairman.

Prof. Jaroslav Drobník; member of the Czech Commission for Dealing with Genetically Modified Organisms, the advisory body of the Ministry of the Environment, and chair of the civic association Biotrin.

Spain

Daniele Franzone; European Commission, DG ENV, Deputy Head Biotechnology Unit.

Miguel Castrovejo; Spanish Permanent Representation, Brussels.

Ana Fresno Ruiz; Ministry for the Environment, Comisión Nacional de Bioseguridad, Chairwoman.

Carlos Luis Cuenca Esteban; Ministry of Agriculture and Fisheries, Subdirección General de Planificación Alimentaria, permanent member of the Comisión Nacional de Bioseguridad.

Jorge Riechmann Fernández; Director of the Environmental Area of the Fundación 1º de Mayo.

Dolors Hernandez Navarro; Executive Secretary of UGT (Unión General de Trabajadores), responsible for the area of health at work and environment.

Liliane Spendeler; Amigos de la Tierra-Friends of the Earth, Co-ordinator biotechnology.

Juan Felipe Carrasco; Greenpeace Spain, Co-ordinator GMO campaign.