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Frame dynamics and stakeholders in risk governance

A study of EU food safety and GMOs



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Beatrice Bengtsson

Frame dynamics and stakeholders in risk governance
A study of EU food safety and GMOs

The Research Policy Institute, Lund University, Sweden

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Abstract

The EU governance of food safety and GM food and feed has gone through significant changes since the BSE crisis and food scares during the 1990s. This work focuses on one particular new feature; the role of stakeholders representing the food chain: biotech associations, farmer organizations, food and feed processors, consumer organizations and environmental NGOs. These stakeholders are not merely lobbyists exerting influence on EU institutions; they are knowledge producers with a certain expertise who participate within the European Food Safety Authority (EFSA) and the European Commission's Directorate General for Health and Consumers (DG SANCO) in order to improve risk assessment as well as risk management.

This study uses an interpretive approach to governance and expertise. Governance occurs in a larger system of policy discourses and architectures of meaning through which – in turn – policy options achieve meaning, are expressed, clash and compete with each other. Governance is constantly negotiated and framed, and its boundaries drawn by the various institutions and actors involved. This thesis analyses frames that are involved in the food safety governance of GMOs in the EU. Frames are understood as ideas, structures of argumentation, and the underlying rationality behind governance. Particular emphasis is placed on deliberative rationality, stakeholder participation, and how stakeholders compete to influence policy and establish themselves as legitimate experts by framing activities within a policy debate.

Empirically, this thesis draws on GMO issues such as cultivation, the approval process and Environmental Risk Assessment Guidance. The policy dispute mainly explored is asynchronous authorization and zero tolerance policy. This debate contains a wide range of arguments that relate to the global trade of GMOs, feed imports, socio-economic risks, environmental contamination and consumer protection. The thesis is based on extensive research of documentary sources from policymakers and stakeholders,

interviews with elite actors in Brussels and Sweden, as well as observations in the field.

My conclusion is that a new governance rationality has taken hold in DG SANCO and EFSA; a deliberative rationality by which policymakers actively and innovatively engage with stakeholders and encourage them to contribute with knowledge for policy advice, risk assessment, management and process development. Yet this rationality is geared towards participation and appears in the shadow of hierarchy, meaning that participatory exercises are facilitated and firmly controlled by the policymakers themselves. It is clear that administrative rationality remains in a dominant position: GMOs are governed by 'hard law' in a multi-level political system that subordinates economic rationality, thereby hindering GMO market expansion in the EU. I also conclude that intertextual spinning and intertextual proximity in frames are particularly important to influence policy outcomes. These enable stakeholders to become legitimate experts and influence policy response and legislative change. This is a process where data is shared, processed and spinned between public and private actors to engender its status as legitimate expertise, not interest-based claims. By such means was the problem definition in the debate on asynchronous authorization and zero tolerance policy reframed from safety to security.

Overall, this work thus furthers the understanding about frames as an agenda-setting tool, and framing as influence. Even though this thesis addresses the GMO post-implementation phase, it shows that framing conflicts in the EU food safety domain are still fierce. Power struggles are ongoing, and the last boundary is far from being drawn.

Key words:

GMOs, framing, EU, stakeholders, expertise, governance rationalities, policy, feed, boundary framing, frame extension, intertextuality, food chain, participation, EFSA, DG SANCO, risk assessment, risk management, threshold, risks.

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1 GreenGov stands for 'Participation, Deliberation and Sustainability. Governance beyond Rhetoric in the Domains of Climate, Forestry and Food Safety'. The project was coordinated by Karin Bäckstrand at the Department of Political Science at Lund University in Sweden and funded by the Swedish Research Council on Environment, Agricultural Sciences and Spatial Planning (Formas). This study is carried out as a part of this research project. Parts of this dissertation are also based on research projects financed by the Swedish Research Council (Vetenskapsrådet). They are here gratefully acknowledged.

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² Matforskarnätverket (tidigare Nätverket Konsumentnära Livsmedelsforskning).

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Beatrice Bengtsson
Lund, August 30, 2011

Acronyms and abbreviations

AA	Asynchronous approval of GM crops
AP	Adventitious presence
Bt	Bacillus thuringiensis
BEUC	European Consumers' Organization
CAP	Common Agricultural Policy
CELCAA	European Liaison Committee for Agricultural and Agri-Food Trade
CEN	European Committee for Standardization
COCERAL	The European Association representing the trade with cereals, oilseeds, feedstuffs, oils and fats, olive oil and agro-supply
COPA-COGECA	Committee of Agricultural Organizations in the European Union, General Committee for Agricultural Cooperation in the European Union
CIAA	Confederation of European Food and Drink Industries
CGF	Corn gluten feed
CPE	European Farmers Co-ordination
DDG	Distillers dried grains with soluble
DG AGRI	Directorate General for Agriculture and Rural Development
DG ENVI	Directorate General for Environment
DG SANCO	Directorate General for Health and Consumer Protection
DNA	Deoxyribonucleic acid

EC	European Commission
ECVC	European Coordination Via Campesina
EEB	European Environmental Bureau
EFSA	European Food Safety Authority
ENEA	National Agency for New Technologies, Energy and the Environment (Italy)
ENSSER	Network of Scientists for Social and Environmental Responsibility
ERA	Environmental Risk Assessment
ESA	The European Seed Association
ETP	European Technology Platform
EU	European Union
EuroCommerce	The retail, wholesale and international trade representation to the EU
EuroCoop	European Community of Consumer Co- operatives
EuropaBio	The European Association for Bioindustries
FAO	Food and Agricultural Organization of the United Nations
FEDIOL	EU Oil and Proteinmeal Industry
FEFAC	European Feed Manufacturers Federation
FERM	Federation of European Rice Millers
FoE	Friends of the Earth
GFL	General Food Law
GM	Genetically modified
GMO	Genetically modified organism
Ha	Hectare
HDP	Healthy Democracy Process
HLG	High-Level Group
IFOAM	International Federation of Organic Agriculture Movements
IP	Identity preservation
IPTS	Institute for Prospective Technological Studies of the JRC
IPR	Intellectual property rights
JRC	Joint Research Centre

KBBE	Knowledge-Based Bio-Economy
LEI	Agricultural Economic Research Institute
LLP	Low-level presence of unapproved GM material
NGO	Non-governmental organization
RA	Risk analysis
SCFCAH	Standing Committee on the Food Chain and Animal Health
SDG	Stakeholder Dialogue Group
SOS	Save Our Seeds
TestBiotech	Institute for Independent Impact Assessment in Biotechnology
TNC	Transnational Corporation
UECBV	European Livestock and Meat Trading Union
UN	United Nations
US	United States
WB	World Bank

CHAPTER ONE

Introduction

1.1 New modes of governance

Much hope has been attached to new governance arrangements. New modes of governance, governance from below, network governance and other similar terms all denote a shift towards governance arrangements that increase participation and deliberation across government, markets and civil society. Stakeholder dialogues, citizen juries, public-private partnerships and voluntary standards are some examples of the deliberative, participatory and market-oriented strategies that have gained ground in policy areas such as food safety, forestry and climate change. These governance modes are claimed to be functional, and capable of handling the cross-sectoral and long-term aspects of complex problems facing various societies today. The promise is to open up politics and make policymaking more inclusive, transparent and accountable, while at the same time effective and output-oriented (Bäckstrand et al. 2010, chapter 1). Participation can take place in different forms and at different levels (see Arnstein 1969) – it can involve the public as well as stakeholders; namely, organized interests, such as non-governmental organizations (NGOs), consumer organizations, traders and farmers. In scientific and technological policies, for instance, participatory mechanisms are considered useful for different facets of risk management and risk identification. In other cases, stakeholders can be involved in rule-making processes in which they have actual decision-making authority, or they can participate in more distant processes of knowledge production. In all cases, the involvement of a multiplicity of actors from society is expected to deliver a useful contribution to the policymaking process in some way (van de Kerkhof 2006:279; Renn 2008, chapter 8). They are part of the

‘public discussion of science’ that is expected to make expertise more responsible to the public and – in turn – the public more ‘enlightened’ through its participation: both contributing to the acceptance of policy choice (Papadopolous & Warin 2007:446).

In the European Union, the rise of new modes of governance has been seen as a response to the legitimacy deficit and crisis of governance. New instruments have been advanced to counter the democracy deficit, to strengthen policy performance and to improve public accountability (Schout & Jordan 2005; Skogstad 2006). Within EU institutions, participation takes place at different stages of the policymaking process and is done through a variety of consultation tools. ‘Virtually all EU documents regarding the environment, health, risk and safety issues are permeated with a constant and insistent call for public participation in their management. This is a significant change from earlier times, when actors from society were regarded as passive subjects, whose interests and needs were being taken care of by experts and public agencies alone’ (De Marchi 2003:173). The ideas about participation and dialogue must be understood in the light of the EU’s democratic deficit and the absence of a so-called ‘European people’. The EU’s capacity to govern effectively and democratically has constantly been called into question. The deficiencies of the Union’s institutions are typically said to lie within the realms of representativeness, accountability and transparency (cf. Eriksen & Fossum 2000). The ‘deficit problem’ undermines EU decision-makers’ ability to make legally binding decisions and the willingness of Member States and citizens to obey their commands (Skogstad 2003). Against this background, so-called new modes of governance, which depart from the traditional ‘community method’ of regulation through legislation, have gained ground, both in the debate on reform and in the ‘real world’ of various policy areas (Eberlein & Kerwer 2004:122).

1.2 Food safety and GMOs

EU food safety is a tale of risk, science and governance that starts with the ramifications of the BSE crisis of the 1990s.³ Images of burning cows in English fields, slaughterhouses, cattleblood and cattlebrains, not only led to a fall in beef consumption, but also resulted in a collapse of citizens' trust in the credibility of public authorities and choked the institutional status quo. Jasanoff et al. (1997) has called this a 'civic dislocation' - a mismatch between what governmental institutions were supposed to do for the public, and what they actually did. 'It was as if the gears of democracy had spun loose, causing citizens, at least temporarily, to disengage from the state' (Jasanoff et al. 1997:223). How could citizens ever again trust a government that had prioritized the protection of agricultural interests over the need to secure public health? Governmental responses included institutional and procedural reforms to ensure the quality and transparency of science-based decision-making, and an invitation to citizens and other parts of society to participate throughout the policymaking process.

The same year as the UK announced that Creutzfeldt-Jakob disease had afflicted humans, US-grown, genetically modified⁴ corn and soybeans began to arrive at European ports. The issue of GMOs engendered a political controversy that seemed very similar to the one regarding BSE. The NGOs that comprise the so-called anti-GMO movement took centre stage in the European contestation over genetic engineering and the politics of food.

³ BSE came to public notice towards the end of the 1980s and gained increasing prominence in the first half of the 1990s. This process reached its peak in March 1996, when it was announced that the UK government's independent scientific advisors had concluded that a brain-wasting malady, Creutzfeldt-Jakob disease, had afflicted humans and that the probable cause was consumption of beef infected with bovine spongiform encephalopathy (BSE). It became almost universally accepted that the crisis stemmed from serious policy failures and that government secrecy, cover-ups and mendacity were the main causes and culprits of the whole wretched saga (Packer 2006).

⁴ The EU have defined a GMO as an organism, with the exception of human beings, in 'which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination' (article 2(2) of Directive 2001/ 18/EC).

Their influence has been pervasive. GMO critics have cut down GM crops growing on test sites, pressured major food retailers to sell only GM- free products, demanded the application of the precautionary principle when approving new GM crops, monitored nations and companies, staged symbolic protests, lobbied governments, and challenged the scientific claims of private industry and government agencies (Ansell & Vogel 2006:98–99). NGOs have asserted their own democratic legitimacy in the name of protecting the environment from agricultural biotechnology, and have put policymakers symbolically on trial for their failure to protect society from risks and uncertainties (Levidow & Carr 2010:1).

The process of genetic modification – also called genetic engineering, gene technology or recombinant DNA technology – refers to the transfer of DNA between species using laboratory techniques, and is only one of the many tools of modern plant biotechnology (so-called green biotechnology) with applications in agriculture. While conventional breeding techniques rely on the random rearrangement of existing genes between two closely related parent plants, genetic engineering allows for the transfer of individual, known genes, even from completely unrelated organisms (Fukuda-Parr 2006:5). Genetic modification in crop plants thus provides a supplement to classic breeding techniques and has so far focused primarily on the production of varieties for minimizing harvest losses due to weeds (herbicide-resistant crops), and insect-resistant varieties in order to decrease losses from insect damage (Bt-crops). Soy, maize, cotton, and rapeseed (the ‘big four’) account for almost all commercial GMO production.⁵

The empirical focus of EU food safety governance and GMOs exemplify the challenge of European multilevel governance in the area of risk regulation, which covers multiple policy domains, ranging from internal market and external trade promotion, science, research and development, to environmental and consumer protection (Everson & Vos 2009). Regulation here is much more than a routine struggle over policies and policy

⁵ GM plants are grown mainly in North and South America, and to an increasing extent also in India, China and South Africa. The first GM seeds were planted in the US for commercial use in 1996, and GM plants are now grown on a total of 134 million hectares. In the case of soy, approximately 77 % of global production is achieved with GM soybeans. The most extensive GM field areas are in the USA (64 million hectares) and Brazil (21.4 million hectares) (GMO Compass, 2011d).

outcomes. Rather, it is an example of contested governance, ‘a more pervasive and fundamental form of conflict... [about] who should make decision, where, how, and on what basis’ (Ansell & Vogel 2006:10). Contested governance is associated with ‘a pervasive sense of distrust’ that challenges the ‘legitimacy of existing institutional arrangements’ (Ansell & Vogel 2006:10). Food safety concerns are often translated into intense struggles within the EU, and between the EU and its trading partners before the WTO. These issues of governance also entail more than questions of who gets what, when, and how. The contested policy struggles are also about the process of decision-making (administrative or deliberative), the locus of authority (state or market), and the search for evidence and expertise (scientific or practical). In essence, these contemporary struggles indicate that we are facing a battle for power between different types of underlying structures of belief, perception and appreciation – something that can be called ‘frames’ (Schön & Rein 1994:23).

1.2.1 Architectures of meaning

Governance occurs in a larger system of policy discourses and architectures of meaning through which policy options in turn achieve meaning, are expressed and become defined and changed (Yanow 2003). Mapping exercises and conceptualizations in which hierarchies have been differentiated from networks, legitimate governance modes from illegitimate, or private from public, have sometimes overshadowed the underlying logic behind governance (Bäckstrand et al. 2010). Or, in other words: they have overshadowed the presupposed concepts, ideas and norms which structure meaning and (re)define governance and policy options. The present work conceptualizes policymaking as an ordering activity of heterogeneous systems of representations that creates governability. I emphasize the importance of paying special attention to narratives and counter-narratives in policymaking, and in those areas and sites where the meanings of multi-level governance are negotiated and renegotiated. Language and representation are constitutive of politics (Gottweis 2003). Politics and political phenomena do not ‘simply exist’. Their borders are always drawn (Gieryn 1995) by various institutions and actors involved, and thus we can view politics as an ‘empty space’ until demarcated and partitioned by means of boundary drawing struggles. These boundaries, for

example, separate the 'political' from the 'non-political', the 'safe' from the 'non-safe', and the 'relevant risks' from the 'irrelevant ones'. They define what the legitimate space for policymaking is, and what is not (Gottweis 2003:259). This work is an attempt to examine the plural processes of social and political ordering (Law 1993), because a steering process is not one single and stable order, but entails a plurality of sometimes conflicting orders. This approach is particularly helpful in this field, since GMOs are as much a product of language as of technology. The GM debate is a war of discourse, to be won as much by persuasion as by working in the laboratory (Cook 2005). GMOs have come to mean far more than food and feed derived from GM crops. GM-related debates resonate beyond the confines of agriculture and continue to act as a lightning rod for wider issues at national and global level. In this work, GMOs are examined as a discursive frame conflict and boundary dispute: While some see genetic modification as a dramatic departure from conventional agriculture (enabling the transfer of genetic material between organisms that would not normally mix), others regard it as an evolution of plant breeding that has occurred for thousands of years, and GM is just the latest development. According to one perspective involved in the controversy, genetic engineering can increase crop yield and ensure food security; it can also help reduce the dependence on chemical pesticides and herbicides. In addition, GMOs have the ability to tackle climate change and ultimately lead to sustainable development. Others see a technology that risks causing health problems for consumers, creates environmental contamination, and abuse of market power. And they all – public authorities, scientific experts, NGOs, industry and research institutions, etc. – mobilize language, images and knowledge. They compete to define the problem, formulate questions, conduct research, analyse findings, develop usable knowledge, participate in the dissemination of results, and identify the next steps in the policymaking process (if any are required). This thesis seeks to delve into, uncover and illuminate the values, norms and epistemology that give authority to justify actions to govern this particular policy field (cf. Fisher & Forester 1993).

1.3 Research questions and aim of the study

By analysing frames involved in food safety governance of GMOs in the EU, the aim of this dissertation is to understand ideas and structures of argumentation that shape and influence policy processes and outcomes in risk governance.

The following sub-questions will guide the empirical analysis:

- How do different frames of governance rationalities clash, integrate and compete in the EU food safety domain concerning GMOs?
- How is deliberative rationality, particularly stakeholder participation and stakeholder expertise, framed in this policy domain?
- How do stakeholders compete to influence policy and establish themselves as legitimate experts by framing activities within a policy debate?

In addition to the empirical and analytical contribution indicated with this aim and its research questions, an ambition at a theoretical level is that this dissertation will elucidate how knowledge issues and governance issues can be integrated in a framing analysis. By analysing the interplay and contest among frames involved in food safety governance of GMOs in the EU, my aim is to further the understanding of how frames become dominant and influence policy response and regulatory action in risk governance.

1.4 Why this study?

Many other researchers have analysed the GMO controversy and multi-level and national government responses (for a comprehensive review, see Levidow & Carr 2010, chapter one). The work in this study operates on the boundary between several disciplines: European studies, law, sociology, science and technology studies and environmental governance. Scholars in political science, sociology and STS often approach governance by focusing on procedures. Here, the procedural approach often takes on the purpose of evaluating – according to certain (often normative) procedural criteria (e.g. inclusion, accountability, transparency) – the legitimacy of such governance processes. However, an important shortcoming of this approach is that it focuses too little on the policy outcome – according to one critic, there is a ‘total neglect of context and outcomes’ (Oels, in Stollkleemann & Welp 2006:130). This work therefore seeks to go beyond the procedures by developing a theoretical framework that also focuses on content (see below on case studies and the substantial unit of analysis).

STS-scholars have been successful in emphasizing the role of the public in risk governing and GMOs (e.g. Wynne 2001; Maasen & Weingart 2005; Hagendijk & Irwin 2006; Blok 2007; Ferretti 2007; Levidow 2007; Jasanoff et al. 2007; Irwin 2001, 2006, 2008). Such studies on public engagement in the field of GMOs typically discuss the democratization of expertise, trust and public participation (typically national experience with consensus conferences and public consultation). At the heart of this literature lies the notion that more active, open and democratic relations between science and citizens are both desirable and necessary. At the same time, this body of literature criticizes previous inclusionary attempts and suggests improvements which go beyond public-understanding activities and deficit models.

My work deviates from this so-called ‘democratization of expertise’ literature in the following way: I focus on stakeholders instead of the public, and on the EU level instead of national experiences. Many of the previously mentioned studies tend to stress the boundary between scientific expertise and lay expertise, and science and policy. As an alternative, this work is located in the space between: Stakeholders participate in the realm of risk

management (policy) *and* risk assessment (science), and they are invited because they have specific knowledge on the policy issue at hand. However, this knowledge is neither lay nor scientific. And it is not *just* practical either. Furthermore, I examine participation as governance rather than as democracy.

Sociologists, political scientists and STS-scholars have contributed extensively to the field of framing and boundary-work. Gottweis (1998) analyses the discursive framing of biotech and public debates, from the 1980s through to the early 1990s. He shows how ecological modernization shaped new cognitive frames for risk management. Toke (2004) develops a discourse-frame analysis to compare the policy systems of the US, the UK and the EU in the agricultural biotechnology (agbiotech) sector. He examines the changing discourses underpinning the operation of an Advisory Committee in the UK, and how various NGOs have achieved their objectives. Jasanoff (2005) analyses biotechnology policy in the US, the EU as a whole and some of its Member States in particular. In the work by Levidow and Boschert (2008), agricultural development frames and coexistence frames are identified that belong to legislators and regulators, agbiotech promoters and agbiotech opponents. These authors focus on the GMO policy area coexistence; namely, how GM, organic and conventional farming can coexist in the fields. Within the same policy dossier, Soneryd 2009 uses frame analysis to examine the rationale behind Sweden's coexistence measures. Frame and/or discursive analysis of GMOs has also been carried out in relation to corporate power and storytelling (Glover 2010), and the precautionary principle (e.g. Levidow 2001). GMOs are also frequently discussed in relation to ecological fragility and social responsibility (see Forsyth 2007). The spectrum of GM research is extensive.

It would be possible to argue that GMOs are an outdated and over-researched topic. However, *GMOs are not a topic*. Rather, GMOs constitute an encompassing research and policy field in which several perspectives can be applied, and for which several so-called policy dossiers (policy files) exist. And since there are constant technological as well as legal developments in the field, it is open to new scientific scrutiny.

Figure 1: GMO perspectives



While scholars have been successful in comparing the regulatory framework of GMOs in the EU and USA (the so-called ‘transatlantic divide’ – e.g. Murphy & Levidow 2006), little has been written about EU reform policy measures after 2004. And although social scientists have gained valuable insights on collective actions by civil society and green NGOs, little is known about the consultation of stakeholders representing the European food chain.

Scholarly interest in the GMO-critical movement seems to have obstructed a picture of stakeholders representing economic interests (developers, traders, farmers, etc.). This is particularly troublesome, since a considerable amount of responsibility for implementing food safety regulations rests upon producers and processors. And even though we know much about the public discourse on GMOs, few have embedded the debate into a governance system in which interest groups no longer function exclusively to persuade, but also become important *partners* of the public authorities in the making of policies (Tanasescu 2009).

Approaching GMOs from the perspective of frames and discourse is not new; however, the focus on stakeholders and the policy dossier *asynchronous authorization and zero tolerance policy* represent an original empirical approach. In contrast, scholars have focused more on regulatory frameworks in the EU (e.g. Ansell & Vogel 2006; Johansson 2009) and in different countries (e.g. Bodiguel & Cardwell 2010; Everson & Vos 2009), labelling rules (e.g. Marsden 2000; Klintman 2002; Princen 2002; Meins 2003; Botha & Viljoen 2009), as well as GM cultivation/coexistence (e.g. Bodiguel & Cardwell 2010; Soneryd 2009). The controversy on asynchronous authorization and zero tolerance policy, on the other hand, concerns agricultural commodities imported for feed purposes, and seems to have gone unnoticed in the public debate as well as in the public research community. Lastly, this work does not separate governance (as a fixed system) from frames (something loosely held only by actors), and it does not study expertise separately. Instead, these concepts are integrated under the heading of frames. Instead of (just) applying a framing perspective, this work seeks to operationalize certain concepts.

1.5 Methodology

1.5.1 A theory-driven and interpretive case study

Despite the widespread use of case studies, there is little consensus about what the term actually means. What is clear is that the definition of what constitutes a case study has changed over time and varies between social science disciplines and individual researchers (Burton 2000:216, see table 16.1). In the social sciences it is common that cases are used as building blocks for data collection and analysis. However, there is also some controversy as to what should be regarded as 'a case'. An additional debate is whether cases should be conceptualized as empirical units or theoretical categories (in Burton 2000). There are a few reasons why I label this thesis a

case study: I deal with 'how' questions, address a contemporary phenomenon within its real-life context, concentrate on the unclear boundaries between the phenomenon and the context, and use a variety of sources. There are several possible empirical issues to focus on in the EU food safety domain: cloning, pesticides, nanotechnology, health claims, nutrition, additives, etc. GM is a strategic choice, and an example of a theory-driven, interpretive (i.e. Merriam 1994) and strategic (Flyvbjerg 2006) case study of EU food safety. GMOs are, just like many other issues in the wider policy field of EU food safety, an example of contested governance. Nevertheless, GM is not a representative case of food safety. It is the 'odd one out' (albeit partially in company with nanotechnology) due to the technical complexity in this area, the stretch across several existing policy domains (e.g. agriculture, environment, trade and consumer protection), the economic and industrial importance, the scientific uncertainties involved, the public scepticism, the mobilization by European NGOs, and extensive debates over ethical and socio-economic aspects (cf. Borrás 2006). All of these circumstances separate GMOs from other issues in this policy field – despite the contested nature of both GMOs and food safety in general.

GMOs should be understood as a strategic case selection in terms of selecting a case, or actually a set of cases, that live up to certain promises in the new food safety regime. These promises involve (a) the application of an integrated approach to food safety, which covers not just food but also animal feed (the 'farm to the fork' strategy), (b) transparency, involving all the stakeholders and 'allowing them to make effective contributions to new developments' (EC 2000:8, emphasis added), and (c) the application of a risk analysis approach in which risk assessment is separated from risk management, and where the European Food Safety Authority (EFSA) is established as a legitimate authority enabling science-based decision-making. The case of GMOs is essential to validate these promises. And if it works for the high-stake and challenging case of GMOs, it may work in other food safety cases as well.

This case study is also strategic from the perspective of theory: Due to the contested nature of GMOs and the specific circumstances that can be referred to as an 'information-war' (different actors mobilizing language, images and knowledge), it is a strategic case in terms of framing. The case of GMOs is particularly helpful for a detailed empirical frame analysis. It offers

a setting in which intersections and conflicts among frames are clearly exposed. It is also possible to argue that GM is a paradigmatic case (Flyvbjerg 2006), because so much is at stake, and because this issue highlights more general characteristics of risk governance.

Certain units of analysis shall also be mentioned here, as they clarify from where empirical material has been gathered. Based on the aim and research questions of this thesis concerning frames, I define units of analysis in two ways: *procedurally* and *substantially*. Firstly, units of analysis refer to two *arenas* for stakeholder participation: DG SANCO and EFSA. Within these arenas I generally limit the study to the Advisory Group (DG SANCO) and the Stakeholder Platform (EFSA). Nevertheless, because this study deals with frames – and thus focuses on processes of exclusion and inclusion – it is not therefore possible to limit the study to the Advisory Group and Stakeholder Platform exclusively, because, as the theory suggests, I will also have to examine what falls outside (the arenas) and how boundaries are pushed outwards. Secondly, units of analysis refer to substance, namely a *policy debate*. GMOs will also be studied in relation to the policy debate on asynchronous authorization and zero tolerance policy. This distinction between procedural and substantive units of analysis also overlaps, as asynchronous authorization and zero tolerance policy (as well as other GMO dossiers) are discussed in different arenas for stakeholder participation.

Even though this case study of GMOs is strategic, the units of analysis should be regarded as representative and as information- oriented selections. Selections have been made on the basis of expectations regarding the empirical material and in order to maximize the utility of information (Flyvbjerg 2006). The arenas are representative as they exemplify relevant institutionalized and ongoing debates on GMOs with stakeholders from the food chain. The policy debate on asynchronous authorization and zero tolerance policy is a representative choice of focus in the policy debate on GMOs since it – just as other GMO dossiers – is a polarized and technically complex debate which cuts across several existing policy domains, has economic and industrial importance, mobilizes NGOs, etc. (see above). In other words, it shares many of those characteristics apparent in the wider GMO debate (see Borrás 2006, above). With regard to stakeholders, I look particularly at the so-called high-stake stakeholders who are publicly vocal in the GMO reform debate:

- EuropaBio (bioindustries)
- Friends of the Earth (environmental organization)
- Greenpeace (environmental organization)
- ESA (seed association)
- COPA-COGECA (farmers' organization)
- CIAA (food and drink industries)
- FEFAC (feed manufacturers)

Member States, scientists and policymakers are not the primary objects here – stakeholders are.

1.6 Analysing frames

Frame analysis is a type of discourse analysis that studies how the implicit rather than the explicit influences politics (Forsyth 2003:78). To frame means to select some aspects of a perceived reality and make them more salient in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described. Frames typically diagnose, evaluate, and prescribe (Entman 1993:52). Entman writes that ‘frames select and call attention to particular aspects of the reality described, which logically means that frames simultaneously direct attention away from other aspects’ (1993:54). Moreover, frames reflect more than plain interests; they reflect more generally how actors perceive and understand aspects of the world (Hajer & Versteeg 2005). This study develops the theoretical case for operationalizing frames in two ways – as governance rationalities and issue frames.

Governance rationalities refer to the underlying logic behind governance and correspond to institutional thinking (Jasanoff 2005) and the ‘how’ of governing (Dean 2004:2). Analysing different frames of governance rationalities puts the spotlight on the rationality behind governance, rather than the form of governance (i.e. market, hierarchy and networks). Each frame of governance rationality (in this work: administrative, deliberative and economic) comes with a certain view on expertise. As an example, the

frame of deliberative governance rationality will be identified as inclusion beyond the classic notion of political representation. Expertise in this frame is procedural and may concern issues such as risk communication. My second approach to frames refers to content (Benford 1997). Framing, discourse and boundary-work overlap here. Actors frame; that is, organize and give meaning to information. By so doing, they also draw boundaries for what is included and what is excluded from the frame. Therefore, a frame can be seen as a boundary, as it fixes the attention and demarcates what is inside from what is outside (Rein & Schön 1996:89). The sourcing of information and the use of expertise to render framing credible and to provide authority are also important. By looking at intertextuality, namely the shaping of a text's meaning in relation to other texts, it is possible to identify sources of knowledge and different types of expertise. Altogether, this analytical framework will make it possible to examine ideas and structures of argumentation that shape and influence policy processes and outcomes in risk governance.

1.7 Empirical material

The empirical material for this work consists mainly of texts accessed from the Internet, such as policy documents, reports, position papers, policy briefings, powerpoint slides, news articles, etc. In addition, I have conducted interviews and non-participant observations. All primary data, the written and the oral, have been released into the public domain after careful consideration and according to certain rules. This means that my analysis can only be based on publicly available information. Consequently, there are obviously limits to what can be concluded in this study. Qualitative triangulation and a communicative approach to validation can partly alleviate this problem.

The consistent use of multiple sources of information contributes to the validity of this work. The meanings attached to statements, arenas, decisions and the like have been cross-checked, and a coherent picture of framing

processes has gradually emerged. Credibility has also been assessed by trying out whether the analysis of this thesis ‘appears reasonable’ for the actors involved. This was mainly done during the last set of interviews. In addition, stakeholders with a so-called ‘reflexive capacity’ were asked to read and comment on chapter 7, which is the major empirical investigation. Furthermore, a number of colleagues and other peers have read and commented on the entire work. Nevertheless, the interpretations in this work are likely to go beyond the respondents’ self-understanding, and the appropriate sphere for its validation is consequently the academic community (cf. Beland Lindahl 2008:154–155).

1.7.1 Texts

This study is based on written material related mainly to GMO risk management, but also risk assessment and risk communication (see Appendix). Texts are produced by the European Commission, stakeholders and external contractors (private firms as well as public research institutions). They all have in common the purpose of reflecting on policy proposals, estimating the consequences of different policy alternatives and making recommendations. The sources consist of official documents; namely, EU and stakeholder documents such as press releases, publications, summaries, speeches, powerpoint slides, etc. Material termed official-private refers to information from private actors that has been released into the public domain and which is therefore official. Statements from stakeholders, quoted in newspaper articles, have also been used. Due to the diversity of sources, I indicate the type of sources (i.e. policy document, interview or powerpoint slides) used.

Table 1: Texts

Official-EU	Official reports and information published on websites, such as agendas, minutes and summary records from specific stakeholder consultations. Since summaries and minutes tend to
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	be very brief, it has been important to complement them with other documentary sources as well as other types of empirical material.
Official-private	This type of material comes from stakeholders (private) but is publicly available (official). It consists of press releases, position papers, newsletters, brochures, Powerpoint presentations and annual reports. In most cases it has been possible to access the material via the homepage of each stakeholder.
The Media	Written sources also come from European news media, for instance EurActive.com.

Texts have been systematically collected from 2005 (with regard to official texts from EFSA and DG SANCO) and 2007 (regarding texts from stakeholders). These provide a rich source of information. An overview of the selected texts is presented in the Appendix.

Texts can serve different functions as research material: (a) texts may themselves be the object of research or (b) may be approached as representation (Titscher et al. 2007:32). This thesis uses *texts as representation*. However, this term can be understood in different ways: Each of these approaches depends on the different research questions and requires quite different modes of text selection. Firstly, texts were selected to represent the context (EU food safety) and case (GMOs). In this situation, the population must be defined specifically – that area about which the investigation seeks to draw some conclusions. Several units of analysis have been important here (see above discussion on case study). As an example, the borders were drawn in and around DG SANCO and EFSA. Interviews with stakeholders have also been important to limit the selection of texts and concentrate the study on two arenas for stakeholder participation. Secondly, texts were chosen as a representation of stakeholders. This, of course, begins with the groups concerned – as data collection units. Texts (minutes) from the Advisory Group at DG SANCO were helpful for identifying the population of stakeholders active in the debate on asynchronous authorization and zero tolerance policy. The collection of texts has been explorative as well as strategic: explorative when working with the first research question and more strategic when working with the second and third ones. Something should also be said about representativeness and texts as representations of stakeholders: In this thesis, only the frequently repeated arguments have been selected, and I have avoided bringing up ‘unrepresentative’ claims without clarifying that they are rare.

1.7.2 Interviews

Much has been written on the topic of different types of interviews (see Punch 2005, chapter 9). This thesis makes use of *one* particular research tool that falls under the interviewing heading; namely, the elite interview. All the interviews were carried out with individuals who have specific competence, are influential in this particular field and well-informed (see list of references).

The first set of interviews was carried out in Sweden (11) and Brussels (6) in 2009. They were conversational: informal and relaxed. The purpose was to gain general insights and establish a first contact with key actors in the field. I asked questions regarding stakeholder participation as a new mode of governance (where do stakeholders participate and what is their experience?), and sought to get a sense of the types of developments in the food safety field that were under discussion at that moment (not only regarding GMOs). After narrowing down the substantial unit of analysis to asynchronous authorization and zero tolerance policy, and after working with the written material on this topic, I then conducted additional interviews (11) in Brussels in February 2011. These interviews were semi-structured and formal, and had the purpose of clarifying questions and ascertaining whether my analysis had 'seemed reasonable'. It was important to check and get feedback on my analysis, while still maintaining my outlook as a researcher.

Due to the controversial nature of this policy field, some stakeholders requested confidentiality for certain references and quotes. I accepted this. In some cases it is not the organizational belonging, but the statement as such, that is important. Nevertheless, I believe it is central for the reader to know my use of references, and to differentiate between references despite the granted confidentiality. I have therefore put numbers to the references from stakeholder interviews, so that the reader knows that references are made to *different* stakeholders, and not one and the same. I believe this adds some transparency.

Dealing with the European Commission and stakeholders has been intriguing, yet complicated. Even though a large number of texts are available on the Internet, it has been difficult to discuss the texts with people involved. In some cases, there has also been an absence of texts. For instance,

CIAA typically do not publish individual position papers or openly discuss GMO-related issues. It is simply too sensitive (politically). BEUC, on the other hand, does not prioritize GMOs and refuses to comment on GMO dossiers. Therefore, I had to build the analysis on texts published by other stakeholders. Issues of confidentiality have, of course, also limited the possibility to access information. And when communicating with policy officials from DG SANCO, information typically comes with the caveat: 'this does not necessarily represent the view of the European Commission' and 'you are not allowed to refer to individuals working within the European Commission'. Furthermore, it was not (as originally intended), possible to participate in certain arenas for stakeholder participation due to rules of confidentiality. Nevertheless, I believe that the richness and diversity of the accessed texts, combined with interviews and non-participant observation, has compensated for many of these drawbacks.

1.7.3 Non-participant observation

In March 2010 I attended the workshop 'GMO Asynchronous and Asymmetric Approvals: Bringing lasting solutions to identified problems' in Brussels. The workshop had the purpose of enabling 'the genuine stakeholders' to better understand various viewpoints and detect common objectives (CEN/ENEA 2010, Workshop). The purpose with my non-participant observation was not to analyse this arena for stakeholder participation, but to collect data (Powerpoint slides), take notes, gain an understanding about this policy dossier, and talk to participants in an informal and conversational way. A wide range of speakers participated: Economic stakeholders from the food chain, representatives from DG SANCO, JRC and EFSA as well as the European Parliament. My notes from this workshop have been compared to, and validated by, a high-stake participant at this workshop. This has been particularly helpful since I, at

the time, had no beforehand knowledge about this particular dossier. Information from this workshop has been integrated in chapter 7.⁶

Non-participant observation has also been undertaken with the help of a video recording from the European Food Safety Authority. In March 2011, EFSA held a consultative workshop in Brussels to discuss stakeholders' views on its draft guidance for the selection of genetically modified plant comparators. This occasion brought together various interested parties, including representatives from academia, industry, NGOs, the European Commission, the European Parliament and scientific experts from EFSA. The meeting was also accessible to the public via a live webcast. The aim of the meeting was to allow those who had commented during the recent written public consultation on the draft guidance to further elaborate and discuss their views, and to engage directly with scientific experts from EFSA's GMO Panel and Working Group on Comparators. Information from this EFSA consultative workshop has been integrated in chapter 5.

However, Comparators for the Risk Assessment of Genetically Modified Plants does not constitute the substantive unit of analysis in this thesis. Instead, it is a GMO dossier that becomes relevant as a procedural unit of analysis, as it was brought up in one of the arenas for stakeholder participation (at EFSA). This non-participant observation through video streaming is thus less relevant compared to my personal non-participant observation of the CEN/ENEA workshop. The method of analysis, coding process and interview guides can be found in the Appendix.

⁶ DG SANCO has not authorized my use of data from this workshop. If I had asked for permission it most certainly would not have been granted, because outsiders are not allowed to quote or refer to individual statements from this body. Nevertheless, I have chosen to do so despite the lack of permission. These are my reasons: it should be a democratic right to scrutinize the European Commission, and my references are not expressed by a lower-rank civil servant on a private occasion, but by a high-up policy officer in a semi-public arena. Furthermore, the references included in chapter 7 are essential to the understanding of this policy debate. And as said above, they are validated by another (yet confidential) source.

1.8 Situated knowledge

Disinterestedness is one of the so-called Mertonian norms of science. In short, it refers to being objective and unbiased – a norm assuming that objectivity in science is possible or at least desirable. This position has been increasingly criticized, not least within science and technology studies, with authors such as Haraway pointing to the situatedness of all knowledge (Haraway 1990). This highlights the role of the researcher's own position in relation to the issues and processes under study. It calls for some clarification of my own position towards the main actors involved in this research.

Two sets of communities are typically contrasted in the literature, namely NGO stakeholders and economic/industry stakeholders. I refer to the second group as economic stakeholders, since they include developers, traders, farmers, retailers etc. NGO stakeholders are often claimed as being motivated by values and morals, while economic stakeholders are said to be motivated by material and instrumental concerns. I believe that this distinction is overstated. NGOs are also guided by instrumental concerns. For instance, environmental NGOs seek to enforce environmental laws – clearly an instrumental objective. Furthermore, they may also seek confrontation ('thrive on controversy') (Keck & Sikkink 1998:31) to increase membership, which can be seen as another instrumental objective. In a similar vein, consumer stakeholders have instrumental motives when promoting expanded consumer choices and labelling.

Every interest group has a core constituency that it seeks to serve. Accordingly, I reject the strict separation between social movement organizations and interest groups. Insights derived from constructivist literature about transnational advocacy networks can also be applied to the analysis of industry associations. It has moreover been shown that the success of influencing policy processes does not lie in a claimed moral superiority of the agenda, but in organizations' abilities to frame, draw boundaries around legitimate and illegitimate claims, provide knowledge and information, mobilize coalitions and translate frames into policy response. Because organic farmers or animal welfare organizations have both instrumental interests and normative concerns, their actions need to be understood through a common analytical framework. Although some

NGOs may claim to work for the ‘public benefit’, one cannot dispute that there are different ‘publics’ that can be served.

To clarify the scope of this thesis: In it I neither defend economic stakeholders nor criticize NGO stakeholders, and make no claims about the relative accountability of NGOs, public authorities or industry federations. My position is that all interest groups have their share of principled beliefs and instrumental goals. Hence, their actions and strategies should be critically examined in an equal way. This does *not* mean that consumer organizations and traders are identical and the distinction between them is artificial. Economic stakeholders are a category representing institutions that seek to maximize profits and in which shareholders are ultimate claimants. On the other hand, NGOs do not seek to generate such goals and are not accountable to any single constituent. I also argue that there are no a priori reasons to believe that the levels of benefits from policies championed by NGOs would be less excludable and more widespread than the ones championed by economic stakeholders (cf. Hasan 2010; Sell & Prakash 2004).

1.9 Structure of the thesis

The next chapter lays the foundation for the analytical framework and relates it to previous literature on framing, expertise, stakeholders and the EU. This chapter is important for drawing conclusions regarding key concepts and the analytical framework presented in chapter 3. Chapters 4 to 8 are empirical, and directed towards answering the research questions. The first is contextual, macro-oriented, and analyses frames as governance rationalities that play out in the EU food safety field concerning GMOs. This chapter corresponds to the first research question. Chapters 5 and 6 deal with the second research question on deliberative governance rationality, and are based on the procedural units of analysis: arenas for stakeholder participation at EFSA (chapter 5) and DG SANCO (chapter 6). In chapter 7 I conduct a first-order analysis and study the ‘micro-politics of meaning’, in order to start to answer the third research question of this

thesis regarding how stakeholders compete to establish themselves as experts. This chapter is based on the substantive units of analysis and is empirically the most comprehensive one. Chapter 8 continues to answer the third research question by conducting a second-order analysis (a higher level of abstraction) and draws together the main conclusions from the previous chapter. The subsequent, last chapter summarizes the main conclusions and provides the basis for a wider discussion.

CHAPTER TWO

Towards an interpretive analysis of governance

Disparate disciplines employ different models in order to describe, explain and hopefully understand the nature of governance and policymaking in the EU. This thesis has an interdisciplinary and interpretive approach to governance, public policy and actors in the political context. The purpose of this chapter is threefold: firstly, to provide an introduction of the main concepts that will be used to pursue the research questions of this thesis; secondly, to place the thesis in relation to relevant theoretical traditions and clusters of literature; and thirdly, to explore the possibilities of combining and synthesizing different concepts and theories. As stated before, my exploration of the frame concept is motivated by an interest in its possible use as an analytical tool to explore both structures and agency and to link it to expertise. However, many different approaches to frames and frame analysis occur in the literature. In order to assess their usefulness and suitability, the frame concept will be reviewed in some depth. In order to develop a potentially useful combination, the chapter also discusses other concepts such as co-production, institutional discourse, boundary-work and expertise. Some of them are important to provide key perspectives, anchor the analytical framework and explain from where certain ideas originate. Other concepts will be developed in an operational way to guide the analysis more clearly.

2.1 Frames

‘Frames matter. The ways in which political actors package their messages affect their ability to recruit adherents, gain favorable media coverage, demobilize antagonists, and win political victories’ (Polletta & Kai Ho 2006:188).

The frame concept has reached a high position as an ordering device in public policy scholarship over the last fifteen years (Moran et al. 2006:256). On a basic level, frames involve selection and salience, and they structure which parts of reality become noticed. Scholars typically talk about how ‘a frame’ organizes and gives meaning to information, and how this process might be called ‘framing’ (Ihlen & Nitz 2008:2). Goffman (1974) defines a frame as ‘schemata of interpretation’ through which individuals organize and make sense of information or an occurrence’ (1974:21). The metaphor of a window frame is also useful: ‘The message framer has the choice of what is to be emphasized in the message, as the view through a window is emphasized by where the carpenter frames, or places, the window. If the window had been placed, or framed, on a different wall, the view would be different’ (Zoch et al. 2006: 281). The concept of frames has been used in a whole range of academic disciplines, including psychology, sociology, political science, communication and media studies. It originated within psychology and cognitive theory in the 1970s (e.g. Bateson 1972; Kahneman & Tversky 2000), was introduced in sociology by Ervin Goffman (Goffman 1974/1986) and in media studies by Gaye Tuchman and Todd Gitlin (Gitlin 1980; Tuchman 1978,1980) (in Ihlen & Nitz 2008:2). References to framing processes can also be found in political science and policy studies (e.g. Gamson 1992; Snow & Benford 1992; Rein & Schön 1996; Triandafyllidou & Fotiou 1998), environmental conflicts and natural resource management (e.g. Gray 2003), linguistics and discourse analysis (e.g. Tannen 1993) and science and technology studies (STS) (e.g. Jasanoff 2005; Gieryn 1995; Levidow & Boschert 2008; Gottweis 1998). The following sections will turn to different disciplines in order to obtain specific answers to the question: what are frames?

2.1.1 Framing in social movements

During the 1980s, research in political sociology and social psychology focused attention on framing conducted by and within social movements (see Benford & Snow 2000). Much of the work on movements involves various frame alignment processes aimed at linking individual interests, values and beliefs to those of the movement. Movements are carriers of beliefs and ideologies. In addition, they are part of the process of constructing meaning for participants and opponents. Snow and Benford (1988) argue that when individual frames become linked in congruency and complementariness, then 'frame alignment' occurs (Snow and Benford 1988:198; Snow et al. 1986:464). This produces 'frame resonance', which is seen as central to the process of a group transitioning from one frame to another (although not all framing efforts are successful). In other words: Frame alignment is a process by which projected frames align with the frames of participants to produce resonance between the two parties. This leads to people's participation in and support for the movement and generates pressure on decision-makers to make concessions to it. Snow and Benford (1988) identify three core framing tasks, and the degree to which these tasks are attended to will determine participant mobilization. The three tasks are: (a) diagnostic framing for the identification of a problem and assignment of blame, (b) prognostic framing to suggest solutions, strategies and tactics to a problem, and (c) motivational framing that serves as a call to arms or rationale for action. Along with those formal features, finally, the resonance of frames with their audiences is crucial to their success. Effective frames accord with available evidence, with people's experiences, and with familiar stories, values and belief systems. In other words: they are at once empirically credible, experimentally commensurable, and narratively faithful (Snow & Benford 1988).

There are four types of frame alignment: frame bridging, frame amplification, frame extension and frame transformation. *Frame bridging* is the 'linkage of two or more ideologically congruent but structurally unconnected frames regarding a particular issue or problem' (Snow et al. 1986: 467). It involves the linkage of a movement to 'unmobilized sentiment pools or public opinion preference clusters' (467) of people who share similar views or grievances but who lack an organizational base. *Frame*

amplification refers to ‘the clarification and invigoration of an interpretive frame that bears on a particular issue, problem, or set of events’ (Snow et al. 1986: 469). This interpretive frame usually involves the invigoration of values or beliefs. *Frame extensions* are a movement's effort to incorporate participants by extending the boundaries of the proposed frame to include or encompass the views, interests, or sentiments of targeted groups. *Frame transformation* is a process required when the proposed frames ‘may not resonate with, and on occasion may even appear antithetical to, conventional lifestyles or rituals and extant interpretive frames’ (Snow et al. 1986: 473).

The concept of frames in social movements has generated a wide variety of theoretical elaborations and empirical applications. And several results demonstrate just what it is about frames themselves that secure movements their support. Along with propositions made by framing theorists, Cress and Snow found that frames that were more coherent and articulate were likely to engender movement victories. Moreover, it is important to make frames seem credible to audiences. Narrative theorists, on the other hand, argue that accounts are often thought to be truer the more they resemble familiar stories. In other words: we believe particular stories because we have heard them before. This may have the consequence that activist claims can be dismissed simply on account of their unfamiliarity (Polletta & Kai Ho 2006). Frame alignment processes are important to understanding how frames work in relation to interestgroups. This study will only apply one type of alignment; frame extension. This concept will be further discussed in the following chapter.

2.1.2 Framing policy problems

Even though [the concept of] framing was originally coined in other fields, it was taken up in public policy analysis by Donald Schön and Martin Rein in pioneering research that led to their *Frame Reflection* (1994) – an effort to work towards what they called the ‘resolution of intractable policy controversies’. Whether conceptualized as storylines that underlie a

particular problem-setting narrative (Rein & Schön 1995;) or more generally as schemata for interpretation (Goffman 1974), policy and other political frames are seen as ways through which experience is organized. Frames accomplish this implicitly, by directing attention towards particular features of the political landscape and away from other features, thereby shaping the possibilities for taking action. Policy frames can thus be seen as a type of story that is told by various political actors, and these narrative policy stories, including the use of symbols and synecdoches to tell them, help explain why some controversies are more powerful than others. Rein and Schön (1996) offer four ways to look at frames. These are to be understood as mutually compatible, and not as competing conceptions (1996:88). Firstly, a frame can be understood as ‘an underlying structure which is sufficiently strong and stable to support an edifice’. Structure implies ‘a degree of regularity, and hence, a lack of adaptability to events as they unfold over time’ (1996:88). Secondly, a frame can be seen as a boundary; it fixes the attention and demarcates what is inside from what is outside (1996:89). Thirdly, frames can be understood as ‘schemata of interpretation that enable individuals’ to locate, perceive, identify and label occurrences at large, ‘rendering events meaningful and thereby guiding action’ (1996:89). Fourthly, frames are a particular kind of ‘normative-prescriptive’ story that provides a sense of what the problem is and what should be done about it. These ‘generic story lines’ are important because they ‘give coherence to the analysis of issues in a policy domain’ (1996:89). Schön and Rein (1994) also elaborate on where frames come from and state that they are not free-floating ideas or concepts, but ‘grounded in the institutions that sponsor them’ (1994:29). In other words: frames are firmly anchored in social institutions. They furthermore suggest that actors’ construction of frames may be explored through stories and storytelling. Each story is seen as constructing a view of social reality through a complementary process of ‘naming’ and ‘framing’. Things are thus selected for attention and named in such a way as to fit the frame constructed for the situation. According to these scholars, it is through the ‘naming’ and ‘framing’ that the stories make the ‘normative leap’ from data to recommendations, from facts to values, from ‘is’ to ‘ought’. In the analytical framework, I will develop the case for applying frames as structures and as boundaries.

2.1.3 Framing environmental conflicts

In the policy sciences, frame analysis, as sketched out by Schön, Rein and others, has been applied to several empirical settings. Environmental conflicts comprise one such setting in which framing has become a popular and useful analytical tool, especially for studying the involvement of interest groups in the development of environmental policies. In a similar fashion to Benford and Snow, Davis and Lewicki define the framing tasks involved in environmental conflicts (e.g. defining the issues, shaping action, protecting oneself etc.). These tasks are performed by stakeholders to achieve consensus and mobilization. In environmental cases, frame disputes emerge when there are conflicting definitions of environmental conditions and when there are differences regarding the actions needed to ease the problems. When such disputes emerge, interest groups engage in a form of competitive framing to gain power and to influence environmental policy decisions. As pointed out earlier, the resonance of a frame is closely related to its credibility (in Vincent and Shriver 2009:167). Vincent and Shriver (2009) conceptualize credibility as three factors: (a) frame consistency, (b) empirical credibility, and (c) credibility of the claimants. 'Frame consistency refers to the congruency between a social movement's articulated beliefs, claims and action. Empirical credibility refers to the degree to which the frame being promoted fits with related real world events' (p. 167). Ambiguity is central to environmental disputes. In the absence of concrete, empirical evidence, stakeholder groups must base their claims on both real and assumed problems in order to convince others of their respective position. The more believable and more verifiable the proof, the more credible the frame becomes. In environmental dispute cases, scientific risk assessments conducted by independent scientists are important for strengthening the credibility of a group's frame (see Triandafyllidou and Fotiou 1998). The third function of frame credibility relates to the integrity of the claimants themselves, and stakeholder groups use a number of strategies for enhancing the resonance of their frame: the use of anecdotes and 'vocabularies of motives' that stress the urgency of the matter. Competing stakeholder groups often engage in contentious framing battles to discredit their opponents.

So far, the framing concept has been reviewed from the disciplinary angles of sociology and political sociology/political science. In the following section, I will turn to scholarly work that approaches frames from a structural perspective and examines the institutional sponsors of frames. The purpose here is to look at frames that offer stability in governance and regulatory house-building (cf. Schön & Rein 1996:88). The idea that knowledge claims and evidence are embedded in frames is central to this analysis. The following section will turn to insights from science and technology studies in order to connect frames to institutional knowing and expertise. Linking frames to knowledge begs the question of how institutions and stakeholders think, and what expertise is counted for as legitimate for steering a policy domain and policy debate. The question will be discussed in this chapter and operationalized in the subsequent one.

2.2 Expertise

Expertise and evidence are essential components in framing. They serve to define problems and suggest appropriate and legitimate policy response. Expertise is, however, much more than scientific knowledge. Expertise is not only located in the traditional sphere of science, but is socially distributed in society and located at different knowledge sites, such as environmental NGOs and industry associations. This calls for a discussion on the production of knowledge and the use of expertise to frame and to achieve dominance in policymaking processes.

2.2.1 Co-production

Science and technology studies have shown that a one-directional linear relationship between science and policy (in which science provides objective ‘answers’ for policy) is an illusion. What counts as an ‘answer’ depends on how the problem is framed in the first place. For example, Jasanoff and Wynne argue that environmental phenomena are constructed by a myriad of social interactions within scientific communities and with actors outside science, who play a role in defining problems and sanctioning solutions (Jasanoff & Wynne 1998). The idiom⁷ of co-production represents a major synthesis of scholarship in science and technology studies (STS) that questions institutionalized notions of expertise from the outset and hard demarcations between nature and society (Jasanoff 2004).

Rather than viewing science either as the product of social practices or as a reflection of truth about nature, many scholars prefer to see the two as mutually constitutive. Scientific research is shaped by, and in turn influences, practices of governance. Science and policy thus derive legitimacy from each other (Jasanoff 1998:16). In the case of GMO, a co-production perspective suggests that knowledge about food safety and GMO should not only be investigated based on its connection to observations in risk assessment (e.g. toxicological effects). The analysis should also pay close attention to human agency, discourses, and the social goals of food safety policy.⁸

Building upon constructivist and post-structuralist frameworks, co-production reflects earlier insights by Foucault, who demonstrated both how power and knowledge are closely linked, and how all knowledge legitimizes certain power relations and ways of making sense of the world at the expense of alternative ones. Knowledge is not independent of the world – instead, it

⁷ Co-production is not a theory, but rather an idiom, or a way of interpreting and accounting for complex phenomena in such a way as to avoid the strategic deletions and omissions of most other approaches to understanding the roles of the public and non-disciplinary actors in science policy (Jasanoff 2004:3).

⁸ Epistemologically, the idea of co-production has its basis in viewing science as a social activity and thus in the sociology of science.

actively brings forth the world as it is conceived (Pretty 2002, in Oels 2007:119). Co-production can also be understood by contrasting it with other, perhaps more dominant, modes of lay–professional interaction in science policymaking; namely, the deficit and complementary models.

According to the deficit model, professionals view laypersons as not having sufficient knowledge about scientific and technological problems, and thus they need to be educated in order to see the world more like professional scientists (Yearley 2000). The deficit model is based on the idea that ‘science speaks truth to power’, and assumes that technical input to policy problems can, and has to be, developed separately from politics in order to act as a constraint on political power. On the other hand, the complementary model rejects the notion that only professional knowledge should inform science, and instead invites laypersons into the process to raise issues of ‘risk perceptions’ and value questions. While laypersons offer value judgments and reflect on issues like fairness in the complementary model, professionals maintain authority over technical analyses and policy decisions. In the complementary model, science is still viewed as offering unbiased and apolitical ‘facts’ to policy processes. Both models tend to view lay or non-professional knowledge with scepticism. One important difference between the deficit and complementary models is that, in the latter, lay publics are given an opportunity to comment on the fairness or relevance of predetermined facts; but not, for instance, on whether or not the original framing of the issue may appear in one way to those in power and in quite another way to the marginal or the excluded (Corburn 2007:152). Some critics of constructivist approaches to science have been concerned that acknowledging social influences on science may imply a relativist approach, or the belief that there is no ‘hard’ reality beyond the language and concepts developed by society.⁹ These concerns are exaggerated.¹⁰ The co-production model suggests that science and technology are not ‘contaminated’ by society, but rather embedded in ‘social practices, identities, norms, conventions, discourse, instruments, and

⁹ See the extended debates about relativism in the so-called Science Wars of the 1990s.

¹⁰ Social constructivism does not assume that there is no physical reality, but nature’s role is seen as less deterministic in controlling the production of scientific knowledge, and the analytical focus is shifted towards the social processes that create our understanding (Jasanoff & Wynne 1998:17–20).

institutions – in short, in all the building blocks of what we term the social’ (Jasanoff 2004:3). Thus, co-production is not only a reaction to the incompleteness of the deficit and complementary models, but is also a critique of the realist ideology that constantly separates the domains of nature, facts and objectivity from those of culture, values, subjectivity, and emotion in policy and politics more generally (Latour 2004; Jasanoff 2004 in Corburn 2007:152).

The next section turns to the first component of co-production; what Jasanoff and Wynne refer to as the political order. This is a concept that includes governance arrangements and other political structures.

2.2.2 Institutional discourse and boundary-work

In conventional political sciences, government is associated with the activities of political authorities. Traditionally, policy analysis focuses on the activities of the state and its surrounding institutions. It seeks to understand how the machinery of the state and political actors interact to produce public actions. Recently, the study of governance has pointed to a trend towards less hierarchical governance, manifested inside states where governments cede control of the policy process to become managers of a complexity of governance relations (Pierre & Peters 2000). This shift is also marked by a loss of state control in the international system, exemplified by multi-level governance and global governance. As a consequence, governance today relies on a mix of hierarchical and non-hierarchical forms of steering, and builds upon collaboration between government, market and civil society actors (Bäckstrand et al. 2010:12–13). Bäckstrand et al. (2010) explore the emergence of new modes of governance through two dimensions: organizational forms (hierarchy, market, networks) and rationalities (administrative, economic, deliberative). Instead of asking who governs in which sites, it is possible to draw attention to the ‘software’ that informs contemporary rule-making. A focus on governance forms, on the other hand, relates to the organization, or the ‘hardware’, of governance. Hierarchy, markets and networks are three forms highlighted in political

science and relevant for environmental governance. It is worth noting that only the first approach (software and rationalities) is in line with an interpretive approach to policy analysis, as it draws attention to the logic or mode of policymaking. An interpretive approach does not concern itself with whether hierarchies, markets or networks govern – but rather with the kind of rationality that informs the governing.¹¹ A concrete result of this shift of focus (from institutions to networks and back again to institutions, but to rationalities instead of forms) is the need to look at the political and policy discourses used by institutions as objects of analysis. Instead of assuming governability and practices of policymaking, this approach focuses on the political role of ideas, their origins, power and disseminations. Or in other words: how institutions embody meaning, create social relationships and symbolic orders, and ‘set the limits on the very nature of rationality’ (Jasanoff 2005:28). Institutions play a crucial role in co-production: they create discourses, develop persuasive ways of speaking about the problems over which they exercise jurisdiction, and such efforts entail regulation. They also question and redefine the boundaries between the ‘safe’ and the ‘unsafe’. Institutional ways of knowing things are thus continually reproduced in new contexts. This institutional approach to framing leads us to deepen the ideas about framing in relation to another concept, namely boundary-work. As suggested by Schön and Rein in the previous section, frames can be seen as a boundary (1996:89). Or, as understood in this thesis: the process through which framing has influence is through the drawing of boundaries. Sociologists use the term boundary-work to describe the creation and maintenance of essential social demarcations. Boundaries are everywhere and exercise enormous influence on thought and action. Lawyers, for instance, make and remake the boundaries between acceptable and unacceptable risks while claiming to ‘find’ these demarcations within the law (Jasanoff 2005:26). Indeed, perhaps the most influential forms of boundary-work in contemporary societies are carried out by legal institutions as they try to sort the infinite variety of human actions and their consequences into finite and pragmatic conceptual categories. But politically

¹¹ This is why Sheila Jasanoff, in her book *Designs on Nature. Science and Democracy in Europe and the United States* (2005), focuses on how *institutions think* (Jasanoff 2005:27) and the ‘how’ of governing (Dean 2004:2) rather than what institutions do.

significant boundary- work also takes place in a multitude of more specialized forums, such as advisory committees (Jasanoff 2005:27), public authorities or departments. From this perspective, expertise does not simply 'exist'. Its borders are always drawn (Gieryn 1995:405), and thus we can view legitimate expertise as an 'empty space' until it is demarcated and partitioned by means of framing struggles. Policymaking can thereby be understood as a process which uses and mobilizes different frames to fix the meaning of knowledge and translate it to regulation (Hajer & Wagenaar 2003:260).

A focus on boundary-work (Gieryn 1995) thus enhances our understanding of what knowledge is deemed credible and legitimate in relation to a specific policy issue. And as Jasanoff has shown, boundary-work is also about retaining control and autonomy, especially for scientists and industrialists. The book by Jasanoff (2005) is a case in point. In this study she analyses decades of biotechnology debates and policymaking in Europe and the US. The author demonstrates how the political culture of different democratic societies influences the way they assess evidence and expertise in policymaking regarding biotechnology applications in agriculture or biomedicine. The conclusions are that expertise, relevant to public decisions, responds to specific institutional imperatives that vary within and between nation-states. Accordingly, who counts as an expert (and what counts as expertise) in GMO controversies in the UK may not necessarily be considered an expert in Germany or India or the USA (Jasanoff 2005). This book is an example of a institutional approach to framing and boundary-work.¹²

The next part of this chapter furthers the discussion on how knowledge is produced by new actors in society.

¹² In contrast to the notion of political agenda-setting, which takes for granted the shape of political issues, framing makes room for social response and political action.

2.2.3 New knowledge producers

Today, there is hardly a policy field whose logics and rationales are not in some way or other justified, explained and legitimized by references to knowledge-based arguments. Public policymakers are subjected to increasing volumes of evidence concerning potential impacts of their decisions and activities – evidence that is delivered not only from the scientific community but from various interests in society. This brings me to certain ideas derived from STS-scholars like Gibbons et al. (1994) and Nowotny et al. (2001). Gibbons and his colleagues, claim that a growing contextualization and socialization of knowledge means that we are now facing new forms of knowledge production. The traditional form – Mode 1 science – was characterized by hierarchical structures, and disciplinary borders within which research problems were formulated and solved. The new kind of knowledge production – Mode 2 knowledge – is heterogeneous and open to other forms of knowledge than science. Thus knowledge production in society has moved from the closed context of disciplinary science to a broader transdisciplinary, social and economic context. Nowotny et al. (2001) develop these ideas further and contextualize the shift in knowledge production. Drawing on various transformations in society, they point out the dramatic increase in the number of knowledgeable actors. These actors are not solely located in the traditional academia. Instead, a variety of knowledge sites has emerged in society, such as research institutes, governmental agencies, industrial laboratories and interest groups. Today, we have a situation of more open systems of knowledge production, where science and society are co-mingling (Lidskog 2008:74–76). The development described have implications for the relationship between experts and policymakers. Expertise is no longer situated exclusively in the traditional sphere of science, but is socially distributed in society and found at different knowledge sites such as NGOs and European business associations – so-called interest groups and lobbying organizations. Their expertise addresses issues that cannot be reduced to purely scientific and technical matters. Instead, these knowledge producers offer context-dependent expertise. This is a wider definition of expertise.

2.2.4 Widening the definition of expertise

Many scholars have long called for a wider definition of expertise. Several recent strands of work within science studies, risk analysis, the public understanding of science, and environmental policy analysis have focused on the significance of lay and local knowledge (hereafter lay). Why? Broadly speaking, lay experts contribute to three important goals: First of all, a wider perspective of expertise has a normative rationale and gives meaning to democracy. If we are to take a 'strong form of democracy' seriously, everyone affected by decisions should be allowed to deliberate on and discuss them. Secondly, lay experts contribute normatively to the legitimization of policy developments and their implementation. And thirdly, lay expertise can contribute to professional inquiry. In that sense, the literature on lay knowledge offers not only a different epistemological point of view, but also claims this knowledge is crucial for devising policies that actually work in practice (Fisher 2003).

In contrast to scientific knowledge, the defining characteristic of lay knowledge is that it is embedded in a specific cultural and often also practical context. Lay knowledge can be characterized in the following way: First, it is often held by members of a community that can be located both geographically and contextually with respect to specific identity groups. This means that a knowledge community might be a group with shared norms and interests. In contrast, professional knowledge is generally held by members of a profession, discipline, university, government agency or industrial association. Second, lay knowledge is often acquired through life experience. Practitioners emphasize their reliance on evidence from traditions and narratives. Credibility is central to all knowledge claims. Since lay knowledge is rarely instrument-dependent, its credibility comes in part from actual sights and experiences encountered in everyday life, and is often tested through years of practice (Corburn 2007:153).

One of the most extensively discussed examples in the literature on lay knowledge has come from Brian Wynne's study of English sheep farmers on matters pertaining to the risk of radioactive contamination in the wake of the Chernobyl fallout (Wynne 1992). Wynne argued that the external experts brought in by the agricultural authorities employed knowledge claims that were insensitive to local knowledge, geographical contexts and

practices of the farmers they were advising. Expert knowledge, based on supposed universal generalizations and universalistic principles, was seen to be misleading in this particular context. Furthermore, the officials' devotion to their 'expert' knowledge gave rise to mistrust and suspicion (Yearly 2000). Wynne's study ascertained that farmers and radiation experts possessed different, complementary knowledge about local soils, grazing conditions, and radioactive cesium uptake into vegetation. This is an important piece of his account, but more significant is the fact that these differences were rooted in diverse life worlds, with different perceptions of uncertainty, predictability and control. As Jasanoff writes: 'They represented radically other ways of understanding the world' (Jasanoff 2003:392).

Wynne's analysis is not an isolated instance. GMOs have become a favored site for studying public discontent with expert knowledge. As public participation in techno-scientific issues has gained mainstream support in Europe, scholarly interest has also increased. The literature on public consultation in the field of biotechnology and GMOs is growing (e.g. Irwin 2001, 2006; Hagendijk & Irwin 2006; Ferretti 2008; Renn 2008) but not included in this thesis, as the focus is on interest groups – not the public. Therefore, the literature on public participation in the field of GMOs is excluded in this review. Before exploring interest groups more specifically, I will turn to scholars criticizing this wider definition of expertise.

2.2.5 Narrowing the definition of expertise

One of the perhaps most prominent efforts to deal with the question of lay and professional expertise has been that of Collins and Evans (2002, 2007).¹³ Writing from the perspective of the discipline of STS, they

¹³ Collins and Evan's article (2002) on the 'Third Wave' is the most downloaded essay ever to have been published by *Social Studies of Science*, one of the prestigious journals in the field of science, technology and society (STS) (Fischer 2009: 137). The third wave in science studies has attracted wide, and occasionally critical, attention in STS and related fields (Jasanoff 2003; Wynne 2003).

question the development of postmodern challenges to science, especially those that stipulate a wider definition of expertise. For Collins and Evans, the social constructivism in science studies has led to an inability to distinguish between experts and non-experts. If the similarities of different types of knowledge have been emphasized, what are then the differences? This is expressed as the 'Problem of Extension' (Collins & Evans 2002:237). After two decades of deconstruction, they argue, it is now time to 'reconstruct' the concept of expertise. The question is: how to accept that science and technology are much more ordinary than we once thought, but still unique and special?¹⁴ Collins and Evans (2002) distinguish between two levels of expertise: contributory expertise and interactional expertise.

- Contributory expertise enables those who have acquired it to contribute *linguistically and practically* to the community through the expertise it has sustained. This is the most common usage of the word 'expert'.
- Interactional expertise means expertise in the *language* of a specialism in the absence of expertise in its practice. Like contributory expertise, it requires the *tacit knowledge* acquired by immersion in a form-of-life (i.e. socialization). It enables individuals to talk as if they had contributory expertise even though they lack practical or craft skills (Collins & Evans 2002, 2007).

According to Collins and Evans, Wynne's example of sheep farmers is a case of contributory expertise: They had contributory expertise that was complementary to that of the scientists, and developed it through their long collective experience in the ecology of the fields and the sheep that live there

¹⁴ Collins and Evans offer several important thoughts on the problem of expertise and the constructivist stance on knowledge. For instance, many advocates of social constructivism have preferred to *wait* until after the fact to see whose claims have become convincing and acceptable in the course of social and political action. In their view, only *downstream* can we come to see who gets defined as expert. The problem here, according to Collins and Evans, is that such an approach misses an important aspect of public issues; namely, that decisions have to be made according to a timetable established within the political sphere, not the scientific or technical sphere (Fisher 2009:140).

(Collins & Evans 2002:261). Contributory and interactional expertise has also been discussed in relation to Steven Epstein's work on AIDS activism (Epstein 2000). Some AIDS activists educated themselves in scientific terminology to the point where they were able to interact with researchers, and can therefore be understood as interactional experts. But since these activists not only mastered the language of medical research but also brought about changes in the epistemological practice of science, they can also be understood as contributory experts.¹⁵

Coming back to the authors' concerns and critique of the notion of 'lay expertise', it is clear that they do not extend expertise very far. Others have expressed similar concerns in the field of health and medicine. Even though Collins and Evans' notion of expertise has a reductionist quality (Jasanoff 2003; Wynne 2003), they do spur further reflection about how expertise is constituted and maintained. As suggested by Wynne, we must consider expertise in relation to the definitions and solutions of bureaucracy: What kinds of expertise are mobilized in different contexts, and by whom? We know that, generally, technical expertise is valued, but the details of what counts as technical in any given situation might vary. A narrow and technical definition of expertise corresponds to findings about policymaking in the EU and concerning GMOs. Turnpenny et al. (2008) find that in the case of policy assessment in the EU, a more narrow understanding of what counts as evidence (partially results from cost-benefit analyses) tends to prevail in spite of extensive participation from a wide range of actors. In the case of risk governance in general and GMO governance in particular, Borrás (2006) concludes that scientific experts continue to exert a central and uncontested role in decision-making processes: scientists alone continue to bear the sole responsibility for defining the essential question of what constitutes a risk. Similarly, the real locations of decision-making remain within the comitology¹⁶ realm, which is the closed interface between Member States and the Commission.

¹⁵ One of the reasons that the sheep farmers made less of an impact than they might have done was their lack of interactional expertise – they did not learn the language of the relevant science (in Collins & Evans 2002:262).

¹⁶ The term comitology describes the way the Commission executes the implementing powers. This committee system – known as comitology – comprises committees of Member State experts which the Commission must consult before implementing rules.

So far, I have studied how expertise is defined in the STS-literature by focusing on policy debates on technological and environmental risk and the expert–lay divide. However, expertise is also addressed in political science literature on advocacy and lobbying. The following section will explore the space between scientific and lay expertise – that is, policy knowledge.

2.2.6 Collective approaches to expertise

Interest groups, social movements, pressure groups, think tanks, advocacy groups, advocacy networks and epistemic communities¹⁷ have all one thing in common: they represent collective approaches to knowledge production and expertise. These groups serve as catalysts of ideas and actions and fill the void between the academic world on the one hand, and the realm of government on the other. If they want to make sure that their concerns are heard in the policymaking processes at EU level, and if they want to convince the European Commission, they need expertise, since the Commission listens to this, not to pleas for ‘justice’ for some special interest (Boswell 2009). Obviously, there are some differences between the groups. Public interest groups are more interested in grassroots activity and advocacy, whereas policy research institutes or think tanks are, first and

The committees function as mini-Councils of Ministers and meet regularly in Brussels to vote on whether to approve the Commission’s proposals or to refer them to the Council of Ministers for closer scrutiny (see EC 2010).

¹⁷ Theories on policy networks, advocacy coalitions and epistemic communities are similar in the sense that they study the role of ideas in decision-making. Nevertheless, there are certain reasons for why these theories are excluded in this thesis: They tend to assume that policy outcomes reflect technocratically rational ideas. Especially theories on epistemic communities have been criticized by scholars in STS-studies for representing a deficit model of learning. Learning is a process of informing decision-makers’ beliefs about technical issues embodied by epistemic communities. In other words: epistemic communities are there to fill decision-makers’ knowledge gaps (Forsyth 2003:183–186). The epistemological implications behind these theories thus conflict with the overall framework of framing in this thesis.

foremost, about research. Interaction with the public is also more important for interest groups and social movements than industrial associations and business networks. Interest groups and social movements may also have a less consistent legally designated route to influence policy than business groups. And while interest groups work according to a political agenda and often take an aggressive stand on a particular issue, business/economic groups rather produce scholarly data. Social movements employ collective actions, whereas the primary resource of advocacy groups is discourse, information and expertise (Hasan 2010). The distinguishing characteristics between these groups have, however, over time become increasingly blurred, and there are clear overlaps between them in the literature. Interest groups have attempted to acquire greater policy expertise in order to enhance their status in the policymaking community, and think tanks have turned to interest groups to learn more about lobbying strategies. Unlike researchers, who are often engaged in research with little relation to policy, think tanks and interest groups are in the business of providing policy-relevant expertise to elected officials or civil servants. In that sense, think tanks as well as interest groups may be more appealing to policymakers. Many of the larger organizations now have a dedicated research department and undertake extensive analysis with the intention of advancing the cause of the association and giving the organizations ammunition to use in the 'policy wars' (Weiss 1992 in Hasan 2010:298).

The function of expert knowledge and the type of knowledge used by these groups are different from the type of knowledge that has been discussed earlier in this chapter: it is neither lay, nor scientific. Instead, this expertise is policy-relevant and can be described as policy knowledge. Its purpose is to solve regulatory problems, estimate the effects of certain strategies, make policies effective, etc. The type of knowledge used can be statistics, technical data and social scientific findings. In some cases it may also be characterized as lay- or practical- oriented (cf. Boswell 2009:97). Literature on advocacy and lobbying shows the following types of argumentation strategies, relevant from the perspective of frames and boundary-work. Looking at these arguments enables additional insights on how frames are created and pushed for in policy debates. It will also further the understanding about the characteristics of different types of expertise.

- *Commonly shared goals arguments*: This category includes arguments referring to concepts such as ‘good for the environment’, ‘good for democracy’ and so forth. They are positively viewed concepts that the large majority of the population would support, and that would be difficult to be publicly against.
- *Technical arguments*: Arguments that are scientifically technical, detailing the scientific data supporting or opposing a proposal. The category also includes arguments that are legally technical, making the claim that a technical change in legislative language is needed. This group can also encompass technical arguments that are very sector-specific.
- *Cost or economic impact arguments*. This category is fairly straightforward and would include arguments that claim a proposal or policy would result in costs or savings to different actors.
- *Feasibility of a proposal or the workability of current policy*: This includes arguments that a new proposal would not work or could not be implemented, as well as arguments that the current policy does not work or that it is working fine and no new policies are necessary. This is different from technical arguments, which are more scientific or complex.
- *Discriminatory nature or fairness of the proposal argument*: This includes arguments that a proposal or current policy affects some groups more than others.
- *Constituency or public opinion arguments*: Arguments in this category are often direct references to the constituency of a policymaker or references to the broader public or public opinion polls on the topic at hand (Mahoney 2008, chapter 5).

Furthermore, knowledge and arguments about experience elsewhere is important. Policy lessons from abroad are often put forward as politically neutral truths. Reference to foreign experience – especially the notion that things *can* be done differently – can be potentially powerful. When

incorporated in frames, these arguments will require the back-up of more or less knowledge-based data. In some ways, the knowledge element in frames may seem obvious: If a proposal will damage a lobbyist's economic sector, the lobbyist would simply put forward this argument. In reality, however, the argumentation is much more complex. If an interest group wants to be successful, it is imperative to think about the best way of framing the message and about which dimensions of the policy debate to emphasize (Mahoney 2008:81). Interest groups, then, rely on a mixture of technical, normative, scientific, economic and legalistic arguments.

Mahoney (2008) has shown that advocates in both the US and EU tend to make certain arguments on certain types of issues. High-profile issues better lend themselves to constituency and shared-goals arguments. Low salience issues can be argued along technical lines, but only if there is some complexity to the debate. Citizen groups are more likely to use shared-goals and constituency arguments, while industry interests employ more technical and economic arguments. Another difference between industry and environmental organizations concerns rationality and the use of science. Industry has sought to define decisions as science (instead of policy), because science is seen as favourable to industrial interests (Jasanoff 1987:216). Coming back to policy debates on risks, business lobbies seek to claim legitimacy for their environmental arguments; they typically claim them to be rational and based on reason. Being rational and balanced allows these lobbies to 'cast their environmentalist opponents into the wasteland of irrationality' and enhances the authority of business groups to speak to policymakers more than their opponents (e.g. Eden 1999 in Eden et al. 2006:1068). However, being rational and balanced is important for all interest groups seeking to influence public policy, and both NGOs and business groups show examples of pragmatism.

A special type of pragmatism – legitimation – is particularly important in the field of GMO. Where it is useful, interest groups draw on classical notions of expertise; and where it is not, they begin to develop and legitimate their own (Eden et al. 2006:1073). This epistemological flexibility is also identified by Klintman (2002), in the debate on GMO labelling. According to him, both pro-GMO groups and anti-GMO groups move – or cross over – between epistemic absolutisms and judgemental relativism, depending on the issue. GMO critics clearly give priority to elaborating on complexities of knowledge uncertainties concerning GM risks. A typical

rhetoric is that the science related to GM technology is based on too many uncertainties. In that sense, they stress the imperfection and epistemic relativity of science and knowledge. However, the reasoning concerning labelling reveals a completely different epistemology. The knowledge associated with the use of a label, on the other hand, is an unproblematic source of valid knowledge and treats labelling as if it were the 'objective mirror of truth' (epistemic absolutism) (Klintman 2002:83). GMO advocates, arguing against labelling, cross over in another way: They argue that labelling is not meaningful because GM-free can never be verified in an absolute sense (due to the risk of adventitious or accidental presence of material of GMO origin). A mandatory label stating that certain foods are genetically modified can never perfectly reflect separated products. A label is not in touch with reality; it therefore lacks authority and is inherently biased and ecologically irrelevant (what Klintman refers to as judgmental relativism).

The next section develops the analysis of these groups in the context of the European Union and the European Commission. In a governance context, interest groups no longer function exclusively to persuade, but also become important partners of the public authorities in the making and implementation of policies. On the one hand, the thousands of interest representation groups in Brussels target the European Commission with position papers and input on the various issues on the agenda. On the other hand, the European Commission itself is trying to structure the dialogue and make it an essential element of democratic life at the EU level.

2.3 The European Union and interest groups

Food safety and GMO governance have developed as a policy area within the EU rather than in the context of national policy. Consumers typically play by the normal market rules rather than engage in the kinds of processes that categorize politics. Stakeholders, on the other hand, are an important part of EU policymaking. In contrast to citizens, interest groups in Brussels

are also knowledge- producing actors. There are thus good reasons for why this chapter continues to explore the interactions between organized interests and the European Union institutions.

2.3.1 EU policymaking and deliberative democracy

The analysis and understanding of the particular nature of the interactions between organized interests and the European Union institutions has had a prominent place on the research agenda of the past decade. EU interest group research is vast and covers theoretical perspectives such as international relations approaches, comparative politics, European governance and European democracy (Eising 2000; Tanasescu 2009:9). There are several reasons that have led researchers to deliberative theories: The very nature of the EU polity implies that powers are not divided according to the classical functions encountered in national settings. The polycentric nature of EU governance entails a need for actors to cooperate both in policymaking and in the implementation of decisions taken. This need to cooperate has led to a multiplicity of institutional settings that seems to favour deliberative problem solving: 'The EU is conducive to non-hierarchical consensus and deliberative supranationalism because it has established procedures both for securing broad debates as well as for reaching consensus in institutional settings – in councils, committees, conventions, etc.' (Eriksen & Fossum 2004 in Tanasescu 2009:30).

The current deliberative EU literature can be split into two main areas: a systemic level analysis and a micro level analysis (Tanasescu 2009:29–34). Within the systemic level analysis, authors have been taking a normative as well as empirical look at the EU. In this strand, the link between deliberative democracy theories and the European Union was not hard to make, taking into account the perception that the EU's democratic deficit stems to a large extent from secrecy, bureaucratization and lack of involvement of citizens in the decision-making. The ideas and procedures of deliberative democracy – putting emphasis on constructive discussion prior to taking a decision – are therefore seen as solving key problems of EU decision-making. Looking briefly into the micro level analysis literature strand, two main empirical

applications of deliberative theories can be observed: one concerning institutions and the other political or policy processes. Joerges (2006), for instance, argues that the process of European integration has led to a series of institutional innovations that question the traditional paradigms of bureaucracy. The deliberative qualities of the EU institutions' principles have also been analysed in relation to the Council of Ministers and to committees in the EU arena, apart from comitology committees. The Open Method of Coordination is a case in point. All of these studies point to a similar conclusion: there are deliberative elements embedded in the EU institutional structure. Nevertheless, this logic is often challenged by a technocratic one (in Tanasescu 2009:31–32).

Indeed, research by Skogstad (2003) on the regulation of genetically modified organisms (GMO) in the EU suggests that it is very difficult to achieve effective policy solutions in this kind of environment, where legitimacy does not rest on the basis of deliberation by fractions of a representative democratic system, but is claimed by relying on expert authority. This has led to an implementation deficit in the EU's GMO legislation, where Member States have refused to comply with resulting policies. Returning to the literature on interest representation, "little, if any, attention has been paid to the interaction between civil society and the EU institutions from a deliberative perspective" (Tanasescu 2009:34).¹⁸ Deliberative approaches have been used almost exclusively to study interactions between Member State representatives (e.g. in the Council of Ministers or in comitology committees), or between Member State representatives and the European Commission (in the framework of the Open Method of Coordination). 'No attempt has been made to look into the interactions between the European Commission and interest groups' – from a deliberative perspective (Tanasescu 2009:36). The following section will turn to empirical studies of the European Commission and the more rational-choice inspired literature on advocacy.

¹⁸ Interest representation has mainly been analysed using the pluralist and the neo-corporatist framework, and, more recently, with the help of theories such as epistemic communities (Haas 1992), advocacy coalitions (Sabatier 1998), policy network analysis (Kohler-Koch 2002) and exchange theory (see Tanasescu 2009).

2.3.2 The European Commission

The European Commission's legal monopoly over policy initiation gives it a crucial role in agenda-setting and policy formulation, which is why it has always been the most important target for lobbying activities. The European Commission holds the pen and drafts the text of the legislative proposal itself, and it is not easy to change the initial text of the Commission radically. This explains why most of the lobbying activity is directed at the Commission. The so-called 'non-comitology consultative committees' are identified as the most important access point for private interests. In contrast to expert and comitology committees, individual firms and interest groups are allowed to participate directly in these committees (Bouwen 2004:354). In comparison to national administrations, the Commission is a relatively small bureaucracy. This means that it is understaffed and lacks in-house expertise for a variety of policy domains (Tanasescu 2009:56).

Following the previous section on collective approaches to expertise, it is now important to make a distinction between information and expertise. Information in this study refers to knowledge about the consequences of or the need for certain policies. Expertise is the ability to assess information. It includes procedural knowledge on the unfolding policymaking process and the capacity to transform information into technically and legally workable policy decisions. Bureaucrats possess expertise but have incomplete information about the consequences of specific policies for specific constituencies. Regular contact with organized interests is one way of remedying this lack of information, by gaining first-hand information from the groups that would be most affected by a specific policy decision.¹⁹ Organized interests, on the other hand, are capable of providing detailed information on how policies generate costs and benefits for their constituencies (Beyers & Kerremans 2004:1123). Depending on the policy field, the information can be more or less technical. It is important that the information address the question of whether a policy proposal works; that is,

¹⁹ Politicians are in a slightly different position. They do not have the bureaucrats' expertise; nor do they possess the information organized interests have about the consequences of policies for the constituencies they represent (Beyers & Kerremans 2004: 1123).

whether it has a desirable outcome and whether it will be acceptable to the actors involved in the political decision process (Broscheid & Coen 2007:349). Another thing to note about the Commission is its relatively fragile basis of legitimacy. Directorates-General are not headed by elected representatives, nor are they tasked with implementing a democratically mandated policy programme. Moreover, the Commission's role in many areas is not taken for granted, or at least not in the way that national administrations tend to be. Rather, its role is continually being questioned, and its activities are frequently subject to demands for justification. Such challenges are not just symbolic. There is a continuous process of debate and decision-making on the Commission's scope of competence, and on the distribution of power between the Commission and other institutions. There is also considerable rivalry between different Directorates-General within the Commission. These factors are likely to encourage individual Directorates-General to find ways of enhancing their legitimacy in order to consolidate their position vis-à-vis other departments, especially in policy areas where there is some dispute over departmental jurisdiction. Involving organized interests in the preparation of proposals is thus a way for the Commission to increase input legitimacy, tackle democratic deficits and legitimacy criticism (Boswell 2009:191–192; Tanasescu 2009:55–56).

As the literature shows, early involvement of stakeholders in decision-making is also likely to increase the chances for smooth implementation, once the proposals of the Commission become binding legislation and need to be implemented. Furthermore, it is a legal obligation for the Commission to consult. However, the Commission is rarely approached as a collective body. Rather, interest groups maintain relations with one or several of its Directorates-General that are responsible for specific policy areas (Tanasescu 2009:79–80). This brings us to what the advocacy literature refers to as the 'demand-side of lobbying'; namely, the lobbyists themselves.

2.3.3 EU lobbying

‘In Brussels the key to successful lobbying is not political patronage, or campaign contributions, but the provision of *information*’ (Broscheid & Coen 2007:349, my emphasis).

Practically all collective groups, such as civil servants, farmers, environmentalists, industrialists, traders, customs officers, academics, trade unions, and professional associations seek access to the European Commission to get information about EU policies and influence their development, because these groups carry the costs of or obtain benefits from EU regulation (Majone 1996). But not only concentrated interests facing direct costs and benefits mobilize. Groups representing societal preferences not directly related to material self-interests may also organize mobilization of support or opposition. Researchers like Justin Greenwood have showed that it is now commonplace for a large number of firms, national associations, regions, and political, economic and legal consultants to have offices in Brussels (e.g. Greenwood 2007). According to EU statistics, there are 1108 registrants in the EU Transparency Register. 545 of them are in-house lobbyists and trade/professional associations (professional associations, trade unions, companies and groups), 309 NGOs and 65 think tanks, research and academic institutions (Europa 2011c).²⁰ As pointed out earlier, the Commission is the primary focus of much of the lobbying activity. However, access to the Commission, despite wider consultation and public interest group funding, continues to be biased towards business interests. There are also significant differences with regard to interest representation between Commission Director Generals. DG Enterprise and Industry works with the largest number of interest groups, while DG Research has most arenas for stakeholder consultation. Interest representation can also be expected to be high in DG Enterprise, Environment and SANCO, since this is where most EU legislative activity has occurred in the last five years (see Coen & Richardson 2009). A great deal of work has been done on advocacy

²⁰ Both the European Parliament and the European Commission have previously had lobby registers. In November 2010, a joint register was agreed upon and has been available online since June 2011.

activity in certain policy areas²¹ and on various types of actors active in the EU policymaking arena²². The way interest groups frame policy issues differently, depending on which EU institutions they approach, confirms this. For example, the R&D pharmaceutical companies presented strong global competitiveness arguments and rationales for long patents to the Commission, but framed the same issue in terms of the impact on regional employment and education when addressing the European Parliament (Coen 2007:340). Business groups have a comparative advantage in terms of organizational capacity, financial resources, expertise and information. Nevertheless, it is important to emphasize that power cannot merely include a focus on formal position and resources. Compared to business groups, NGOs may be strong in symbolic resources but weak in financial resources. Moreover, because framing involves both the provision of information and of normative claims, financial or material resources are not necessarily the most important factors influencing policy debates and, ultimately, policy outcomes.

Environmental NGOs (many of whom enjoy greater public legitimacy than academic scientists who are perceived to be closer to industry or government) are often portrayed as having counter-expertise; namely, alternative accounts to those offered by industry and regulatory agencies.²³ Literature in environmental sociology, natural resource sociology and social movements has shown that green groups cannot merely be dismissed as lay experts or counter-experts, and especially not as anti-science. It is clear that science still forms the main legitimacy for environmental arguments. Green NGOs use classical, peer-reviewed science as a powerful ally because of its neutrality and legitimacy. NGOs are consequently concerned to build and protect a reputation for using such 'sound science' and are rigorous about

²¹ Electronics industry (Cawson 2003); telecommunications (Schneider 1992); biotechnology (Greenwood 1994); fruit trade policy (Pedler 1994); aviation (Van den Polder 1994); transport (Stevens 2004); postal policy (Campbell 1994), and the environment (e.g. Boyd 2002; Long, Salter & Singer 2002) (in Mahoney 2008:6).

²² Business/economic groups (e.g. Grossman 2004); trade associations (Martin & Ross 2001); farmers (e.g. Bush & Simi 2001); regional interests, professional lobbyists or consultancies (in Mahoney 2008:6).

²³ A typical example is Greenpeace's challenge to official arguments – agreed upon by Shell and the UK government – about the advisability of dumping the Brent Spar oil platform in 1995 (Yearly 2000:106).

the evidence they use to inform arguments and advocacy. However, even peer-reviewing may not work for their own credibility. Citing peer-reviewed papers will not necessarily validate their arguments in the eyes of their critics because NGOs will automatically be cast on 'that side of the divide'. In line with the epistemic flexibility mentioned before, NGOs sometimes claim peer-reviewed science fails quality controls, which is why NGOs also fund 'advocacy science'. This involves hiring experts to undermine each other's arguments (Horlick-Jones & De Marchi 1995 in Eden et al. 2006:1065). Some NGOs may conduct environmental consultancy themselves, thus both producing and selling knowledge. As well as using contextualized knowledge from other sources, NGOs have increasingly sought to produce the kind of policy-relevant knowledge that 'pure' science is failing to provide them with.²⁴ However, NGOs are in general highly dependent upon the original research of others (Yearley 1993, in Eden et al. 2006:1067).

Formal business associations have a historic role as the largest, the most significant, and the most encompassing 'sector' of business interests' representation. The most visible business actors, whose purpose is primarily dedicated to addressing the EU level, are formal EU-level business associations. There are different organizational forms of business interest representation to the European Commission: companies, associations and consultants. For this thesis, associations are the main interest. European associations are specialized in building consensus positions by channeling the different opinions of their member associations. They serve as information brokers and act as interest intermediaries for their members. This extensive consultation mechanism allows the European associations to present an encompassing European perspective on their sector and provides good quality information about the European encompassing interest. Nevertheless, some research shows that associations at national or EU level are not as good as individual firms at providing expert knowledge because they have fewer resources and have to deal with a wider range of issues. It has become a kind of habit throughout the EU institutions to view trade

²⁴ One example is the laboratory for Greenpeace International, based at the University of Exeter, England. This is the only lab to be directly affiliated with Greenpeace and to undertake scientific analyses on commission for Greenpeace (as well as for other customers).

association officials as ‘industrial civil servants’ who lack the expertise needed to inform policy formulation (Greenwood & Webster 2000:5). Because of their multi-layered organizational structure, associations are too distant from the market reality. The three-layer structure of the European associations’ organizational form – EU level, national level, company level – also hampers the efficient provision of access goods (Bouwen 2004).

2.3.4 Consultation

The idea about participation and deliberation is embraced by several international institutions who view it to be a way to obtain desirable governance (EU, IMF, WB, OECD, etc.) (Papadopoulos & Warin 2007:456). Participation can take place in different forms and at different levels: it can involve the public as well as stakeholders, namely organized interests such as NGOs and industry. For instance, the public and/or stakeholders can be involved in rule-making processes in which they have actual decision-making authority. They can also operate as advisors by sitting on boards of decision-making bodies, or be involved in more distant processes of knowledge generation. In all cases, the involvement of actors from society is expected to deliver a useful contribution to the policy-making process in some way (van de Kerhof 2006:279). Meadowcroft (2004) notes that stakeholder processes are more oriented towards representation than transformation of established interests. The stakeholder model does not ask representatives to go beyond the pursuit of particular group interests and take the perspective of all affected. Several typologies have been developed to understand different approaches to stakeholder consultation: They can be based on (1) the degree to which stakeholders are engaged,²⁵ (2) the nature rather than the degree of engagement,²⁶ (3)

²⁵ Arnstein’s ladder of participation (Arnstein 1969)

²⁶ E.g. Rowe & Frewer (2000).

theoretical principles,²⁷ or (4) the objectives for which participation is used. Another example is Oels (2007) who classifies stakeholder dialogues according to three main purposes: The dialogues for science have the aim of clarifying and improving knowledge. Those for policymaking are intended to garner political acceptance after deliberations. Finally, the aim of stakeholder dialogues in management is to strengthen implementation.

Even though the European Commission has always consulted, in a more or less structured way, it was first during the 1990s that it started to consider its interaction with third parties in a more consolidated way. However, there is no unitary approach of the Commission to consultation, but rather DG-specific practices (Tanasescu 2009:79–80). Stakeholder participation has been explored to some extent in the field of EU policy-making processes. As an example, Tanasescu (2009:80–85) identifies several consultation tools relevant for the interaction between the Commission and stakeholders, ranging from online questionnaires to expert groups.²⁸ The latter can be consulted by the Commission at any stage of the policy cycle, and their role is limited to providing advice. This means that, unlike comitology committees (which are also made up of experts, but representing Member State administrations), they have no formal decision powers. Expert committees have attracted mixed reviews. On the one hand, authors point

²⁷ There is a general agreement that theoretical criteria for analysing participatory processes can be divided into those of process and outcome (Stoll-Kleemann & Welp 2007, chapter 4). Process-criteria are typically participation/inclusion, control/accountability and deliberative quality. Outcome-criteria, on the other hand, are usually different types of effectiveness (policy, institutional, compliance, and environmental effectiveness) (cf. Scharpf 2001; Skogstad 2003; Bäckstrand & Kronsell 2010). One important conclusion can be drawn regarding the theoretical criteria for evaluating stakeholder consultation: Theory-based analyses are often grounded in the ideals found in deliberative democratic theory and the Habermasian ideal speech situation, which highlights the need for fair and competent proceedings and reaching consensus. More importantly, theory-based criteria tend to focus on procedural criteria (e.g. inclusion, participation, etc.). Yet more recently, efficiency and legitimacy have been added to the list of theory-based criteria (cf. Oels 2006:145).

²⁸ An expert group is, according to the Commission definition, ‘a consultative entity comprising national and/or private-sector experts set up by the Commission to provide it with expert advice. Its main task is to advise the Commission and its services in the preparation of legislative proposals and policy initiatives as well as in its task of monitoring and coordination or cooperation with the Member States. These groups can either be permanent or temporary (Tanasescu 2009:84).

to their constructive role in EU governance. The committees help build the Commission's position by providing the institution with technical and expert advice. On the other hand, many voices have raised concerns regarding the lack of transparency in the system and the power of certain expert groups in the decision-making process. Stakeholders are also consulted in impact assessment procedures at the EU level. Impact assessments have the purpose of identifying alternatives to regulation, understanding the 'true' costs and benefits of regulations, avoiding regulatory failure and increasing the accountability of regulators (Tanasescu 2009:185). Consultation has also been examined in terms of arenas for stakeholder participation. These arenas are particularly important in a field like food safety and GMOs, for which policy disputes cannot be solved by reference to scientific and technical expertise alone. In this field, as in few others, the boundaries of politics, society, nature and economy are temporary and repeatedly redrawn (Gottweis 2003). Borrás (2005) concludes that consultation is underdeveloped and that participatory procedures involving stakeholders are adhoc and informal. Recently, Everson and Vos (2009) have nevertheless identified the European Food Safety Authority (EFSA) and its Stakeholder Platform as an example of stakeholder participation in risk assessment, and the Advisory Group of the Food Chain and Animal and Plant Health as an example of participation in risk management. In the field of EU trade policy, stakeholder access remains uneven. Even though policymakers now acknowledge the right of NGOs to contribute to the process, outside groups 'have drifted away, disaffected' (Jarman 2008:31). Studies from this policy field (trade) also show that the Commission has retained a great deal of the power to set the dialogue's agenda,²⁹ and that dialogues fail to bring about deliberation (Jarman 2008:30). There is a danger that the consultative process could be reduced to tick-box legitimacy: 'the ability of DG Trade to articulate that it has held how ever many meetings with how ever many stakeholders and that it paid for how ever many of them to travel from outside Brussels' (Fazi & Smith 2006, in Jarman 2008:28). The conventional wisdom behind involving both

²⁹ It chooses the timing of meetings, retains the chair in them and decides which officials should attend. These limitations have caused some NGOs to lose patience with the dialogue process as it stands (Jarman 2008).

business groups and NGOs in trade policymaking is that businesses provide technical expertise (addressing the knowledge deficit), while NGOs leverage constituencies (addressing the legitimacy deficit) (Jarman 2008:27). Nevertheless, results of civil society dialogues stand in contrast to common expectations of business interests having more expertise than NGOs (Dur & Bièvre 2007, in Jarman 2008).

The Commission's preference for policy forums are a function of the informational demands, number of interests and its capacity to process interest groups' inputs, balanced against the 'input' and 'output' legitimacy requirements of the policy domain. Thus, in highly regulatory domains, where technical policy inputs define policy legitimacy, Broscheid and Coen (2007) observe that the Commission creates forums and committees to reduce lobbying activity and manage the policy process. The rationales and imperatives for participatory engagement beyond the Commission and beyond the EU can be categorized under normative, substantive and instrumental arguments: Normative – because it is the right thing to do; substantive – because it leads to better decisions; and instrumental – because it facilitates particularly favoured decisions (Stirling 2008). However, there is growing concern that stakeholder participation is not living up to many of the claims that are being made (Bäckstrand et al. 2010). It has also been argued that participatory processes can become 'talking shops' that create ambiguities and delay decisive action. For some, the idea of a dialogue might appear controversial or even dangerous.³⁰

³⁰ Since the days of Schumpeter (1942) and Hayek (1944), several scholars have objected to the notion of participation. As an example, it is argued that it is impossible for participants to give up their core assumptions and that dialogue will therefore yield an escalation of latent conflicts. Since institutionalized voices, i.e. vested interests, have a huge advantage in terms of information and communication skills, a dialogue might also lead to a situation in which already powerful views get even more attention (Hisschemöller 2005:200–201).

2.4 Conclusion: Guiding concepts

In this chapter, literature from the fields of sociology, political science, and science and technology studies have been reviewed to develop an interpretive approach to governance and knowledge production. Certain concepts helpful to the examination of my research questions have emerged: frames, boundary-work and expertise. An important observation is that frames and framing can be applied on both a structural level and in relation to agency/stakeholders. The next step, to be undertaken in chapter 4, is to develop a framework that combines these two levels and to put together the essential conceptual pieces.

CHAPTER THREE

An analytical framework

Titscher et al. (2000:13) write that the quality of research results can be no better than the theoretical considerations that underlie the data collection and the methods derived from the theoretical approach. Theories define the framework for methods, and methods determine the conditions for concrete research operations. Chapter 2 aimed at reviewing literature and introducing the concepts and theories that will guide my thesis. The objective of this chapter is to synthesize these into an integrated analytical framework; one that will be used to illuminate the empirical material and guide the analysis and discussion. The first part of the present chapter is a more thorough discussion of certain ideas presented in the previous chapter. After this broad introduction, the framework will be presented.

3.1 Interpreting frames along various lines

From the review of literature undertaken earlier, it is clear that framing can be defined and interpreted in different ways and along various lines. The link to knowledge claims and expertise, and the focus on institutions as well as interest groups are not self-evident. The purpose of this section is thus to bring together the main arguments and make some important clarifications regarding: (a) structure and agency, (b) expertise and knowledge, (c) power (d) and identification of frames in textual data.

First of all, the literature review demonstrated that frames operate on various levels: the micro level refers to framing processes by individual actors (e.g. the micro-sociological approach by Goffman); the meso level refers to

collective action and controversies in a political context (e.g. meso level political sociology by Schön and Rein or Gamson), and the macro level to a whole society, nation or even supranational entities (e.g. Jasanoff 2005). In this thesis I interpret frames in the same way as suggested by Rein and Schön (1996) – as ‘underlying structures of belief, perception, and appreciation on which people and institutions draw in order to give meaning, sense, and normative direction to their thinking and action’ (Schön & Rein 1996:23). Frames are models helping actors to organize their experiences and give direction to their responses. Frames function in the plural, and often there are competing frames, selecting different aspects of a policy field or policy controversy as salient. When each competing frame gives different directions concerning courses of action in social settings, we can also distinguish their diverging logics; their projections of preferable rationality of governance to be followed. Based on these considerations, the present work makes an important distinction between two levels of analysis: institutional frames and issue frames. Frames of governance rationalities operate at institutional level, namely EU level, and can be identified by exploring institutional discourse. Issue frames, on the other hand, operate at meso level and refer to the discursive reasoning of interest groups concerning policy responses. Both types of frames organize experiences and give direction to policy and regulatory responses. Nevertheless, agency is more clearly expressed in the issue frames, in which the discourse of interest groups is strongly focused. While a discourse analysis will not be carried out in this thesis, the approach to frames is relevant for the same reasons as discourse analysis. Studying frames on two different levels will make it possible to explore a dialectical relationship: A two-way relationship in which the discursive events are shaped by actors, institutions and social structures, but that also shape them (Fairclough 1995, in Titscher et al. 2007:147).

An important dimension of frames consists of knowledge claims and expertise. Knowledge is here understood as the epistemic dimension of frames; something that is embedded in them. It is clear that the production of knowledge and expertise is contingent upon a variety of social processes, involving the framing and drawing of boundaries around knowledge; the discourse used to express it; the institutions and social groups in which it is sought and presented; and the political purpose to which it is put. The sourcing of expertise and the drawing on certain knowledge claims are thus

an important element for the understanding of how frames work. However, the layperson–expert divide is of little relevance in this work, since all the actors that will be scrutinized are not laypersons but possess some type of professional knowledge. As Collins and Evans write: ‘it is no longer between the class of professional accredited experts and the rest; it is between groups of specialists and the rest’ (Collins & Evans 2002:270). Moreover, the interest groups analyzed here do not represent the public in the same manner as Wynne’s sheep farmers. Interest groups are organized interests and represent different sets of specialists, each with something to contribute. However, this does not help us to understand the nature of expertise and/or how it relates to frames. In fact, neither the STS-literature nor the political science literature on advocacy offer any concrete help regarding how to operationalize the ideas about framing and expertise. We need to understand that the use of expertise is not just a means of adjusting policy, but both a cognitive and symbolic resource for underpinning regulation and bolstering the authority, substantiating preferences or justifying the action of both public authorities and interest groups involved in framing. This brings me to the next discussion, namely power.

On a general level, frames are understood as elements in a power struggle – because, ultimately, frames compete with each other to achieve dominance in policy decision-making. Certain frames become powerful only when adopted or enacted by a host of relevant decision-makers and interest groups. Furthermore, frames can be understood as both conduct-shaping and context-shaping (Hay 2002): Frames are context-shaping because they define what is understood as socially, politically and economically feasible in a regulatory context. However, successful frames are also conduct-shaping because they have a direct visible effect, e.g. translating certain frames into legislation.

The last point for discussion and clarification concerns the identification of frames in textual data. This is particularly important since frame analysis is performed in a variety of ways. In communication studies, a media-package is often put together in which the analyst looks for typical framing devices such as metaphors, catchphrases and visual images. Researchers in sociology, on the other hand, have put together a conceptual framing-package. As an example, Boström and Klintman (2008) examine ‘framing aspirations’ in green labelling by combining an analysis of frame resolution, boundary framing, frame extension, and frame reflection (Boström &

Klintman 2008). In contrast to these two approaches in which conceptual frames help the researcher to interpret the data, others have a more inductive approach to framing analysis. Instead of applying a conceptual framing-package, they identify frames in the data and name these themselves. This approach has similarities with discourse analysis and language-based studies that are not primarily theoretical but derive their theorizing inductively, from empirical case material. It is thus possible to speak of a more deductive and inductive approach to frame analysis. Based on the research questions for this thesis, which operates at different levels of analysis, it will not be possible to choose *one* framing-package. The three core framing tasks suggested by Snow and Benfords (1988) are also rejected as analytical concepts. Empirical analysis under the heading of, for example, a 'prognostic frame' is not seen by myself as sufficient, since this simply means that the researcher has identified a proposed solution. The simplicity of such a conceptual package is the reason why it should be used as basic coding tool (for the empirical material), rather than analytical framework. Since it would be possible to apply many framing concepts to the empirical material, another point shall be made: The importance of avoiding the temptation of sorting out and naming too many frames (e.g. Beland Lindahl 2008), or analysing the empirical material through the lenses of too many framing concepts (e.g. Boström & Klintman 2008), because this adds another layer of complexity when the initial purpose was to reduce it.

The following part of this chapter will be devoted to developing the analytical framework for empirical analysis of framing dynamics. The framework will help to identify structural as well as issue frames and help to analyse the competition among them.

3.2 Frames of governance rationalities

My thesis will follow the work by Benford (1997:413) and distinguish institutional schemes from frames that focus more on content. Institutional frames are understood as underlying structures that imply a degree of regularity (Schön & Rein 1996:88). Combining elements from political

science and research on social movements makes it possible to develop the theoretical case for defining frames as governance rationalities. As stated in the previous chapter, an interpretive approach to governance means a focus on the underlying logic or rationality behind it. This implies the need to study different types of institutional discourse and different modes of policymaking. Instead of using frames as a loose perspective and analysing institutional reasoning more exploratively (e.g. Jasanoff 2005) (and thus remain heavily dependent on the creativity of the researcher), governance rationalities will here be identified in a more visible and systematic way.

The term 'rationality' arouses a wide range of associations. This concept has its roots in philosophy and is discussed in various academic disciplines, such as economics, sociology, psychology and political science. My intention is not to explain what rationality is, by analyzing rational processes according to, for instance, Max Weber, Anthony Giddens or Jürgen Habermas (for this turn to e.g. Bolan 1999). Rather, I will use three types of rationalities in environmental governance to analyze the logic behind governance in the EU. Governance rationalities are very important, as they guide the crafting of formal institutions governing EU food safety and GMO all the way from their goal statements, which count in the policy debate, through to the types of favoured policy instruments. They also shape the way that knowledge is used to guide institutional frameworks. Institutions, in turn, can reinforce certain rationalities by setting boundaries and rules which constrain the goals and function of knowledge systems, for example by defining the directions for the pursuit of new knowledge. Rationalities are often several, relatively powerful governance rationalities expressed in society. Over time, these logics wax and wane, with different ones becoming dominant. I refer to this as a frame conflicts. This thesis builds upon scholarly work on environmental governance (Bäckstrand et al. 2010) and develops the framework for the case of three types of frames of governance rationalities: administrative, economic and deliberative rationality.³¹ The core assumption behind these rationalities is that it is irrelevant whether hierarchies, markets or networks govern, but instead the kind of rationality that informs the governing. Rationalities thus draw attention to different ways through which governance is made thinkable and

³¹ Rationality/rationalities will be used synonymously with logic/s.

operable – the 'how' of governance. This approach from scholars in environmental governance is similar to the way that frames have been used to analyse institutional thinking in the field of STS-studies (e.g. Jasanoff 2005). As stated earlier, I am not merely interested in what expertise actor *A* possesses and how it differs from that held by actor *B*. Rather, the aim of the present work is to explore the notion of expertise embedded in frames that, in turn, seek to influence policy debates and the direction of legislation. It will therefore be necessary to conceptually integrate expertise together with the three types of governance rationalities offered by Bäckstrand et al. (2010) in the field of environmental governance. Altogether, this represents a new, more visible and systematic approach to the study of institutional frames.

3.2.1 Frames of administrative rationality

Administrative rationality is a governance logic associated with the bureaucratic and expert apparatus of governments. In the classic Weberian sense, problem- solving takes place in a hierarchical organization that tends to separate complex problems and leave them in the hands of experts, civil servants and bureaucrats who are believed to have the information, insight and knowledge to transform political will into action (Dryzek 2005:75). Governance is carried out by administrators and experts through rules and principles. According to this concept, authoritative institutions and their personnel, who are perceived as experts in their field, will make the most informed decisions for the collective good. Consequently, governance is simply about implementing the decisions at the most appropriate level by administrative agencies. Administrative rationality assumes that this is the optimal approach to resolving problems and changing behavioural patterns, as politically appointed administrative staff are the best informed (they have the expertise), legitimate (governments are, after all, democratically elected), and most effective. Political scientists have pointed out the flaws of administrative rationality: according to one point of criticism, administrative rationality cannot deal with long-term problems. Further, difficulties of implementation are claimed, due to for example street-level bureaucrats, the

municipal veto, civil disobedience or illegal behaviour (Dryzek 2005: 92–96). Administrative rationality has also been criticized as being inadequate for solving environmental issues due to governance, legitimacy and implementation deficits (see Bäckstrand et al., Chapter 1). Despite all these limitations, the tools applied in administrative rationality, such as expertise and rule of law, remain relevant in environmental governance (in Bäckstrand et al. 2010:31).

The frame of administrative rationality is encompassing and has some resemblance to the frame of deliberative rationality. Both of these frames focus on the procedures for decision-making. The logic is, however, disparate. The frame of administrative rationality is limited in scope, as it focuses on bureaucratic and expert-driven legal procedures. Important keywords are: institutions, legal rules and principles, public administration and decision-making. Hierarchy and shadow of hierarchy are two important terms used to describe this type of rationality. Shadow of hierarchy refers to legislators who are having shadow influence on self-organizing forms like dialogue processes and stakeholder participation. It is an important encouragement for non-state actors to engage and become institutionally committed to reach common goals. Shadow hierarchy provides actors with incentives for cooperation, yet incentives can be weak or strong, encouraging or directly threatening. As an example, shadow of hierarchy can take the form of policymakers threatening market actors with legally binding rules to make them commit to voluntary standards. This logic thus bears a probabilistic element to ensure the effectiveness of policy performance (Héritier & Lehmkuhl 2008). There is not one but *two* types of expertise embedded in this frame: scientific expertise and verifying expertise.

Drawing on insights from Boswell (2009), the first type is here conceptualized as expertise relevant for policy debates on risk. Scientific expertise in areas of risk has particular features. Rather than relying on practical knowledge and experience, risks are constructed and vary according to often highly abstract expert knowledge. The result is that political debates on areas of risk become far more susceptible to influence from science. Expert knowledge has a privileged role in defining the scale and nature of phenomena associated with risk, and how to best address it. The purpose of this expertise is to reduce uncertainty about policy impacts (Boswell

2009:92–94)³². The second type of expertise embedded in this frame is termed verifying expertise and is legalistically bureaucratic (e.g. based on legislative technical arguments). Verifying expertise refers to cases where new research findings are marshalled to support – or more frequently cast doubt on – the record of governments in relation to their stated goals. The main condition is that new knowledge demonstrates the success or shortcomings of current policies or practices. The findings will not necessarily be in the form of research. This expertise may come from methods of data collection that are structured to ascertain if certain targets are being met (Boswell 2009:96–97).

3.2.2 Frames of economic rationality

The call for new forms of governance has put much hope in governance forms that rely on economic rationality. Market liberals are deeply sceptical to interventions and centralized management of environmental problems, except for establishing the basic rules of markets and property rights (Clapp & Dauvergne 2005: 4–7). Economic rationality relies on the price mechanism and the making of contracts; it is assumed that actors respond to costs and benefits by maximizing their self-interest. Depending on the costs or benefits, they will change behaviour accordingly (Dryzek 2005: 121–42). The focus on the role of economic costs and benefits in inducing change creates certain dilemmas. One relates to problems of setting the right price. In addition, economic rationality only works if the subject of governance is reducible to an economic value. Economic rationality also relies on sensitivity to prices, and thereby raises ethical issues about how groups and individuals are disproportionately affected by price changes. Market principles in environmental governance have become increasingly important as a governance form and are particularly praised by economists (Stern

³² Yet, as noted in the previous chapter, such knowledge claims do not go unchallenged. Areas of risk are almost by definition characterized by contestation of the validity of scientific claims. And different users of knowledge – operating within business or NGOs – can instrumentalize new research findings to substantiate certain claims about the phenomena in question (in Boswell 2009:92–94).

2002). Governments, too, have noted the positive effects of economic incentives for environmental problem-solving and have increasingly employed such means. Consequently, it is possible to distinguish between an economic rationality used in the market form and one that is endorsed in the hierarchical governance form (by states and supranational institutions). Both forms are nevertheless guided by the same logic of economic rationality (in Bäckstrand et al. 2010:32–33).

The frame of economic rationality is much more distinct than the other two. The standard economic approach emphasizes the potential of economic incentives and sanctions to produce desired outcomes. A primary economic rationale is to reduce barriers to trade that is impeded by regulators. Supporting factors to facilitate global economic integration and profit maximization are important. Important key-words for this frame are: market expansion, the internal market, free movement of goods, freedom of choice, trade and the private sector. The rationale in this frame can be, but does not have to be, typical neo-classic. Despite a strong focus on material interest, rational agents and individual choice, this frame should not be understood as coming from the standard rational egoist/profit maximization version of the economic model. Frames of economic rationality can include altruistic values that are consistent with profit maximization. Social norms and ethical values have a strong influence on this frame, yet frames of economic rationality do not integrate these concepts, if the costs are too high. Normative considerations are always calculated against economic costs. That is why regulatory changes are assessed in relation to economic cost, rather than inclusive procedural ideals for decision-making (as in the frame of deliberative rationality).

The type of expertise embedded in this frame also focuses on verification, namely estimating the success and failure of policy and regulation. Nevertheless, verification is made here from an economic understanding rather than a legal point of view. Data, statistics, scientific research, but also lay expertise, are used to estimate regulation in relation to trade and competitiveness. But, as said earlier, expertise embedded in this frame is not free from judgments about a wide range of issues. The expertise going into economic modelling – such as economic forecasting, for instance – comes from many different sources (Evans 2007). Economic expertise may also come in the form of economic impact assessment and cost-benefit analysis.

3.3.3 Frames of deliberative rationality

A more recent trend in discussions on effective environmental governance is the call for increased participation and democratization of existing governance institutions and forms. This debate takes place within liberal democracies where institutions such as parliaments, political parties, as well as constitutional rights such as the right of free speech, are already in place. Hagendijk and Irwin (2006) argue that deliberative ideals have taken hold in the governance of most EU countries, and Baber and Bartlett (2002:55) find 'empirical grounding in an inventory of wide-reaching institutionalizations of deliberative environmental democracy'. This deliberative turn, as Bäckstrand et al. (2010) call it, has influenced governance in democratic countries in the North, where a deliberative rationality is evident in the governance of environmental and sustainability issues. A cornerstone of deliberative rationality is that participation, deliberation, accountability, communication, and multiple actors' engagement in problem-solving and decision-making, will lead to more effective environmental governance. Deliberation is often associated with the ideal speech situation and power-free discourse postulated by Jürgen Habermas. However, my notion of deliberative rationality is broader than consensus and transformation of preferences and also covers process criteria like participation.

In line with economic rationality, deliberative rationality is seen as a better alternative and a response to the inadequacies of administrative rationality. Accordingly, it is argued that the liberal democratic state and its associated institutions have largely failed in implementing policies and ameliorating environmental problems. The Achilles' heel of deliberative rationality is whether a deliberative process can also lead to decisions that are environmentally effective. As often pointed out, the empirical foundation upon which the question of whether deliberation leads to more effective governance, remains weak. Moreover, there is a general critique of deliberative democracy as the 'new tyranny of participation'. In fact, the theory of deliberative democracy often clashes with the practical experience of deliberation processes. For instance, consultation often takes place after a decision is made and thus participation remains symbolic (in Bäckstrand et al. 2010:33).

The frame of deliberative rationality is – as clearly shown – procedural. Nevertheless, the procedural characteristic of this rationality is clearly

different from the administrative one. The door is not closed to outside participants – instead, the rationality is based on an inclusive dialogue between multiple actors engaged in problem-solving processes. Furthermore, deliberative rationality does not only focus on the inclusion of a broad set of actors; it also regards information sharing and communication as imperatives. The process must also be transparent, so that it can include a whole range of knowledge (for example lay knowledge), rather than being limited to scientific knowledge. Important keywords for this frame are: participatory mechanisms, stakeholder consultation, inclusive dialogue and transparency.

The expertise embedded in this frame is procedural and concerns how to steer in the best way. It has a more pluralistic conception of risk and is less authoritarian in its epistemology. This, however, does not necessarily imply a more democratic view of knowledge in the sense that it would substantially downplay, for instance, the distinction between experts and the lay public. Some suggest that reasoned rationality should be practised by elites, albeit from various fields (Skogstad 2003, in Klintman & Kronsell 2010). Indeed, a deliberative rationality is argued to have an effect on the outcome of decision-making, thus leading to more policy effectiveness. In that sense, this frame is – just as the other two – instrumental, because it seeks to avoid regulatory failures. The expertise embedded in this frame also shares some similarities with the frame of economic rationality, in that it may lead to a better functioning market. Yet, while the economic frame pushes for a better functioning market through norms such as competitiveness and trade, this one pushes for a better functioning market through procedural norms leading to more policy effectiveness. Of course, the knowledge here is not always expertise in the sense defined by for instance Collins and Evans (2002). Expertise may instead be derived from practical experiences, anecdotes from practitioners, or the observation of good practice in other policy areas. This makes the use of patterns of knowledge rather different from scientific expertise. However, attempts to steer complex systems will also frequently require theoretical knowledge (e.g. models of economic processes) (Boswell 2009:95–96).

Rationality as used in this study refers to both means and ends. As an example, actors may package a frame according to one type of rationality in order to push for another one. This will become clearer when applying this theoretical framework on the empirical material.

3.4 Issue framing

The second approach to frames in this thesis focuses on the more concrete content of frames (Benford 1997). While the previous approach to frames understands them as institutionalised thought styles (Schön & Rein 1996), this one understands frames as a boundary: 'a frame can be seen as a boundary, it fixes the attention and demarcates what is inside from what it outside' (Schön & Rein 1996:89). Frames then have a resemblance to the concept of boundary-work that describes the creation and maintenance of essential social demarcations. In other words: the process by which framing has influence is through the imposition of boundaries. And as Jasanoff (2005) shows, boundaries are everywhere: Regulatory authorities make legal boundaries between safe and unsafe and provide legal answers to the question 'how safe is safe enough'? In a similar way, interest groups frame policy disputes and draw boundaries around what they perceive as legitimate and illegitimate knowledge claims.

As conceptualized above, expertise and knowledge claims can have different types of logic: economic, administrative and deliberative. Even though the drawing on expertise is important to support different frames, expertise does not always have the purpose of adjusting policy output. The sourcing of expertise can also have more symbolic functions – to substantiate or legitimize policy output. Schön and Rein suggest that actors' construction of frames can be explored through stories and storytelling. Each story is seen as constructing a view of social reality through a complementary process of 'naming' and 'framing'. Things are thus selected for attention and named in such a way as to fit the frame constructed for the situation. According to these scholars, it is through the 'naming' and 'framing' that the stories make the 'normative leap' from data to recommendations, from facts to values, from 'is' to 'ought'. But how, then, are issue frames identified?

My approach to issue frames can be explained as working along two dimensions: frontstage and backstage. The frontstage dimension generally receives most attention and involves the way frames are presented and made vocal: the 'naming'. Two concepts will be explored here: frame extension and boundary framing. Frame extension in this thesis has some resemblance to the concept used by Snow et al. (1986): it refers to moving the boundaries outwards, towards a more inclusive frame (e.g. by drawing on

policy lessons from abroad). The second concept is boundary framing and refers to the exclusion of certain perspectives/claims in or between frames (e.g. by separating knowledge claims in relation to economic impacts from claims about the workability of current policy). These two concepts are helpful to describe the creation and maintenance of essential social demarcations. Nevertheless, they do not conceptualize questions of expertise.

This brings me to the backstage dimension of framing: the sourcing of information. In order to make the epistemological dimension of frames explicit – the drawing on expertise – I will incorporate the concept of intertextuality, which is most commonly understood as the shaping of texts' meanings by other texts. This concept will act as the bridge between frames and expertise. By studying intertextual links (the relationship between texts), it will be possible to understand the type of information and expertise that is embedded in frames.

3.4.1 Drawing boundaries and intertextual links

The concept of frame extension refers to moving the boundaries outwards towards a more inclusive frame. Frame extension adds to a frame certain issues or dimensions which were previously defined irrelevant for it. The process occurs when insiders seek to push forward the frontiers of their authority into spaces already claimed by others. The main goal of frame extension is to make the frame more attractive to its potential adherents with different priorities. For instance, a group primarily concerned with environmental issues could include a platform against nuclear energy and frame its risks as environmental ones. Frame extension often comes at a cost, though, as it can weaken the appeal of a frame by clouding the essence of its contents (Snow & Benford 1988:478). Frame extension is here operationalized by posing the following questions to the empirical material: How do stakeholders seek support in order to establish and legitimize their own position? How do stakeholders link their own framing to other frames perhaps already accepted and authorized? How do stakeholders legitimize their own position by drawing on other, already accepted, conclusions? What efforts are made by stakeholders to establish trust for their own

cognitive map and to overthrow others? How do stakeholders try to 'scienticize' their cause; viz., increase its legitimacy and credibility by drawing on research and expertise.

The concept of boundary framing (Hunt et al. 1994; Silver 1997) refers to the creation of boundaries and the exclusion of certain perspectives in or between frames. It denotes processes where movements and counter-movements construct their separate framings, often as 'good' versus 'bad' or at least as two distinct categories. Expulsion occurs when scientists exclude deviants, pseudoscientists, fakes and other heterodox individuals or groups from the authoritative cultural space occupied by 'real' science. Those excluded typically give the impression of being 'real' scientists, and may believe themselves to be so. But insiders define them as poseurs, illegitimately exploiting the authority that belongs only to bona fide occupants of the cultural space for science. Boundary framing is here operationalized by posing the following questions to the empirical material: How do stakeholders try to raise walls to protect their own framing against the frames of competing stakeholders? How do stakeholders protect themselves from the influence of other stakeholders? Is there a denial of certain stakeholder perspectives? Which arguments are excluded as deviant and why? How is someone's superiority of knowing protected?

As explained above, the study of issue frames does not only imply the study of inward and outward boundaries – it also implies the study of intertextual links. Intertextual relations in public discourse are a form of mediation through which claims produced within one domain are taken up in other domains, and thereby travel across domains (Fairclough 1993, chapter 4). In this thesis, intertextuality is used in a rather practical manner, to look for the sources of expertise in texts. This concept will help to identify which text is taken up to produce frames and to provide credibility for the drawing of boundaries. Intertextuality is thus a practical tool to use for approaching sources of knowledge (which texts?) and then to analyse their rationale (economic, administrative and/or deliberative).

A focus on institutional frames as well as issue frames will not only help to answer the research questions for this thesis. It will, moreover, further the understanding about structure and agency:

'We readily acknowledge the need for including the context in which movements operate in a systematic way in order to explain the development and outcomes of collective action...Theoretically, we want to integrate the internal

processes of social movements with the analysis of the context in which they emerge' (Gamson & Meyer 1996:277).

Combining frames of governance rationalities with issue frames will help us to understand how ordering takes place in concrete policy debates.

3.5 Conclusions

This chapter has developed frames as an overarching conceptual framework for the present work. Frames of governance rationalities will be used for empirical frame detection to study the integration and competition among frames in the field of EU food safety and GMO. Frame extension, boundary framing and intertextuality will then be used to study issues frames regarding a specific GMO policy debate, in order to examine how key interest groups acts as knowledge producers and frame the debate in order to influence policy. With this conceptual framework it will be possible to further the understanding about dominant governance logics and dominant views of knowledge steering this policy field.

CHAPTER FOUR

Conflicting frames of governance rationalities

Even though a legislative framework of GMOs has been in place since 2004, this policy field is far from fixed. Actors continually push to redefine the boundaries and exercise policy influence. The governance of GMOs is, in the words of Law (1994), plural processes of social and political ordering. This chapter will answer the first research question: how do different frames of governance rationalities clash, integrate and compete in the EU food safety domain concerning GMOs? This will be done by examining institutional tension between key actors such as the European Commission, the Council of Ministers, EFSA, EU Member States and stakeholders representing the EU food chain. The empirical focus will primarily be on the GMO approval process and stakeholders in the food chain. There are several delimitations to this chapter: It is not the purpose to describe the organizational form of these institutional actors. Other scholars have already been successful in doing that. And since my research does not focus on scientific expertise, I will not address risk evaluation or scientific uncertainty. Furthermore, this chapter does not examine economic rationality in terms of self-regulation, the international regulatory dimension (like WTO disputes) or the structure of the European food industry. However, this chapter makes use of some of these phenomena in order to illustrate the underlying logic behind governance, and its modes of expression. The main analytical theme is competition: competition between the economic and administrative governance rationality; between the European Commission and the Council of Ministers, and between different framings of the EU GMO approval process. The analysis will show the dominance of the administrative rationality over the economic one, and the tension in the administrative logic itself: A tension that has not diminished over time, on the contrary. In

this chapter, I will also categorize different stakeholders in the food chain and start to identify the origin of deliberative rationality in terms of stakeholder consultation.

4.1 Economic embedding

Economic concerns and market expansion have clearly dominated food policy historically. In fact, no explicit reference to public health or consumer protection was made in the Treaty of Rome before the adoption of the Single European Act (1986) and the Maastricht Treaty (1992) (Alemanno 2006:244). Regulations before the 1990s were fragmented and national governments used food safety regulation as a competitive tool for domestic markets (Bernauer & Caduff 2006). On EU level, food policy was addressed in separate compartments such as farming, fisheries, development, health, environment, transport, consumer affairs, and so forth (Lang 2003). The primary influence on the development of the EC's regulation of food resulted from the Common Agricultural Policy (CAP). The implementation of the Single European Market made harmonization of food safety governance necessary (Holm & Halkier 2009:474). For almost three decades the EC maintained this economic approach to food law by using Article 100 (currently Article 94) of the EC Treaty to harmonize a few specific areas of national food legislation. Yet due to the food scares during the 1990s, the Community became aware that regulating the food sector only through the economic lens of the internal market was inadequate.

'There is no doubt that before 1992, following more than thirty years of legislative activity, EC food law was still mainly focused on issues of trade and the free movement of foods rather than on safety issues ... In the mid-1990s, in the wake of several food outbreaks and food scares, it became clear that the free movement of foodstuffs could no longer be the overriding principle of EC food law' (Alemanno 1996:243, my emphasis).

With the BSE crisis, changes were deemed necessary. Stronger institutions containing scientific experts, and a centralized governance logic were introduced to deal with the new approach to risks (Alemanno 2006). In

2002 the new European Food Regulation was adopted (Regulation (EC) 178/2002). This provided a framework that established a coherent approach in the development of food legislation in order to ensure the free movement of food and feed in the EU, as well as ensuring a high level of protection of human life and health. However, free movement of safe foods (Article 1) was made the first priority. The protection of human life and health came second (Article 2). Contrary to what one might assume, the BSE crisis did not result in allocating less responsibility to the food and feed chain, but more. This regulation establishes the basic principle that the primary responsibility for ensuring the safety of food rests with the food business. Operators must guarantee that products at all stages of production, processing and distribution within the businesses under their control fulfil and meet the requirements of food law (Article 17, Regulation 178/2002). The operators are obliged to withdraw products from the market when they suspect that these products do not satisfy the safety requirements (Articles 18 and 19, Regulation 178/2002). Public authorities have an important role, too: 'To complement and support this principle, there must be adequate and effective controls organised by the competent authorities of the Member States' (Regulation (EC) 178/2002 in Holm & Halkier 2009:478). Examples of a deliberative logic can be found in the European Food Regulation in the form of traceability and transparency rules. To restore the confidence of both consumers and trading partners, the law also stipulates that the public has to be consulted during the preparation, evaluation and revision of food laws (Article 9 of Regulation 178/2002 in Vos 2009). These principles are, however, complicated to live up to. Public disclosure of risk management practices and failures can lead to a competitive disadvantage for stakeholders (see chapter 7).

4.1.1 Economic rationality used in the market form

Bäckstrand et al. (2010) distinguish between an economic rationality used in the market form, and an economic rationality that is endorsed in the hierarchical governance form (by states and supranational institutions). This distinction is relevant here. Allocating and reinforcing responsibilities of safety to the various actors in the food and feed chain forms an important

element in the new food policy. In practice, this means self-regulatory, public-private partnerships, private standards, codes of conduct, certification programmes, etc. '[W]e also need to take into account the fact that *our areas of action are not governed and determined by legislation alone*. Balancing public and private interventions to achieve the best results in our policy areas is a key factor for future success' (DG SANCO 2008a: 17–18, my emphasis). The trend towards self-regulatory measures should be understood in the light of the food sectors rapidly becoming internationalized and embedded in the global economy. The food industry is today an interconnected system with a large variety of complex relationships. Retailers and food industries need to answer to consumer demands and respond to regulatory action. Public-private collaboration with various parties becomes important for all businesses in order to achieve safe and high-quality food products (see Henson & Caswell 1999 and Trienekens & Zuurbier 2008 for quality and safety standards in the food industry). Outsourcing rule-based work to the market can be understood as a form of governance. Liberal political theory makes a clear distinction between the state and the market. This means that only decisions about the market (its rules) are governance, while the self-organizing resulting from supply and demand is *not* governance. However, the market can be understood as a form of governance *if* it is conceptualized as a possibility to 'structure the possible field of actions of others' (Foucault 1982, in Striiple 2010:73).

In the field of EU food safety, the EU authorities do help to organize the field: They not only regulate food safety in a top-down fashion and through the threat of sanctions. As a complement, they act as facilitators of public-private partnerships and stakeholder dialogues (see van der Zeijden & van der Horst 2008 on co-regulation and self-regulation and DG SANCO). The European Technology Platform (ETP) Food for Life is an example of a public-private partnership. However, ETP has more to do with research and innovation than with food safety and risk governance. In the case of EU food safety, a great deal of governance takes place outside institutions. Political actors increasingly rely on private actors to shape public policy, due to their greater expertise. In the end, it is also the market that decides on the effectiveness of regulations and safety.

Both the EU and national governments identified biotechnology and life sciences as core priorities as early as in the 1980s. The EU reconfirmed this priority in 2001 through its major policy initiative, the EU Strategy for Life

Science and Biotechnology. Commission President Barroso has created a unit with the aim of encouraging biotechnology. Biotechnology is also part of the Lisbon Agenda to establish the EU as the most competitive arena in the world (Tiberghien 2009:399). Nonetheless, the market has forced out GMOs because genetically modified ingredients and products have been turned into a competitive disadvantage. Retailers, the gatekeepers between upstream and downstream stakeholders, are protective of their brand, market share, reputation and profitability. This means they are also sensitive to consumer interests and activist groups. In the case of GMOs, retailers early became risk-averse to new food technology. Facing public protests, more and more supermarket chains went GM-free, required non-GM soy, applied negative labelling (i.e. 'contains no GM ingredients'), excluded GM grain on a European scale, and condemned GM foods with a discourse similar to that of environmental NGOs. More and more companies went beyond EU requirements for GM labelling and alternative supply chains were called for.³³ Levidow and Carr write: '[A]ctivists took advantage of the industry structures whereby a market for GM products depended upon European food companies, in turn dependent upon consumer reaction' (Levidow & Carr 2010:198). The GM labelling rules united a wide range of civil society groups to call for freedom of choice. However, regulatory measures have created a situation in the EU where freedom of choice, according to economic rationality, is not possible due to the absence of GM food products on the market. Despite this, Europe's cows, pigs, and chickens are eating GMOs, as their feed usually contains ingredients made from GM plants.³⁴

³³ As an example, major retailers established a Europe-wide consortium to obtain non-GM grain, with members such as Sainsbury's in the UK, Carrefour-Promodes in France and Migros in Switzerland. The largest food manufacturer in Europe, Nestlé, undertook to exclude GM-derived ingredients as far as possible. As a Nestlé spokesperson said to Monsanto in 1999: 'Don't expect us to take a bullet for your GMO products' (Charles, in Levidow & Carr 2010:197).

³⁴ In addition, animal feed often has additives and enzymes that are produced with GM microorganisms. Although GM animal feed must be labelled, the end product of animal production like milk, eggs, and meat *do not require labelling* (see GMO Compass 2011c).

4.2 Regulatory context

There is wide agreement among observers that the BSE crisis was, above all, a political crisis, but also an economic one. There was also a widespread feeling that science was not responding adequately to the challenges; that the BSE crisis was also a failure of science and the communication of risk. After the European Parliament's confrontation with the Santer Commission over corruption in 1998–1999, the Prodi Commission entered office with improving EU food safety policy as one of its top priorities (Skogstad 2003). The reform work over the following years is here summarized as three strategies: (a) separation, (b) integration and (c) extension. In order to avoid future conflicts of interest, economic (industrial or agricultural policy) interests were *separated* from health protection. Food security was moved away from the earlier approach of conceiving the provision of food in the context of agricultural policy, towards an approach that emphasized food *safety*, and consumers' health.³⁵ This responsibility was consolidated in one place: The Directorate General for Health and Consumers (DG SANCO). With these reforms, consumer protection and public health came to be treated not merely as a matter of facilitating market exchange across Europe, but as politically relevant themes in themselves.

DG SANCO is one of the various departments (known as Directorates-General) in the European Commission working with public health, food safety and consumers. In 2010, John Dalli³⁶ from Malta was appointed European Commissioner for DG SANCO. The non-political Director General, on the other hand, is Paola Testori-Coggi.³⁷ As with other DGs,

³⁵ All scientific committees involving consumer affairs were transferred to DG XXIV (consumer health protection), which in 1997 was given responsibility for food safety issues. In 1999, a second reorganization took place: DG XXIV was renamed DG Health and Consumer Protection (DG SANCO). By this means, the responsibility for regulating the food industry was separated from sponsorship of that sector.

³⁶ Until the end of 2009 the Directorate-General for Health and Consumers answered to two members: the Commissioner for Consumer Protection, Meglena Kuneva, and the Commissioner for Health, Androulla Vassiliou.

³⁷ Paola Testori-Coggi replaced Robert Madelin, who was Director General for Health and Consumer Protection between 2004 and 2010.

SANCO works with other EU institutions, national governments and agencies, consumer organizations, business groups, NGOs, scientists and researchers to accomplish its goals.

Another example of separation is that the tasks of risk assessment (science), risk management (policy), and risk communication (dialogue) were rendered distinct in the policy process (see Appendix). Legislative responsibilities were separated from those relating to scientific advice. The European Food Safety Authority (EFSA) was established in 2002 as an independent agency funded by the European Community, with the purpose of giving scientific advice on food-related risks, so-called scientific opinions. This ensures that policymaking is based on science. Members of the different bodies of EFSA are not appointed by the Member States, and national interests are not taken into account, making this a firmly central body. But when it evaluates risks, EFSA may ask a national competent body to carry out the risk assessment. The separation of policy from science and a new emphasis on scientific autonomy have been particularly important. The Commission's response was also a strategy of *integration*: The integrated strategy regarding food safety aimed to assure a high level of food safety, animal health, animal welfare and plant health within the European Union through coherent farm-to-table measures (Holm & Halkier 2009). Safety principles relate to all stages in the production, processing and distribution of food, and legal principles cover food as well as feed. *Extension* here refers to the active involvement of actors representing the entire food chain.

4.2.1 GMO regulation

Authoritative principles and procedures recognized as legitimate in one society may not be regarded similarly elsewhere. The US and the EU represent two very different regulatory policy styles, with distinguishing features of policymaking and implementation. While the US style is one of adversarial legalism (the courts playing a major role in solving conflicts) or private interest governance (self-regulation by private firms with state oversight), the EU has been characterized as having a consensual, mediative food safety regulatory policy style (Skogstad 2006, chapter 9). The EU and US define the roles of regulatory authorities, the market, scientific experts,

interest groups and the public differently. These are some often-referred-to characteristics of the EU regulatory policy style on GMOs: Unlike Canada and the US, the EU has passed legislation specific to the regulation of GM crops and food; has an independent scientific authority responsible for mandatory case-by-case risk assessment; holds public consultation prior to the commercial release of GMOs; has special rules for traceability and labelling, and places the final decision as to whether to authorize a GMO or GM product in the hands of political authorities, not independent regulators or the developers (Ansell & Vogel 2006; Skogstad 2006; Everson & Vos 2009).³⁸

The European laws on the commercial use of genetic engineering have been in place since the early 1990s. In 2004, a new, fundamentally revised legal system took effect in all EU Member States. There are two different sets of rules governing the authorization of GM products in the EU: one is for the use of GM plants, while the other is for food and feed made from them. The Directive on the Deliberative Release into the Environment of Genetically Modified Organisms (2001/18) refers to the commercial use of a GM plant (that is able to reproduce); namely, releasing it into the environment by growing the plant or importing plant material. The Regulation on Genetically Modified Food and Feed (1829/2003), on the other hand, concerns products containing (e.g. yoghurt with living, genetically modified microorganisms), consisting of (e.g. maize or soybean) or produced from GMOs (e.g. tomato purée or rapeseed oil) (Kurowska, Lecture, 2009; GMO Compass 2011a). Requirements thus differ depending on whether the GM product is capable of being propagated and cultivated, or if it is a processed product that is not made of living material. There is, in

³⁸ In the US, on the other hand, no special legislation has been passed on the regulation of GMOs. Biotechnology products and processes are regulated under existing statutes and institutional arrangements, because GM food is seen as 'substantially equivalent' to a conventionally produced food and is 'generally recognized as safe' (Jasanoff 1995). Argentina also bases its approach on the principle that GM food is substantially equivalent to traditional food, and this has to date led to consistent authorization of new varieties (see Bodiguel & Cardwell 2010). The US approach has been governed by the belief that plant biotechnology was an innovative technology that would give US agriculture a competitive edge internationally. It has been important to 'find solutions that will ensure safety of the food supply, but [that] will not stifle innovation of new technologies' (Skogstad 2006:229).

other words, a legal difference between *GM plants in the environment* and *GM food on the table*.³⁹

4.2.2 Co-decision and comitology

The EU has always been characterized by its multilevel governance system, by which authority is not allocated in a straightforward way to either the EU or the Member States. Instead, authority is dispersed along a spectrum of more or less national control. This is certainly the case in relation to GMOs, where legislators share authority (Lee 2010). GMO regulatory politics consists of two parts: one legislative part (co-decision) and one implementation part (comitology). Comitology is formally a mechanism through which Member States can supervise the European Commission's exercise of implementing power (Lee 2010:109). Environment and food safety both fall under co-decisions, which means that the Commission has the exclusive right to propose legislation, but the European Parliament and the Council of Ministers are co-legislators on all GMO legislation. If an absolute majority of the Parliament and a qualified majority of the Council fail to agree, the legislation is not approved.

Food and feed made from GMOs can only be allowed on the market once they have received authorization. The authorization procedure is carried out by the EU, and the resulting decision applies to all EU Member States. The process is based on the EU Regulation on Genetically Modified Food and Feed (1829/2003) and consists of three phases: (a) an application, (b) a safety assessment and (c) a final decision. This authorization procedure is highly criticized by all parties involved, and is central to the understanding of the clash among frames of governance rationalities as explored in this chapter and chapter 7.

³⁹ However, the two key pieces of legislation overlap, so that food or feed that is also a GMO (e.g. a tomato rather than tomato ketchup) is also subject to the environmental risk assessment provisions of the Deliberative Release Directive (Lee 2010:105).

The process of authorizing a new GMO is summarized in the table below. It is based on the EU Regulation on Genetically Modified Food and Feed (1829/2003) (Kuiper & Davies 2010; Shaffer & Pollack 2009; Lee 2010; GMO Compass 2011b).

Table 2: EU GMO authorization

Operator	Before a company can place any genetically modified organism or derived product on the EU market, the GMO has to pass an approval system. This starts with the operator submitting an application to the competent authority in one of the Member States.
National authority of the Member State	The national authority then informs the European Food Safety Authority (EFSA) and passes along all application documents.
EFSA	Within six months, EFSA submits its opinion, based on risk assessments and safety research, to the European Commission and the Member States. The report is then made accessible to the public.
European Commission	Within three months after receiving EFSA's report, the Commission prepares for a decision on granting or refusing authorization. The Commission may diverge from EFSA's opinion, but it must then justify its position. The Commission's official recommendation is then submitted for approval to the Standing Committee on the Food Chain and Animal Health, the so-called regulatory committee consisting of Member State representatives.
Standing Committee on the Food Chain and Animal health	This regulatory committee is composed of representatives of the Member States. It may accept or reject the recommendation, but only with a qualified majority (approval from about two-thirds of voters). According to these regulations, every country has a certain number of votes corresponding to its number of citizens. If the committee gives a positive opinion, the European Commission adopts the decision. If not, the decision goes to the Council of Ministers. In the vast majority of cases in EU law, comitology committees agree with the European Commission, and so the decision never reaches the Council. GMOs are, however, an anomaly in this respect since every decision so far has had to move up to the Council.
Council of Ministers	In the case of GMO <i>plants</i> , the Council of Ministers is made up of ministers for agriculture and fisheries from

	each of the MS. The draft proposal is submitted to the Council for adoption or rejection by a qualified majority. Council considerations slow the process down, but at the same time ensure that authorization of GMOs receives high-level political consideration. If the Council rejects the Commission's draft, the Commission must revise its draft. If the Council approves or finds itself 'unable' to make a decision (cannot reach a qualified majority), the Commission's draft for a decision comes into effect.
Commission	If the Council cannot agree on a decision within ninety days, the Commission adopts the decision.

Member State disagreement has so far meant that the Council has been unable to reach a qualified majority either for or against any European Commission proposal on authorization of a GMO. This leaves considerable power in the hands of the Commission, which is the decision-maker of last resort in a process that is supposed to be different. The default position and special regulatory procedure have become the norm. This centralizes the power of the Commission even more, since decisions revert to the centre rather than back to the national level (Lee 2010:110). The authorization procedure is an example of a dysfunctional administrative rationality (Bengtsson & Klintman 2010) and will be discussed more in the sections ahead.

4.2.3 Institutional boundary-work and power struggles

The regulation of GMOs exemplifies institutional boundary-work over legislative leadership and power struggles between core actors; namely, the European Commission and the Council of Ministers. Even though the Commission has a monopoly over the formal initiation of new legislation in the EU, every other actor can exert pressure or try to shape the public discourse in order to influence the Commission. The Council of Ministers is particularly likely to act in such a way, because of its direct control mechanisms over the Commission. Such struggles are more likely an issue in areas that have become politicized and where the public is very involved. In this regard, GMOs serve as one extreme case (Tiberghien 2009:393).

In the mid-1980s, a number of EU Member States started to regulate biotechnology in response to developments in genetic engineering technology. The Commission reacted by exploring the possibility of a Community framework for biotechnology regulation, and several inter-departmental coordinating bodies were established. DG Industry and DG Research initially had a dominant voice, but policy leadership then gradually moved towards other DGs, in particular DG Environment (Shaffer & Pollack 2009:271). The EU competence, however, remained weak (Tiberghien 2009:395). Since the early 1990s, the Commission has pursued one coherent goal on GMO policy: the establishment of reliable rules for approval that can enable both public support and the promotion of biotechnology in the EU – as a research area and as a competitive industry. Nevertheless, this endeavour has proven difficult, due to, among many reasons, the power struggles between different DGs. DG Environment gained early control over the initiation of GM legislation in 1986 (Skogstad 2006:232) and took a strong precautionary stand under Commissioner Dimas (2004 – 2010). DG Health and Consumers has taken a more pragmatic approach than other DGs, and has over the years gained more influence (in relation to other DGs). DG Environment and DG SANCO ended up dividing responsibilities over the drafting of Directive 2001/18 and Regulation 1929-1830/2003 (Tiberghien 2009:395). With the new European Commission (2010–2014), DG SANCO, with Commissioner John Dalli, was given not only primary but full responsibility for biotechnology. Barroso's decision to give large biotech competencies to a single Commissioner came 'after conflicts over agribiotech in the former Commission, between the pro-GM commissioners Günter Verheugen (Industry), Mariann Fischer Boel (Agriculture), Janez Potocnik (Research), and the former anti-GM Environment Commissioner Stavros Dimas' ('Dalli to take responsibility', 2009). This means that DG SANCO is not only responsible for health aspects of GMOs but also environmental questions. Today, new legislative proposals are initiated here. Yet for stakeholders it is crucial to have good contacts in several DGs and try to shift the balance to their advantage:

'[other DGs like Trade and Research] should make their voice heard, and not leave it up to DG Environment or DG Consumer Affairs to make legislation that will affect their clientele like researchers or grain traders...we have been able to convince people that it is an economic issue. This legislation is going to

determine the competitiveness of the industry here in Europe vis à vis our main competitors in the US or other parts of the world' (ESA, in Holland 2004:8).

As the next two chapters will show, DG SANCO is innovative: Instead of waiting for stakeholders to come forward, it actively pushes stakeholders from the entire food chain to get engaged in the policy process.

Particularly intense struggles of demarcation and protection have taken place between the Commission and the Council. The Council, being the main decision-making body of the EU, is a more political actor than the Commission. The Commission tries to preserve its agenda-setting power but is constantly challenged by the Council, which shapes its own agenda through knowledge production (e.g. reports, demands, and actions). Their relationship involves both partnership and competition (Tiberghien 2009:395). The Council of Ministers, or more formal, the Council of the European Union (sometimes just called the Council), represents the individual Member States. The presidency of the Council is held for six months by each Member State on a rotational basis. Holding the presidency means more possibility to influence the agenda by pushing certain issues. In order to lobby the Council, stakeholders need to call attention to their issues on the national ministerial level in each of the Member States. In the case of GMOs, a 'qualified majority' is required. The Council sees GMO policy as highly salient and has played a major role in the implementation phase of GMO, due to its power as the last arena in the comitology process. As will be shown in the next section, the Council as a whole and some individual Member States in particular have used GMO regulation 'as a tool to build legitimacy and demonstrate democratic responsiveness' (Tiberghien 2009:395). Critics, on the other hand, argue that the actions of some EU Member States in the Council have undermined the legitimacy of EU GMO governance, creating a disproportionately 'politicized' logic.

4.2.4 Member States' powers and regulatory deadlock

The precautionary principle is a core concept of the EU regulatory framework. This principle demands anticipatory action in the absence of firm scientific evidence. When human action is expected to have negative

consequences on the environment or public health, it is the obligation of risk managers to protect us from this, even when the expected negative effects are not yet backed up or proven by scientific results (Kleine 2009:11).⁴⁰ In the name of precautionary actions, several EU Member States have revolted against GMOs, required moratoriums and called for national bans on GM crops and products. This has created a regulatory deadlock in the EU. One of the most remarkable incidents is the course of events that led to the moratorium in June 1999, when a group of EU Member States (Denmark, Italy and Luxembourg, led by France and Greece) decided to systematically block the EU's authorization of any GM products (for import and cultivation). The ban continued until the 90/220 Directive (covering the release of GMOs into the environment) was revised to provide a stricter legal framework, covering not only safety, but also labelling and traceability.⁴¹ The blockade of new GMO authorizations has continued since then, and is linked to the use of the so-called safeguard measures of Member States. Of course, Member States are not allowed to simply ignore an EU decision. The way past this is a safeguard clause in the 2001/18 EC Directive which – according to some actors – represents an overextension of the precautionary principle (see next section). The safeguard clause specifies that if a Member State has safety concerns, it can actively ban the potentially harmful GMO until scientific assessment has proven it safe (Shaffer & Pollack 2009:281). Six Member States are currently applying safeguard clauses on GMO events: Austria, France, Greece, Hungary, Germany and Luxembourg (DG SANCO 2011a).⁴² Since the beginning of this century, Member States have provided the scientific arguments required by the

⁴⁰ In other words: one is not to wait for the confirming scientific results whilst allowing the action to take place. It can be described as a 'guilty until proven innocent' approach (Kleine 2009:11) or 'better safe than sorry' principle.

⁴¹ Even though the European Commission tried to break the moratorium, EU Member States remained strong in their opposition. The deadlock ended in 2003, after the EU moved towards the most restrictive regulations in the world (Tiberghien 2009:392; Johansson 2009, chapter 6).

⁴² The agricultural use of gene technology in the EU (six Member States) is developing contrarily to the worldwide trend, primarily due to cultivation bans in France and Germany. For example, Spain is the only Member State in which commercialization of GM crops has occurred on a significant scale. But even there, only some 100, 000 hectares were cultivated using this technique in 2009 (GMO Compass, 2011).

safeguard clause to support the ban to the Commission. A vicious cycle is then set in motion: The Commission asks EFSA to judge if the arguments are scientifically sound. In almost all cases, EFSA concludes that the arguments are not 'scientifically substantiated'. The Commission then creates a proposal, urging the Member States to lift their ban. But the committees are often unable to form an opinion and so the proposal is referred to the Council. So far, Member States have rejected every proposal calling for an end to the ban. The committee is unable to reach a qualified majority concerning both authorization and the removal of the ban. However, it has later managed to reject the proposals of the Commission to remove the bans (Kleine 2009:15–20; Kurzer & Cooper 2007). The opposition to GMOs is thus stronger in the case of cultivation than in the case of GM products (Lee 2010:115). 'Maize, rapeseed or soy, it really does not seem to matter' (Kleine 2009:20).

A prominent case in point is MON863, a genetically engineered variety of maize produced by Monsanto, and approved in 2005 (for import and use in feed). Even though the EFSA GMO Panel concluded in April and October 2004 that this maize would be safe for humans, animals and the environment, French scientists and environmental NGOs had other opinions. Following legal actions by Greenpeace, a German court ruled that Monsanto was to publicly reveal its research data (GMO Safety 2011). And in 2005, a group of French scientists (CRIIGEN), funded by Greenpeace, started re-evaluating the original data from the Monsanto study. In a peer-reviewed scientific paper, the group questioned the methods used by Monsanto, and came to another conclusion than that of the EFSA GMO Panel. According to Séralini et al. (2007), a new analysis of a feeding study of GM maize revealed liver and kidney damage in rats. The European Commission then asked EFSA to carry out another re-evaluation. But EFSA came to the same conclusion in May 2005: MON863 is just as safe as conventional maize. The paper by CRIIGEN was seen as statistically flawed, not demonstrating sound scientific judgment, and should simply 'not have been accepted for publication in the first place' (Andersson, EFSA, Interview, 2009). There was, in other words, no reason for EFSA to revise its previous opinion. This is how the boundary around science and the hierarchy between expertises were protected.

This passing the ball back and forth between actors in the EU system shows that there is an enormous tension within and between frames of

governance rationalities. Firstly, it illustrates a conflict between the administrative and economic frame: the regulatory deadlock clashes with the demands of the internal market, the free movement of goods and economic integration. And here regulatory efforts clearly dominate over internal market discipline, resulting in national protection and a ban of GMOs. Secondly, there is a tension between the different sides of the administrative rationality itself. Centralizing authorization with the help of the European Food Safety Authority has not provided cognitive authority. Instead, the cognitive authority continues to be challenged by Member States. This cannot be reduced to a conflict between science and politics. Member States bring forward counter-expertise and seek to widen the definition of risk. At the same time, they seek to shift the power from EFSA and the European Commission towards the Council.

The deliberative rationality examined in the next chapter should be understood in the light of these power struggles: The task of EFSA is primarily to assess risks, but it has more and more been required to network and consult with national authorities and stakeholders. This new logic seeks to engage critics (national competent authorities, and stakeholders such as Greenpeace) within the borders of EFSA, with the hope of reducing conflicts. Thirdly, these conflicts also threaten the administrative logic itself. When Member States raise barriers to the completion of the internal market, this can also be understood as a threat to the core of the EU's ambitions. The powerful, yet controversial and challenged role of the European Commission spills over into broader debates on the legitimacy of the Commission and even the EU.

4.3 Framing of the EU GMO approval process

Even though all actors acknowledge problems with the regulatory deadlock, they frame the EU GMO approval procedure in different ways. Some argue that 'it is too easy to get approvals', while others argue that the process 'is stuck', and that 'nothing happens'. Two opposing issue frames have been identified: 'A technocratic approval process' and 'a politicized approval

process'. This frame conflict is important, as it is related to, and will be further analysed, in chapter 7.

4.3.1 'A technocratic approval process'

NGOs such as Greenpeace, TestBiotech and Friends of the Earth, as well as Member States such as Austria, France, Hungary, Germany and greens in the European Parliament, are very critical towards the approval process. It is framed as technocratic, undemocratic, and special attention is drawn to the role of EFSA, but also the European Commission. The focus is on GM cultivation. Problems regarding comitology and the Council are excluded from this frame. The authorization process is seen as technocratic because it has little support from Member States, and the administrative logic does not offer any possibility of rejecting a GMO: 'The authorization process makes it extremely difficult to reject a GMO authorization' (Greenpeace 2006, Powerpoint slides). Both sides in the administrative rationality are criticized on the grounds of verifying expertise. In other words, current practices do not live up to the legal rules and principles, these actors argue. Credibility is provided by referring to different directives and sections in legal texts. A typical position paper by Greenpeace starts with a claim; for instance: 'Assessments of the long-term health and environmental impacts of GMOs and their effects on non-target organisms are not being carried out, despite being required under EU legislation'. This is then substantiated by citing Directive 2001/18 Annex II (Greenpeace 2008:1). The frame puts EFSA in the centre for cognitive reasons; for its role in the political system, and for what these actors understand as a pro-GM bias and economic logic. EFSA does not fulfil its legal requirements to address differences in scientific opinions, lacks scientific expertise to fulfil its legal requirement to carry out complex environmental assessments, does not respect its legal obligation to identify scientific uncertainties, etc. (Greenpeace 2008). The role of this expert authority in the political system refers to the overextension of scientific expertise: that the Commission routinely accepts EFSA's safety claims, and that a broader consideration of risks and impacts does not take place. The authorization procedure is framed as technocratic because the

final decision so far has always been in line with EFSA's opinion, and because centralized expertise is preferred over national expertise. The opinions of EFSA create excessive spillovers to risk management, in the sense that the Commission too frequently treats the opinion of the EFSA as a result of both risk assessment and risk management, and not just risk assessment (Bengtsson & Klintman 2010:109).

EFSA is criticized for representing an economic governance logic, and pushing for GM market expansion: Assessments are based on the companies' data, experts fail to carry out quality checks on scientific information produced by industry, and there are conflicts of interests within the EFSA GMO Panel – meaning that scientific experts lack independence from industry and collaborate too closely with the International Life Sciences Institute (ILSI Europe) (Holland 2011; Then & Bauer-Panskus 2010). The claim of EFSA being generally pro-GM comes as much from Austria as from Greenpeace. NGOs, in contrast to Member States, state openly that EFSA is not a reliable partner at the moment (Greenpeace, Interview, 2009; 2011) and call on the European Commission to dissolve its GMO Panel.

'EFSA is becoming the laughing stock of the scientific community. Rubber-stamping anything that the agro-biotech industry puts forward, with the blessing of the European Commission. It is destroying its credibility' (Greenpeace, in 'Shut down EFSA GMO Panel', 2008).

Moreover, EFSA is understood as an example of 'softening the burden of regulation' for the GM industry (Then & Bauer-Panskus 2010). Actors incorporate empirical credibility by referring to the storyline of MON863, as this chain of events highlights rules of confidentiality, unwillingness to disclose data, hierarchy between EFSA and national scientific expertise, and the regulatory deadlock. According to this frame, GMO approvals are many and processed too swiftly. Altogether, this frame pushes to stop the market expansion of GMOs in the EU, and to decentralize cognitive as well as political power.

4.3.2 'A politicized GMO approval process'

Economic stakeholders (e.g. EuropaBio and ESA), some EU Member States (e.g. Sweden and Spain), and biotech companies (e.g. Monsanto and BASF), frame the EU GMO approval process as politicized, undermining the centralized approach to regulation. Discriminatory arguments are recurrent and a typical expression is: 'Why make tough laws on GMOs and then break them?' (EuropaBio, Press release, 2009b; EuropaBio, Interview, 2011). Attention is not drawn to EFSA or the European Commission, but to the Council of Ministers and the EU Member States.

'EuropaBio believes EFSA must not be distracted from fulfilling its original objectives by individual Member States that are diametrically opposed to biotech crops because of what can only logically be seen as short term political decision making. Furthermore, the same Member States are *undermining an institution which they themselves established*, risking undermining public confidence in a science based safety assessment and in science itself in their bid to deny access to this technology across all of Europe' (EuropaBio, Position paper, 2006b, my emphasis).

The regulatory deadlock is, according to these actors, an example of political sabotage. And the safeguards are taken as an indicator of an approval process that is not based on science, but an overextension of the precautionary principle. 'Industry is held hostage by some Member States...Facts are being pushed out of the window in decision-making – which is unworthy of the quality of governance that EU citizens should expect' (De Greef, in O'Donnel 2008). The Council is seen as the greatest hurdle: hopelessly divided, and an arena that intentionally leaves the Commission to be the scapegoat and approve a new GMO (ESA, in Holland 2004:4). Attention is drawn to the unpredictable process between risk assessment and risk management, and to the question why certain GMOs do not reach the agenda in the Standing Committee or Council. During some EU presidencies, GMO dossiers have simply been withdrawn from the agenda. 'It is clear that some politicians do everything they can to slow down the process' (ESA, in Holland 2004:7).

Economic rationality is important to push this frame and problematize market competition. Actors remain concerned about Europe's loss of

competitiveness in the agricultural biotech sector: '[P]olitical voting is making Europe into a science museum rather than an economic motor driven by innovation...' (du Marchie Sarvaas, in Moran 2011). These concerns are supported by national authorities like Sweden's National Food Administration and the Swedish Board of Agriculture (e.g. Kurowska, Interview 2009), DG Trade (e.g. Europa, Press release, 2007) and DG AGRI (e.g. Fischer Boel, Speech, 2009), as well as the Commission's President Barroso and previous President Prodi (Shaffer & Pollack 2009:288). Separation and hierarchy between administrative responsibilities are key principles to uphold this frame: The separation between risk assessment and risk management, and the superiority of EFSA expertise in relation to Member States expertise.

This puts science at centre stage and aims to destroy the so-called myth of GMOs as unsafe. The critical stance towards GMOs is based, so the argument goes, on public perception – not science, and a result of inadequate risk communication – not risk assessment: 'Biotech food is safe: is anyone going to tell the consumer?' (EuropaBio, Press release, 2008a). 'Stand by science on GMO foods' and 'Let the voice of science speak' are typical expressions from DG Trade and DG AGRI. Credibility to this frame comes from sources like the 2001 Commission study (a 15-year study including 400 research institutes), the re-assessment of this study by JRC in 2008, and EFSA opinions, just to mention a few. The economic logic in this frame emphasizes the freedom of choice – a principle that should come after the authorization process, in the marketplace (the supermarket), not during policymaking (Moll, in 'GMO:s We shouldn't mix', 2007): 'The problem is that you don't have a choice; that you cannot choose between GMOs and non-GMOs; you only have non-GMOs. In Europe we do not even give our consumers the chance. The producers of food are too afraid of the public concern, made by NGOs/consumer organizations. And *that*, I think, is a problem, the real problem' (Kurowska, Lecture, 2009).⁴³ The focus shifts

⁴³ This quotation was expressed as a *personal* reflection in a lecture to master students in Sweden, and *not* an official opinion of the Swedish National Food Administration. The reflection had the purpose of informing students from developing countries about different approaches to policy and regulation.

towards the lack of competitiveness and innovation, instead of environmental risks and democratic concerns.

4.3.3 Framing effects

The technocratic frame has been the most dominant one, and is a publicly recurrent and familiar theme in the EU. At the same time, the politicized frame has also been acknowledged. In 2010, the European Commission approved a licence for the first GM-crop to be passed for commercial production in 12 years – the Amflora potato (Europa, Press release, 2010a).

Environmental NGOs, GM critical Member States and parts of the European Parliament have clearly won this framing battle. EU GMO approvals became a top priority during the Austrian presidency in 2006. Fronted by Austria, several environmental ministers and NGOs criticized EFSA for not being sufficiently independent, and for not taking all national studies into account ('Austria criticises EFSA on GMO bias', 2007). In the framework of this presidency, the Commission took action and organized two conferences on co-existence/cultivation, and started a consultative process with stakeholders (Europa, Press release, 2006). During the French presidency in 2008, a High-Level Group was set up to look at a broad range of GMO issues. A Reflection Group was initiated in which the Commission and Member States discussed socio-economic implications of placing GMOs on the market (such as cost-benefit analysis of the possible consequences of the entry of GM seeds into the overall agricultural system). In 2008, an Environment Council Conclusion requested the Commission and EFSA – together with the Member States – to update EFSA's Environmental Risk Assessment Guidelines (see next chapter). The same year, the Council also requested that the Commission provide a report on the socio-economic implications of GMOs, which was presented in April 2011 (Europa, Press release, 2011b). In 2009, Austria pushed again to extend the safeguard clause, and won support from several other Member States ('Austria pushes for GMO', 2009). In 2010, the new EU Commission proposed an overhaul of the EU's policy for approving GM crops, suggesting that individual countries be given the freedom to ban cultivation on their territory (Europa, Press release, 2010b). In July 2011,

Members of the European Parliament voted in favour of the draft report which now allows EU Member States to ban GM cultivation, based on environmental, socio-economic or land use concerns (Marsden 2011). Cultivation has thus become a national GMO issue. A more pluralist conception of risk is introduced, allowing for more than traditional, narrow scientific considerations. Administrative rationality has become less centralized, and clashes – even more than before – with the market. The new measures run contrary to the free movement of goods, and will cause not only international but also EU-internal trade disputes.

Altogether, this shows that the administrative logic has shifted yet again, and immense changes have been made during the short period of time since the new European Commission took office. It might seem that the changes will relocate power towards Member States, further reducing the access of GMOs to the market. However, others suggest that the so-called renationalization of GM- crop cultivation decision-making will actually transfer power to Brussels, and soon open the access of GMOs to the market. Giving GM-critical Member States decision-making power in some aspects (cultivation) has come only with the concession of them ending the regulatory deadlock, thus opening up for the authorization of a range of new GMOs (the first one being the Amflora potato). ‘The unique position of the EU as the world’s largest GMO-free zone therefore appears about to come to an end’ (Etty 2010).

The rest of this chapter will deepen the analysis of stakeholders pushing for these frames, and clarify from where ideas about stakeholder consultation originates. This is important to introduce the main actors in this thesis, and to start to explore the deliberative rationality that will be further explored in the next two chapters.

4.4 Consulting stakeholders

In order to tackle public distrust in the European institutions after the food scares, there was a call for science-based food legislation and scientific advice of the highest standards. However, of particular interest to this work is not scientific excellence at the European Food Safety Authority, but the recourse

of European institutions to greater openness and better involvement of societal actors in policymaking. The White Paper on Governance and the White Paper on Food Safety are policy documents that are particularly important to understand how a deliberative rationality was created by administrative means.

In its White Paper on European Governance, the Commission adopted a set of principles and guidelines to be used by its departments when collecting and using expert advice for policymaking. It was observed that:

‘Recent food crises have highlighted the importance of informing people and policy makers about what is known and where uncertainty persists. But they have also undermined public confidence in expert-based policy-making. Public perceptions are not helped by the opacity of the Union’s system of expert committees or the lack of information about how they work. It is often unclear who is actually deciding – experts or those with political authority. At the same time, a better-informed public increasingly questions the content and independence of the expert advice that is given. These issues become more acute whenever the Union is required to apply the precautionary principle and play its role in risk assessment and risk management’ (EC 2001a:19).

Reforming European Governance, as outlined in this report, should be done according to four principles: openness, participation, accountability, effectiveness and coherence. ‘The quality, relevance and effectiveness of EU policies depend on ensuring broad participation throughout the policy chain – from conception to implementation. Improved participation is likely to create more confidence in the end result and in the institutions which deliver policies’ (EC 2001a:10). However, participation is not a new phenomenon. In fact, the Commission has a long tradition of consulting interested parties from outside when formulating its policies: ‘It incorporates external consultation into the development of almost all its policy areas’ (EC 2002c:3). Yet, until around 2002, there was no Commission-wide approach on how to undertake such consultations. Each of the departments had its own mechanisms and methods for consulting its respective sectoral interest groups (EC 2002c:3). Interaction between the European institutions and society took the following forms: (a) through the European Parliament, (b) through the institutionalised advisory bodies of the EU (Economic and Social Committee and the Committee of the Regions), and (c) through less formalised direct contacts with interested parties.

In its White Paper on European Governance, the Commission undertook work to help reinforce this culture of consultation and dialogue. It continued to work on guidelines on the collection and use of expert advice and set up principles and minimum standards to be applied when the Commission consults interested parties (EC 2002b). An interested party was defined as an 'individual or group that is concerned about, or stands to be affected by, directly or indirectly, the outcome of a policy process; or that represents the general interest of groups concerned by such an outcome' (2002b:3). In this document, it is stated that 'expertise may take many forms, including both scientific knowledge and that derived from practical experience'. Moreover, expertise may be used at any stage in the policymaking cycle. Experts of interested parties can be brought together in groups, or they can interact by the means of workshops (EC 2002b:6). The qualification of expert advice is also recognized, for example by ensuring that the breadth of viewpoints is considered: 'The final determinant of quality is pluralism' (EC 2002b:9). Creating a deliberative rationality by administrative means was also developed in the White Paper on Food Safety. The guiding principle here was that food safety policy must be based on a 'comprehensive, integrated approach' throughout the food chain. This means 'farm to table'⁴⁴; across all food sectors; between the Member States; at the EU external frontier and within the EU; in international and EU decision-making fora, and at all stages of the policymaking cycle (EC 2000:8). The role of stakeholders is also identified: They are feed manufacturers, farmers and food manufacturers/operators. The farm to the table policy is said to cover all sectors of the food chain, including feed production, primary production, food processing, storage, transport and retail sale (EC 2000:8). In order to present an overview of stakeholders relevant for this research I will define the food chain as: developers, farmers, traders, retailers, NGOs and consumer organizations. The following section will provide this overview, mainly by referring to the stakeholders' own mission statements and their members. This will bring clarity to the analysis when answering the second and third research question.

⁴⁴ So-called 'farm-to-table' or 'farm-to-fork' measures refer to the EU's integrated approach to food safety that has the purpose to assure a high level of food safety, animal health, animal welfare and plant health within the EU.

4.4.1 Stakeholders in the food chain

The application of biotechnology in agriculture, whether in the form of genetically modified GM crops or GM food, requires a level of scientific and technological infrastructure. Because small and medium-sized firms are unlikely to possess this, the global production of GM crops has been developed in a capital-intensive, internationalized, and unequal agricultural system (Williams 2009). The vast majority of GMOs are developed, manufactured, and marketed by a limited number of agrobusiness companies, mainly the four biotech giants: Monsanto, Syngenta, Pioneer (DuPont) and Bayer. These companies carry out their own lobbying activities, but are also represented by two industry associations relevant for this work, namely ESA and EuropaBio.⁴⁵

Table 3: ESA

Stakeholder	ESA
Name	The European Seed Association
Mission	ESA works to protect intellectual property rights for plants and seeds; fair regulation of its industry, freedom of choice for their customers (farmers being the customer no. 1), as well as innovative technologies.
Members	33 national seed associations (representing 400 seed companies), and 41 individual company members (ESA website).

ESA and EuropaBio are at the center of political discussion of the pro-GM lobby in Brussels. Their members are both national (biotech/seeds)

⁴⁵ Transnational corporations (TNCs) are key political actors in debates concerning the production and application of agricultural biotechnology. Monsanto is of particular interest because it was the pioneer of commercial GM crops and remains one of the biggest players in agricultural biotechnology (see Glover 2010). However, efforts to promote GM food are not undertaken solely individually, but also through industry associations. CropLife International is a body with international presence. This is a global federation representing the plant science industry, developers, manufacturers, formulators, and distributors of plant science solutions for agriculture and pest management (Williams 2009:155-156). This work does not address TNCs, but limits the analysis to industry associations like ESA and EuropaBio.

associations and individual companies that develop new seeds (and produce the accompanying chemical products) and/or also produce and distribute the seeds, or license out the technology to others (Holland 2004:6). Lobbying activities are coordinated, position papers sometimes signed jointly, even though these actors are also in competition with each other. ESA represents the totality of the European seed industry (both non-GM and GM) active in research, breeding, production and marketing of seeds. Separating GMOs and non-GMOs begins with the seed industry. Despite continuing efforts, absolute non-GMO-purity is difficult. Arguments for this are examined in chapter 7.

Table 4: EuropaBio

Stakeholder	EuropaBio
Name	The European Association for Bioindustries
Mission	To promote an innovative biotechnology industry, advocate free and open markets and works to remove barriers to its industry.
Members	62 corporate and 7 associate members operating worldwide, 2 Bioregions and 19 national biotechnology associations representing some 1800 small and medium sized enterprises (SMEs) (EuropaBio website).

EuropaBio is one of the main and most active lobby groups on GM food and crops at the EU level. Its members are involved in research and development, testing, manufacturing and distribution of biotechnology products and processes. Its corporate members work with biotechnology in so-called red biotech (healthcare), green biotech (agriculture), as well as white biotech (industrial). EuropaBio as well as ESA are engaged in dialogue with European institutions and contribute to the creation of legislation. They both ensure a firm flow of information about biotechnology to the European Parliament, the European Commission as well as the Council of Ministers. EuropaBio has been in strong opposition to the requirement of mandatory labelling for GMOs (Meins 2002).

4.4.2 Farmers

Agronomic advantages of genetic engineering for farmers, as promised by developers are: increasing yields, controlling weeds, increasing farmland biodiversity, improving soil quality and reducing spraying and ploughing (the last two examples leading to savings of diesel fuel and reduced carbon dioxide emissions) (see e.g. EuropaBio 2011). COPA-COGECA is a double-headed organization representing European farmers, and is one of the oldest and most powerful lobby groups in Brussels. It works with topics such as commodities, cooperative affairs, rural development, biotechnology, environment, animal health & welfare etc. It has active and regular participation in Advisory Groups within the Commission and lobbies the Council, the Commission as well as the Parliament. As an example, COPA-COGECA Presidents meet with the president-in-office of the Agricultural Council before every council meeting (COPA-COGECA, Powerpoint slides, 2011a).⁴⁶

Table 5: COPA-COGECA

Stakeholder	COPA-COGECA
Name	The united voice of farmers and their co-operatives in the European Union.
Mission	The objectives of COPA and COGECA are distinct as well as overlapping. Together, they work to represent the interests of the agricultural sector as a whole. COPA examines matters related to the Common Agricultural Policy. COGECA, on the other hand represents the general and specific interests of European agricultural, forestry, fisheries and agri-food co-operatives, and seek to contribute to the development of cooperatives in general.
Members	COPA represents 13 million farmers and their families, whilst COGECA represents the interests of 38,000 agricultural cooperatives. They have 77 member organizations from the EU member states (COPA-COGECA website)

⁴⁶ There are fewer individual position papers from COPA-COGECA regarding GMO than expected. This is probably due to the delicate position of COPA-COGECA to speak for farmers choosing different agricultural management practices (conventional, organic as well as GM). It is my impression that EuropaBio speaks more about farmers (their customers) than this farmers' organization itself.

COPA-COGECA has had a privileged position in the EU until the 1980s, when the European Farmers Coordination (CPE) was included in dialogue with the European Commission (Yakova 2005/2006:126).

Table 6: CPE

Stakeholder	CPE
Name	European Farmers Co-ordination
Objectives	CPE works for 'sustainable family farms and farmers' income first through the sale of their products'. Other objectives are to work for sustainable modes of agricultural production, 'a relation of solidarity' with the farmers in the EU and elsewhere, and to eliminate dumping prices in international trade.
Members	24 farmer and rural organisations from 14 European countries (Members and non members of the EU) (CPE website).

While COPA-COGECA seeks a balanced position in the GMO debate, CPE openly states that it does not believe that coexistence between conventional, organic and GM crops is possible. CPE has asked for a European moratorium (total ban) on all GM crops as late as 2008. IFOAM represents not only organic farmers, but also commercial organic companies.

Table 7: IFOAM EU Group

Stakeholder	IFOAM EU Group
Name	The International Federation of Organic Agriculture Movements
Objectives	IFOAM's mission is to lead, unite and assist the organic movement and to work towards the adoption of ecologically, socially and economically sound systems worldwide, based on organic agriculture.
Members	Represents the 330 member organisations of the International Federation of Organic Agriculture Movements in the EU 27 and EFTA countries, working on organic production. Member organisations include: consumer, farmer and processor associations; research, education and advisory organisations; certification bodies and commercial organic companies (IFOAM EU Group website).

IFOAM is a federation and global umbrella advocacy group for the organic sector, and is engaged with many multilateral organizations including the

UN. It presents a unified voice of the organics sector in a variety of international forums.

Table 8: The European Coordination Via Campesina

Stakeholder	The European Coordination Via Campesina
Name	Via Campesina means the ‘peasant way’ in Spanish.
Objectives	To organize small and medium farmers, agricultural workers, rural women and indigenous communities. Via Campesina works for agricultural policies based on ‘fairness, solidarity and sustainability’, and also pursues global objectives such as food security.
Members	25 EU members representing national or regional peasant organizations. La Vía Campesina includes 149 organizations from 56 countries (Via Campesina website).

The European Coordination Via Campesina represents peasant and family farmers. It is part of La Vía Campesina, a network of grassroots organizations with roots in Latin America that has presence in the anti-globalisation movement. It opposes trade liberalization, has food sovereignty on its agenda, and seeks to actively promote an alternative framework. This movement has been created and driven by peasants’ and people’s organizations, not international NGOs (Beauregard 2009:7).

4.4.3 Food and feed traders: exporters and importers

Traders of food and agricultural products connect farmers to retailers and later to consumers. As exporters and importers, traders act as gatekeepers to the cost of food/feed and the availability of food/feed through the international trade in agricultural commodities. The reason is that exporters can only ship products that farmers produce, while importers can only sell products that retailers demand (Kershen 2010:625-626). In this work, I use the term traders for stakeholders moving bulk commodities, crushing raw material and trading meat.

Table 9: CELCAA

Stakeholder	CELCAA
Name	European Liaison Committee for Agricultural and Agri-Food Trade, is the umbrella organisation representing at European level associations and companies active in the sector of agricultural and agri-food trading
Objectives	To facilitate and promote international exchange of agricultural products, secure a favourable legal environment for its industry and co-ordinate advocacy. CELCAA also works to ensure awareness of the function of agricultural, horticultural and agri-food at European level.
Members	Members include COCERAL (grain), Freshfel (fruit), Eucolait (milk), UECBV (meat) und Union Fleurs (flowers). Its customers are farmers, the feed industry, the food industry and to a certain extent supermarkets (vegetables). CELCAA cover nearly all the trade conducted with agricultural raw materials (CELCAA website).

CELCAA is active within networks and represents interests in cooperation with other actors, such as the informal European Agri-Food-Network. However, CELCAA does not typically take on the role of a lobby group, but passes rather on information for its members. Lobbying is instead carried out by individual members, mainly COCERAL.

Table 10: COCERAL

Stakeholder	COCERAL
Name	The European Association representing the trade with cereals, oilseeds, feedstuffs, oils and fats, olive oil and agro-supply.
Objectives	To promote the interests of the grain, feedstuffs, rice, olive oil and agro-supply trade associations operating within Europe. It proactively monitors and guide EU policymakers, promotes strategies for safe food and feed raw materials, and publishes reports for stakeholders.
Members	The members of COCERAL are the national trade organisations of most of the EU-27 Member States, who for their part represent collectors, distributors, exporters, importers and agribulk storers of the above mentioned commodities. The members are composed of essentially private traders and in some countries also farmers' cooperatives (COCERAL website).

COCERAL represents members that are collectors, distributors, exporters, importers and agribulk stores of commodities. Commodity imports enter the EU by sea and transit through sea-port silos. FEDIOL is a stakeholder not listed with a separate box in this chapter. This is a federation for the EU Oil and Protein Meal Industry and represents crushers of oilseed meal producers and vegetable oil producers/processors. Together, COCERAL (importers/traders) and FEDIOL (processors) represent the majority of European operators importing, handling and processing soybean commodity (CEN/ENEA Workshop 2010). UECBV is a livestock and meat trading union. Its members represent the importers and exporters of meat products.

Table 11: UECBV

Stakeholder	UECBV
Name	European Livestock and Meat Trading Union
Objectives	To represent and defend livestock and meat trade and its industry, to deepen the internal market and combat distortions of competition.
Members	Represent livestock traders (cattle, horses, sheep, pigs), meat traders (beef, horsemeat, sheepmeat, pigmeat), slaughterhouses, cutting plants and meat preparation plants. In total, some 20,000 firms of all sizes and 230,000 jobs are represented within the UECBV through its national member federations (UECBV website).

Raw GM products like soy is used as animal feed and as a material for numerous food additives. Most soybeans end up in feed. But during the processing, soybeans are pressed in oil mills, and the derived oil is then extracted and refined for food use. Important to mention prior to chapter 7 is that most of the agricultural crops are traded as bulk: their collection, trade, transport and processing is characterized by adding together many small consignments into large, uniform bulk shipments. These steps are presented in the Appendix. FEFAC represents the EU compound feed and premixtures manufacturing industry. This means that its members work to optimize efficient feed production.

Table 12: FEFAC

Stakeholder	FEFAC
Name are	European Feed Manufacturers Federation
Objectives	To represent and promote the interests of the EU compound feed industry to the EU institutions. FEFAC lobbies to reduce legal discrimination among EU Member States and to maximize

	market opportunities for compound feed companies. FEFAC also safeguards free access to raw materials.
Members	21 national associations in 20 EU Member States (FEFAC website).

Animal feed companies mix GM soy and various raw materials (feed cereals and byproducts from the food, beverage and bio fuels industries) together with additives and enzymes produced with genetically modified microorganisms. Imported GM soy meal is the single most important animal feed ingredient in the EU, followed by rapeseed meal and corn gluten feed (FEFAC 2009). Relying on GM ingredients means that genetic engineering has come to play an important role for feed manufacturing, and that feed manufacturers provide a market for biotech companies. These manufacturers have so far gone unnoticed in the public domain, despite their important role in the global trade of GMOs. The policy debate on asynchronous authorization and zero tolerance policy has changed this.

4.4.4 Retailers: food processors and food stores

Retailers are the gatekeepers to consumer choice. If retailers do not offer a particular food to consumers, consumers cannot buy it. Market concentration, in combination with an expansion in the development of private governance (specifically private food standards), reflect the growth in the structural power of retailers. At the same time, the retailers' close relation to consumers (through public relations and media) signals the increasing discursive power by retail corporations (Fuchs, Kalfagianni & Arentsen 2009). EuroCommerce is the European Association for retail, wholesale and international trade. This stakeholder did, in the beginning of the 1990s, urge American farmers to separate GM soya and maize. EuroCommerce has also advocated GM labelling and traceability rules. But even though it takes part in consultation, it does not always undertake specific lobbying activities (Meins 2002).

Table 13: EuroCommerce

Stakeholder	EuroCommerce
Name	The retail, wholesale and international trade representation to the EU.
Objectives	To promote, defend and explain the interests of commerce to EU institutions. EuroCommerce also works to improve legislations in terms of reducing costs and uncertainties for businesses, and to inform members about new developments impacting their daily activities.
Members	Federations in 31 countries, European and national associations representing specific commerce sectors and individual companies (EuroCommerce, website).

Food processors are represented at the European level by the Confederation of Food and Drink Industries (CIAA).⁴⁷ CIAA is composed of affiliated national federations and sectoral associations. Important corporate members are Unilever, Nestlé and Kraft Foods. This stakeholder has resources in abundance compared to other interest groups at the EU level.

Table14: CIAA

Stakeholder	CIAA
Name	Confederation of European Food and Drink Industries
Objectives	To promote the industry's interest before the EU and international institutions, to work for food safety, science, health, environmental sustainability and competitiveness.
Members	32 sector-specific associations, 24 national associations and the European liaison committee of large food and drink companies. The liaison committee comprises 20 global actors including Cargill, Kraftfoods, Nestle, and Unilever (CIAA website).

CIAA was initially opposed to GM labelling, claiming that labels would stigmatise its products and confuse consumers. Later, CIAA changed this position (Mein 2002). GMOs are an utterly sensitive matter for this

⁴⁷ In June 2011, CIAA changed its name to FoodDrinkEurope.

stakeholder and its members, which explains the lack of official statements.⁴⁸ While CELCAA represents nearly all traders of agricultural raw products (first processors), CIAA represents the second processors. The concentration of food retailing in the EU has made members of these stakeholders particularly sensitive to GMO boycott and pressure from anti-GM NGOs (Levidow and Carr 2010).⁴⁹

4.4.5 Non-governmental organization (NGOs)

The nongovernmental organizations (NGOs) have been at the core of the European anti-GM lobby campaign and influence has been persistent (Ansell, Maxwell & Sicurelli 2006). Looking at the food chain in general, NGOs do not only comprise environmental interests, but also animal welfare organizations like Animals' Angels. However, this study mainly addresses green NGOs. Greenpeace is a centralized organization under control of its international office and has always worked according to a limited number of single-issue campaigns and avoided broader ideological claims (Doherty 2007). The campaign against GMOs has been ongoing since the early 1990s, while many other organizations became involved only in the mid-late 1990s. Greenpeace conducts surveys across Europe to determine public opinion and to develop campaign strategies in which direct action is an important method. In the context of public distrust of

⁴⁸ With regards to the processing of agricultural raw materials, one has to distinguish between first and second processing industry. The first processing stage includes, for instance, the processing of grain for the production of flour. The second stage involves using flour for the production of bakery products (CEN/ENEA workshop 2010).

⁴⁹ For the most part, foods in European supermarkets are not genetically modified. However, genetic engineering does play a role in the production of the food that European citizens consume each day. GM soybeans are the basis for countless ingredients, additives and vitamins. It is estimated that soy plays at least a small part in 20, 000 to 30, 000 products that are on the market, whether directly as an ingredient or indirectly as feed or a nutrient source. Cheese, eggs, and milk products are not genetically modified themselves, but may contain ingredients and additives that were produced from genetically modified microorganisms. And in the EU, dairy products are typically derived from animals raised with GM feed (GMO Compass 2011c).

governments and producers, Greenpeace has been much more effective at influencing public opinion than biotech developers like Monsanto (Ansell, Maxwell & Sicurelli 2006)

Table 15: Greenpeace

Stakeholder	Greenpeace
Name	Greenpeace
Objectives	To 'bear witness to environmental destruction' in a non-violent manner. Greenpeace seeks to raise the level of public debate about society's environmental choices. Respect for democratic principles and solutions that will promote global social equity' are important.
Members	Greenpeace speaks for 2.8 million members worldwide (Greenpeace website).

FoE is a small organization, compared to Greenpeace and has a different organizational structure. FoE is a federation, based on the participation of autonomous national member groups. More than Greenpeace, FoE has sought to address environmental issues through a critique of social and political inequality, and has an explicit commitment to environmental justice (Doherty 2007).

Table 16: FoEE

Stakeholder	FoEE
Name	Friends of the Earth Europe
Objectives	FoE stands for three ideas: 'that we need to use the planet like there is a tomorrow', that everyone around the world 'must get a good life', and to change society so that economy and the environment can work together (FoEE website).
Members	Friends of the Earth has approximately 100,000 active financial supporters and about 75,000 people who volunteer to campaign with us to create change.

Both of these organizations devote resources to research and network building. Lobbying includes symbolic protest tactics as well as institutional lobbying at different levels (Ansell, Maxwell & Sicurelli 2006). EEB was the first specifically European organisation addressing environmental issues (Lehmann 2003:7). It is also the largest federation of environmental organizations in Europe.

Table 17: EEB

Stakeholder	EEB
Name	The European Environmental Bureau
Objectives	EEB stands for sustainable development, environmental justice, global equity, transparency, participatory democracy and shared but differentiated responsibilities. It promotes the principles of prevention, precaution and the polluter pays (EEB website).
Members	EEB is a federation of over 145 environmental organizations representing about 20 million citizens and based in all EU Member States. These organizations range from local and national, to European and international.

Save our seeds (SoS) is not an NGO, but a campaign supported by many different organizations in Europe to keep conventional and organic seeds free of GMOs.

Table 18: SoS

Stakeholder	SoS
Name	Save our Seeds
Objectives	To protect the purity of seed.
Members	350 organizations and over 250,000 citizens from all Member States of the EU have signed a joint petition to the European Commission to prevent the contamination of conventional and organic seeds from genetically modified varieties

TestBiotech is another NGO that should also be mentioned. It promotes independent research, examines ethical, social and economic issues and assesses risks to health and the environment. It claims to act as a watchdog and engages in debates on biotechnology, particularly with EFSA. It also publishes several studies on behalf of green voices in the EU, for example the Greens in the European Parliament.

4.4.6 Consumer organizations

Consumers are the last link in the food chain. The European institutions have played an important role in creating incentives for and promoting consumer co-operation at the European level. BEUC is the largest and most

important association of European consumers. It is composed of independent national consumer organizations, and tends to advocate more liberal policies (Lehmann 2003:10).

Table 19: BEUC

Stakeholder	BEUC
Name	The European Consumers' Organization
Objectives	To represent its members and defend the interests of all Europe's consumers. BEUC has 8 main areas of activity: consumer contracts, digital rights, energy and sustainability, financial services, food, consumer redress, health and safety (BEUC website).
Members	Membership of 42 well respected, independent national consumer organizations from 31 European countries (EU, EEA and applicant countries). BEUC acts as the umbrella group in Brussels for these organizations.

EuroCoop is the founding father of the European consumer movement, but has lost its primacy to BEUC (Lehmann 2003:10).

Table 20: EuroCoop

Stakeholder	EuroCoop
Name	European Community of Consumer Co-operatives.
Objectives	To promote and represent the economic and social objectives of Europe's consumer co-operatives to the EU institutions. EuroCoop has an ethical approach to food and also works to inform its member organizations about new policies and initiatives on EU level (EuroCoop website).
Members	Its members are the national organizations of consumer cooperatives in 18 European countries. Eurocoop represents over 3,200 local and regional cooperatives, whose members amount to more than 25 million consumers across Europe.

Together, these actors represent the food chain and engage with the European Food Safety Authority and DG SANCO to discuss food safety issues and GMO.

4.5 Conclusion

EU food safety is a new policy regime within the EU. Prior to the food scares of the 1990s, food was regulated by divergent national approaches and through the lens of the internal market only. Food was addressed in separate analytical boxes in relation to different policy areas as agriculture and trade. A centralized approach to food and the overarching umbrella of safety came about only after the food scandals had exposed the inadequacy of EU policymaking. However, the food safety problems during the 1990s did not provide less influence and responsibility for economic actors, but more. A great deal of governance takes place through complements to legislation, so-called co-regulatory and self-regulatory measures (e.g. public-private partnerships, codes of conduct etc.). In the end, it is market operators that decide on the effectiveness of regulations and the degree of safety.

In the case of EU GMO governance, however, the economic rationality is subordinated. Biotechnology is a central feature in EU policy objectives, such as the Lisbon Agenda and the Knowledge-Based Bio-Economy (KBBE). Economic stakeholders devote many resources to lobby policymakers on the promise of this technology. The economic rationality is also expressed in terms of scientific data from biotech companies forming the basis for risk assessment at EFSA, thus setting the foundation for the entire GM approval process. Moreover, economic stakeholders like traders have an important role to play in terms of ensuring transparency and traceability in the food chain, from the farm to the fork. The adequacy of GMO labelling rules depends on producers and traders of GM raw materials to pass on information to subsequent stakeholders in the food supply chain. The latter also have a responsibility to ensure the possibility of tracing the route of a GMO from the farm to the final product. Despite this, the economic rationality is clearly weak in terms of GMO market access, market expansion, self-regulation and freedom of choice. Administrative (e.g. the moratorium and labelling rules) as well as economic logics (GM-avoidance on the part of retailers, food processors and consumers) have in effect created a GMO-free European Union, in terms of GMO cultivation and GM food products.

GMO governance reveals a dispersed administrative rationality. In a continued conflict of European multilevel governance, the administrative

rationality has become increasingly centralized at the EU level after 2004, just to become re-nationalized in certain aspects in 2011. A new comprehensive regulatory framework on GMOs came about after the moratorium, providing several mechanisms that are unique in an international context (i.e. public participation, stakeholder consultation, labelling, transparency and traceability). Bureaucratic control has then continued to expand in a constant battle between the European Commission and its various DGs, the European Commission and the Council of Ministers, and between EFSA and counter-experts (stakeholders as well as national government authorities). The political authority of the European Commission and the epistemological authority of the European Food Safety Authority have been undermined. Boundary-work and framing battles are most politically and publicly salient in the GMO policy issue concerning cultivation. However, this particular dossier spills over to a wider debate about the approval process. This process suffers from a regulatory deadlock that actors frame in contrasting ways.

Framing the EU GMO approval process reveals two opposing frames. While one alliance frames it as 'technocratic', the other one frames it as 'politicized'. Environmental NGOs, parts of the European Parliament and Member States like Austria and France have clearly won this framing battle. They have been successful in mobilizing political support which has now placed the decision-making on cultivation on the national level, thus again fragmenting the administrative rationality and subordinating the internal market. Interesting to note, this has created a more pluralist conception of risk: It is now possible for Member States to ban GMOs nationally and/or regionally, with reference to so-called socio-economic criteria like, for instance, the protection of small-scale agriculture, and consumer protection (e.g. consideration of ethical or religious concerns about GMOs). This will certainly clash with the free movement of goods which is a fundamental right and trade law. Policymakers themselves however, argue the contrary. Nevertheless, this study shows that much of the international friction that has been experienced between the EU and the US (the so-called transatlantic divide), has now become an EU-internal problem: The trade dispute that has previously been experienced before the WTO can now develop in the EU and between Member States. What this means for the future of GMOs in the EU will be discussed in chapter 9.

In this chapter I have also identified an extended definition of expertise that includes stakeholders in the food chain. Regulatory reforms have given a new role to interest groups representing sectoral knowledge and a pluralism of perspectives. Furthermore, I have provided an overview of key actors in the food chain, namely developers, farmers, traders, retailers, NGOs and consumer organizations. Several stakeholders that have perviously gone unnoticed in studies regarding GMOs have been highlighted. These are not developers, food processors, NGOs or consumers – but traders, importing GM raw material to the EU. Stakeholders like COCERAL and FEFAC in the middle of the food chain are particularly powerful in the global trade of GMOs and in the EU market, as their members import, move and crush GM crops, as well as mix GM ingredients for feed. They create a market for GMOs upwards (towards developers) and downwards towards food processors. However, they have not succeeded in creating a market for GM food products. As chapter 7 will demonstrate, GM feed is a different matter. Imported GM soy is used for animal feed, but also as raw material for numerous food additives. GMO is therefore a good example of how integrated the food and feed chain is, and how dependent economic stakeholders in the chain are of each other for using genetic engineering for food and feed. This dependency will be further explored in chapter 7.

CHAPTER FIVE

Stakeholder participation in the European Food Safety Authority

The analysis of food safety issues is typically confined to scientific experts in risk assessment and professional risk managers, with very limited formal input from other stakeholders, such as consumer organizations, NGOs and industry. It has long been unclear how and when to include stakeholders (Borrás 2006; Wentholt et al. 2009). In this and the following chapter I proceed by analysing how different governance rationalities, their clashes, synergies, and priorities are framed in the EU food safety domain concerning GMOs. Specific emphasis is placed on the second research question; namely, how deliberative rationality, particularly stakeholder participation and stakeholder expertise, is framed in this policy domain. In order to answer this question, I will study different types of institutional discourse and different arenas for stakeholder participation. Empirically, this and the following chapter focus on two institutions: one for risk assessment (European Food Safety Authority, EFSA), and one for risk management (European Commission/DG SANCO). The theoretical concepts of governance rationalities, boundary-work and expertise will be applied.

This chapter starts by examining arenas for stakeholder participation in EFSA and how the deliberative logic is manifested in practice. Attention is then turned to EFSA's Stakeholder Platform and the relation between stakeholders and scientific experts. The main GMO debate in this chapter concerns the so-called Environmental Risk Assessment Guidance. The analysis will show that even though the European Food Safety Authority is an independent expert body, there are several arenas facilitating stakeholder input and deliberation. Not only do stakeholders deliberate with each other, they also participate in arenas where science and society meet. EFSA's work on updating guidance documents for the risk assessment of GMOs and

derived food and feed has also allowed for upstream involvement in risk assessment. Environmental NGOs now participate in discussing the scientific substance behind risk assessment, something that is remarkable. Obviously, this has not occurred without strong criticism from those protecting the boundary between scientific experts and so-called interest-driven stakeholders. To study participation within EFSA implies studying not only boundary-work and the tension between different governance rationalities, but also the tension within the administrative rationality itself (between scientists and policymakers).

5.1 Arenas for stakeholder participation

Deliberative rationality is expected to render risk assessment at EFSA legitimate and to improve risk communication. As we will see, to a certain extent deliberative rationality opens up the work surrounding risk assessment and facilitates participation, deliberation and arguing among concerned actors from the food and feed chain. EFSA is committed by law to open up its work to public scrutiny and to maintain ‘efficient’ contact with its stakeholders: ‘The Authority shall develop effective contacts with consumers’ representatives, producers’ representatives, processors and any other interested parties’ (Regulation EC 178/2002). The article implements recital 56, which states that the Authority should be an ‘organisation open to contacts with consumers and other interested groups’. Regulation 178/2002 did not foresee any concrete mechanism being created with stakeholder organizations, and the obligation and pressure from stakeholders led EFSA to institutionalize stakeholder participation in several ways in 2005. The purpose, as stated by EFSA itself, is:

- ‘Comment on EFSA’s work program and annual management plan;
- Comment on the EFSA’s stakeholders annual work plan;
- Provide EFSA with feedback on the effectiveness of its policies in responding to stakeholders’ concerns:

- Alert EFSA to key issues of current or emerging stakeholders' concern, as well as concerns on possible emerging and existing risks;
- Advise on risk assessment methodologies, including the topics for consultation and the best way to organize such consultations;
- Provide information and cooperation at the technical level
- Set up objectives to be achieved by the Platform during its mandate
- Advise on communication to different target groups' (EFSA 2010e:1).

The logic behind stakeholder participation is thus deliberative (procedures, mutual understanding and communication) as well as administrative (problem-solving through rules and principles) (see also EFSA 2010d). No specific example of economic rationality is expressed above. The frame of deliberative rationality can be identified in terms of four arenas for stakeholder participation:

Firstly, it is expressed in the composition of its *Management Board*, on which four members are present with a background in organizations representing consumers and other interests in the food chain. For instance, Sue Davies, Chief Policy Adviser at 'Which?', a UK consumer organization, is now Vice-Chair of the Management Board (EFSA 2008a). Secondly, EFSA holds *online public consultations* and responds to requests for data through its website on a number of scientific subjects in relation to the risk assessment of health claims, pesticides, additives, GMOs and biological hazards. 'Members of the public and interested parties are asked to submit relevant information and data or assist EFSA in performing its tasks and in accomplishing its mission. This information is then reviewed and can feed into EFSA's work and outputs such as opinions and guidance documents' (EFSA 2009a). Whenever a draft document for a 'Scientific Opinion' is published on the EFSA website, it is also possible for the public to comment on this document on the EFSA homepage and a specific submission page, according to specific instructions. Comments submitted by e-mail or letter cannot be taken into account, and a submission is not considered if it contains 'complaints against institutions, personal accusations, irrelevant or offensive statements or material' or if it is 'related to policy or risk

management aspects'.⁵⁰ The window of online public consultation encourages people and organizations to think from the perspective of society. Public consultation at EFSA extends the notion of the public but does not collect citizen or lay expertise. In practice, it represents an additional arena for NGO participation, expanding the boundary between public/private and citizens/organizations. The obstacles to this type of participation and lay knowledge contribution are too large. In practice, the average citizen does not have the knowledge to comment on risk assessment performed by EFSA. Instead, NGOs take on the role of representing the public by offering counter-expertise, namely alternative accounts to those offered by economic stakeholders and regulatory agencies. However, the expertise of NGOs is not necessarily congruent with the public interest. Deliberative rationality is thus geared towards stakeholder expertise – not citizen expertise.

Secondly, consultations with scientists and stakeholders are also organized regularly through the Scientific Colloquium and the Annual Colloquium of EFSA. 'Spanning two days, the Annual Colloquium is an interactive and participative event that facilitates group works, debates and breakout sessions. This approach fosters an environment that allows participants to discuss issues of current concern in an open way. In parallel, EFSA is able to increase awareness of its partners' views and learn more about possible future challenges for the Authority'. Participation is here limited, as participants are invited directly by (EFSA 2010a).⁵¹

Thirdly, EFSA has technical meetings which bring together EFSA scientists and stakeholders to discuss scientific issues and exchange views on various topics, such as animal cloning, health claims and GMO risk assessment. Opening up the traditionally closed circles of science by allowing interested parties to participate is new, even in national contexts (Bal, Bijker & Hendriks 2002:312). Technical meetings are ad hoc and may

⁵⁰ Until a couple of years ago, the procedure was less clear. Users had to go through the homepage of DG SANCO in order to comment, and there was no link from the EFSA webpage to the DG SANCO one, which made it difficult for inexperienced users (Paola Ferretti 2008:171).

⁵¹ The 15th meeting in the EFSA Scientific Colloquium Series had the title 'Emerging Risks in Food – from Identification to Communication' (2010). Stakeholders such as Coca-Cola, WHO and the Nestle Research Centre participated (EFSA 2010b).

include just one type of stakeholder group, such as applicants (biotech companies) or NGOs.

Fourthly, stakeholders are engaged in the EFSA Stakeholder Consultative Platform, which consists of EU-wide stakeholder organizations. Since its inauguration in October 2005, it has met more or less half-yearly. This Platform comprises a wide range of stakeholders, including antagonistic stakeholders such as Greenpeace, that are known for their very critical stance towards GMOs, and EuropaBio, which represents the interests of the biotechnology industry. The Stakeholder Consultative Platform (hereafter the Platform) acts as an advisory group to the EFSA Executive Director in relation to a broad range of 'horizontal' issues concerning risk assessment policy (i.e. its work programme, methodological questions, and feedback on the effectiveness of policies by stakeholders). The Platform has debated a number of general issues in relation to the work of EFSA; for example, the evaluation report on EFSA, the question of whether to introduce fees for authorizations, the improvement of the interface with Member States and the discussion of emerging risks. Most recently, members of the Platform also established working groups on the transparency of risk assessment, mirroring a working group of the Scientific Committee of EFSA with a similar mandate, and on criteria for public consultation (Borrás et al. 2007:590). In order to summarize so far, a deliberative rationality has been identified encompassing (a) *arenas within the Consultative Platform* (Platform plenary, comments on horizontal dossiers, Annual Work Plan, WGs with Platform members), and (b) *activities open to all stakeholders* (technical meetings, colloquia and conferences, open consultations). These are all examples of a deliberative rationality that has become institutionalized.

5.1.1 Deliberation in the shadow of hierarchy

Deliberation with stakeholders at the European Food Safety Authority is mainly exercised within a hierarchical governance form. There are many examples showing how EFSA acts as a facilitator and enabler of participatory

processes, deciding under strict rules which actors to include, when, how and under which conditions.

For EFSA, the term ‘stakeholder’ describes an ‘individual or group that is concerned or stands to be affected – directly or indirectly – by EFSA’s work in scientific risk assessment. In EFSA’s work with stakeholders, a distinction is made between ‘civil society stakeholders’ and ‘institutional stakeholders’. The term ‘civil society stakeholders’ refers to consumer groups, non-governmental organizations (NGOs), and market operators such as farmers, food manufacturers, distributors or processors and science professionals’. A relationship with civil society stakeholders is described in EFSA’s funding regulation, stating that EFSA must have ‘effective contacts with consumer representatives, producer representatives, processors and any other interested parties’. In addition to this, EFSA also works with environmental and animal welfare NGOs (EFSA 2008b). This may seem overly inclusive; however, not just any organization is eligible to participate. Stakeholder organizations, in order to participate, must meet the following criteria:

- ‘To be an EU wide organization with members distributed in the majority of the EU Member States; representing at least 60% of the EU population;
- To be an organization that has been established since at least 5 years;
- To be an organization having legitimate and general interests covered and represented by the EFSA’s remit;
- To be a major organization in its field of competence, representing relevant areas within EFSA’s remit; playing a crucial role for the area represented, and securing significant expertise in the fields covered by the EFSA’s remit’ (EFSA 2010e:2–3).

Furthermore, EFSA exerts shadow influence by taking decisions on representation and stakeholder categorization. Stakeholders must represent one of the following categories:

- Consumer associations and NGOs representing consumer interests;
- Farmers and primary processors, including feed processors;
- Food industry, including raw material processors;
- Trade and catering (wholesale, retail, hotels, restaurants, etc.);

- NGOs involved in health protection, animal welfare, the environment (EFSA 2010e:2).

These stakeholder categories are not merely an organizing and legitimizing activity for EFSA. The creation of stakeholder categories contains a power dimension. Categorizations constitute the very principle of boundary-work: The inclusion and exclusion of participants. How a stakeholder is categorized has an impact on that participant's role and on the stakeholder participatory process. The terms of reference and membership of the Platform are reviewed on a 'regular basis' by EFSA's Management Board. The renewal of Platform membership is organized through a public call for interests (EFSA 2010e:2). Judging from the set of criteria for the Platform, an exclusive participatory process is envisioned by the EFSA. In practice, however, the deliberative rationality extends quite far. At present, the following stakeholders have a mandate to participate:

- BEUC: European Consumers' Organization
- CEFIC: The European Chemical Industry Council
- CELCAA: European Liaison Committee for the Agri-food Trade
- CIAA: Confederation of the Food and Drink Industries in the EU
- Copa-Cogeca: European Farmers - European Agri-Cooperatives
- ECPA: European Crop Protection Association
- EEB: European Environmental Bureau
- EFFA: European Flavour and Fragrance Association
- EFFAT: European Federation of the Food, Agriculture and Tourism Trade Unions
- EMRA: European Modern Restaurant Association
- EPHA: European Public Health Alliance
- ESA: European Seed Association
- EUFIC: European Food Information Council
- EuroCommerce
- EuroCoop: European Community of Consumer Co-operatives
- Eurogroup for animals
- EuropaBio

- FEFAC: European Feed Manufacturers Federation
- FEFANA
- Freshfel Europe
- Friends of the Earth Europe
- Greenpeace
- ILSI Europe
- UEAPME: European Association of Craft, Small and Medium-sized Enterprises (EFSA n.d.).

Members of organizations attending the Platform meetings represent their specific organization, and do not take part as individuals. EFSA staff participate in meetings of the Platform ‘to ensure a proper exchange of information and dialogue, as well as giving support to the Platform by providing the Secretariat’ (EFSA 2010e). Openness is expressed in terms of the Chair of the Platform – who holds the chair decided by the Platform members. Other organizations or individuals can attend the meetings upon registration and acceptance by EFSA. The EFSA Secretariat of the Platform drafts agendas and minutes in collaboration with the Chair and Vice-Chair. The costs of participation in the meetings are usually borne by each individual organization. In exceptional cases, EFSA may contribute to financing the costs of those organizations which cannot otherwise afford to participate in meetings. This may only be awarded to European organizations which are ‘non-governmental, non-profit making, independent of industry, commercial and business, and have as their primary objectives and activities the promotion and protection of the health and safety of consumers’ (EFSA 2010e).

EFSA’s exercise of shadow influence in terms of striving to keep a balanced representation of consumer and economic stakeholders has caused some tension. This relates to financial support. For BEUC, reimbursed expenses for travelling to Platform meetings in Parma is important for its ability to participate. Logistics are still difficult, but reimbursement certainly makes it easier to find members who can participate (BEUC, Interview, 2011). Nevertheless, reimbursement and the allocation of additional seats for BEUC are seen as an exercise of unfair shadow influence by EFSA in the eyes of some economic stakeholders:

‘Indeed, BEUC is the only organization that can come with three people, and that is completely useless. I’m very critical of that approach. It is the continuous perception that consumer organizations or NGOs are weak, and that the industry is strong. That is not correct from my experience. That includes questions of funding, and I don’t get funding from the European Commission. I also don’t get reimbursed from meetings, whereas BEUC does, so there is no such thing as – let’s say – overrepresentation or overpowering from the industry side. This is usually not the case; neither in this area of GMO, nor in any other area that I know of. And I take part in a number of these meetings’ (Stakeholder no. 2, Interview, 2011).

Consumer organizations and NGOs, on the other hand, view this shadow influence – to create balanced representation – as crucial for the legitimacy of EFSA. Extending the boundaries for inclusion is indeed central to the deliberative rationality. In order to secure legitimate (and effective) outcomes, such processes must give all the same chance to initiate speech acts to question, to interrogate, and to debate (Benhabib 1996:70). However, in practice, this procedural requirement is complicated from a practical and an organizational perspective. BEUC itself acknowledges the difficulty in finding member organizations to participate and to fill the extra seats. And other stakeholders ask how meaningful extended inclusion really is: ‘Because you have the possibility, then you also have to show that you use them. So you bring people, regardless of their background, just to fill the seats. So often you have three people sitting there and one person does the talk and the other two have no idea what the issue is all about’ (Stakeholder no. 2, Interview 2011). This puts the spotlight on the tension between inclusion and expertise. The criticism coming from economic stakeholders questions EFSA’s shadow influence and suggests that legitimate deliberation should be detached from the actual counting of heads. This criticism has some resemblance to the view on expertise in the frame of economic rationality, in which output is treated as wants. A significant asymmetry of voices is not seen as justifying affirmative-action principles, and no moral rightness should enter the criteria for selecting participants.

Shadow hierarchy also creates another tension between the administrative and deliberative rationality – a tension between expertise and transparency. The Platform allows observation. After asking for, and being granted, permission from EFSA, external actors can attend meetings as observers. This is a requirement for transparency and an indicator of deliberative quality. Nevertheless, this requirement is questioned by one stakeholder,

who claims that transparency – at least for its stakeholder organization – puts a restriction on the debate. When external actors are there to observe the meetings, this stakeholder organization is not allowed (according to internal rules) to deliberate. The quality of the debate decreases.

‘You have observers sitting in the back, which immediately puts some restrictions. I am simply very honest. We will most definitely not speak about things that we do not want to see in the press. This is definitely so’ (Stakeholder no. 6, Interview, 2009).

The censorship effect of transparency is something that usually goes unnoticed in debates about deliberation. However, for most stakeholders, efforts to increase transparency are appreciated. NGO stakeholders have repeatedly sought to strengthen this. Agendas and minutes are available online. And more meetings are being broadcasted on the internet.

Nevertheless, there seems to be a general dissatisfaction with the EFSA’s Stakeholder Platform. Stakeholders have been criticizing the Platform for its lack of in-depth discussions, for having an unclear rationale and for producing results that are perceived as insufficient (van Dijk Ingénieurs Conseils with Arcadia International EEIG 2005). Stakeholders do not attend these meetings to make a knowledge contribution; they attend to get information, monitor each other and exercise some type of control and accountability (towards EFSA and towards each other). Instead of upstream involvement in risk assessment, stakeholders agree that the Platform comes down to risk communication and monitoring. While it is possible to get up-to-date information, meetings are perceived as tedious and costly. As a consequence, some of the stakeholders who attend them send a secretary or assistant instead of a policy adviser. Several stakeholders see EFSA as overly instrumental. EFSA’s Stakeholder Dialogue Platform is not sufficiently based on qualified debates. Stakeholders attend to feel the temperature in the room, so to speak. Sometimes the debates are based on more two-way communication. Nevertheless, it is clear that the Platform does not challenge the privileged position of scientific experts. But even though this arena has not extended its debates on GMOs, other arenas have facilitated such an expansion. While economic stakeholders seek to protect the boundary between risk assessment and risk communication, NGOs seek actively to stretch the boundary. And when this cannot be done from within the Platform itself, they participate in other arenas.

EFSA has facilitated and enabled several stakeholder meetings on GMOs and pooled together expertise from the food chain and EU Member States: (1) Plenary meetings in the Stakeholder Consultative Platform,⁵² (2) specific Working Group (WG) meetings,⁵³ and (3) Technical meetings.⁵⁴ The GMO dossier on asynchronous authorization and zero tolerance policy has not received any specific attention within the realm of EFSA (only one meeting). Instead, the most challenging debate with stakeholders in EFSA, regarding GMOs, has taken place on the Environmental Risk Assessment Guidelines for GMOs. The frequency of meetings and the different character of them (Platform, WG and Technical meetings) demonstrate that deliberative rationality has taken hold of EFSA, and has opened up risk assessment and risk communication on GMOs. Nevertheless, the balance between administrative rationality and deliberative rationality is truly challenging.

‘But we are here not only to inform, but also to listen and learn. We want to get as wide a range of views and experiences as possible. We are aware that our published opinions in this field are not as accepted as in others, and we are sensitive to the differing views in this complex field. That is why we continue to strengthen our engagement with all stakeholders. The process of authorisation of GMOs highlights the need for openness and inclusiveness both for risk assessors and risk managers, and in EFSA we have taken several initiatives to address this’ (EFSA 2009b).

On the one hand, the purpose of EFSA is to perform risk assessment and to safeguard independent scientific expertise. On the other hand, EFSA is also required to facilitate an open dialogue with society. Obviously, this creates tension.

⁵² GMO labelling (July 2007) and Evaluation of the EU legislative framework on GM food and feed (May 2009).

⁵³ The legal framework for risk assessment of GM food and feed (July 2008) and Evaluation of the EU legislative framework for GM food and feed (July 2009).

⁵⁴ EFSA’s work on GMOs (February 2006) and GMO Risk Assessment (February 2006; July 2008; September 2010).

5.2 Protecting the boundary between a scientific core and interest-driven expertise

A key message from EFSA is that ‘EFSA listens and learns, but cannot get drawn into wider debates’ (e.g. EFSA 2009b:33; EFSA 2009c:15; EFSA 2010c:15). EFSA is in the crossfire between at least two sets of governance logics: On the one hand, it needs to establish credibility in scientific risk assessment. But since the field in which the objectivity of ‘sound science’ cannot be taken for granted, EFSA is becoming more concerned with deliberative rationality and the involvement of stakeholders. I argue that it is not sufficient to describe this situation as a tension between an administrative and a deliberative logic. It is, in fact, more complex.

First of all, tension arises due to the separation between scientists and stakeholders. It might seem as if the Platform is where stakeholders come close to the realm of science (risk assessment). However, the Platform does not link stakeholders with scientists. In fact, the Platform reaffirms and protects the boundary between stakeholders and scientists. It keeps so-called interest-driven stakeholders at arm’s length from the scientific core. And as stated earlier, the purpose of this Platform is to discuss risk communication, not risk assessment. Even though all actors involved in EFSA activities are called experts, there is a clear border drawn between the Panels and the Platform. Those claiming to be interactional experts are clearly separated from those who act with a mandate of contributory expertise. In the writing of EFSA documents, the EFSA GMO Panel is framed as scientific and impartial. The Platform, on the other hand, is framed as interest-driven. A boundary is drawn that isolates the small specialist group – the core-set of scientists – and gives them a legitimate position to perform risk assessment in the GMO Panel. Around this enlightened core there are interest-driven stakeholder arenas such as the Stakeholder Platform, where stakeholders, to varying extent, interact with counter-expertise and interactional expertise. The integrity of the GMO Panel as an exclusive knowledge club is, however, constantly challenged by NGOs, some Member States and parts of the European Parliament. That battle has been fought, and largely won, by those protecting a strong boundary between the core-set and the Stakeholder Platform.

The independence of EFSA, the scientific integrity of the scientific Panels, and the overall structure of EFSA is acknowledged and protected by several actors. During my interviews, several economic stakeholders pointed out that lobbying the EFSA is not allowed (e.g. EuroCommerce, Interview, 2009; COPA-COGECA, Interview, 2009). According to them, the boundary is important for providing EFSA with legitimacy, transparency and a good structure. EuropaBio, FEFAC and ESA emphasize the importance of the Stakeholder Platform concentrating on procedural and horizontal issues linked to risk communication only. The purpose of the Platform is 'to have a general exchange of information and to flag up issues' (ESA, Interview, 2011). The legitimacy, from their perspective, comes from protecting this boundary between administrative and deliberative rationality. 'The Platform should focus on procedures, not scientific substance' (ESA, Interview, 2011). EuropaBio shares this position: 'We are not going to talk about the concerns of the risk assessment of some types of products, GMO or whatever. We really look at ways that issues are overlapping, like risk communication issues' (EuropaBio, Interview, 2011).

'There are some borders, certainly at EFSA. Especially NGOs question the scientific credibility of scientists at the Panel, but then EFSA said no, this is not the place; we have strict home rules on that. Even they reacted and said, okay, if anybody has questions about the legitimacy and criteria of scientific excellence we will take that separately ... It is not a witch-hunting platform to say Mr X and Mr Y should not be here' (Stakeholder no. 7, Interview, 2011).

According to these stakeholders, the Platform is not the right arena in which to discuss the role of EFSA or risk assessment: 'We have different opinions and we will never reach an acceptance on issues such as the EFSA guidance documents' (Stakeholder no. 2, Interview, 2011).

This separation of governance logics is also reflected in the frequently expressed wording in EFSA documents saying 'EFSA cannot get drawn into wider debates'. According to this frame, shared by some economic stakeholders, it is a problem that the Platform is not concentrating sufficiently on horizontal issues, processes and transparency. The reason it should not be drawn into other issues is because the Platform is not competent enough. This protection of the boundary between the EFSA Platform and 'wider debates' related to the GMO Panel can also be understood in terms of frames of governance rationalities. Here, economic

stakeholders embrace and protect deliberative expertise that is procedural and focused on risk communication. However, they also try to prevent the deliberative and administrative governance logic from intermingling. Obviously, Harry A. Kuiper, Chairperson of the EFSA GMO Panel, is also a protector. He accepts stakeholder participation at the level of problem identification: in the organization of the risk analysis process and establishment of judgemental values regarding acceptance/mitigation of identified and characterized risks. However, he rejects participation at higher levels. Kuiper's argument is similar to Collins and Evans (2002), participation should not be extended too far:

'The technical-scientific evaluation of risk-benefit issues demands a high level of expertise and must be carried out by *experts acting alone*. However, the results of the technical-scientific assessment should be subject to broader public scrutiny prior to any final decision on risk management' (Kuiper 2009:397, emphasis added).

Another member of the EFSA GMO Panel is less diplomatic and holds a typical deficit attitude in the field of GMO, in which NGOs are seen as more than interest-driven; namely, political, hostile and scientifically illiterate:

'There was one meeting with environmental organizations. And that was the worst I have ever experienced, because they were so rude. They did not say anything about science. They just complained about the politics. So we, who work with these issues, down-to-earth, hard-working with these scientific issues, we were astonished, we were paralyzed from what we heard from these organizations. It did not have anything to do with science. The main point was that they did not want GMO' (Stakeholder no. 8, Interview, 2009).

Economic stakeholders as well as scientists on the EFSA GMO Panel not only protect the boundary against NGOs and a deliberative rationality, but the boundary is also protected against policymakers and that part of the administrative logic associated with bureaucratic control. The updating of EFSA's Environmental Guidance documents on GMOs is a case in point. This request came from the European Commission and will be discussed in the next section.

5.3 Frame extension and shadow influence

Expanding the boundary between scientific experts and stakeholders should be understood as a conflict between not only administrative and deliberative rationality, but also between the two aspects of administrative rationality; namely, policymaking and science. In the case of GMOs, the scientific core within the EFSA is not only challenged by environmental NGOs, but also by policymakers.

EU policymakers have exercised shadow influence and frame extension with regard to GMO environmental risk assessment. In December 2008 the Environmental Council concluded that the implementation of the EU legal framework for GMOs should be reinforced (Council of Ministers 2008). The Council adopted a comprehensive legal framework for the authorization of GMOs, aiming to ensure a high level of protection of the environment, human and animal health. It also concluded that the cultivation of GMOs has given rise to discussions and questions concerning the possible impact on health, the environment and ecosystems. The Council therefore considered it necessary to look for improvements in regard to the implementation of this legal framework. In this respect, two areas of improvement fell within the remit of the EFSA: 'Strengthening of environmental assessment and monitoring arrangements' and 'Better use of expertise' (EFSA 2009d). However, as early as 2007, EFSA organized a series of technical discussions to bring together GMO Panel experts, stakeholders and technical experts from the EU Member States to exchange views on the scientific issues and various aspects of the guidelines documents.

Following this formal request, the EFSA GMO Panel endorsed in January 2010 a draft scientific opinion on the assessment of potential impacts of GM plants, and a public consultation was launched.⁵⁵ EFSA received 494 comments and over 2,000 people watched the web-streamed meeting with Member State experts held in Berlin in June 2010. At this

⁵⁵ In parallel, the EFSA GMO Panel also updated specific topics (e.g. design of field trials and long-term effects) of its 2006 guidance document for the ERA of GM plants.

meeting, there was agreement amongst the 18 represented countries that the draft guidelines represented a significant step forward in GM plant environmental risk assessment. Following this discussion with Member States, EFSA recognized the specific interests of environmental NGOs, which were invited for an individual consultation in September 2010. As mentioned earlier, EFSA annually invites NGOs to a meeting to discuss the latest scientific issues regarding GMOs. In 2010, the consultation focused on the guidance for the Environmental Risk Assessment of GMOs, the so-called ERA Guidance.

The very conclusion of the Environmental Council, and the call from the European Commission to EFSA for a revision of the guidance, are examples of shadow influence and boundary-work. This created tension within the administrative rationality itself. The request was understood by scientists on the EFSA GMO Panel as an example of politicization and a serious spillover from risk management (politics) to risk assessment (science): 'The European Commission annexed the GMO Panel's guidelines for risk assessment of GMO' (Andersson, Interview, 2009). To 'annex' is an expression of frame extension, where policymakers pushed the boundaries outwards and claimed power over risk assessment. According to Andersson, the GMO Panel did not initially (November 2007) accept the proposal from the European Commission to convert the guidelines into legal text. The opinion among Panel members was that policymakers should not interfere with science, and that it is not possible to put down in legal text a knowledge field that is constantly growing (Andersson, Interview, 2009). With legal requirements, policymakers thus acted as frame-makers. Despite the resistance from the GMO Panel, a so-called High Level Agreement was reached between the European Commission and EFSA, without the participation of the GMO Panel, and a text for new guidelines was suggested. This highlights the inner tensions in the administrative rationality itself: Between governance logic associated with the policymaking apparatus of the EC, on the one hand, and governance logic associated with independent scientific expertise on the other – both trying to find the optimal approach to resolving problems.

5.3 1 Upstream involvement and expertise

The problem of extension (Collins & Evans 2002) is a pressing issue: Actors working with EFSA have conflicting opinions about the co-mingling of science and society. Stakeholder participation outside the borders of the Platform and outside the so-called technical meetings with certain groups of stakeholders (e.g. isolated meetings just with NGOs), is controversial. Nevertheless, participation has been extended ever further with the stakeholder workshop on EFSA's draft guidance document for the selection of GM plant comparators.

Environmental NGOs clearly seek to expand the boundary between the scientific core and so-called interest-driven experts, namely themselves. They actively push for upstream involvement in risk assessment and envision participation in risk assessment processes at higher levels beyond the Platform. Those who are typically seen as the defenders of procedural ideals (FoE and Greenpeace) talk of 'empty proceduralism' in the Platform and seem to experience political apathy towards this arena

'This is not because we are not interested. We have to travel to Parma for the stakeholder forum. You make input, and then you don't know if anything is taken up by anybody. So we had some doubts about the cost-efficiency. Is it justified to spend three days travelling to Parma? ... We are in consultation with EFSA, and participate in the debate on guidelines for risk assessment. The thing is, we are not against this transparency to stakeholders giving input, but at the moment it's difficult. You ask yourself on the impact you have through such stakeholder events' (Greenpeace, Interview, 2011).

Greenpeace does not prioritize Platform meetings at present. Instead, it has been focusing on extending its participation in the debate on the ERA guidance (Greenpeace, Interview, 2011). This upstream involvement is limited and strictly controlled; nevertheless, it is sanctioned by, and has support from EFSA. Dr Riitta Maijala, the head of EFSA's Risk Assessment Directorate, explained:

'EFSA aims to finalize the GM Environmental Risk Assessment guidelines by the end of the year, and dialogue with the environmental NGOs forms an important part of our on-going consultation. We recognize that some environmental NGOs have questions about this complex scientific process, and we are ready to listen, engage and exchange views with those actively involved in this field.

Today in the European Parliament for example, TestBiotech will present a report on EFSA's environmental risk assessment approach, which upon receipt, we will read with due consideration. We look forward to constructive discussions with environmental NGOs interested in our work' (Maijala, in Dunn, 2010).

And the individual consultation in September 2010 was not an isolated event. NGOs were also invited in March 2011 when EFSA held a consultative workshop in Brussels to discuss the views of stakeholders on a more specific area of GM plant environmental risk assessment: the selection of GM plant comparators. This workshop brought together various actors, including representatives from academia, industry, NGOs, the European Commission, the European Parliament and scientific experts from EFSA (the GMO Panel). The meeting was also available to the public via a live webcast, which was viewed by more than 900 people (EFSA, audiovisual, 2011). This workshop represents the widest-ranging attempt by administrative staff at EFSA to extend the border between science and society. And during the workshop itself, we find several examples of tension and conflicts. Just a few of them shall be mentioned here.

The very purpose of this workshop was to create a commonly accepted frame for risk assessment, and to decide upon criteria for relevant methodologies and which data should be included or excluded. Framing thus lies in the very commitment of this workshop: to select and call attention to particular aspects of the reality, and to direct attention away from other aspects (cf. Entman 1993:54). Central to this debate was the question of a key concept underlying the paradigm in risk assessment; namely, substantial equivalence. This is a concept developed by OECD and a key principle in risk assessment that is normally associated with the US regulatory policy style. It maintains that a novel food (e.g. GM foods) should be considered the same as, and as safe as, a conventional food if it demonstrates the same characteristics and composition as the latter. Substantial equivalence is important from a regulatory point of view. If a novel food is substantially equivalent to its conventional counterpart, then it could be covered by the same regulatory framework as a conventional food (Levidow et al. 2007). This dynamic concept has in the EU been renamed and articulated as the comparative approach for risk assessment of GM foods: 'The new name implied more scientific uncertainty and a greater burden of proof required to demonstrate similarity with a safe food' (Levidow et al. 2007:47). While this principle is not new in the debate on

GMOs, it is still on the agenda and was an important principle against which NGOs voiced criticism during the workshop.

According to the NGO TestBiotech, which participated in the workshop and gave an 'invited comment' (short presentation), the main problem with comparative assessment as proposed by EFSA is that genetically engineered plants are not seen as basically different from conventionally bred plants. Therefore, genetically engineered plants are not assessed as technical products inheriting specific risks and technical qualities. On the contrary, they are assessed by comparing them with plants derived from conventional breeding. This has an important impact on the overall process of risk assessment (Then & Potthof 2009). Moreover, the concept of comparative risk assessment allows the 'concealment' of the specific risks of genetic engineering by comparing it with very general risks and non-relevant data. The message from this NGO (during the workshop and in its position papers) is that comparison can serve as a tool but not as a concept. EFSA should not presume safety, equivalence, similarity or familiarity. Instead, EFSA should always apply a risk assessment 'per se' in the case of GMOs (Tenh 2011; EFSA 2011, audiovisual). This demonstrates how an NGO seeks to establish itself as not only an interactional expert, but also a contributory expert, debating on the very principles of risk assessment. It also exemplifies an attempt to extend the boundary between stakeholders and the GMO Panel. As shown in the following quote, this creates conflicts:

'I think scientifically he [the NGO TestBiotech representative?] is so far off-base, he is not even in the ball park anymore. Because a lot of issues that he is raising are already covered in what EFSA is doing in its risk assessment ... The thing with getting a lot of data on the plants...it just turns the whole system of doing scientific research on its head. First you create a scientific hypothesis that you know you can test in an experiment. Then you generate data to test your hypothesis. And then you either reject your hypothesis or, if you can't reject your hypothesis, you look at another way of trying to test it. That is how you do it. You just don't get a lot of data and then try to sift through the bunch of data and try to identify risks that might be potentially there. And this leads me basically to the question what the specific risks of genetic modification in plants are that we are hiding with a comparative approach. I don't get that' (Workshop participant, audiovisual, EFSA 2011).

This quote shows the rejection of this NGO as a contributory and interactional expert. And this was not only an individual comment during

the workshop. Based on the video recording, several participants clearly undermined the authority of this NGO. This deficit approach towards NGOs is not new, either – on the contrary. Mediating between a deliberative and a administrative rationality, the moderator of this workshop, Dr Helmut Gaugitsch from the Austrian Environmental Agency, exerted shadow influence and performed boundary framing when trying to facilitate a constructive debate: ‘Please, I would like you to stick to the subject of the discussion because I don’t think there is much to gain when we are discussing on such a general level. I would also be very happy if we can discuss, with the respect to the tone, in a way that we respect each other as colleagues’ (Mr Gaugitsch, Moderator, EFSA 2011, audiovisual).

Clear-cut boundary framing is difficult to obtain. Research shows that NGOs have different positions with regard to GMOs: in terms of the emphasis each NGO puts on issues such as freedom of choice for consumers and farmers, environmental contamination and seed purity, their attitude towards a tolerance threshold for GMOs, attitude towards science and the interpretation of the ‘polluter pays’ principle⁵⁶ (Ansell & Vogel 2006, chapter 5). Yet in this workshop, some participants rejected TestBiotech for belonging to the same group of NGOs that work with direct political action and engage in illegal activities such as destroying GM field trials:

‘If you really want to have such a lot of field trials, then please go together with all the other NGOs and help us to protect these field trials *that in your name want to destroy them*’ (Workshop participant, audiovisual, EFSA, 2011, emphasis added).

With such a statement (clearly outside the border of this workshop debate), some participants sought to, in the words of Eden (1999 in Eden et al. 2006:1068), ‘cast their environmentalist opponents into the wasteland of irrationality’ and enhance the authority of themselves.

The criticism of EFSA’s comparative approach in risk assessment and the similarity to the principle of substantial equivalence is, however, not only criticized by environmental NGOs. The European Network of Scientists for

⁵⁶ In environmental law, the polluter pay principle refers to making the actor responsible for producing pollution that in turn is responsible for paying for the damage done to the environment.

Social and Environmental Responsibility (ENSSER) supports the criticism of the comparative safety assessment as a reformulation of the concept of substantial equivalence. It also suggests that EFSA abandons the concept of comparative safety assessment and the concept of familiarity applied prior to environmental risk assessment (ERA). Furthermore, ENSSER suggests developing a risk assessment per se, at least when there are no appropriate parental organisms (Meyer, Powerpoint slides, 2011; EFSA, audiovisual, 2011).

This debate includes different views and boundary-work on many other issues beyond the general strategies for the Environmental Risk Assessments (ERA) of GM plants: consideration of the receiving environments, assessment of the persistence and invasiveness of GM plants, assessment of impacts on Non-Target Organisms (NTOs), impacts of the specific cultivation, management and harvesting techniques, and statistical considerations (see e.g. EFSA 2010f). For these issues, NGOs as well as Member States have produced a lot of expertise. Nevertheless, co-production is mainly exercised between EFSA and Member States. To what extent comments and concerns raised by environmental NGOs are taken in by EFSA in the new ERA Guidance is unclear, since the debate is still ongoing while I am finalizing this study. However, NGOs' ontological and epistemological criticism of EFSA certainly does not make it easier to reach the position of a legitimate interactional and/or contributory expert. According to critics, the purpose of NGOs is not to reach a position as interactional or contributory experts – but to stall the process, be it the general authorization process or updated guidelines for GMO risk assessment.

'It's like a divorce lawyer: you will always win, whatever the outcome is. Some groups here will always win unless there is a solution and it's off the table. So keep the disputes going. I think a participatory democracy approach works if there is willingness for an outcome, a willingness to come to a conclusion; then I think it can work. But if it's a debate where some actors do not have any benefit from an outcome, it's just a way to slow down the process. And this is something that is overlooked in the GM area. There is always this tendency, or this belief, that if people just talk more, then we will find a better way. But actually, we don't need to talk; we need to take decisions' (Stakeholder no. 5, Interview, 2011).

According to critics, NGOs take advantage of the deliberative logic to slow down the administrative one – not to develop it further. NGOs simply thrive on deliberation and not reaching consensus. Nevertheless, such a statement comes from a stakeholder who sees that the strict border between a core-set and so-called interest-driven stakeholder starts to crack – something that threatens this organization’s interests. And the border starts to crack with expertise belonging to the frame of administrative rationality. A deliberative rationality has thus made it possible for some stakeholders to put forward not merely procedural, but scientific expertise in a deliberative and transparent setting. This is innovative and new, but is clearly rejected by the majority of actors involved.

5.4 Conclusion

In this chapter I conclude that a deliberative rationality is present in the European Food Safety Authority and that it has changed how this expert authority works in the field of GMOs. Deliberative rationality is a new phenomenon that has materialized into social practice in the form of several institutionalized arenas for stakeholder participation. Stakeholders participate mainly to deliberate with each other and the EFSA administration. Nevertheless, stakeholder participation also takes place beyond the Stakeholder Platform, upstream in the GMO Environmental Risk Assessment Guidance. This means that science and society do meet. Environmental NGOs discuss with scientists the principles of risk assessment. Nevertheless, this is controversial. While economic stakeholders try to limit their participation to stay mainly within the border of the EFSA Stakeholder Platform, environmental NGOs push the boundaries outwards and upwards. Economic stakeholders protect and contribute with deliberative expertise, namely procedural input related to risk communication. Environmental NGOs, on the other hand, do not prioritize this type of deliberation and instead try to engage according to the frame of administrative rationality and seek to contribute with scientific expertise. And even though the border between the scientific core and the so-called

interest-driven stakeholders is still maintained, the debate on the ERA Guidance has clearly challenged that border.

CHAPTER SIX

Stakeholder participation in DG SANCO

In this chapter, I will continue to examine the interplay and competition among the frames involved in the food safety governance of GMOs in the EU by studying one particular Commission Directorate-General in the EU; namely, DG SANCO. As in the previous chapter, the focus is on the second research: How is deliberative rationality, particularly stakeholder participation and stakeholder expertise, framed in this policy domain? I will search for a potential deliberative rationality in policy processes from the division within DG SANCO that focuses on food, from arenas dealing with stakeholder input, and from the Advisory Group on the Food Chain and Animal and Plant Health, hereafter the Advisory Group. This chapter starts off by examining a stakeholder consultation called the Healthy Democracy Process – that brought together around 200 stakeholders from society to discuss how working procedures can be made more open, transparent and participatory. This process is important as it has spurred a wide range of stakeholder engagement across the areas of activity of DG SANCO.

The chapter then continues by examining how deliberative rationality has materialized in terms of different arenas for stakeholder participation, contributing to policy advice, management and process development. Specific attention is drawn to the Advisory Group, as this is the only arena where stakeholders can deliberate on GMOs. The analysis will show that input from stakeholders is no longer addressed in an adhoc or informal way. The deliberative rationality has brought a fundamental change to this policy domain. New legal principles have created greater transparency, new working practices, predictability of rules and processes, and involvement of stakeholders in the EU policymaking process. Nevertheless, participation is hierarchical, which means that it is regulated in law, exercised in a top-down

fashion and controlled by policy officials. Since GMOs continue to be a controversial subject, one would expect to find formalized discussions on GMOs in several DG SANCO arenas. Yet as the analysis will show, this is not the case. There is a limit to how far the governance process can be opened up to stakeholders, especially in the case of GMOs. But as this chapter will illustrate, the border is negotiated and pushed not only by stakeholders – but also by public officials. To study stakeholder participation thus calls for studying the dynamic between deliberative and administrative rationality. And the spotlight then turns not only towards stakeholders, but also to public officials as frame-makers operating in the shadow of hierarchy.

6.1 Opening up for structured dialogue with stakeholders

‘Connecting with citizens and stakeholders is intrinsic to DG SANCO’s mission and in early 2006 DG SANCO embarked on a new process to take this agenda further. Known as the Healthy Democracy process, this new process has built upon DG SANCO’s extensive track record of stakeholder engagement...The purpose of the Healthy Democracy process is to improve stakeholder involvement and participation. In the long term, the aim is to establish a solid network of stakeholders and research bodies to improve its substantive performance’ (DG SANCO 2007a:3).

The frame of deliberative rationality can be identified in key documents from DG SANCO linked to The Healthy Democracy Process. DG SANCO launched this process (HDP) in 2006, when external pressure on EU institutions pushed them to open up their working and policymaking processes, making them more transparent and accessible to stakeholders. The HDP was a structured dialogue with stakeholders and strategic initiative for quality improvements. It had the purpose of mapping problems directly associated with their needs and expectations for better governance and discussing how to improve the situation. The process comprised three phases: (a) establishing of a Peer Review Group which reviewed the DG’s

experience of stakeholder involvement, and identified gaps and weakness in the existing consultation system; (b) the elaboration of supporting materials, and (c) a conference in the spring of 2007, which gathered stakeholders, DGs, EU institutions and public participation experts to share and validate these findings (DG SANCO 2007a, 2009).

There are several reasons why I have chosen to commence this chapter by deepening the analysis of HDP: Firstly, this process brought together a number of key activities (workshops, conferences, reports, etc.) that demonstrated a new direction of this DG. Secondly, the encompassing nature of this process makes it representative when it comes to institutional discourse on stakeholder participation in this DG (Foldal, Interview, 2009). Thirdly, ideas from this process have translated to concrete actions.⁵⁷ In order to understand the characteristics of deliberative rationality, one must therefore scrutinize this wide-ranging process.

The ideals in the Healthy Democracy Process were not merely procedural, but tied to high substantive expectations, as expressed in the following recommendations: Establish a 'Stakeholder Dialogue Group' to get advice on processes (a group to advise DG SANCO on processes rather than on content); improve transparency through better 'Forward Planning' (better access to timetables of individual consultations, web-tools etc.); get more and better feedback (from stakeholders, to clarify the main outcomes of consultations and reasons why certain stakeholder views were not taken on board); engage the 'un-engaged' (making sure that more federations are consulted); drive up data quality (ensuring a better quality and reliability of data); define representativeness (establishing criteria for a representative stakeholder involvement); be aware of stakeholder asymmetries (to ensure a more balanced participation); establish flexible and longer consultation timeframes (enlarge the timeframes for consultation); improvement of inter-DG coordination (better co-ordination between DGs to minimize the burden on stakeholders); and make comitology more transparent (i.e. establish a 'Dummies' Guide' to comitology) (DG SANCO 2007a). These recommendations illustrate a deliberative logic that seeks to improve procedures (transparency, engagement, representation and coordination)

⁵⁷ For instance, the DG SANCO 2006 Peer Review Group on Stakeholder Involvement later suggested the creation of a Stakeholder Dialogue Group, which started to operate in 2007.

and substance (for instance, data quality and performance). The vision to go beyond procedures is expressed in reports from this process, supported at the Directorate General level, and championed by the former Director General of SANCO, Mr Robert Madelin:

‘The objective of the whole process is to achieve not only more legitimate, but also more efficient decisions’ (Madelin, in DG SANCO 2007a:18).

This quote illustrates the vision to create policy effectiveness. In line with Scharpf (1999), Madelin claims that a deliberative logic will also result in more efficient problem-solving. Yet the assertion that deliberation and arguing strengthen not only procedures for policymaking, but also improve the output has – as my empirical material shows – not been confirmed in the case of GMOs. Nevertheless, the deliberative rationality may offer deliberative quality for other policy dossiers within DG SANCO. The recommendations from the Healthy Democracy Process also show that deliberative rationality is clearly linked to the administrative one. The deliberative rationality is clearly hierarchical and top-down (i.e. establish a stakeholder group, gather more feedback, improve consultation procedures). Deliberative ideals and procedures were – during the process itself – put into practice by DG SANCO with the help of professional facilitators possessing expertise in process development. HDP also provided for an active role for civil servants at DG SANCO. Intertextual links can be found from DG SANCO to external contractors who did the main practice-in-the-making during the conference in 2007.⁵⁸ An administrative logic was thus central for deliberation to take place in this policy domain. More so, this process illustrates the view of policymakers on deliberative rationality. They view it as complementary – not contradictory, and especially not conflicting with

⁵⁸ The British organization INVOLVE (i.e. Richard Wilson, the founder of INVOLVE and its former director) worked as a facilitator (outlined the process and divided participants into working groups, etc.). Other stakeholder consultation experts were also invited as participants (e.g. the Institute for Public Policy Research, RAND, Google, as well as Professor Ortwin Renn from Stuttgart University). Insights and lessons from the UK Better Regulation Task Force (BRTF) were also discussed. In that sense, there seems to be a close connection between theory and policy: civil servants at DG SANCO seem enthusiastic to translate participatory theory into policy learning. For that reason, the EU food safety domain lends itself to an analysis about theory-policy learning.

other rationalities. Nevertheless, there were tensions that show that these two rationalities also can be in conflict with each other.

6.1.1 Tension linked to inclusion and participation

The Healthy Democracy process – just as the institutionalized arenas for stakeholder participation within DG SANCO – raises questions regarding deliberative quality (e.g. inclusion and participation) as well as the interplay between and challenges of administrative and deliberative rationality.

Looking at the list of participants in the Stakeholder Involvement Conference of 2007, one is struck by the wide range of participants taking part in plenary as well as small-group discussions. A few examples shall be noted here, categorized by DG SANCO as: Twenty-six industry stakeholders⁵⁹ (sixteen federations/associations and ten individual firms),⁶⁰ seventeen NGO stakeholders,⁶¹ nineteen stakeholder consultation experts,⁶² twenty Member States representatives,⁶³ six other DGs,⁶⁴ WHO and Mission of the People's Republic of China to the European Union (DG SANCO 2007a).

The Healthy Democracy process as such thus created a wide platform, as it encompassed actors with different types of material, symbolic, cognitive and social power: producers, retailers, farmers, NGOs, state agencies, transnational corporations (TNC) and international organizations (IGOs). It brought together public and private actors as well as actors from civil society. This a good example of how a deliberative rationality – participation, consultation, dialogue and involvement of affected interests –

⁵⁹ E.g. CIAA (Confederation of the Food and Drink Industries), FBE (European Banking Federation) and World Federation of Advertisers.

⁶⁰ E.g. Bayer, Nike, Coca-Cola and Tesco.

⁶¹ E.g. BEUC, Eurogroup for Animal Welfare, European Disability Forum and the Swedish temperance organisation IOGT-NTO.

⁶² E.g. Agra CEAS Consulting, Google, Institute for Public Policy Research (IPPR), INVOLVE and Professor Baruch Fischhoff (Pittsburgh University).

⁶³ E.g. UK Department of Trade and Industry, German Ministry of Health, UK Cabinet Office Better Regulation Executive, and Poland's General Veterinary Inspectorate.

⁶⁴ E.g. DG Enterprise and Industry and DG Environment.

is created by administrative means within core political institutions. DG SANCO acted as facilitator and exerted shadow influence by making distinctions and describing similarities and differences in regard to the groups.

As Hacking in Tamm Hallström & Boström (2010) reminds us, categories are not given; nor are they neutral in any way. This became evident in the initial step in the process, when inclusion and participation were discussed in terms of stakeholder categories. Here, the inclusion of EU Member States was questioned: 'Should Member States be seen as a public body or a stakeholder. There were very many who were sceptical to the participation of Member States' (Foldal, Interview, 2009). The Commission then decided that national public authorities should be considered as interest organizations (stakeholders). The main argument was that public authorities – besides their executive and administrative power – also have a responsibility to gather opinions and feedback from those who are affected by their policies. Shadow influence and an extensive view of representation thus enlarged the process considerably by letting lobbyists sit at the same table as EU MS representatives. This shows the tension between the administrative and deliberative logic, as some participants argued that Member State participation had a limiting effect on deliberation.

Another problem can be identified in the internal debate on the geographical location of participants. During the Healthy Democracy conference in 2007, there was a lack of participants from new Member States. One possible explanation for this could be that they prioritized public administration rather than dialogue: 'You could say it's somewhat of a luxury problem for new Member States, they might put resources on other things than to discuss what might seem like a theoretical issue' (Foldal, Interview 2009). Participation and inclusion also created tension due to differences in the legal and governance structure of the different policy areas of DG SANCO. Since the problem-solving capacity, rules and principles are different in the area of food and health, they created asymmetrical room for manoeuvre for representatives working in these areas. As one respondent points out: 'DG SANCO is much more than food safety.... We are used to rules coming from Brussels; we are used to the fact that everything is decided in Brussels. But it's not the same on the healthside. When it comes to health, this is much more a national issue [national regulation]; it's not as harmonized as food' (Foldal, Interview 2009). The above exemplifies how

the administrative rationality constrains as well as supports deliberation. Because health issues are not as centralized as food, the participants sometimes found it challenging to discuss with each other and find common solutions. As an example, participants working with food and animal health ‘spoke another language’ than those involved in health issues. This is, in the terminology of deliberative democratic scholars, termed ‘incommensurability’ between groups. In this case, administrative rationality challenged the deliberative one because the legal framework in the two policy areas is different. It suggests that a strong administrative rationality – as in harmonized regulation – fits better with a deliberative rationality. Participants representing the food and feed chain found it easier to deliberate and be more specific, because the debate could take off from a shared set of legal principles and better understanding about comitology and decision-making.

A fourth type of tension regards stakeholder asymmetry. The HDP acknowledged that: ‘There exist great disparities in access to resources between stakeholders, which undermine the legitimacy and representativeness of involvement processes as certain stakeholders can engage with processes more easily. In particular, the asymmetry in access and production of information was seen as a key issue leading to stakeholder inequality’ (DG SANCO 2007a:12). This puts the spotlight on power issues: Stakeholders have different power resources (material, symbolic, cognitive and social). Cognitive power resources are particularly important, as stakeholders have different abilities to provide expertise: ‘Working Group A highlighted that policy arguments are often won and lost on available evidence; therefore the ability of a stakeholder to produce evidence would affect the balance of any decision-making’ (DG SANCO 2007a:12). And as we will see later on, the ability (or not) to provide expertise affects the capacity to provide alternative frames to influence policy response and regulation. In the case of the Healthy Democracy process, the issue of stakeholder asymmetries was highlighted and discussed mainly in terms of providing additional funding to NGOs. More direct efforts to reduce stakeholder asymmetries have been made by creating a more balanced representation for consumer organizations.

Altogether, these examples demonstrate that administrative and deliberative rationality in the context of EU food safety and GMOs are dependent on each other, but that they also create tensions. It also shows

that policy officials exert shadow influence, as they have to make decisions regarding inclusion and participation linked to, among other things, stakeholder categorization and stakeholder asymmetry.

6.2 Deliberative rationality materialized

The deliberative rationality envisioned by policymakers and pushed for in the Healthy Democracy process has materialized at DG SANCO. EU food safety is not only governed by a bureaucratic and Weberian logic, a deliberative logic also steers the behaviour of different actors and influences policymaking. There are several notable examples of how policymakers facilitate multiple actors' engagement.

The EU food safety domain reveals several arenas for institutionalized stakeholder participation. Following the categorization by DG SANCO, policy officials make a distinction between (a) consultative groups, (b) consultation processes, (c) action platforms and (d) stakeholder dialogue. First of all, consultations are available through 'Your voice in Europe'. This is the European Commission's initiative offering online debates and online consultations. It has been set up in the context of the Interactive Policy Making initiative. As part of the Commission's Minimum Standards on consultation, it aims to improve European governance and introduce better regulation. Secondly, DG SANCO has specific food consultations available through their homepage on topics such as, for instance, animal health legislation, antimicrobial resistance and medicated feed.

Thirdly, there are so-called 'Action platforms'. Operating on the border between health and food, the relevant platform for food is called the EU Platform for Action on Diet, Physical Activity and Health. This structure, hereafter the Nutrition Platform (as it is typically referred to),⁶⁵ was established in 2005 with the purpose of creating a forum for actors at

⁶⁵ The Nutrition Platform should not be confused with other initiatives such as the High Level Group (HLG) on Nutrition and Physical Activity or the Nutrition and Physical Activity (NPA) network.

European level who can commit their membership to engage in concrete actions designed to discuss plans to contribute to healthy nutrition, physical activity and the fight against obesity. The Nutrition Platform covers a wide range of activities, including actions in key fields such as: (a) consumer information, including labelling, (b) education, (c) physical activity promotion, (d) marketing and advertising, composition of foods, availability of healthy food options, and portion sizes. At present the Platform involves 32 members of EU organizations ranging from those representing the food industry to consumer protection NGOs (DG SANCO 2010a).

When DG SANCO speaks of stakeholder participation, the Nutrition Platform is often highlighted as a good example of co-ownership, putting stakeholders in the 'driving seat' and enabling the process to be self-validating. This means that it is a soft policy instrument and relies on dialogue and voluntary commitments by stakeholders (Madelin audio podcast, in EUFIC 2010). However, this Platform is not free from conflicts. As in other similar arenas, there is still an element of confrontation between NGOs and economic stakeholders, which have very different perceptions on a number of issues (The evaluation partnership 2010). Since this arena does not contain any debate on GMOs, it will not be further examined.

The fourth arena is the Stakeholder Dialogue Group, which, according to DG SANCO, is an example of stakeholder dialogue. The DG SANCO Stakeholder Dialogue Group (SDG) was created as a direct result of the Healthy Democracy process,⁶⁶ in 2007. The objective of the group is to advise the Director General and the European Commission on different procedural issues that will facilitate stakeholder involvement in the work of DG SANCO. The group has been chaired by Mr Robert Madelin, previously Director-General of DG SANCO, and consists of nineteen members. Even though the members come from different stakeholder organizations (among others, ESA, EuroCommerce and CIAA), they participate as individuals. Members are not supposed to represent any organizational interest. The SDG's tasks involve effecting a more transparent comitology, improved consultation, reflecting on how to engage 'the unengaged', and improving stakeholder asymmetry (DG SANCO

⁶⁶ More specifically, SDG was created as a direct result of the 2006 Peer Review Group on Stakeholder Involvement.

2008b). Since this group focuses on procedures – not substance (i.e. food safety dossiers) – SDG has not had any direct impact on the regulation of GMOs. Nevertheless, this type of participation may have an impact on future regulations. In contrast to the other arenas for stakeholder participation, this one is where the transformation of preferences and exchange of arguments seems to take place. This relates to deliberative quality as an important dimension of deliberative governance rationality. The discussion in this arena (according to the participants) has been focused, deliberative and contained different opinions, while also being a learning environment. ‘The feedback from the [former] Chair [Mr Robert Madelin] has been professional and is highly appreciated.’ Three participants were clearly impressed (Stakeholder no.1, Interview, 2008; Stakeholder no. 6, Interview, 2009; Stakeholder no.2, Interview, 2011).

One possible explanation for the deliberative quality is, one could assume, that the group focuses exclusively on procedures – not content. Deliberation tends to be easier in low-stake issues, and in this arena there are no publicly or scientifically polarized food safety issues on the table. This institutional boundary-work, in which policymakers strictly separate ‘process from content’ (DG SANCO 2007a:7) has thus been successful in the eyes of its participants, who do not seem to experience ‘empty proceduralism’. Instead they experience substance in an arena that is strictly limited to procedures. This is somewhat ironic. Participation, deliberation, arguing among concerned actors and social learning is understood as most satisfying when in the most preparatory phase, furthest away from decision-making and management. An important outcome of SDG is the ‘Comitology Planner’, published annually to allow stakeholders to anticipate consultations in the forthcoming year, so that they know in advance when they will be consulted and on what particular topic (see DG SANCO 2011b). There are also more visionary plans to develop deliberative innovations at the interface between DG SANCO, civil society and the public. However, citizen juries as a deliberative innovation are perceived by stakeholders as practically unworkable, and more of a theoretical idea (Stakeholder no. 6, Interview, 2009). Since GMO dossiers do not pass through this arena, it will not be examined further.

The last example of an arena for stakeholder participation within DG SANCO is what this DG refers to as a *consultative group*. The Advisory Group on the Food Chain and Animal and Plant Health, hereafter the

Advisory Group, is the only consultative group on the food side of DG SANCO (as opposed to health and consumer protection). The Advisory Group was created in 2004 and brings together key stakeholders, including farmers, the food industry, retailers, consumer organizations and others to advise the European Commission on food safety policy. It meets in principle twice a year in plenary sessions to discuss general policy issues that have an interest for all the 36 member organizations. More technical meetings are held in Working Groups, in which other experts can also participate (DG SANCO 2008c). This is the only arena in which GMO dossiers are discussed, and will therefore be analysed in more depth later on. Prior to that, I will compare these arenas and highlight the main characteristics.

With administrative means, the following arenas enforce a deliberative rationality of governance within the borders of DG SANCO: Consultations, consultative groups, stakeholder dialogue and action platforms. The table 21 represents an alternative way to categorize the institutionalized arenas that bring together stakeholders to deliberate face to face (leaving out online communication). Stakeholders participate to give policy advice, and in management and process development. Policy advice means preparatory work with stakeholders to ground decision-making prior to risk management and the comitology process. Since stakeholders are often in a position to have an effect on the resource or the problem, their expertise, engagement and attitudes matter. Stakeholder participation for management has the purpose to work with food chain actors to adopt common guidelines amongst themselves at European level (e.g. codes of conduct, guidelines, sectoral agreements/schemes etc). Participation enables stakeholders to specify concrete aims and tools for implementation. Instead of having rules imposed upon them, stakeholders are empowered to experiment with own solutions that also build social capital, social learning and best practice. Stakeholder participation for process development has the purpose to reflect on participatory tools to foster more and better engagement with stakeholders who may not traditionally get involved in EU policymaking. It is not directly linked to the policy process and does not deal with particular policy dossiers.

Table 21: Arenas for stakeholder participation in DG SANCO

Participatory type	Example	Administrative location
Stakeholder participation for policy advice	The Advisory Group on the Food Chain and Animal and Plant Health	DG SANCO/Food safety
Stakeholder participation for process development	The DG SANCO Stakeholder Dialogue Group	DG SANCO/General
Stakeholder participation for management	EU Platform for Action on Diet, Physical Activity and Health	DG SANCO/Health

Several conclusions regarding deliberative rationality can be drawn at this stage. This rationality penetrates the core political institutions and constitution-making bodies. There are, indeed, several arenas facilitating a structured exchange of views and reflections linked to food, both directly and indirectly. Antagonists like Greenpeace and EuropaBio, which have previously ‘shouted at each other’ from a distance, are now meeting face to face. The idea is that participants engaged in these forums have divergent assessments regarding the problem at hand and the course of action to be taken. The criteria for participation and representation are based on differences and diversity (different stakeholders with contrasting views), not similarities. The goal is not to reach consensus (DG SANCO, Interview, 2009). In that sense, DG SANCO’s approach to stakeholders does not follow the conventional view of deliberative decision-making in which transformation of preferences and consensus is essential.

Moreover, deliberative rationality prevails in different stages relating to the policy cycle: The Stakeholder Dialogue Group is a distant arena in relation to the policy cycle. SDG operates outside the policy cycle, as it does not deal with policy content but with policy tools. The DG SANCO Advisory Group, on the other hand, operates at the very beginning of the policy cycle, in the problem definition and the identification of alternative solutions and responses. Stakeholder participation here takes place prior to the definition of any legislative action. The Nutrition Platform, lastly, can be said to operate towards the end of the policy cycle, as it concerns management and ‘practical action’.

Deliberative rationality represents a new approach to expertise: Expertise is gathered through a more transparent and open process; as a complement

to the traditional and privately written correspondence, or confidential one-to-one communication between stakeholders and policymakers in the European Commission. Rival stakeholders meet face to face and are involved in direct dialogue, through which they become familiar with each other. Expertise in the arenas mentioned so far belongs to different rationalities and serves multiple functions. It may be procedural expertise, as in SDG, or policy-relevant knowledge, as in the Advisory Group. The participation and expertise may be legitimizing (symbolic), as well as substantiating (where knowledge has a more clear function). It is therefore also possible to talk of procedural and substantial expertise. Nevertheless, it is beyond the scope of my research to evaluate whether arenas for participation and expertise serve a legitimizing or substantiating purpose. There might, however, be reasons to sometimes differentiate between a deliberative rationality (the logic) and deliberative qualities (indicators of a deliberative logic). I will return to this later on.

6.2.1 The problem of extension

Collins and Evans (2002) raise the question of how far participation should extend, and how to distinguish between experts and non-experts. In the case of DG SANCO, there are definitely boundaries, but they are not drawn once and for all, they are negotiable.

On the one hand, it may appear as if stakeholders can be consulted on every occasion and on every topic. This is definitely not the case. There are strict borders for stakeholder participation (DG SANCO Unit 03, Interview, 2009; DG SANCO Unit 03, Interview, 2009). Stakeholders are never authorized to participate directly in risk management. They operate in other arenas than those attended by the EU Member State representatives. The administrative logic separates stakeholders from comitology, and decision-making is never in the hands of stakeholders. Consultation can never replace the procedures and decisions of legislative bodies. In that way, the administrative rationality sets the boundaries for the deliberative logic and remains dominant.

On the other hand, intertextual links from stakeholder involvement events reveal that the boundary has been up for discussion. Even though policymakers draw a line between stakeholders and decision-making, the very idea with a deliberative rationality is to influence decisions. This logic is instrumental. Certainly, stakeholders want to be engaged as early as possible, so that they can be involved in defining the issue right from the start (DG SANCO 2007a:76; Interviews with stakeholders in Brussels, 2009). However, it is not only stakeholders that push to expand the boundary. The push also comes from, and seems to be sanctioned by, public officials at DG SANCO. The *Healthy Democracy Progress Report* (2007a) recommended that information should be provided in a clear and simple language that could be understood by all stakeholders. 'Stakeholders must be informed of what the Commission is looking for in order to provide the best possible stakeholder input'. Apparently, it is also important to motivate stakeholders: 'Stakeholders need to feel that there is the possibility of changing things to be motivated to participate, which to some degree is solely a matter of perception. It is not possible for all the different views to be taken on board by the Commission, but the stakeholders need to feel that there is real possibility to influence decisions' (DG SANCO 2007a:79).

The boundary between influencing decisions and taking decisions is protected by the law. Nevertheless, there are indications that policymakers are neither safeguarding nor fully protecting this boundary. One key recommendation from the Healthy Democracy process was to make comitology understandable for stakeholders (cf. the idea of developing a 'dummies' guide' to comitology, as recommended by the Peer Review Group). This is a frequent request from all stakeholders (Interviews, Brussels, 2009). Making comitology and risk management more transparent is also encouraged by policymakers. Ms Testori-Coggi, now Director-General for DG SANCO, has herself extended the boundary for stakeholder participation, and blurred the line between stakeholders and Member States representatives:

'Stakeholder involvement in comitology could be increased, by identifying comitology measure categories and matching stakeholder involvement methods with them...Feedback, according to one method or another, should be given to better explain the final output of comitology procedures and to maintain stakeholders' motivation to engage' (DG SANCO 2007b:16).

Special interest groups are here discursively extended into the realm of democratically elected representatives. In that sense, the overlap between administrative and deliberative rationality is not problematized – the overlap is publicly sanctioned. This suggests that the vision about a deliberative rationality is not critically reflected upon. And it raises questions regarding, among other things, democratic ideals and principles, such as accountability.

DG SANCO writes that stakeholder feedback increases accountability: 'If stakeholders are provided with feedback, this will increase the Commission's accountability, whether the stakeholders' views are taken on board or not' (DG SANCO 2007a:78). However, DG SANCO does not raise the question to whom stakeholders can be held accountable, nor does it discuss representativeness: To what extent do stakeholders really represent the public? And when a consumer organization is supposed to represent one part of society, why is BEUC typically chosen as the representative instead of another consumer organization? And is it not problematic, from a democratic perspective, when stakeholders are accommodated by moving the boundary outwards, towards Member States representatives and decision-making?

Going through intertextual links related to stakeholder arenas and documents from the Healthy Democracy process makes one surprised about the discourse on stakeholders. Also, when speaking to stakeholders themselves, the administrative means enforcing deliberation seem to have gone far: Policy officials at DG SANCO do not only encourage lobbying, but also make sure that lobbying is as easy as possible. Stakeholders themselves also talk about these arenas in the following way: policymakers encourage and inform us about how, where, when and with what type of expertise we should contribute. The institutional discourse on stakeholder participation has, so it seems, brought stakeholders and Member States representatives closer together. Furthermore, the discourse on stakeholder participation has – under the heading of expertise, trust, and transparency – transformed lobbyists into legitimate experts; transformed lobbying into democratic participation. This shows just how embedded the deliberative rationality is in the EU food safety domain, and how strong support this rationality draws from the administrative one. Stakeholder participation has become a normal way of conducting politics in DG SANCO.

The economic logic is not obvious when looking at the Healthy Democracy Process and the various arenas for stakeholder participation,

such as the Advisory Group. Nevertheless, it is still important. Ultimately, the deliberative logic is introduced to help policymakers improve their substantive performance, the output (i.e. DG SANCO 2007a:3). In order to do that, DG SANCO needs to tackle the changing logic of governance explored in chapter 3 – a logic that delegates responsibility, rule-based work and authority to actors in the food and feed chain. Therefore, stakeholder participation can be understood as a way to manage and to avoid a clash with economic rationality. It keeps actors in the food chain close to regulatory authorities; it facilitates communication and builds up a relationship with market actors. It also helps market actors to avoid the so-called tunnel view, and to think broader: not only in terms of sectors – but as a chain with a common responsibility (from the farm to the table).

6.3 The Advisory Group on the Food Chain and Animal and Plant Health

The DG SANCO Advisory Group is an example of stakeholder participation for policy advice. This arena allows deliberative rationality to permeate the initial stage in the policymaking cycle and to open up problem definition. It is also the only arena for stakeholder participation within DG SANCO that discusses GMO dossiers. Before analysing this arena in terms of governance rationalities and boundary-work, I will describe the form of the Advisory Group.

The Advisory Group was formed in 2004 and replaced old committees such as the Advisory Committee on Foodstuffs and the Advisory Committee on Agricultural Product Health and Safety, as well as certain standing groups attached to it. In order to improve the participation of the stakeholders affected by food safety issues, the White Paper on Food Safety, adopted by the Commission in 2000, proposed to regroup and reorganize the various advisory committees and standing groups by creating a new advisory committee dealing with the food chain and animal and plant health. The advisory committees affected by this reform included the Advisory Committee on Foodstuffs, created by the Commission in 1980,

and the Advisory Committee on Agricultural Product Health and Safety, as well as certain standing groups attached to it (veterinary matters, plant health, animal welfare, foodstuffs), established in 1998. A new consultation system was seen as important, to establish 'an ongoing dialogue between the Commission's departments and the socio-professional circles involved in the fields covered by food legislation' (EC 2004b:2). The dialogue is said to assure the possibility to 'anticipate and pinpoint the nature of the difficulties and uncertainties which the Union may have to address, with an eye to taking decisions and ensuring that the risks can be clearly explained to the public' (EC 2004b:1). Another promise of this group is to ensure that the Commission's proposals are 'technically viable, practically applicable and acceptable by all the players involved' (EC 2004b:1). The Commission can consult the group in the following fields:

- Food and feed safety
- Food and feed labelling and presentation
- Human nutrition, in relation to food legislation
- Animal health and welfare
- Matters relating to crop protection, plant protection products and residues thereof, and conditions for the marketing of seed and propagation material, including biodiversity, and including matters pertaining to industrial property (EC 2004a:2).

The Advisory Group brings together key stakeholders including farmers, the food industry, retailers, consumer organizations and others to advise the European Commission on food safety policy. It meets in principle twice a year in plenary sessions to discuss general policy issues that are of interest for all the 36 member organizations listed below. Stakeholders also meet in Working Groups when more technical issues are examined. The representative bodies must meet the following criteria: (a) that the general nature of the interests is protected, (b) that they represent all or most Member States, and (c) that they have a permanent presence at Community level to allow direct access to members' expertise and to permit swift and coordinated reactions (EC 2004a).

- AIPCE-CEP: Association des industries du poisson de l'Union européenne/Comité des organisations nationales des importateurs et exportateurs de poisson de l'Union européenne.
- ANIMALS ANGELS: Animal Welfare Association.
- AVEC: Association of Poultry Processors and Poultry Import and Export Trade in the European Union Countries.
- BEUC: Bureau européen des unions de consommateurs..
- CEFIC: Conseil européen des fédérations de l'industrie chimique..
- CELCAA: Comité européen de liaison des commerces agroalimentaires.
- CES/ETUC: Confédération européenne des syndicats/European Trade Union Confederation.
- CIAA: Confédération des industries agroalimentaires de l'Union européenne.
- CLITRAVI: Centre de liaison des industries transformatrices de viandes de l'Union européenne.
- COCERAL: Comité du commerce des céréales, aliments du bétail, oléagineux, huile d'olive, huiles et graisses et agrofournitures de l'Union européenne.
- COPA-Cogeca: Comité des organisations professionnelles agricoles de l'Union européenne – Confédération générale des coopératives agricoles de l'Union européenne.
- ECCA: European Crop Care Association.
- ECPA: European Crop Protection Association.
- ECSLA: European Cold Storage and Logistics Association.
- EDA: European Dairy Association.
- EFFAT. European Federation of Food, Agriculture and Tourism Trade Unions.
- EFPPA: European Fat Processors and Renderers Association.
- EMRA: European Modern Restaurant Association.
- ESA: European Seed Association.
- EUROCHAMBRES: Association of European Chambers of Commerce and Industry.
- EUROCOMMERCE: European Representation of Retail, Wholesale and International Trade.
- EUROCOOP: European Community of Consumer Cooperatives.
- EUROGROUP: Eurogroup for Animal Welfare.

- EUROPABIO: European Association of Bioindustries.
- FEDIAF: Fédération européenne de l'industrie des aliments pour animaux familiers.
- FEFAC: Fédération européenne des fabricants d'aliments composés pour animaux.
- FERCO: Fédération européenne de la restauration collective concédée.
- FESASS: Fédération européenne pour la santé animale et la sécurité sanitaire.
- FRESHFEL: European Fresh Produce Association.
- FVE: Federation of Veterinarians of Europe.
- HOTREC: Confédération des associations nationales de l'hôtellerie, de la restauration, des cafés et établissements similaires de l'Union européenne et de l'Espace économique européen.
- IFAH-EUROPE: International Federation for Animal Health Europe.
- IFOAM EU GROUP: International Federation of Organic Agriculture Movements — European Union Regional Group.
- UEAPME: Union européenne de l'artisanat et des petites et moyennes entreprises.
- UECBV: Union européenne du commerce du bétail et de la viande.
- UGAL: Union des groupements de détaillants indépendants de l'Europe.
- AESGP: Association of the European Self-Medication Industry.
- ECVC: European Coordination Via Campesina.
- EHPM: European Federation of Associations of Health Product Manufacturers.
- EUWEP: European Union of Wholesale with Eggs, Egg Products and Poultry and Game.
- FEFANA EU: Association of Specialty Feed Ingredients and their Mixtures.
- FoEE: Friends of the Earth Europe.
- PAN EUROPE: Pesticide Action Network Europe.
- PFP: Primary Food Processors.

- SLOW FOOD: Slow Food Associazione Internazionale (EC 2011).⁶⁷

The criteria for fulfilling DG SANCO's legitimacy requirements are low, and the inclusion is broad (horizontally as well as vertically): Low in terms of EU representation being the core criterion for inclusion; horizontally broad in terms of opposing interests such as EuropaBio and Greenpeace; and vertically broad in terms of divergent power and resources (e.g. Animal Angels versus CIAA, or ECVC versus COPA-COGECA). The criteria bring together business associations, consumer organizations, animal welfare organizations, environmental organizations and networks of non-governmental organizations. This has the effect of excluding individual firms, and giving NGOs and business associations similar insider status.

The administrative rationality is hierarchical, as it has strict rules on representation. Firstly, participants are here to represent citizens: 'an effective ongoing consultation system will involve the consultation of citizens through bodies representing interests related to the food chain and animal and plant health at European level, although the direct consultation of citizens must still be possible' (EC 2004b:6). Secondly, the composition of the group should, for practical reasons, 'not be too broad; however, adequate representation of the interests of the food chain and animal and plant health should be ensured' (EC 2004b:6). 'It will in practice be essential for it to embrace the representative bodies that are the most capable of protecting, at European level, general interests connected with the food chain and animal and plant health' (EC 2004b:6). Three seats are allocated to BEUC in order to facilitate the representation of European consumers. The effort to create a balanced representation is another example of the shadow of hierarchy and the dominance of administrative logic in this deliberative arena.

Furthermore, economic rationality is relevant in stakeholder participation simply because a great number of the participants are economic stakeholders representing producers, traders, retailers, processors, industry, farmers, etc. This is essential, given that public authorities are not the supreme authority and cannot act in terms of traditional forms of hierarchical steering. Instead,

⁶⁷ The names are listed here as listed by DG SANCO (using both French and English).

they have to enable different societal groups, especially economic stakeholders, to pursue their policies and to ensure outcomes, such as safe foods.

6.3.1 Deliberative rationality

A deliberative rationality can be oriented towards different goals: transparency, participation, dialogue etc. The administrative rationality of the Advisory Group is flexible: it makes it possible to limit the number of representatives and organize working group meetings which are open to a smaller group of stakeholders and other interested parties. These groups function as a complement to the horizontal plenary meetings of the Advisory Group and have the purpose of collecting more technical contributions from the different fields involved, and providing information on the implementation of the existing law and rules of procedure. The Advisory Group is, then, really two different arenas: one for plenary meetings and one for meetings of working groups.

There are certain advantages with this horizontal and vertical approach: The possibility to expand in terms of scale, scope and participants is an example of the deliberative quality of the working groups. A (generally very optimistic) stakeholder is eager to talk about the working groups as an arena for qualified debates: 'Plenary is really...we tell you what we have done, you can say something but that's it. I think they still take the notes. But I am not certain that it really makes a change. But in the working groups, *here* I really see the qualified debates' (Stakeholder no. 6, Interview, 2009). The plenary meetings, on the other hand, tend to be rather informative and one-way communicative. As an example, civil servants from DG SANCO or other public authorities present information. It is thus possible to talk about input in terms of deliberative (procedural) expertise. It is an one-way monologic communication where information is given and presentations are made, directed towards stakeholders representing society. Nevertheless, the horizontal and more inclusive nature of the Advisory Group also has certain advantages. Even though the debate is less qualified, it broadens the view and opens the way for new perspectives. One stakeholder refers to the Advisory Group (plenary meetings) as a 'sounding board':

‘We have a large horizontal forum, which is more like a sounding board. And the role of the Commission is when they roll out their work plan. For them, the value is a sounding board, and for us it is to get a complete understanding, because most of us are just there as vertical groups. Only in such a setting you will get the overall knowledge, impressions on certain principles and approaches, and it is always good to compare, not to have the tunnel view’ (Stakeholder no. 7, Interview, 2011).

Representation is a key challenge in these arenas. When the range of participants is limited, the debate gets more qualified. Nevertheless, a limited definition of representation runs the risk of losing the wider perspective. The administrative flexibility is thus important as it allows for two different arenas within the Advisory Group.

Compared to earlier working methods in DG SANCO, the Advisory Group and the working groups attached have, nevertheless, brought about not only a deliberative rationality, but also some deliberative qualities: Representation is now based on an integrated approach to the food chain. Representatives from the different components of the food chain are included. This is a clear difference compared to the earlier Advisory Committee in which, for instance, food and feed were treated individually. Furthermore, this arena is open and transparent, which means, for example, that the minutes of the Advisory Group and working groups are now published on a webpage. This differs from the former secrecy of the meetings. Now there are also established procedures for formalized and regular stakeholder participation.

However, there are also some limitations to the deliberative logic. Critics such as Greenpeace are not satisfied with representativeness, due to structural inequalities. Despite improvements, organizations representing consumer interests remain a minority compared to economic stakeholders, and there are great disparities between participants in terms of access to resources. Stakeholders, as well as public officials, are open about these problems. As an example, stakeholder representativeness and stakeholder asymmetries have been discussed in the DG SANCO Stakeholder Dialogue Group (SDG), which has attended meetings of the Advisory Group to put the problem on the agenda also here. In particular, the asymmetry in access and production of information is a key issue that may lead to inequality.

Not all stakeholders have a dedicated research department, ad hoc working groups and issue teams, specialized and/or horizontal committees that allow for publishing reports and position papers to ‘guide’ EU policymakers. But having members of the SDG participating in other arenas and talking about ‘stakeholder asymmetry’ or ‘engaging the un-engaged’ does not *solve* the problem. And adding more seats to get a more balanced representation (for consumers at least) does not always help. In one specific GMO meeting (on asynchronous authorization and zero tolerance policy, in 2008), BEUC still did not participate despite the extra seats. This was because at the time (and up to the present) BEUC rejected participating in issues dealing with GMOs. The seats were not handed over to another consumer organization, either – even though EuroCoop is a member of the Advisory Group.

Even so, the Advisory Group, may also reduce one type of information asymmetry because stakeholders get the same information at the same time: ‘It’s the round-table format that makes it so important: it has been said in a setting where everyone else was hearing the same message, whether it was the consumer organization or exporting country. That is the strength of the forum. If it is used, then the messages are put on the table, everybody hears them at the same time; it’s not two-ways channelling’ (Stakeholder no. 7, Interview, 2011). But since stakeholders also have one-to-one contact with public officials at the European Commission, one should be cautious about statements indicating that the deliberative logic also adds deliberative quality. ‘Hearing the same message at the same time’ and meeting ‘face to face’ in an arena like the Advisory Group should not be overestimated. Stakeholders may very well know in advance about the policy issues that are going to be put on the agenda; especially economic stakeholders, who tend to have close relations with the European Commission. Some stakeholders thus know in advance what expertise the EC is looking for (Stakeholder no. 2, Interview, 2011). Therefore, the possibility for policy officials to ‘send the same message to all stakeholders at the same time’ may be as important, or even more important, to DG SANCO, as to stakeholders.

Shadow influence here provides legitimacy to DG SANCO and also makes it more difficult for stakeholders to criticize them. In a policy area like this, when there is a history of constant friction between groups, the process as such becomes very important. Inclusiveness and transparency are fundamental. If the policymakers do not practice that, they engender – in the words of one stakeholder – ‘mistrust in the political system right from

the starting point' (Stakeholder no. 2, Interview, 2011). This is indeed an important risk for the Advisory Group, one it must exclude. Deliberative rationality renders administrative rationality legitimate, and thereby more efficient. At least, that is the assumption. Another challenge to the deliberative quality is that DG SANCO is not obliged to use input from the Advisory Group. Policy officials make decisions about legitimate and illegitimate expertise, which again is an example of the relationship and hierarchy between administrative and deliberative rationality. Altogether, the conclusion of this section is that it is possible to talk about a deliberative rationality in the Advisory Group as it demonstrates stakeholder participation, inclusion of a broad set of stakeholders, information sharing, communication and transparency.

6.3.2 Policymakers as frame-makers

Closely related to the argument on shadow influence is the issue of framing and boundary-work. Examining how policymakers draw and redraw boundaries and package policy issues will also further describe the deliberative rationality. As this section will show, there is a difference between deliberative rationality and deliberative quality. The former does not necessarily have to affect the latter.

The Advisory Group has had several working group meetings on diverse topics, among others the competitiveness of the European agri-food sector, seeds and propagating material, smoke flavourings, public and private partnerships, nanotechnologies and animal cloning. Animal cloning is one topic that has been pointed out by some stakeholders (CIAA, Interview, 2009; Greenpeace, Interview 2009) as particularly productive. A limited number of plenary meetings (horizontal) have been held on GMOs:

- Information on Environmental Risk Assessment of GMOs (March 2011)
- Information on DG Environment's evaluation of the GMO legislation, presentation by external contractors (December 2009)
- Information on GMO-Labeling (July 2007)

Here, GMOs have been addressed to a limited extent, as this topic has been only one among many on the agenda for the meeting with the Advisory Group. These GMO topics have not been open for a debate. Instead, stakeholders have received brief and general information on working procedures. In order to identify a more qualified debate, one has to turn to the working groups of the Advisory Group. Since GMOs is such a polarized topic, one could expect to find several meetings on them in the Advisory Group as well as the working groups. However, this is not the case. There is an absence of GMO dossiers on the agenda of both the Advisory Group and the working group. This is particularly evident in the working group agendas and is also confirmed by a civil servant at DG SANCO responsible for this group. The following are the working group (vertical) meetings of the Advisory Group dealing with GMOs:

- Evaluation of the EU legislative framework for GMOs (July 2009)
- Technical solution for asynchronous authorization of GMOs in the feed sector (December 2008)
- Legal framework for risk assessment of GMOs (July 2008)

In the meeting regarding risk assessment, DG SANCO made a presentation describing the context and the objectives of the establishment of a legal framework in that field. A discussion took place on the status of the protocols and the general approach (comparative assessment – case-by-case approach) for the safety assessment. Questions were raised on the difference between the safety assessments carried out in the EU compared to Third Countries. Afterwards, a general presentation by EFSA representatives was made. A discussion took place on issues such as economic impact assessment. Stakeholders also had the possibility to make comments on EFSA guidance documents, chapter by chapter. DG SANCO concluded by stating the next steps in the process.

The other meeting, on technical solutions for asynchronous authorization, was specifically referred to as a ‘technical meeting aimed at gathering specialised inputs’. This specific GMO dossier refers to the low-level presence of unauthorized GMOs and GM-derived materials in imports of feed commodity crops from outside the European Union. Under existing EU legislation there is a ‘zero tolerance’ for the presence of unauthorized GMOs in any food or feed marketed in the EU. This has given rise to

problems when imports of commodity crops from Third Countries have been found to contain low levels of material from a GM variety which has still to be authorized for the use in the EU. This in turn has resulted in imports from exporting countries either being suspended, or imported consignments being rejected and returned to their point of origin. This is typically referred to as a trade debate, but is much broader and will be further examined in the next chapter. During this working group meeting in 2008, the following stakeholders participated: AVEC, CELCAA, CIAA, CLITRAVI, COCERAL, COPACOGECA, ESA, EuropaBio, EUROMAISERS, FEDIOL, FEFAC, FERM, FoE, GREENPEACE and PRRI. External observers were also present during the meeting: the US mission to the EU, the Argentine mission to the EU, and a researcher on GMO policy from Oxford University. Several policy officials from DG SANCO also attended and chaired the meeting (DG SANCO 2008d).

6.3.3 Working group meeting on asynchronous authorization and zero tolerance policy

In this meeting, the proposed measure was presented. The metaphor of a window can here illustrate the meeting:

‘The message framer has the choice of what is to be emphasized in the message, as the view through a window is emphasized by where the carpenter frames, or place, the window. If the window had been placed, or framed, on a different wall, the view would be different’ (Zoach & Molleda 2006:281).

Several examples of framing and boundary-work occurred: First of all, the most important boundary framing had already taken place prior to this stakeholder meeting and outside the scope of this stakeholder arena. Reducing the policy issue of asynchronous authorization to a technical issue represents a fundamental way to simplify and package this policy issue. In this way, policymakers had set and controlled the agenda and shaped the subsequent debate. Reducing this issue to a technical one means to exclude

the choice to open the legislation and thereby exclude the involvement of the European Parliament. As we will see in the next chapter, this example of boundary framing has been heavily criticized by environmental NGOs, which argue that this is not justified from a democratic point of view. Nevertheless, this criticism is downplayed in the minutes offered by DG SANCO:

‘GREENPEACE said that given the proposal was in interservice discussions they would await the final document before commenting further on some key points. They recognised the difficulties that asynchronous authorisation was causing to the sectors but considered that asynchronous authorisation was mainly a US problem in that other Third Countries usually wait for EU approval before approving new GMOs. It was also pointed out that an in-depth review of the EU legislation by co-decision was most probably the right approach to tackle the whole GMO Policy’ (DG SANCO 2008d:4).

For DG SANCO to act as a frame-maker in this way has kept the issue away from the wider public. A second crucial example of boundary framing is the exclusion of a food safety perspective. Policymakers frame asynchronous authorization as a feed issue only, thus making a legal separation between food and feed. This was criticized by stakeholders representing both food and feed: ‘FEFAC, COCERAL, CIAA and ESA stated that measures should apply to both food and feed’. Protecting this boundary and separation of food from feed, the Chair replied that ‘the current impact of asynchronous authorization was principally on the feed sector’ (DG SANCO 2008d:3). Both these examples show how framing may be used to de-politicize a policy issue in the light of technical expertise; with the statement ‘this is a technical issue – not a political issue’ (DG SANCO Uni E1, Interview, 2011). Framing the policy debate in this way has implications for the governance rationality. Since this is an arena that has opened up the governance process to stakeholder participation and engaging multiple actors in problem-solving, one could easily term it deliberative governance. Nevertheless, when examining this arena and GMO debates from the perspective of issue frames, administrative governance rationality reveals itself. The governance logic is administrative because the core problem-solving activity takes place in a hierarchical setting in which policymakers separate what, according to them, is a relevant and irrelevant problem. The administrative agency here, DG SANCO, is in control and takes decisions on the optimal approach to resolve problems. Policy officials are the ones deciding about appropriate

tools and measurements. This again, demonstrate how administrative rationality informs the deliberative one.

Stakeholders have conflicting opinions about the deliberative quality of this specific working group meeting on GMOs that focused on asynchronous authorization and zero tolerance policy. The verdict follows to a large extent, but not completely, stakeholder's interest in the policy debate itself. An economic stakeholder, who is generally very positive towards DG SANCO and is a member in the Stakeholder Dialogue Group (the arena for process development), holds the 2008 working group meeting in very high regard:

'Here it was indeed a stakeholder meeting, it was *very* important. Here you had again the different players in the field, you even had the US mission [to the EU] and Argentina [mission to the EU] there. And then different professional organizations were there. You had also Greenpeace and Friends of the Earth there. You think things would work. Of course I was disappointed that the consumers were not there. But they were invited' (Stakeholder no. 6, Interview, 2009).

An indication of deliberative quality in this meeting was, as the quote illustrates, the wide definition of inclusion and participation. Both Greenpeace and FoE participated. In the view of some economic stakeholders, this added important legitimacy to the debate (it is also in the interest of stakeholders to make this claim). Or in other words: the deliberative logic added legitimacy to the administrative one. FEFAC gives emphasis to this meeting for similar reasons. The participation of two environmental NGOs is taken (by others) as an acknowledgement that also they acknowledge the problem definition: 'We didn't agree on the causes. And of course they said that the problem is the US, not the EU. But it was a clear-cut acknowledgement that even those said: yes, the food chain has a problem' (FEFAC, Interview, 2011). Environmental NGOs, on the other hand, were not particularly enthusiastic about the meeting, while economic stakeholders regarded NGO participation as an acknowledgement of the problem definition and the agenda. Conversely, as the next chapter explains, NGOs do not. Therefore, it is understandable that environmental NGOs are cautious about participating. According to them, participation does not mean acknowledging a problem definition. As stated earlier, BEUC did not participate in the meeting despite being a member of the Advisory Group

and despite being invited. It is not possible to say that all economic stakeholders valued this meeting. Two high-stake stakeholders dismissed it for the following reasons: it did not change or add anything new to the policymaking process. For them, it was business as usual, regardless of the Advisory Group and regardless of this particular meeting on GMOs. Since they already have good relations with policy officials at DG SANCO they are not dependent on these forums for attaining information or exerting influence.

Another example of boundary framing in this context is a GMO issue that has fallen outside the scope of this arena. The issue of GMO cultivation – as discussed in the previous chapter – has been high on the political agenda in the EU for several years. It has also, in contrast to the issue of asynchronous authorization and low-level presence, been spotlighted (via the media). One could therefore expect that this dossier would also have found its way to the agenda of the Advisory Group (horizontal plenary meetings) or in a working group (vertical meetings). However, the politically sensitive issue of GMO cultivation has been excluded from this arena. As an alternative, GMO cultivation has been discussed at ministerial level and in a High-Level Group within the European Commission. It has not been open for discussion in the Advisory Group. In this way, policymakers have safeguarded the boundary between Member States and stakeholders. By excluding this dossier from this arena, policymakers have also barred one option for stakeholders to (at least openly/officially) influence the legislation in this area. This GMO dossier is also pushed more clearly by Member States. However, an evaluation – in which questions regarding (among other things) cultivation were asked – has been sent to stakeholders. This evaluation will be released into the public domain in the summer of 2011.

This section has shown that the Advisory Group represents an arena in which opposing claims can clash and contested governance may be negotiated. Nevertheless, in the case of GMOs, this rationality has not been that present as one could assume, both in terms of quantity (few meetings) and in terms of communication (much communication comes down to information-sharing presentations, rather than interactive dialogue).

The reason why there have not been more meetings on GMOs (an observation that stakeholders and DG SANCO share) relates back to the administrative rationality. The legal framework on GMOs has already been implemented. The Advisory Group operates in the GMO post-

implementation stage. The deliberative rationality is, then, again dependent on the administrative one. In other words, there has been no need to gather stakeholders as the implementation phase is already over. Initiatives have already been taken (DG SANCO, Unit E1, Interview, 2011). This puts the role of the European Commission and the so-called 'institutional way of thinking' (Jasanoff 2005) in the centre. The very purpose of the European Commission is to act as an agenda-setter for the Union (because the legislator/co-legislator can only work on a proposal from the Commission), and to 'find' reasons to take initiatives and move forward. The role as legislative initiator relies on 'impulses from society' and depends on support from other actors. So while policymakers argue that 'a legislative framework on GMOs is already implemented, no need for more deliberation', they act as a 'guardian' that 'watches over' the implementation. This is also the expected role of the EC. More stakeholder participation would not ease the Commission's job if a framework was finally agreed upon; certainly not in the area of GMOs. The European Commission thus has a reason for saying that there 'has not been any regulatory initiative and therefore no need for the Advisory Group'.

However, my point is that they (the European Commission) are the one deciding on the need for and the taking of any regulatory initiative. There have been important legislative developments in the field of GMOs, and policymakers have 'moved' GMO dossiers (see previous chapter). Perhaps most importantly: the rationalization of decisions regarding GMO cultivation. This is known to be a high-stake GMO dossier for the EU Member States, and is probably the GMO debate that is most well-known in the public sphere. Keeping this dossier off the table for stakeholders is thus rational. It is politically wise, due to the controversial nature of GMO cultivation in the EU. The profile of asynchronous authorization and zero tolerance policy, on the other hand, is less public (I would say), as it is framed as a 'non-safety feed and trade debate' (see next chapter). And this dossier has been pushed, albeit *outside* the Advisory Group, and opened by *other* actors (not primarily EU Member States).

In November 2008, JRC-IPTS held a two-day workshop in Seville on 'The global commercial pipeline of new GM crops', to which regulatory bodies and agencies, private technology providers, public technology

providers and stakeholders were invited.⁶⁸ And in March 2010 the European Committee for Standardization (CEN), and the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), held another two-day workshop: ‘GMO Asynchronous and asymmetric approvals: bringing lasting solutions to identified problems’ in Brussels (CEN/ENEA 2010). Again, a set of high-stake actors were invited as speakers.⁶⁹ There have, in other words, been a number of meetings relating to this GMO dossier that have taken place outside the framework of the Advisory Group.

Several conclusions shall be drawn here. Firstly, the European Commission seems to have acted as a gatekeeper, keeping stakeholders from the EU food chain at arm’s length from deliberations on GMO dossiers. To find a deliberative rationality oriented towards dialogue, rather than participation within DG SANCO, one should simply turn to other dossiers than GMOs. For those meetings that have been held with stakeholders on GMOs, it is appropriate to talk of a deliberative rationality in the shadow of hierarchy. In the case of asynchronous authorization and zero tolerance policy, the fundamental framing was already done by policymakers prior to the meeting. The technical packaging was already set.

So far, I have found little evidence to show that the deliberative logic in DG SANCO and in the field of GMOs has had an effect on the output. In other words, the deliberative logic has not helped the administrative one. The win-win situation as promised by policymakers in the Healthy Democracy Process, and as promised in theory, has not prevailed. Altogether, the Advisory Group is less relevant and less dynamic than one could expect. This conclusion contrasts with the findings from the Healthy Democracy Process, in which ideas on stakeholder participation seemed to put the deliberative rationality in a much more dominant position; seemed

⁶⁸ Stakeholders such as COCERAL, FEDIOL, Gafta, FEFAC, The European Flour Millers, Euromaisers, FERM and CIAA gave presentations, as did COPA-COGECA and EuropaBio.

⁶⁹ EFSA, DG SANCO, DG AGRI, OECD, LEI Wageningen UR, the European Parliament and JRC-IPTS. A similar set of economic stakeholders gave presentations, and a similar set of participants attended (i.e. regulatory bodies and agencies, private technology providers, etc.).

to push stakeholders towards a situation where trespassing over to comitology almost seemed reasonable.

6.4 Power behind the scenes

6.4.1 Shadow influence from policymakers

An important characteristic of the deliberative logic in the EU food safety domain is that it is linked and submissive to the administrative one. One way to express this is to refer to top-down deliberation, and the shadow of hierarchy or power behind the scenes. All stakeholder arenas are regulated in legal texts (albeit with different legal statuses), and there are ‘terms of conditions’ and ‘internal rules’ deciding which stakeholders are allowed to participate, how, on which conditions, etc. DG SANCO retains control and acts as a gatekeeper, deciding which knowledge claims are to be regarded as legitimate and illegitimate. This is a powerful example of boundary-work and shows the hierarchy between administrative and deliberative rationality.

On the one hand, the shadow hierarchy is welcomed by stakeholders operating at DG SANCO because it gives them access to policymakers, information about policy proposals and legislative developments. In comparison to other DGs, SANCO is seen as having an experimental and innovative approach to stakeholder consultation: ‘I think that is real change in the system. And SANCO definitely was the first in the European Commission to go in that direction’ (ESA, Interview, 2011).⁷⁰ Other interviews with economic stakeholders as well as NGOs support this view: that the deliberative rationality – albeit influenced by the administrative one – is a new and welcomed approach. The logic is particularly welcomed in the light of the food scares during the 1990s.⁷¹ Among economic

⁷⁰ This stakeholder has much experience of stakeholder consultation in several other DGs.

⁷¹ Many economic stakeholders *still* frame the BSE crisis as a risk management problem (failure of policymakers rather than failure in the food chain itself).

stakeholders, this DG is seen as having a more active role, steering and controlling the agenda; compared to DG AGRI, in which stakeholders themselves chair the arenas for stakeholder participation. For those with experience from DG AGRI, the approach by DG SANCO is clearly different: As an example, there is *one* seat per organization. Farmers are only given one seat at DG SANCO; they are *one* [among many] in the chain and not number one (COPA-COGECA, Interview, 2009). Furthermore, stakeholders never themselves chair at DG SANCO, which they can do at other DGs (DG SANCO Unit 03, Interview, 2009) like DG AGRI (COPA-COGECA, Interview, 2009). This demonstrates that the deliberative logic permeating one department of the European Commission is *not* the same logic as in others. And as shown in this chapter, the quality of the deliberative logic differs depending on the policy dossier and arena for stakeholder participation.

Earlier analysis in this chapter suggests that the administrative rationality in this policy field – the centralized legal framework on food safety – paves the way for a deliberative rationality also. When the basic legal principles are shared, it is easier to deliberate because this gives stakeholders a common ground from which the debate can be launched. But in the case of GMOs, a common legal framework has given little opportunity for deliberation. Nevertheless, the very nature of the policy field of EU food safety seems to give a special dynamic to the deliberative logic and makes the arenas for stakeholder participation particularly intense. Food safety, as only a few other areas of public policy, directly affects the well-being of every citizen personally and continually. Few other areas of policy failure, or perceptions of policy failure, are as politically salient as those associated with food (Ansell & Vogel 2006, chapter 1). The contested nature of food safety policy, and the active level of engagement by stakeholders, are – generally speaking – felt by the stakeholders involved:

‘I think DG SANCO was more in the firing line of policymaking, if I may say so, than for example DG Trade. DG Trade still has a very open approach to stakeholder consultations, very effective, very well organized, since many years. But that is usually much more technical, and also more abstract.... In SANCO’s policy area you have a different background: you have a lot of groups that take a principal interest in a policy area, but that are not necessarily well informed or experts in that area. In Trade you have technical discussions, good discussions, led by experts, with a rather limited interest of the general public and respective organizations. Whereas in SANCO, it’s the other way around: you have a very

strong interest from individual and organized NGOs that very often, at least in the beginning, lacked technical knowledge' (Stakeholder no. 2, Interview, 2011).

The contested nature of this policy field also calls for a deliberative rationality to ease the tension and enhance the problem-solving capacity of policymakers. Nevertheless, the present work argues that this has not worked in the case of GMOs. Yet the conclusion of this section is that shadow influence comes in handy: It helps the European Commission to structure the dialogue with stakeholders, even if it does not provide policy effectiveness.

6.4.2 Power to as well as power over

This section takes the perspective of stakeholders – a group of organizations with very different power resources. How do they perceive the deliberative logic?

The absolute majority of stakeholders interviewed are, at least officially, supportive of the approach taken by DG SANCO. Especially high-stake stakeholders (high-stake in terms of organizational capacity, financial resources and own research departments) appreciate the shadow influence. Meeting with 'others from the chain' (meaning the food chain) has for some been a learning experience, as these meetings would have never taken place otherwise. One high-stake stakeholder, that has an officially neutral position on GMOs, describes via its spokesperson meetings as positive and interesting. 'The diversity of voices enriches its work and makes it generally interesting to go to such a meeting and to be a member in such an arena' [for stakeholder participation] (Stakeholder no. 6, Interview, 2009). Another high-stake stakeholder, with a strong and publicly well-known position on GMOs, says that it makes it possible to speak to others 'without having to go and look for them'. Nevertheless, meeting face to face with its worst antagonists is sometimes also challenging on an 'organizational as well as personal level' (Stakeholder no. 5, Interview, 2009). Altogether, it seems that the deliberative rationality has *not* changed the way stakeholders work to any great extent, but has made it easier in terms of, for instance, access to information, access to policymakers, monitoring others, anticipating new developments, putting forward one's position, feeling the atmosphere in the

room and hearing what is being said. These stakeholders, describe the general spirit as positive (e.g. BEUC, Interview, 2011). There is usually no confrontation in these meetings. The reason for this, as pointed out by stakeholders themselves, is that the people coming here all know each other very well: 'The European Commission usually only allows representation by one person per organization. So it is a familiar and small group of people' (Stakeholder no. 2, Interview, 2011).

It is not fully possible to conclude that high-stake stakeholders can act upon, and take advantage of, the deliberative rationality more than others. In contrast to EuropaBio which (simply) promotes biotechnology, the representation of COPA-COGECA is more complex. COPA-COGECA represents farmers who want to use biotechnology in agriculture, farmers who prefer organic production methods, and farmers who operate in conventional agriculture. This 'multiple' type of representation limits the possibility for this stakeholder to draw advantage from the deliberative rationality. A high-stake stakeholder like the Confederation of the Food and Drink Industries in the EU (CIAA), which (as many others) has strict internal rules about which information is to be released into the public domain, also experience some limitations: It can simply not 'speak about some things' in transparent participatory arenas. Moreover, individual members of the CIAA – like multinational corporations – may be more powerful than the CIAA itself (e.g. Nestlé and UNILEVER); and they also act alone. In this sense, the internal economic logic conflicts with the deliberative one.

As my research has shown, and will continue to show (in the following chapter), economic stakeholders also refuse to deliberate on some issues because of business interests and because it gives them a competitive disadvantage. As an example, they do not want to discuss sensitive information such as risk management practices (risk of revealing their own failures), and they cannot deliberate in terms of 'giving away' sector-specific expertise and confidential information. As one stakeholder expresses it, 'we have to do that individually in a black-boxed approach' (Stakeholder No. 2, Interview, 2011). Some information cannot, in other words, be disseminated in the public sphere. One-to-one exchange is therefore the most desired type of communication. It relates to questions of confidentiality: Not all expertise that is supplied can be made publicly available. This clearly shows how economic rationality conflicts with the

deliberative one. Moreover, it shows the limits of the deliberative logic: Deliberation is only practically feasible to a certain point, and the basic rules of markets defines this border. Some stakeholders simply have a strong interest in closed doors. This raises questions regarding private information in public spaces and is particularly challenging in the case of GMOs.

Economic stakeholders are usually portrayed as having strong cognitive power resources: language skills, the ability to provide technical expertise, the ability to provide alternative framings, etc. (Tamm Hallström & Boström 2010:20). However, cognitive power resources may also be limited by organizational capacity: It may take more time for high-stake stakeholders to gather expertise; before they can discuss with other organizations. Due to internal hierarchical structures and their constituency, information needs to be gathered from the 'floor' and slowly processed upwards. Decisions need to be anchored before they can be taken according to a specific set of principles, and only certain people within the organization have the mandate to publicly voice the end result in the public domain, while others may voice it in the private domain.

NGOs, on the other hand, are typically referred to as having more social and symbolic power resources than material ones (Tamm Hallström & Boström 2010:19–20). Nevertheless, NGOs are closer to the 'floor' and have some important organizational characteristics that also make it possible for them to take advantage of the deliberative rationality. Just as Ansell and Vogel (2006, chapter 5) have shown, the diversity, flexibility and multilevel character of the so-called 'anti-GMO' movement creates a political opportunity structure to adapt and respond fast. Transnational NGOs (like Greenpeace and FoE), which are used to short-term planning (even though they have long-term capacities), can move between institutional and symbolic politics and use different frames and networks to their strategic advantage. Both the Mad Cow Disease crisis and the introduction of GMOs in the EU led them to quickly establish strong co-operation with allies. Ansell and Vogel therefore refer to those NGOs (which are critical towards GMOs, not necessarily against) as examples of a 'critical interlocutor'; an interlocutor between public opinion and government authority (Ansell & Vogel 2006, chapter 5). This obviously comes in handy in an institutional setting like DG SANCO (and EFSA). As an example, an NGO is likely to require less preparation time than an economic stakeholder as decisions on, among other matters, policy positions can move faster. In that sense, NGOs

can take advantage of, and are also not that dependent on, the deliberative logic. And as shown in this work, Greenpeace and FoE are not particularly excited about the new arenas for stakeholder participation, even though they perceive them as important (as they have themselves lobbied for more transparency), for reasons such as monitoring and accountability (Greenpeace, Interview, 2009).

For one smaller and publicly less visible stakeholder in the food chain, the deliberative rationality and the shadow of hierarchy clearly make internal work more difficult. It is inundated with information and invitations to events over which it has no control and does not have enough staff to send to (Stakeholder no. 9, Interview, 2009; Stakeholder no. 10, Interview 2011). And if it sends somebody, this might be a person with not enough, or the wrong, expertise. This stakeholder is (albeit not officially) hostile towards the hierarchical deliberative logic, and speaks of a forced type of participation. However, this is a rare and non-typical standpoint among those interviewed in this work.

'It's kind of blackmailing. We are set up in these forums and then you have to participate, otherwise they are coming up with legislation. And then you are going to participate in the forum ... And then in the end of the day, you participate and are also part of the legislation If you want to make some sort of masquerade you can always have people coming. Because we have to come. If we are not there we will be criticized' (Stakeholder no. 9, Interview, 2009).

This quote shows that it is possible to talk of power *to* as well as power *over* stakeholders. Policymakers offer power to stakeholders to influence public policy – an enabling understanding of power. But they also have power over stakeholders, which is a more traditional understanding of power (Tamm Hallström & Boström 2010:18). Power embedded within participatory processes need not necessarily reveal itself through exclusion; it can also be manifested in forms of inclusion – as a form of unspoken forced participation. This also shows that the intersection between administrative and deliberative rationality embeds and locks in power relationships into the institutional arrangement (cf. McAdam & Scott 2005). This, in turn, makes it easier for some stakeholders to take advantage of the deliberative logic, to unite their power, but also for policymakers to exert shadow power through framing and boundary-work.

6.5 Conclusions on DG SANCO

This chapter concludes that a deliberative rationality has taken hold of, and permeates, the EU food safety domain. The deliberative logic is a new phenomenon in this policy domain, and is more than just intertextuality and discourse. This logic has materialized into social practice in the form of several arenas for stakeholder participation. It is new, innovative and seems experimental (cf. the Healthy Democracy Process and Stakeholder Dialogue Group). The rationality implies that things are now done differently in this policy area than just a few years ago (prior to 2004–2005). Stakeholder consultation has become an institutionalized phenomenon, operates on a regular basis and in different spheres of the policy cycle: in problem definition (the Advisory Group); outside the policy cycle (Stakeholder Dialogue Group), and towards the end of the policy cycle, in implementation (the Action Platform). Transparency, inclusion and wide-range participation indicate a deliberative rationality in all these arenas.

However, hierarchical forms of steering remain central in the EU food policy. The frame of deliberative rationality is clearly informed by, and subordinated to the administrative one. As an example, deliberative arenas at DG SANCO are laid down in legal texts (regulated by rules of procedures adopted by the European Commission), and require civil servants to take an active role as coordinators, facilitators and mediators. The identified stakeholder arenas would not function without administrative support from public officials. Generally speaking, the strong influence of administrative rationality seems to benefit deliberation: a common legal framework makes it easier to deliberate, and stakeholders view deliberative arenas as more equal when controlled by civil servants. Deliberative rationality contains different types of expertise, not merely procedural expertise. The very purpose of the Stakeholder Dialogue Group is to gather procedural expertise on process development. But the other arenas consist of a mixture of different types of expertise. As an example, the Advisory Group does not only deal with policy-relevant knowledge. It is not possible to reduce the Advisory Group to administrative expertise, policy or legal expertise alone. Rather, economic expertise (particularly economic impact assessments) and validating expertise are also relevant.

The case of GMOs demonstrate that a deliberative rationality is geared towards participation rather than dialogue. This is the food safety topic about which one could expect to find several possibilities for participation, deliberation and arguing among concerned actors. Due to the controversial nature of GMOs, one could expect that if any topic would reach the agenda in these arenas – it would be this one. Nevertheless, this is not the case; on the contrary, it seems. GMOs are only relevant for the DG SANCO Advisory Group. Or in other words: GMO dossiers only pass through this arena. Furthermore, the dossiers have only reached the agenda in the Advisory Group on a limited number of occasions, and mainly at plenary meetings – not those of working groups (where the qualified debates are). There has only been *one* working group meeting on GMOs: this took place in 2008 and concerned the issue of asynchronous authorization and zero tolerance policy. Furthermore, the high-profile GMO dossier on cultivation has not passed through this arena. This is not only an example of boundary framing performed by policymakers. It also suggests that the deliberative rationality is geared towards participation rather than dialogue. And it is geared towards transparency, not other deliberative norms, such as transformation of preferences, consensus or social learning. In the case of GMOs, the deliberative logic has not manifest as one could expect.

6.6 Conclusion on deliberative rationality and stakeholder participation at EFSA and DG SANCO

In this chapter, the frame of a new governance rationality has been identified; namely, deliberative rationality. DG SANCO and EFSA have taken seriously the recommendations made in the White Paper on EU Food Safety and EU Governance. The public authorities' experimental approach towards participatory innovations is expressed in various intertextual links and key documents related to, for instance, the DG SANCO Healthy Democracy Process. The frame of deliberative rationality is not just an intertextual link or discursive practice; it has also been translated to social practice which is manifested in several arenas within EFSA and DG

SANCO. These arenas open up risk assessment and risk management to stakeholder participation and problem-solving among a variety of associations, federations, consumer organizations, and environmental NGOs representing the food chain. Stakeholders contribute with procedural, technical, scientific and economic expertise. They give advice on policy proposals but also participate in upstream involvement in risk assessment. Stakeholder participation is thus not limited to problem identification in the initial phase of policy formulation; stakeholders also participate in the identification of the relevant scientific parameters that should be applied during risk assessment. Stakeholder participation has become a normal way of conducting politics in which policymakers make use of all available expertise that is offered to them by the food chain. Both DG SANCO and EFSA actively push to get stakeholders engaged in official consultations. This transformation of organized interests from lobbyists to stakeholders, and ultimately legitimate knowledge producers, is innovative. It means that the deliberative rationality challenges the traditional separation within administrative rationality that makes a distinction between science (risk assessment) and politics (risk management). In EFSA, the separation between the scientific core-set and the interest-driven Stakeholder Platform is 'out of order' – though still strongly protected – when environmental NGOs in technical meetings discuss the new ERA Guidance with the EFSA GMO Panel. At DG SANCO (risk management-side), on the other hand, arenas for stakeholder participation are also extended. Stakeholders do not only deliberate on procedural issues but advise policymakers on technical issues in the initial stage of legislative developments. The encouragement of stakeholder involvement is strong in both EFSA and DG SANCO. And both public bodies have come far since 2005, as these arenas are now institutionalized and operate on a formal, transparent and regular basis.

However, the deliberative logic lacks an important deliberative quality that is typically associated with deliberative governance. The Habermasian approach to deliberative logic has little relevance to the arenas examined in this chapter. When stakeholders are consulted, the purpose is rarely to transform their preferences in the light of a better argument. Instead, the purpose is typically to bring together diverse epistemologies. The emphasis is on the diversity of expertise – not reaching consensus.

The deliberative governance rationality has – after closer scrutiny – been shown not to have all of the deliberative qualities that might be expected. In

fact, it is more appropriate to talk about a deliberative rationality created by administrative means operating in the shadow of hierarchy. The administrative rationality is clearly dominant when analysing EFSA and DG SANCO from a meso-level perspective. This does not mean that policymakers have handed over power to stakeholders in the food chain. This transformation of administrative rationality, influenced by deliberative rationality, should not be understood as a weakness. Instead, policymakers act as facilitators with strong control over participatory activities which are embedded in a hierarchical setting. Stakeholder arenas are not driven from below. The rules and procedures are laid down in a legal framework and there are strict rules about who should participate, where, how and under which conditions. Obviously, hierarchy thus also controls how different types of expertise shall be pooled together from business, civil society and government sectors. Shadow influence is also exercised in terms of framing and boundary-work. Civil servants make sure they control the agenda and package risk assessment and policy issues. As an example, DG SANCO practiced shadow influence and boundary framing in the debate on asynchronous authorization. Here, the policy issue was introduced as a technical one covering feed, not food. With this framing, the policy issue was de-politicized and limited to feed only. In a similar way, policymakers at DG SANCO have acted as frame-makers when excluding the issue of GMO cultivation from the agendas of the Advisory Group. This exemplifies the subtle power in the administrative governance rationality and the challenge and control over deliberative rationality.

The frame of economic governance rationality does not openly challenge the other two frames. Economic rationality is present more backstage than front stage, but is still important. On a general level, arenas for stakeholder participation have not been introduced for the sake of deliberation itself. Transparency and trust are important. Nevertheless, the purpose is– in the end– to reduce risks, answer economic concerns, and create an efficient internal market. The frame of economic rationality is expressed backstage in yet another way: When examining the Advisory Group at DG SANCO, expertise is – in the intertextual links – expressed as technical. Nevertheless, these arenas (as many other arenas for stakeholder participation) are based on knowledge contribution from stakeholders made outside the scope of these public arenas: Backstage, in one-to-one dialogue between stakeholders and the European Commission, information is exchanged that is more

knowledge-intensive. A large part of this expertise consists of various types of economic impact assessments. Economic impact assessment has been particularly important for the GMO policy debate on asynchronous authorization in the Advisory Group.

This brings us to the question of expertise. This chapter shows that expertise cannot be reduced to just scientific or technical expertise. Furthermore, I have also demonstrated here that a certain type of expertise is not necessarily provided or protected by those stakeholders one could expect. The picture is far more complex than developers, traders and retailers offering economic expertise and environmental NGOs environmental expertise. First of all, there is a wide range of expertise gathered in DG SANCO and EFSA. This could be labelled scientific, policy-relevant, procedural, technical and economic. Applying the theoretical framework of institutional frames, one sees that expertise belonging to administrative rationality is central. Knowledge claims are rarely presented without reference to a legal framework. These calls for some examples: When EuropaBio or Greenpeace make knowledge claims regarding GMOs, be it in the EFSA technical meetings or in working groups belonging to the DG SANCO Advisory Group, they refer to legal principles in order to achieve legitimacy. In the scientific literature, Greenpeace and TestBiotech are often referred to as having moral power resources rather than material and cognitive power resources. However, these stakeholders do not only make use of normative or ethical knowledge claims. Instead, environmental NGOs offer administrative expertise, both scientific (the ERA Guidance) and policy-relevant (DG SANCO Advisory Group). They cannot deliberate on the environment for the sake of the environment only; knowledge claims need to be connected to legal frameworks (Greenpeace, Interview, 2011). And the public antagonists Greenpeace and EuropaBio do not merely offer expertise belonging to the frame of economic governance rationality (e.g. economic impact assessment in the DG SANCO Advisory Group). EuropaBio is also a strong defender of procedural rights (e.g. EFSA's Stakeholder Platform). EuropaBio therefore offers expertise that is also administrative and deliberative: administrative in the sense of, for example, offering data on asynchronous authorization (how the EU does not implement what is legally required), and deliberative in terms of expertise related to risk communication. What actually unifies antagonistic stakeholders such as EuropaBio and Greenpeace – from the

perspective of expertise – is thus administrative rationality: verifying expertise that is legalistic bureaucratic. Is the legal framework performing as it is supposed to; is it delivering as promised?

CHAPTER SEVEN

Reframing a GMO policy dispute

The purpose of this chapter is to begin to answer the third research question: How do stakeholders compete to influence policy and establish themselves as legitimate experts by framing activities within a policy debate? I will do this by focusing on one specific dossier in the EU GMO reform debate, namely the zero tolerance policy for unapproved GMOs and asynchronous authorization. This policy debate will be explored in the situational context in which it is observed and from the situated perspectives of the stakeholders involved. In order to answer the research question, I will pose the following questions to the empirical material: How are conditions constructed as problems and solutions; how do the policies acquire meaning; where does the meaning reside; how is it transmitted; to whom; to what extent is the meaning shared, and how may it be destroyed? (Yanow 1993:41).

While the previous chapter represented a more institutional framing approach, in this one I will search for, and name, issue-oriented frames. An issue frame – as explored in this thesis – is different from a frame of governance rationality, since it specifically focuses on content and operates as a boundary: ‘it fixes the attention and demarcates what is inside from what is outside’ (Schön & Rein 1996:89). The process by which issue frames have influence is through the imposition of boundaries. Even though this approach was discussed in chapter 3, a few more words need to be said. How exactly do I identify the issue frames included in this particular chapter?

Issue frames can be compared to categories, themes, discourses and stories. Nevertheless, they are not entirely similar. Here, I define a frame as specific, recurrent and thematic ideas and structures of argumentation that organize experience and push for an agenda. I also build on the conceptualization of frames presented by Gamson (1995), as well as Schön and Rein (e.g. 1994).

According to them, frames are seen as providing conceptual coherence, constructing the problem situation and leading to normative prescriptions for action. Different frames thus give rise to frame conflicts and frame competition. This will be illustrated by analyses of the 'stories' that stakeholders are disposed to tell about policy situations. In such stories, causal accounts of policy problems are linked to particular proposals for action. In order to be clear, issue frames are identified in a more inductive manner. This stands in contrast to the institutional frames that are more deductive (clearly derived from theory).

This brings me to a second point: The third research question of this thesis will be answered with *two* chapters. The first – the one at hand – makes a first-order analysis which is more empirical and close to the world of stakeholders. This is a detailed investigation which uncovers the 'micro-politics of meaning' (Gottweis 2003:257), that originates from a number of actors (e.g. stakeholders, policymakers and research institutes) and diverse sites, ranging from the international commodity chain to the EU Parliament. Each section starts with a heading, which is a practical category. It just refers to the larger category of issue frames (a higher level of abstraction), grouped together under one heading. The issue frames will be identified, named and described, and certain aspects of governance rationalities, boundary-work and intertextuality will be analysed.

This first-order analysis will be supplemented with a further analytical chapter (chapter 7). In this, a second-order analysis will be conducted in which the issue frames are more explicitly linked to, and analysed in terms of, the theoretical framework. The second-order analysis is important for drawing together the main conclusions from this chapter. In a wider perspective, the analysis in chapter 7 will also help to clarify which type of governance logic and policy change the issue frames from chapter 6 are actually pushing for.

7.1 Introducing the policy dispute

For GMOs that are not authorized in the EU, the threshold is ‘zero’. This means that any imports (essentially cereals from maize and soy) that are found to contain a GMO which has not been approved for import and processing in the EU are not allowed to enter the European Union. If even traces of unapproved GM materials (biotech grain traces) are found in imported commodities, the full shipment has to be rejected at the port of entry and none of it can be marketed in the EU. This is referred to as the EU’s ‘*zero tolerance policy*’.⁷² Adventurous presence or technically unavoidable presence (as some stakeholders express it), or contamination in imports (as other stakeholders express it), may occur at any step in the production of seed or grain, or in processing of harvested products in the food chain. Traces have been found in, for instance, compound feed containing soybean meal, but also in dry pet food and processed food products. The term ‘*asynchronous authorization*’, on the other hand, is used to describe how the EU approves GMOs more slowly than the rest of the world.

“This situation occurs when a certain GM crop has been evaluated for its safety and authorized in the exporting country (X) whereas the importing country (Y) might or might have not [sic] evaluated this GM crop for its safety and has not authorized it (yet). Traces of this non-authorized GMO might occur in conventional or other GM food and feed exported from X to Y as a result of adventurous or technically unavoidable presence during seed production, cultivation, harvest, transport or processing in country X’ (DG SANCO 2010b).

Asynchronous authorization is, according to many actors involved in this policy debate, of growing concern for its potential economic impact on international trade. In such situations, traces of new GM crops can appear in agricultural commodities exported to countries where these new varieties are

⁷² [A] detection of any non approved GMO at whatever level may be considered as an infringement of the EU food and feed law and lead to removal of products from the market (DG SANCO Policy options).

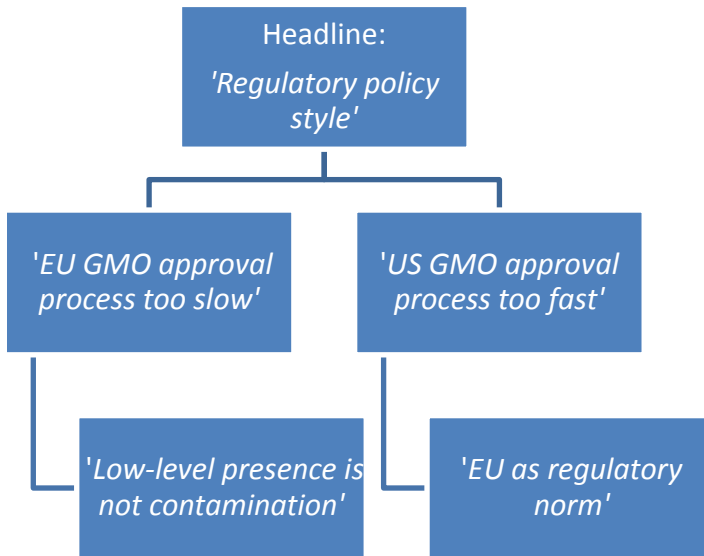
not yet authorized, and shipments can be rejected. This can lead to economic losses for the supply chain operators and to more general disruptions of trade. Instead of zero tolerance, a minimum level – or threshold – has been under discussion, suggesting acceptable low level presence of GMOs from third countries in feed imports that are not covered by EU authorizations.

Others reject this problem definition, and argue that the impact on trade is exaggerated. According to some frame-makers, lifting zero tolerance and replacing it with a threshold level will result in environmental contamination and undermine the European laws on GMOs. As we will see, there is a fundamental dispute over problem definitions and suggested policy solutions regarding this particular GMO dossier. Frame conflicts concern, for example, regulatory harmonization, the EU's GMO authorization procedure, European dependency on feed imports, environmental contamination, consumer protection, global trade and the EU livestock industry. This policy debate has been ongoing since at least 2007, but also prior to that. A transitional measure of a 0.5% threshold expired on 18 April 2007 and was replaced with a zero tolerance policy (DG SANCO n.d. b).

7.2 Regulatory policy styles

This section commences by separating stakeholder claims in the policy debate on asynchronous authorization and zero tolerance policy, and it groups stories into structured and meaningful wholes that provide conceptual coherence, construct problem situations and lead to normative prescriptions for action (see the introduction to this chapter). The heading for this group of issue frames is named 'Regulatory policy styles' because they concern regulatory harmonization and claims linked to authorization procedures for GMOs.

Figure 2: Regulatory policy style



Two issue frames have been identified that belong to economic stakeholders, and a further two belonging to NGO stakeholders. The reason these frames have been grouped together is because there appears to be a clash over questions regarding not only the approval process but the wider regulatory policy style; namely, authoritative rule-making principles and institutions. Given that legitimating standards are a socially constructed system of norms, values, and beliefs, authoritative principles and procedures recognized as legitimate by some actors may not be similarly regarded by others.

7.2.1 'EU GMO approval process too slow'⁷³

According to this frame by EUROPABIO, FEDIOL, COCERAL, FEFAC, CIAA and COPA-COGECA, the administrative governance rationality is dysfunctional and impedes the access to markets.

These stakeholders frame the EU approval process for GM products as slow, unpredictable and unreliable. Most importantly, they emphasize the asynchrony between approvals in the EU and in the main trading countries. The EU takes far longer to approve a new GM trait than the countries that export commodities to the EU. This leads to the situation whereby certain GM crops are fully approved in certain countries, but not in others – a mismatch and so-called asynchronous authorization: 'The huge, chronic delay in product approvals in the EU leads to a continued asynchronous approval speed compared with the rest of the world' (EuropaBio, Position paper, 2009a:8). Stakeholders point out several reasons for problems in the EU authorization procedure and, in the longer run, the asynchrony between EU and export countries; for instance, the EFSA GMO Panel, submission of proposals and comitology.

Firstly, the safety assessment part of the approval process managed by the EFSA GMO Panel functions slowly and unpredictably. Economic stakeholders wonder which products are taken from the long list with positive EFSA opinions and sent for a vote by the Standing Committee: Apparently, the selection is random.

'Nobody knows why some products end up on the agenda while others don't. We clearly see that if there are trade problems, like in 2009, where ships were blocked, then these products can suddenly go very fast. We have the example of products that were causing trade disruptions, where they actually broke all records of a fast processing of the EFSA opinion. So, they can go very fast if they want to. I think it's just a lack of political willingness to get them moving' (EuropaBio, Interview, 2011).

⁷³ EuropaBio 2006a; EuropaBio 2008c; EuropaBio 2009a; Cardy-Brown & Co Ltd 2008; EC (n.d.); ESA 2008; Aramyan et al./LEI Wageningen UR 2009; et al./LEI Wageningen UR 2010; O'Donnel & Rankin 2008; DG AGRI 2007; Stein & Rodríguez-Cerezo/JRC 2009; EuropaBio, Interview 2011; FEFAC, Interview, 2011; UECBV, Interview, 2011; COCERAL, Interview, 2011; CEN/ENEA 2010.

This illustrates the competition between the frame of economic and administrative rationality. It suggests that the administrative rationality changes first when it is strongly pushed by the economic rationality, as in serious trade disruptions. It suggests that the administrative rationality only opens up to the market when under pressure. Secondly, the European Commission's Environment Directorate, which had previously been responsible for managing the approval process, was criticized for not submitting proposals for decisions to the Regulatory (Member State) Committees within the time prescribed by the regulations.

Thirdly, Member State representatives at the Regulatory Committee and Council level are criticized for ignoring EFSA opinions on product safety and voting against the approval of products in comitology. This problem is framed as a result of politicization: Economic stakeholders argue that asynchronous authorization is not merely a matter of time lag. This time lag is a result of politicized risk management. In other words, the system is well-conceived because it takes into account the state of scientific research, but the political management is problematic. 'If we would be applying our system properly and on time, many of the problems would be solved' (ESA, Press release, 2008:1).

This view, as expressed by all interviewed economic stakeholders, shows that the frame relies on an administrative rationality in order to become legitimate. These stakeholders put forward verifying expertise showing the discriminatory nature of the authorization procedure. Member States – so the argument goes – do not act in a manner that is consistent with the EU and international obligations that they themselves have established. According to economic stakeholders, there are no flaws in the authorization procedure, rather a lack in implementation. This makes stakeholders such as EuropaBio gather verifying data regarding risk management in order to estimate time and procedures for product approvals, etc. (EuropaBio, Interview, 2011).

In order to strengthen this frame, frame extension is performed in two ways: Firstly, the EU approval process is linked to EU feed security, and secondly, the EU GMO approval process is linked to the US approval process. There is consensus among all stakeholders involved that GM products are approved, cultivated and commercialized at a faster pace and in

greater number in North America, South America, Asia, Africa and Australia, compared to the EU. Moreover, there is also a consensus regarding the estimation of time difference between the EU and the USA. Both environmental NGO stakeholders and economic stakeholders refer to the Commission study by DG AGRI, in which it is concluded that the EU takes a minimum of 2.5 years and often much longer to complete new biotech trait authorizations, compared to an average of 15 months in the United States (DG AGRI 2007). Differences between NGO stakeholders and economic stakeholders emerge over whether this is understood in negative or positive terms. This is when frame extension becomes important for this frame.

According to economic stakeholders, the EU GMO approval process is not only problematic in its own right; it is not merely a problem of implementation. The speed of the EU GMO approval process is also problematic since it has a negative impact on international commodity markets: it interrupts trade and affects food and feed industries in the EU, which suffer from a reduced import of raw materials and increased costs. If the authorization process continues to take longer than in major export countries, Europe will simply become more isolated in the global marketplace. And since Europe is dependent on raw material supplies, asynchrony and trade disruptions threaten feed supply security. In that sense, this frame is upheld by frame extension when it links together the EU approval process with EU feed security. They are not only dependent on each other, but the former (approval process) is seen as having a direct effect on the latter (feed supply).

Frame extension is also used in another way, to strengthen the problem definition in this frame: The EU GMO approval process is linked to, and compared with, regulatory policy styles elsewhere, most notably the US. Pointing to US experience, the EU GMO approval system and its wider regulatory policy style appears odd. In addition to their own verifying data and general references to the US regulatory model, intertextual references are made by these stakeholders to the WTO, parts of the European Commission and public research institutes. FEFAC draws on the EU GM

Sherpa Group – a so- called High Level Group⁷⁴ – to strengthen the claim of timelags being a serious threat to European agriculture. European Commission President Barroso's High Level Group concluded that there was a 'need to speed up the authorization process, and to 'better synchronise approvals with third trading partners' (Conclusion of the Barroso Sherpa Group). This statement provides strong credibility to this frame. Intertextual links to strengthen this frame also come from the European Commission's DG AGRI and JRC, as well as the research institute LEI Wageningen UR. The DG AGRI report 'Economic Impact of Unapproved GMOs on EU Feed Imports and Livestock Production' (2007) is regarded as the first public acknowledgement (for economic stakeholders) of the problem formulation for this frame. In 2009, the Joint Research Centre JRC (at the European Commission) published a report entitled 'The Global Pipeline of New GM Crops, Implications of Asynchronous Approval for International trade'. References are also made to LEI Wageningen UR, which has published the study 'EU policy on GM soy. Tolerance threshold and asynchronic approval' (2009) and 'Study on the Implications of Asynchronous GMO Approvals for EU Imports of Animal Feed Products' (2010). These reports all emphasize the need to speed up the authorization processes for GM events and to preserve the importance of the EU market in animal feed products

This type of intertextuality provides strong credibility and authority to this frame; it acknowledges the problem definition. Moreover, it gives licence to expand the economic rationality, and to open access to the global pipeline of new GM crops to international trade. The increasing number of countries that develop GM events and submit applications to the EU for authorization thus represents a push from the economic logic to the administrative system. And these studies confirm and strengthen this push. Interesting to note, this intertextual chain is really an intertextual spin between the European Commission, public research institutes and economic stakeholders. The DG AGRI would not have issued its study in 2007 without the problem formulation from economic stakeholders. The studies

⁷⁴ The high-level group on GMOs, also known as 'the Sherpa Group', invited senior officials from the 27 EU Member States to take part in 'informal discussions' to debate broader political issues concerning GMOs and implementation of the legal framework.

from JRC, DG AGRI and LEI Wageningen UR would not have been feasible without the data from economic stakeholders. And without the studies from the European Commission and the independent research institutes (at Wageningen University and the University of Missouri), economic stakeholders would not have established credibility to push for this frame. Together, a group of public and private actors thus empowers and sanctions the same frame, by sharing and referring to the same texts. I call this *intertextual spinning*.

7.2.2 ‘Low-level presence is not contamination’⁷⁵

This frame articulates another form of push for the EU to speed up its GM authorizations, to seek harmonization and adaptation. While the former frame was based on frame extension, this one is based on boundary framing. And again, this frame also refers to foreign experience in order to give power to the frame.

Economic stakeholders reject the framing of asynchronous authorization and zero tolerance policy as a contamination problem. The phrases ‘low level presence’, ‘minute traces’ and ‘technical unavoidable’ separate it from a contamination and, thereby, safety issue. This has implications for the regulatory approach they suggest. Economic stakeholders draw a boundary between contamination and legal presence. These are not the same, they argue. As stated in the previous chapter, the EU is increasingly exposed to incidents where GM material appears in traded commodities entering the Union. Economic stakeholders emphasize that this material has already been approved, yet outside the EU. In that sense, the low-level presence is risk assessed, albeit by another regulatory authority. Therefore, economic stakeholders do not refer to incidents as contamination. Instead, they speak of a legal presence, a low-level presence (LLP):

⁷⁵ CIAA 2008; EuropaBio 2009a; ESA & EuropaBio 2007; FEFAC, Interview 2011, EuropaBio, Interview, 2011; ESA, Interview, 2011; UECBV, Interview, 2011; COCERAL, Interview, 2011; DG SANCO CEN/ENEA 2010.

‘The huge, chronic delay in product approvals in the EU leads to a continued asynchronous approval speed compared with the rest of the world. The net effect of this is that the EU is increasingly exposed to the potential for incidents where low level presence of GM material, *already approved outside the EU*, appears in traded commodities entering the EU leading to trade disruptions’ (EuropaBio, Position paper, 2009a:8, emphasis added).

These stakeholders thus draw a boundary between contamination and legal presence. Since they claim that GM events found in imports are authorized in the exporting country (albeit not yet legal in the EU), the shipment can therefore not be understood as contaminated. This also separates unsafe from safe material.

Drawing on internationally recognized standards like the Codex Plant Guidelines is crucial for these stakeholders: Low levels of GM products in traded commodities are seen as safe because they have been evaluated (not authorized) by Third Country safety assessments – a system agreed and validated by internationally recognized criteria. The fact that they are not yet approved in the EU is secondary. In that sense, adventurous presence can not be seen as a safety issue. An important boundary is drawn, and safety is dismissed as not belonging to the debate; it falls outside the debate: ‘A GM crop can be grown only after it has been tested extensively and approved as safe for humans, animals and the environment under rigorous approval processes. The presence of traces of the same tested and approved GM material in a non-GM crop is obviously equally safe to the consumer and to the environment’ (ESA & EuropaBio, Position paper, 2007:9). With this type of frame, economic stakeholders reach the conclusion that there must be a speeding up of authorizations in line with the US and international harmonization of approval systems.

DG SANCO agrees with parts of this frame: Low level presence is not a safety problem – but a control problem. Nevertheless, DG SANCO does not support the claim on mutual recognition and the reference to the Codex Plant Guidelines. According to this view, third country risk assessment is not relevant in this policy debate (DG SANCO, CEN/ENEA Workshop, 2010).

7.2.3 ‘US GMO approval process too fast’⁷⁶

Even though FoE, Greenpeace, European Farmers Coordination and European Coordination Via Campesina agree with economic stakeholders that there are certain problems in the authorization procedure, they clearly reject the frames pressing for the EU approval system to adapt to the US system. NGO stakeholders do not see any reason why the EU’s GMO approval system needs to change. Instead, it is the US approval system that should (change). In order to legitimize this frame, they discuss GMO approval systems in different countries. The conclusion of this frame extension (to link the EU with other countries), and regulatory outlook, is to portray the US as the deviant case – not the EU. Just as the previous two frames, this one also refers to experiences elsewhere, albeit for another purpose. Similarity is stressed between the EU, Brazil, Argentina and China. And these countries are then contrasted to the US.

As stated earlier, all stakeholders do agree about the time frame for US and EU approvals. However, while economic stakeholders claim the EU to be exceptionally slow, NGO stakeholders claim the US to be exceptionally *fast*:

‘However, Europe is far from the slowest in the world. It is the US which is considerably faster than any other major GMO growing country’ (FoE 2010a).

More importantly, the US approval system is seen as illegitimate due to the US regulatory policy style, which does not separate risk assessment and risk management, and does not gather independent expertise for risk assessment on a case-by-case basis. When reviewing the US regulatory policy style, NGO stakeholders claim an absence of risk assessment due to the principle of substantial equivalence.

‘When a company wants to commercialise [sic] a GMO in the US, a safety assessment is only required if the company presents evidence that this is needed.

⁷⁶ FoE 2007c; FoE 2010c; CPE, FoE & Greenpeace 2008; FoE 2010d; FoE 2007a; FoE 2008b; Greenpeace, FoE & ECV 2008; Greenpeace, Interview, 2011; DG SANCO CEN/ENEA 2010.

Unsurprisingly, no company has chosen to do this up until now. GMO commercialization in the US therefore occurs under a total absence of health and safety procedures and is complete in an average of 15 months' (CPE, FoE and Greenpeace, Position paper, 2008:3; FoE, Media briefing, 2007a).

Framing the US as having a weak risk assessment procedure makes it possible for NGO stakeholders to reject the frame portraying the EU as too slow. In other words: There is no relevance in comparing the EU to a country with a weaker risk assessment procedure and with a private interest regulatory policy style.

These stakeholders make several intertextual references to strengthen their claim about the US having a weak approval process and risk assessment procedure. The US is said not to meet international requirements under the United Nations' Codex Alimentarius. And here, FoE does not only draw on Codex Alimentarius to enforce administrative principles; it also emphasizes that the Codex is considered as the standard by the World Trade Organization's Dispute Settlement Body. In this way, an economic actor – the WTO – is used to add authority to this frame. Furthermore, the US has not signed the UN's Biosafety Protocol. However, in order to frame the US as aberrant, the global outlook is more important. NGO stakeholder views on Argentina, Brazil and China will therefore be examined.

Brazil and Argentina are important export countries for the NGO stakeholder frame in the following sense: They have laws in place that are closer to the EU system than that of the US, and have biosafety measures in place. And in the case of soy, they are simply more significant export countries than the US. When it comes to timelines, FoE stresses that in Argentina it takes on average three years to approve a new GMO for cultivation, thus longer than the US and EU. Even more importantly, these two countries (Argentina and Brazil) are attentive to EU market demands: 'Argentina has historically been unwilling to authorize GM crops prior to EU approval and the likely impact of the GM crop on exports is a consideration in the approvals (FoE, Media briefing 2007a:2).

'Key exporters such as Brazil and Argentina are attentive to EU market demands, and Brazil in particular has GMO laws in place closer to the EU system than the US' (FoE, Media briefing 2007a:2).

The intertextuality to strengthen this frame comes from the DG AGRI report, in which the Commission ‘has itself acknowledged that Argentina has historically been unwilling to authorise GM crops prior to EU approval, and that the likely impact of the GM crops on exports is a consideration in the approval process’ (FoE, Media briefing 2007a:2). A Brazilian diplomatic source is also quoted as saying: ‘We produce to satisfy our clients. We are not going to produce something they [the EU] are not going to buy’ (Financial Times, in FoE, Media briefing 2007a).

China also has an important role in this frame, for the same reasons as Argentina and Brazil. Several claims about China are made: The Chinese approval process takes even longer than the EU’s; China’s system for regulating GMOs is based on biosafety rules, has a precautionary approach, considers putting in place a monitoring of GM foods, and requires importing companies to bear the cost of recalling foods found to contain illegal GM materials. Another important claim is that the Chinese market is attentive to public concern and the EU. As an example, the company Kraft Foods is highlighted as a major manufacturer sourcing GM- free soy. Furthermore, NGO stakeholders downplay the competition between the EU and China, stressing that they import different soy products: China imports soybeans while the EU imports soybean meal, and therefore China ‘does not risk taking over from the EU as a major global importer’ (FoE, Media briefing, 2007a). Here, FoE refers to the OECD-FOA Agricultural Outlook report (2007–2016) and Chinese news reports. Again, this frame is based on a similarity between a group of countries (EU, Argentina, China and Brazil) that stand in contrast to the US.

In sum, Argentina, Brazil and China are used in this frame to strengthen the authority of EU regulatory policy style: Performing frame extension results in a picture in which export countries are more in line with EU than the US regulatory approach to GMOs.

This issue frame does not reject economic governance rationality *per se*. It should not be understood as a clash between economic rationality, on the one hand, and administrative rationality on the other. Rather, this frame differentiates between two types of economic rationalities. It welcomes the one that is more in line with the EU administrative governance rationality (coming from Brazil, Argentina and China), and rejects the economic rationality as represented by the US. Moreover, the frame embeds authority from economic actors like the WTO to strengthen administrative principles

– not to weaken them. And while DG SANCO seems to give support to Argentina waiting for the EU, China is pointed out as having an unclear assessment procedure (DG SANCO, CEN/ENEA Workshop, 2010). So while NGOs put Argentina, Brazil and China in the same group of ‘reliable partners’, DG SANCO separates them.

7.2.4 ‘EU as regulatory norm’⁷⁷

As a logical effect of the previous frame, Greenpeace, EuroCoop, IFOAM, SOS, CPE, EEB, FoE and GMO-Free Ireland provide the message that the EU should be a regulatory norm internationally. These stakeholders emphasize that the European Union is one of the world’s largest trading blocs and ‘carries weight in the international arena’. The EU should therefore ‘use this to support the European non-GMO feed industry, and to promote and defend health and safety standards for people, animals and the environment around the world’ (FoE, Media briefing, 2007a). These stakeholders also seek other countries to establish assessment procedures comparable to international guidelines and the EU’s own standards. The FoE and other NGOs thus frame the EU as the norm: Instead of speeding up approvals to match the US, these NGOs believe that the EU must specify to producer countries what the EU will import, encourage GM-free production and limit new GM cultivation.

‘The EU should also help countries such as China, Argentina and Brazil to establish GMO safety assessment procedures comparable to international guidelines and the EU’s own standards’ (Greenpeace, EuroCoop, IFOAM, SOS, CPE, EEB, FoE, GMO-Free Ireland 2008:3).

This frame pushes for an administrative rationality. It also provides assistance for another form of normative leap: Not only does this frame

⁷⁷ FoE 2007a; CPE, FoE & Greenpeace 2008; CPE, EEB, FoE, GMO-Free Ireland, Greenpeace, EuroCoop, IFOAM & SOS 2008; FoE 2010a; Bourzai et al. 2008; Greenpeace, Interview, 2011; DG SANCO CEN/ENEA 2010.

justify the regulatory system in the EU, it also seeks to justify EU regulatory authorities to go even further; to help the EU livestock industry source GM-free animal feed and to label products from animals fed with GMOs. The previous frame, and this one, are thus essential for NGO stakeholders seeking to defend the status quo: The EU should stand by its regulatory approach. It should not only defend its regulatory approach, but also export it to other countries.

The rejection of the frame ‘the EU GMO approval process is too slow’, and instead pushing for ‘the EU as a regulatory norm’, has a procedural character: NGO stakeholders argue that Barroso’s Sherpa Group (which came to the conclusion that the EU GMO approval process should be faster) lacks credibility: Besides lacking transparency (the group was not public), it ‘bypassed’ not only the Commissioners for Environment, Agriculture and Health, but also National Ministers who are responsible for the GMO issue. By rejecting the procedures through which this group drew its conclusions, NGO stakeholders seek to undermine the frame ‘EU GMO approval process too slow’ (for which the Sherpa Group provides an important intertextual link). Support for this rejection and frame comes not only from NGOs, but also MEPs, including Vice Chairs and members of the Agricultural Environment Committees. These actors write: ‘For good reasons the EU has its own sovereign system of handling food and feed safety. This must not be replaced by USFDA (U.S. Food and Drug Administration) opinions’ (Bourzai et al. 2008). Again, they draw on ‘[the] EU’s main producer countries’ – Brazil and Argentina. Intertextuality in this letter comes from ‘Brazilian officials and CONABIA’ (Argentina’s equivalent to EFSA).

This frame has also received important support from DG SANCO, represented by Dorothée André, Head of Unit Biotechnology and Plant Health, who – at the CEN/ENEA Workshop – expressed that it was ‘very important for Third Countries to wait for EU approvals’. Argentina follows this approach, and Third Country attacks on the Commission’s GMO policy are counterproductive. She also defended the comitology system and involvement by EU Member States: ‘Our safety requirements are *our* safety requirements. It is our level of safety. It is absolutely defendable. And it takes time. This is just a simple reason why [the authorization procedure] takes time’ (André of DG SANCO, CEN/ENEA Workshop, 2010).

This frame shows that the policy debate on asynchronous authorization and zero tolerance policy is a debate about regulatory policy styles; that administrative governance rationality plays an essential role in the debate, and gives the frames authority. Framing the EU as a regulatory norm has, obviously, strong support from DG SANCO who emphasises that the EU has its own regulatory framework and ‘does not rely on safety assessments from Third Countries’ (DG SANCO, CEN/ENEA Workshop, 2011).

7.2.5 Conclusion

Four issue frames have been identified under the heading of ‘Regulatory policy styles’: two economic stakeholder frames and two NGO stakeholder frames. These issue frames clash over the EU authorization procedure and the time it takes to authorize a GMO. And time is understood differently, depending on which other approval system the EU is compared to. Moreover, the interpretation of timelag is different, depending on how stakeholders view the market for GMOs in the first place. Economic stakeholders obviously seek a fast track from the approval process to the market, and link their frames to the US. Environmental, agriculture and consumer NGOs on the other hand, do not (at least not publicly in texts) oppose GMO trade, but link their frames to Argentina, Brazil and China to strengthen the EU regulatory policy style. The analysis so far shows that it is neither just the market nor the bureaucratic apparatus that dominate. The frame conflict here cannot be reduced to just a clash between an economic governance rationality and an administrative governance rationality. Such a simplistic message would not be credible for any stakeholder involved. Rather, the two groups of stakeholders seek legitimacy as experts by drawing on a mixture of economic and administrative rationality.

Administrative rationality is central for the issue frames pushed by economic stakeholders: The EU GMO approval would improve if it just delivered what it promises legally, and if actors just managed policy according to what is legally binding. And a low-level presence of EU-non-authorized GMOs is actually legal, just not in the EU – yet. If this changed, access to the market would also be solved. This is verifying expertise:

providing evidence to evaluate policy. In this way, the two issue frames are less concerned about conflicts, and more focused on co-operation and integration: The frames suggest that the economic and administrative logics strengthen each other. An improved administrative rationality would also benefit the economic rationality. In other words: the *idée* is harmonization, not competition.

Administrative rationality is also central for the issue frames pushed by NGO stakeholders. The EU regulatory policy style should be regarded as the norm and other export countries should follow. These frames do not reject economic rationality *per se*, but mainly the US one. Since the others (Argentina, Brazil and China) are more in line with the EU, economic rationality coming from these countries is accepted.

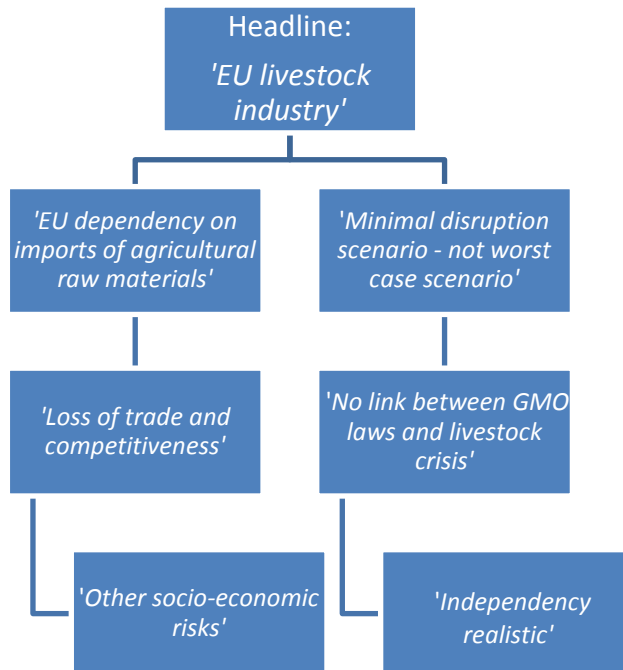
Both groups draw on Codex Alimentarius, internationally recognized standards from the United Nations' FAO and WHO (another example of the dominant position of administrative logic) to provide credibility for their frames. Yet stakeholders draw on different parts of Codex Alimentarius and use this intertextuality for completely different purposes. For economic stakeholders, the Codex plant guidelines strengthen their frames pushing for regulatory adaptation. For NGO stakeholders, on the other hand, Codex Alimentarius is used to undermine the US regulatory policy style.

An important conclusion is thus the need for all stakeholders to draw on administrative rationality in order to gain legitimacy. To demonstrate respect for EU legal rules and principles. Another conclusion is that the zero tolerance policy debate is linked with, and cannot be separated from, the wider and more general debate on the GM approval procedure and models of regulatory policy styles.

7.3 EU livestock industry

A second group of issue frames have been identified under the heading of EU livestock industry. These issue frames are grouped together for the following reasons: They all address claims and expertise regarding the viability of the EU livestock sector. In this chapter, the focus thus moves from the approvalside of the debate to the zero tolerance policy side. Nevertheless, it does not address claims regarding threshold levels, as those are discussed separately in the third group of issue frames.

Figure 3: EU livestock industry



These issue frames continue to clash over the core assumptions and problem definition in this debate (prior to focusing on what some perceive to be the solution, namely threshold).

7.3.1 'EU dependency on imports of agricultural raw materials'⁷⁸

COCERAL and FEFAC are two important stakeholders who state that the EU has a high demand for imports of agricultural raw materials and feed supplies. Because of climatic and agronomic reasons, Europe cannot produce most of the oilseed meal and other protein-rich feedstuffs used as raw materials and required to feed its livestock. The frame of the EU as unable to produce its own feed is a key for economic stakeholders. Stakeholders like FEFAC, ESA, COCERAL and FEDIOL seek to provide authority to this frame:

'The EU is totally dependent on soybean meal imports as a major source of vegetable proteins, for which no substitutes are available in sufficient quantities on EU or world markets' (COCERAL, in 'GMO zero tolerance devastating', 2007).

According to COCERAL, the EU captures for 20% of world trade in soybeans and is not self-sufficient, therefore the EU needs to import (COCERAL, CEN/ENEA Workshop, 2010). The DG AGRI report (2007) is a key intertextual reference to provide credibility to this frame of a supply crisis in the European feed industry and the demand for import of protein. Figures are also provided by COCERAL who estimates the EU's self-sufficiency as: Soybeans (5%), soybean meal (32%), protein-rich feedstuffs (49%), vegetable oils including imported oilseeds (67%) and vegetable oils

⁷⁸ COCERAL, FEFAC, FEDIOL, FERM, CIAA, COPA-COGECA at CEN/ENEA 2010; COCERAL, FEDIOL & FEFAC 2008; FEFAC 2008b; EuropaBio 2010a; 'GMO zero tolerance devastating' 2007; Graham Brookes GBC Ltd 2008; COCERAL, EuropaBio, FEFAC & FEDIOL 2007b; EuropaBio 2010b; COCERAL 2010; CEN/ENEA 2010.

excluding imported oilseeds (35%) (COCERAL, Powerpoint slides, 2010). FEFAC, on the other hand, estimates that the EU imports about 75-80% of its protein demand for animal feed (mainly soybean and maize). Apart from protein-rich soybean meal, the EU imports Corn Gluten Feed (CGF) and Distillers Dried Grain Solubles (DDGS) (FEFAC, Powerpoint slides, 2010). These products are necessary for the livestock producers in the EU to achieve a balanced diet for their animals, especially with regard to proteins. In addition, farmers in countries from where feed is imported are switching to GM crops, meaning it is becoming more difficult and more expensive to source GM-free from Europe's major suppliers (EuropaBio, Position paper, 2010a).

Overall, this frame conceptualizes the EU's dependency on imports of agricultural raw materials and the impact on EU farmers and agriculture overall. According to this frame, self-sufficiency is at stake and the industry is faced with legal uncertainty and considerable financial risk.

7.3.2 'Loss of trade and competitiveness'⁷⁹

This is an issue frame that is based on, and pushes for, economic governance rationality. It also contains several examples of economic expertise. According to the food and feed operators in the chain, like COCERAL, FEFAC, FEDIOL, UECBV, COPA-COGECA, ESA, EuropaBio and CIAA, the key problem in this policy debate is a loss of competitiveness and trade: 'Zero tolerance closes down trade...the presence of even a few seeds of unauthorized GM material will rule out an entire shipment' (COPA-COGECA, in Coughlan 2010).

⁷⁹ COCERAL, EuropaBio, FEFAC & FEDIOL 2007a; EuropaBio 2010b; FEFAC 2008b; FEFAC 2008c; COCERAL, FEFAC, FEDIOL, FERM, CIAA & COPA-COGECA 2010; Graham Brookes GBC Ltd 2008; Coughlan 2010; Cardy-Brown & Co Ltd 2008; COCERAL, FERM, COPA-COGECA, FEDIOL, EFM, UECBV, AVEC, CIAA & FEFAC 2009; COCERAL, UECBV & FEFAC 2008; JRC/IPTS 2008; DG SANCO CEN/ENEA 2010.

Asynchronous authorization and zero tolerance policy are framed to be a distorting EU policy that implies ‘a significant collateral economic impact’ and ‘wipes out’ the EU livestock sector (CEN/ENEA Workshop 2010). In other words: The system is not proportionate. And even though feed manufacturers (FEFAC), more than farmers (COPA-COGECA), is in the forefront of this frame, it is pushed by all high-stake food and feed stakeholders. The fact that CIAA also pushes for it is seen as particularly important, because this extends the message to food. This frame makes an important connection – it links legislation with supply problems: the zero tolerance is a threat to EU feed security and has a serious negative economic impact on the EU livestock and feed industry. As an example, FEFAC claims that EU livestock farmers had to pay an extra cost of 1.6 billion euros due to zero tolerance in 2008–9 (FEFAC, Newsletter, 2008c). Another figure expressed in the case study report sent by COCERAL, FEFAC and UECBV to Commission President Barroso and the GM Sherpa group in 2008, is 2.5 billion euros (Cardy-Brown & Co Ltd 2008).

The loss of trade and competitiveness is calculated, with different methodologies, by several actors: (1) *Economic stakeholders* have produced non-public economic impact assessments and paid contractors to produce reports and release them into the public domain (and send to Barroso’s High Level Group).⁸⁰ (2) *The European Commission* (specific Directorate Generals) has produced studies⁸¹ and commissioned public research institutes to produce studies,⁸² and (3) *public research institutes* produce studies of their own, on behalf of the European Commission and economic stakeholders (more specifically, feed producers).⁸³ In one and the same position paper, economic stakeholders may refer to departments of the European Commission (most notably DG AGRI) as well as to another economic stakeholder *and* themselves. Though these reports have different methodologies and foci, they all acknowledge and reinforce the problem definition of this frame: loss of trade and competitiveness.

⁸⁰ Graham Brookes GBC Ltd (2008).

⁸¹ DG AGRI (2007) and Stein & Rodríguez-Cerezo (2009).

⁸² LEI Wageningen UR (2010).

⁸³ LEI Wageningen UR (2009).

Together, the mentioned studies point out where the financial burden and competitive disadvantage are and how heavy they are on their sector. According to the stakeholders, whose information serves as a basis in the JRC/IPTS study (Stein & Rodríguez-Cerezo 2009), the economic consequences of LLP are felt through the entire food and feed supply chain: In the port (illegal shipment causes costs for the vessel); for first processors (e.g. numerous sampling/testing, lack of space for new supply, cleaning silos and equipment, delays in deliveries, litigation); for second processors (e.g. recall of illegal products, delays in deliveries to customers); at the retail level (potentially empty shelves at supermarkets), and in the aftermath (e.g. administrative and legal costs) (COCERAL, FEDIOL, GAFTA, FEFAC, European Flour Millers, Euromaisiers, FERM and CIAA, in Stein & Rodríguez-Cerezo 2009:50). Two studies have been particular important to provide credibility to this frame: The DG AGRI report (2007) and the JRC/IPTS study (Stein & Rodríguez-Cerezo 2009).

The DG AGRI report (2007) addressed the economic impact of unapproved GMOs on EU feed imports and livestock production. The economic impact of a potential interruption of soybean/-meal imports from the three major exporting countries (USA, Argentina and Brazil) was modelled. Three scenarios were distinguished depending on whether soybean/-meal imports from one, two or all three countries were interrupted. The report concluded that there was a real possibility that the medium and worst case scenarios could materialize.

The common interpretation by economic stakeholders is the worst case scenario.⁸⁴ The impact on the EU livestock sector would be dramatic according to this: for example, poultry production would fall to 44% below the baseline level in 2010, and EU consumption would drop to 26% below this level in 2010. FEFAC has also presented figures of production costs of animal products in the EU up to seven times higher than the DG AGRI study (FEFAC, Position paper, 2008a).

Nevertheless, the methodology in this report and the interpretation of the worst case scenario (by economic stakeholders) have been heavily criticized by NGOs. Therefore, one major economic stakeholder was in dialogue with

⁸⁴ See, for instance, the DG AGRI report quoted in COCERAL, EuropaBio, FEFAC and FEDIOL (2007a:4)

LEI Wageningen UR prior to making its own impact assessment, 'to be certain that nobody could attack' them. This stakeholder wanted to make sure that they 'did the right thing', and requested LEI Wageningen UR to confirm the methodology for its economic impact assessment (Stakeholder no. 6, Interview, 2011).

The JRC study (Stein & Rodríguez-Cerezo 2009) is a second vital intertextual reference (FFAC, Interview, 2011). It is based on desk research and the findings of a workshop organized by JRC/IPTS, to which economic stakeholders were invited. The report presents an overview of the global pipeline of new GM crops and implications for trade. The results predict a significant global increase in the number of individual commercial GM events. However, this study is not as explicitly referred to in public position papers as the DG AGRI report.

Another way to provide credibility is for a public figure – a champion – to publicly defend the frame and spread the message. Economic stakeholders refer to former Commissioner Fisher Boel, responsible for Agriculture and Rural Development, who '*herself* travelled to Argentina and Brazil to consider whether the third scenario, i.e. Brazil and Argentina also producing EU-non- approved GM soya was realistic. Her conclusion, after visiting plants and talking to Brazilian and Argentinean authorities, was that this worst case scenario was unfortunately the most realistic' (FEFAC, Position paper, 2008b:3).

The actual trade interruptions are, of course, another essential component to provide empirical credibility to this frame. Nevertheless, the description of these incidents is, compared to figures of economic costs, less apparent in the position papers of economic stakeholders. Instead, these incidents are rather presented in Powerpoint lists, such as in the 2008 JRC/IPTS Workshop and the 2010 CEN/ENEA Workshop. During the CEN/ENEA Workshop economic stakeholders presented figures from the RASFF system that (just like NGOs) confirm that most contamination incidents originate from the US (and Canada). During this workshop, there was also a discussion on whether or not to avoid negative rapid alerts because it 'gives negative connotations' (CEN/ENEA Workshop 2010). One reason that the actual trade interruptions are less apparent in texts may nevertheless be that stakeholders do not want to publicly display the story concerning economic 'failure'. This would expose their companies and draw attention to poor risk management procedures.

One incident that is highlighted (German Feed Association DVT, CEN/ENEA Workshop, 2010), received a lot of public attention, and was also picked up in a scientific article (Davidson 2010) concerns MON88017 maize. In 2009, the EU rejected a cargo of 180,000 tons of soymeal from the USA because traces of MON88017 maize, which is not authorized in the EU, were found. This seems to be a convenient case for economic stakeholders to draw on for the following reasons: Firstly, the cross contamination of the soybeans with MON88017 was due to (it seems) dust, prevalent in the transport and handling chain. Secondly, the maize in question was later assessed by EFSA, which concluded that the trace amounts were safe.⁸⁵ Thirdly, despite the positive EFSA opinion, MON88017 did not receive the required qualified majority of Member States. In the end, the whole cargo was thus rejected. These agricultural imports were unmarketable in the EU on the basis of the zero tolerance policy. There was – as economic stakeholders call it – a trade blockage.

MON88017 is a convenient case for this frame because it demonstrates a case of dust (not admixture), safety (not un-safety) and a risk management problem (not risk assessment problem). Economic stakeholders therefore argue that the result – the trade blockade – is disproportionate to the problem (dust).

Altogether, this frame is an example of a problem definition according to the frame of economic governance rationality. It is pushed by public as well as private actors and seeks influence over public policy by providing an arsenal of economic expertise of various kinds.

⁸⁵ Safe shall here be understood as MON88017 being compositionally, phenotypically and agronomically equivalent to the non-genetically modified counterpart and conventional maize varieties, except for the presence of two types of proteins in maize. In addition, there were no indications of potential toxicity and allergenicity of the two types of protein detected in MON88017 (see Davidson 2010).

7.3.3 'Other socio-economic risks'⁸⁶

First and foremost, asynchronous authorization and zero tolerance policy are framed as an extensive negative impact on trade and competitiveness. The ability to compete successfully on the world market is hampered when traded commodities cannot enter the EU. However, there are also other types of impact, which are here grouped together in the frame named socio-economic risks.

First of all, socio-economic risk is linked to food security, even though the word safety is not used explicitly. But the loss of competitiveness and the lack of a sufficient supply of feed ingredients have an effect on consumers: If the European livestock industry is uncompetitive with the rest of the world, this will result in increased meat imports which have been using GM products that in turn have not yet been approved in the EU. This ironic situation is expressed as a problem for consumers. They will have to eat imported meat produced from animals fed on the same GM soy that the EU refuses to import to feed its own animals: 'The situation may well lead to the collapse of the EU livestock production and its replacement by large-scale imports of meat from animals fed with not-yet EU authorized GMO feed and raised according to lower production standards' (COPA-COGECA, in Stein & Rodríguez-Cerezo 2009:51). This is, of course, also a threat to the EU agriculture market: 'The EU cannot afford to export its livestock and grain production capacity to third countries' (FEFAC, Newsletter, 2008c:1).

Closely related to reduced competitiveness is the issue of unemployment. Economic stakeholders also claim the absence of a threshold to create a job loss in the EU: a loss of feed supply security would inevitably lead to a major rationalization of the European feed and meat industry. With falling European production, imports of meat would increase. In that sense, there is a threat of layoffs in the trade and processing industries: 'At this rate we will put ourselves out of business very quickly' (UECBV, 2008, 2009). Similar

⁸⁶ EuropaBio 2010b; Cardy-Brown & Co Ltd 2008; COCERAL, UECBV & FEFAC 2008; FEFAC 2008b; COCERAL, EuropaBio, FEFAC & FEDIOL 2007b; EuropaBio 2008b; UECBV 2008; UECBV 2009; GMO Compass 2009; GMO zero tolerance', 2007; FEFAC, Interview, 2011, UECBV, Interview, 2011; JRC 2008; CIAA, Interview, 2011; DG SANCO CEN/ENEA 2010.

to other economic stakeholders, FEFAC views the situation as a ban on soybean meal imports, saying it will have ‘devastating consequences for European livestock producers, wiping out entire pig and poultry production chains in the EU’ (Corréa de Barros, in ‘GMO zero tolerance’, 2007).

Thirdly, asynchronous authorization and zero tolerance policy create socio-economic risks affecting animal health.⁸⁷ Since Europe’s farmers cannot access cost-effective protein-rich feedstuffs, animals are denied a nutritionally balanced diet including carbohydrates, proteins, fibre and fats. A fourth reason for why the economic impact is so threatening is because it has a negative impact on food availability. Many ingredients are derived from commodities such as corn, soy, rapeseed and rice. Single ingredients are used in composite foodstuffs throughout the food chain. Therefore, the zero tolerance policy has an impact on a wider range of food products beyond feed (JRC/IPTS, Workshop, 2008). Ultimately, this can have the consequence that some products will not be available anymore, due to a raw material shortage: ‘I remember we had a rice issue, it was not exactly the same as LLP, but in the end it’s the same: The shelves were empty, the rice was not there anymore. That’s the impact, you can *feel* the impact’ (CIAA, Interview, 2009). This, again, shows how economic stakeholders try to link their frames to consumer interests, even though the voice of BEUC is absent in this debate, and even though BEUC (or any other consumer organization) does not support this frame.

This issue frame can also be placed in the wider category of economic governance rationality. Yet the arguments, claims and data in this frame are broader than in the previous one. They suggest that trade problems are just not economic losses; they are also losses in terms of employment, animal welfare and consumer choices. Frame extension is key to this frame: it moves the debate from safety to security, and to goes beyond the feed perspective, and also includes more broad societal concerns.

While DG SANCO acknowledges some of the problems expressed in these two frames, it also directs the attention *away* from the European Commission and towards the EU MS (DG SANCO CEN/ENEA Workshop, 2010).

⁸⁷ Animal welfare problems due to protein deficiency in the animal diets is a popular reference ridiculed by NGO stakeholders.

7.3.4 ‘Minimal disruption scenario – not worst case scenario’⁸⁸

CPE, EEB, FoE, GMO-free Ireland, Greenpeace, EuroCoop, IFOAM and SOS rejects one popular problem definition in this policy debate, expressed in the DG AGRI report and taken up by economic stakeholders. This frame concerns the modelling of economic scenarios and is based on the drawing of boundaries: NGO stakeholders reject the common interpretation of the DG AGRI report and the entire frame ‘loss of trade and competitiveness’. In fact, environmental NGOs reject the entire report. The disclaimer on the first page of the DG AGRI report is taken to strengthen NGOs’ claim that the report was not supported by other parts of the European Commission, and that it was not produced as an official Commission document (Greenpeace, Interview, 2011). Furthermore, environmental NGO stakeholders argue that the minimal disruption scenario is the most likely – not the worst case scenario. Other ways of drawing conclusions from the DG AGRI report are thus wrong, as are the underlying assumptions made in the report. In order to understand this frame, one needs to elaborate on the two scenarios in the report and the role of export countries.

The criticism can here be regarded as procedural. Stakeholders ask how robust the figures provided by DG AGRI are. Nowhere in the report are the parameters of the model or the confidence intervals of the results set out. This means it is impossible to evaluate the accuracy of the results – the conclusions cannot be verified from the data provided. Referring back to writing the report itself, NGO stakeholders use the following quote (from the report) to weaken the authority of the industry stakeholder frame:

‘It should be noted that the worst case scenario yields an impact that goes well beyond the technical limits of the model used for the analysis in the provision of precise and reliable estimations. As a consequence, the estimates generated by the model may give a clear indication of the direction and severity of the impact, but the magnitude of the estimated figures should be treated with caution’ (DG AGRI report quoted in FoE, 2008a:2).

⁸⁸ CPE, EEB, FoE, GMO-Free Ireland, Greenpeace, EuroCoop, IFOAM & SOS 2008; FoE 2007b; FoE 2008a.

Furthermore, NGOs, small farmer organisations, organic agricultural movement and consumer co-operatives criticize the report's lack of methodology and that the report does not provide error bars for the estimates of economic impacts: 'it is not possible to assess the credibility of the worst case scenario results. But they cannot be robust, simply because the authors put such a strong caveat to them' (FoE 2008a:2). With the DG AGRI report as an example of intertextuality, NGO stakeholders emphasize that the worst case scenario conclusions should be treated with caution. NGO stakeholders then draw the conclusion that it is the minimal scenario that is most likely – not the worst case.

Another form of boundary-work, based on rejection, occurs when NGO stakeholders question a core assumption made in the DG AGRI report, concerning the role of Brazil. The worst case scenario rests upon the assumption that Brazil would rapidly commercialize a GM soybean variety that is *not yet* approved in the EU. If this is accurate, the EU might face a situation with an import deficit. Therefore, economic stakeholders argue that the EU GM approval system needs to function more swiftly in order to secure a sufficient source for the EU livestock sector. However, FoE rejects this assumption about Brazil (and the following consequences thereof). According to FoE, there is *no* evidence presented that Brazil is even considering new GM soybeans. Therefore, FoE does not see a necessity for the EU approval system to be changed.

This frame is clearly based on boundary-drawing and rejection: NGOs reject the methodology and assumptions in the DG AGRI report, and draw a boundary between the EU GMO approval system and the worst case scenario. Furthermore, it is also based on a procedural criticism: NGO stakeholders criticize the conclusion in the DG AGRI report with reference to its methodology – the procedures for drawing conclusions. Rejection is also performed by drawing on foreign experience (Brazil). Public actors that provided empirical credibility to the issue frames presented by economic stakeholders are dismissed. JRC (DG Research) is dismissed as a biased and

long-time supporter of biotechnology. LEI Wageningen is also rejected on the basis of the problem definition in its reports.⁸⁹

7.3.5 'No link between GMO laws and livestock crisis'⁹⁰

There is a consensus among stakeholders that the EU livestock industry has seen its costs increase substantially during the last few years; however, stakeholders disagree over the causes. Therefore, this frame highlights the core uncertainty: to what extent the EU GMO laws are to blame for the loss of trade and competitiveness of the EU livestock industry, traders and farmers.

This frame is based on boundary-work. NGOs, small farmer organisations, organic agricultural movement and consumer co-operatives argue that there is no link between EU GMO laws and the livestock crisis. Intertextuality is used in order to provide alternative explanations for rising prices – explanations that go beyond the intertextuality previously discussed. In other words, other types of data sources are used here. Both boundary framing and frame extension are used now: NGO stakeholders reject the link between a rising cost of feed for the EU livestock industry and EU GMO laws and policy. According to them, there is no link between regulatory policy style and the performance/wellbeing of the EU livestock industry. Yet in order to carry out this rejection, alternative explanations are needed. In that sense, frame extension occurs parallel with boundary framing. As a result, NGO stakeholders draw the conclusion that EU GMO laws do not need to be changed.

NGO stakeholders identify several reasons for the rise of feed prices in the EU. These are: a shift away from food/feed production towards agro

⁸⁹ LEI Wageningen UR reports are dismissed by Greenpeace on the basis of its problem definition. It is therefore not necessary for Greenpeace to go through these reports and comment on their content (Greenpeace, Interview, 2011).

⁹⁰ Greenpeace, Interview, 2011; CPE, EEB, FoE, GMO-Free Ireland, Greenpeace, EuroCoop, IFOAM & SOS 2008; FoE 2010c; Greenpeace, FoE & European Coordination Via Campesina 2008; FoE 2010b; CPE, FoE & Greenpeace 2008; FoE 2010a.

fuels; global and local financial speculation; the deregulation of agricultural markets that has led to the depletion of grain stocks; the rise in oil prices affecting fuel and fertilizer costs; increased droughts and floods in major grain producing countries, and an increased demand for soy. The Institute of Science in Society (ISIS) believes that the real reason for feed shortages is the diversion of crops into biofuel markets, and accuses the EC of using the shortage as an excuse to approve more GM feed varieties. The point made here is that the EU problem is part of the global rise of food and feed prices. The message is: Price increases have occurred around the world including the US, which has the most liberal system of GM approvals. Weakening EU GMO laws will not address this crisis.

Intertextual references to strengthen this frame mainly come from the United Nation's Food and Agriculture Organization (FAO), UN FAO Food Outlook, and a study from Virginia Tech and the Virginia State University Agricultural Extension Service. References are also made to articles from newspapers like the *Financial Times* and the *Guardian*. The article in the *Guardian* informs about a confidential World Bank report stating that biofuels have forced up global food prices by 75%. The story from the *Financial Times*, on the other hand, refers back to environmental campaigners (FoE 2010b, FoE 2010a).

NGO stakeholders agree on increasing prices being a serious problem, but this must not be linked to unrelated issues in an attempt to force more genetically modified crops into the EU. According to NGO stakeholders' way of reasoning, removing zero tolerance will not affect feed prices and availability. In that sense, NGO stakeholders frame this policy debate as resting on a false crisis, a false problem definition. The exertion of pressure on the EU is, according to NGO stakeholders, more about the commercial interests of biotech companies and US farmers than about safeguarding the EU livestock industry. An often referred to quote is used to illustrate this pressure:

'I think the debate about higher prices and being able to meet the demand of people in the world for food is a perfect opportunity to make the case (for GMO crops)... We may have a window of opportunity here and I would encourage you to exploit that' (American Farm Bureau Federation, quoted in FoE, Position paper, 2008b:3; CPE, FoE & Greenpeace 2008).

A closely related type of boundary-work to strengthen this frame is performed by NGO stakeholders when discussing to what extent the EU's GMO laws mean that animal feed imports are actually blocked. In order to address this question, GMO approval systems around the world need to be examined – as was done earlier in this chapter. In the frame 'US GMO approval process is too fast', I showed how NGO stakeholders reach the conclusion that there is no problem with asynchronous approvals. That frame is thus used to strengthen this one. In other words: The debate on timeliness helps to build up the claim of a false crisis and the frame of 'no link between GMO laws and livestock crises'.

Another type of boundary-work reinforces this frame. Besides rejecting asynchronous authorization and the view that EU GMO laws cause problems, NGOs also reject the problem definition of trade blockages. In short: they argue that the number of contamination incidents and the amounts of contaminated animal feed have been so low that the EU zero tolerance policy cannot be blamed for causing any kind of a feed crisis. According to economic expertise from FoE, a maximum of 0.2 per cent of all soy imports used as animal feed (for livestock and pets) contained EU-unapproved GM soy. FoE downplays as well as highlights the role of the USA when it claims: there is no evidence that the soy imports from the USA were blocked from June 2009; as a soy exporter to the EU the USA plays a minor role, and contamination incidents for feed with EU non-approved GMOs comes - from the US. Moreover, GM shipments are contaminated with other GMOs, which make this a problem for the US GM industry, not for certified non-GM suppliers. Brazil and Argentina, on the other hand, have caused no contamination, according to NGOs (based on RASFF-data). The economic expertise behind this 'reality check' (as NGOs call it) comes from data provided by the European 'Rapid Alert System for Food and Feed' (RASFF), which documents all contamination incidents that become known. This is also the data which EU Member States refer to and is therefore an important source to provide empirical credibility for this frame. In order to make estimations about the amounts of feed that have been contaminated (not just only the cases), FoE refers to requests from the Member of Parliament (The Greens), to the German Ministry of Agriculture, and replies from this Ministry. The Agra-Europe news report is another source that is used, stating that: 'the zero tolerance policy practiced until now by Brussels has not been reflected in US statistics; the American

soy meal exports are even expected to increase slightly over 2008/2009' (FoE, Position paper, 2010c:8). Altogether, this suggests that the animal feed crisis is falsely linked to EU GMO laws.

The expertise in this frame can be described as economic and verifying: Economic data from the FAO and World Bank provide alternative explanations for the EU livestock industry's crisis. And economic data from RASFF suggest that the contamination incidents causing trade problems are exaggerated. Together, this information is used in an attempt to verify that the EU GMO laws are not to blame. In other words: An economic logic is used to push for keeping the present administrative governance rationality (the zero tolerance policy).

7.3.6 'Independency realistic'⁹¹

Not only do NGOs, small farmer organisations, organic agricultural movement and consumer co-operatives reject the supply crisis and the causes of feed price increases; they also reject the underlying assumption: that of the EU livestock industry being dependent on foreign raw materials for feed. In fact, NGO stakeholders argue that the EU can, and has to, become independent in this regard: EU food and feed safety does not need to be exposed to such a risk.

NGO stakeholders make an important distinction between maize and soy. With reference to the DG AGRI report of 2007, they state that sourcing maize is not a problem. Soy, however, is different because the EU is highly dependent on imports as soya is only grown in a small amount domestically. In that regard, NGOs agree with economic stakeholders. However, NGOs switch the focus from the US to Latin America, mainly Brazil. With intertextuality to the US Department of Agriculture (USDA) *and* the European Commission's DG Agriculture, NGOs point to a drop in the US soy exports and highlight Brazil as the future primary soybean

⁹¹ FoE 2008b; CPE, EEB, FoE, GMO-Free Ireland, Greenpeace, EuroCoop, IFOAM & SOS 2008; CPE, FoE & Greenpeace 2008, Greenpeace, Interview, 2011; CEN/ENEA 2010.

exporter. CPE, FoE and Greenpeace also quote USDA predicting a drop in EU soybean imports, being cut back by improved EU grain crops.

NGO stakeholders continue to extend the debate and incorporate claims of sustainability. A major link is made between soy production and the responsibility of EU livestock production. When discussing the EU livestock sector, NGO stakeholders bring up mass production of soy. GM soy creates monocultures for the over-consumption of meat and other livestock products in industrialized countries. And this is, according to them, not a sustainable farming model. In the longer term, solutions must therefore be found to ensure that the EU can be self-sufficient in animal feed. This is when a normative leap occurs from data to recommendations, from 'is' to 'ought'. NGO stakeholders argue that the EU must help the livestock industry to source GM-free animal feed and reform agricultural and trade policies in order for European farmers to reduce their reliance on imported animal feed. The EU should develop plant protein crops in Europe with a view to becoming less dependent on animal feed imports. Furthermore, these stakeholders suggest policies that could help to promote the cultivation of vegetal proteins and grassland grazing of cows/sheep, instead of supporting maize and imported soy, as is the case under current rules. In this way, NGO stakeholders enlarge the debate on asynchronous authorization and zero tolerance policy to also include wider issues linked to EU agriculture. This frame extension is, in the eyes of some opponents, undermining the credibility of this frame. However, the expansion is accepted by a majority of other stakeholders. One of the conclusions from the CEN/ENEA Workshop was indeed that the 'EU needs to be self-sufficient in food and feed at reasonable cost' (CEN/ENEA Workshop, Powerpoint slides, 2010).

7.3.7 Conclusions

The issue frames in this chapter bring together arguments, claims and expertise regarding EU feed security and the situation for the EU livestock industry. The frames clash over problemformulations: is the EU dependent on foreign raw materials? Is the EU livestock industry facing problems? How

severe are these problems? And are the problems a result of the EU GMO laws?

This group of issue frames shows, perhaps even more clearly than the last group of frames, that economic stakeholders and NGO stakeholders represent two distinct and opposing groups of stakeholders in this policy debate. While both groups of stakeholders acknowledge that the EU livestock industry is under pressure, they diverge over the causes, severity of the problems, and so on.

Another conclusion is that the economic governance logic dominates this group of issue frames: the problem definition suggested by economic stakeholders is economic and concerns trade and competitiveness, the expertise is economic (economic impact assessment, trade impact, agricultural economics, economic scenarios, etc.). NGOs, small farmer organisations, organic agricultural movement and consumer co-operatives offer counter-expertise that suggests other causes behind the problems facing the EU livestock industry, and this expertise also has an economic logic (rising feed prices, economic scenarios, trade blockages, etc.). Nevertheless, the key problem definition can be described as a combined economic and administrative one, because it is a question of economic and policy impact assessment – in other words, how policy affects economic conditions and the EU internal market. It seeks to answer the question of how much a policy costs and why. In this way, expertise is also verifying, because the expertise assesses the ‘failure’ of meeting certain goals.

Another important conclusion concerns intertextuality and expertise. Both groups of stakeholders offer expertise according to an economic rationality. Nevertheless, there are important differences that most likely will affect the influence of these issues frames and their effect on policy. I call this intertextual proximity and intertextual spin. The economic and verifying expertise offered by economic stakeholders is characterized by an intertextual proximity. The data comes from the stakeholders and their own sectors. It comes from ‘the floor’ and is based on what developers, traders and farmers themselves ‘know and have seen with their own eyes’. In that sense, this expertise is also lay and provides important empirical credibility. Furthermore, this expertise has been picked up by public actors, departments within the European Commission (DG AGRI and JRC) as well as public research institutes (LEI Wageningen) outside. And when these public actors pick up the data from economic stakeholders and produce

their (commissioned) reports, they legitimate the problem definition originating from economic stakeholders. More importantly, it creates an intertextual *spin* when public and private actors share data. This spin is an important agenda-setting mechanism and makes the frames dominant and more likely to affect policy.

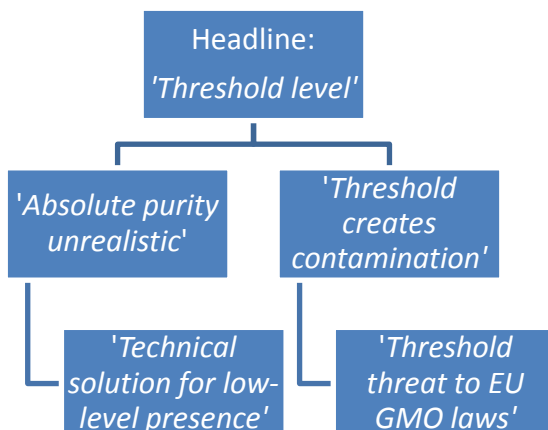
The expertise offered by NGO stakeholders, on the other hand, can be characterized as an intertextual distance. The expertise in their frames may have empirical credibility. Increased droughts and floods in major grain producing countries as well as financial speculation are also important challenges that the EU livestock industry and EU agriculture face. However, sources like the UN and the WB, and their explanations, are more distant. And this distance makes it difficult to compete with expertise from ‘practitioners from the floor’; from stakeholders working in those sectors affected.

This shows that the competition between issue frames cannot be reduced to a competition between economic expertise and administrative or deliberative expertise. All stakeholders offer and draw on economic expertise. However, there is an important difference concerning the intertextual links: data coming from far away versus data coming from the field. If it comes from the latter (i.e. the own sector), it seems to provide more credibility to frames. However, this does not necessarily mean increased power to influence policy and legislative change.

7.4 Threshold level

This chapter brings together issue frames that address the question if and how to change the zero tolerance policy, and instead introduce a threshold level to make it legal for minute traces of EU- non-approved GM material in imported agricultural commodities.

Figure 4: Threshold level



This is the third and last attempt to clarify the policy debate. Two industry stakeholder frames and two NGO stakeholder frames will be presented.

7.4.1 'Absolute purity unrealistic'⁹²

This issue frame maintains that absolute purity and segregation do not exist in farming. Whatever precautions are taken, it is not possible to guarantee the absence of minute levels of foreign materials. It is therefore necessary to acknowledge the need for a threshold.

⁹² COCERAL, FEFAC, FEDIOL, FERM, CIAA & COPA-COGECA 2010; COCERAL, FERM, COPA-COGECA, FEDIOL, EFM, UECBV, AVEC, CIAA & FEFAC 2009; ESA 2008; Cardy-Brown & Co Ltd 2008; COCERAL, UECBV & FEFAC 2008; EuropaBio 2008b; CIAA 2007; ESA & EuropaBio 2007; FEFAC, Interview, 2011; COCERAL, FEDIOL, FEFAC & COPA-COGECA 2009; Coghlan 2010; ESA, Interview, 2011; EuropaBio, Interview, 2011; DG SANCO CEN/ENEA 2010.

Three types of lay and/or economic expertise are important for upholding this issue frame: Firstly, this frame is protected by referring to the features of conventional agriculture. Low- level presence, adventurous presence or technically unavoidable presence may occur in all arable farming and at any step in the production of seed or grain, or in processing of harvested products in the food chain. This has always been a feature of conventional agriculture, and is practically inevitable because farming is conducted in an open environment. There may be cross-pollination of the seed- bearing plants with pollen from different varieties outside of the seed production. Every farmer knows the ‘basic fact that you can not have absolute purity in agricultural production, and consequently neither in feed [not in food, not anywhere else’ sic] (ESA, Interview, 2011, my emphasis). ‘Purity in seeds is impossible and this is why purity in crops is impossible. Breeding companies can not ensure 100% purity in seeds. So it means that farmers can not ensure 100% purity in crops. It is only practical [knowledge]’ (COPA-COGECA, Interview, 2011). The same standpoint is expressed in the JRC report (Stein & Rodríguez-Cerezo 2009:15) and is referred to by economic stakeholders (e.g. COCERAL, FEDIOL, FEFAC and COPA-COGECA, Press release, 2009).

Secondly, market and economic expertise protect this frame by referring to the commodity chain: Adventurous presence or low- level presence, as these stakeholders call it, (as opposed to contamination, as NGO stakeholders call it), may occur in all transboundary shipments of all commodities. All economic stakeholders agree that neither bulk-handling systems nor identity-preservation can manage these events to zero tolerance. It is simply not enforceable in practice, even though attempts have been made. References to previous own practical experiences are here important:

‘You can have the best segregation systems. We did that for ten years. Exporters set up a rather sophisticated channelling system, whereby they designated a certain country elevators, and they told the farmers: if you are growing a GM crop, you can only deliver to that elevator. And these elevators were designated. And only from that elevator authorized GM events could be collected. Only from those elevators materials could go to the processing, and only from these designated processing companies, they could be exported to the EU. So, we had such a channel system in operation. We got quite some experience. But no system in the world can deliver to zero tolerance. You will always have effects of co-mingling and cross-contamination, because we talk about bulk goods, we talk about farms’ (FEFAC, Interview, 2011).

According to this statement, there may thus be a mixing during the harvesting, cleaning and packaging operations. For instance, dust may be prevalent in the transport and handling chain.

A third type of economic expertise also seeks to provide authority to this frame, the in-house knowledge about global trade of GMOs and developments in the field of GM technology. Given the growing pipeline of new GM events and combined GM events (so-called stacked events), a large number of new GMOs will be pressing at the door for regulatory approval. The message is: this development is inevitable (EuropaBio, Interview, 2011). 'While currently there are around 30 commercial GM events cultivated worldwide, by 2015 there will be over 120. Therefore, if problems of low-level presence (LLP) have occurred with 30 events on the market, these are likely to intensify when moving from 30 to 120 available events' (JRC, Workshop, Powerpoint slides, 2008). This is an example of how the market and economic expertise push for the administrative governance rationality to adapt to global trade of GMOs.

In addition to lay and economic expertise, stakeholders like FEFAC also put forward discriminatory arguments and arguments of legalistic character: New risk management tools have 'managed' zero tolerance (in other legal texts). The most relevant reference (for FEFAC) is the veterinary drug legislation but also dioxin legislation (FEFAC, Interview, 2011). COPA-COGECA makes a similar case: 'a tolerance level operates for other contaminants, including pesticides and heavy metals. So why not for GM material, much of which has been cleared for human consumption elsewhere in the world' (COPA-COGECA, in Coghlan 2010). Such 'reference point of actions' (as FEFAC calls it) is another way to show that zero tolerance and trade conflicts can be solved, rendering trace levels a non-safety issue in the future, also in the case of GM legislation. DG SANCO recognises that there have been solutions in other fields, 'but the *GM field is different* and this approach will not work here' (DG SANCO, CEN/ENEA Workshop, 2010, my emphasis).

This frame has an economic logic and pushes the EU to change its administrative logic and apply a threshold. A threshold will thus recognize that contamination can occur, despite the efforts of all partners in the food chain to prevent the adventurous presence of GMOs. It will also offer some legal certainty for economic actors. External intertextuality to strengthen this

frame comes from the EU's Joint Research Centre (JRC), which also acknowledges that whatever precautions are taken, it is not possible to guarantee the absence of low levels of foreign materials.

7.4.2 'Urgent need for technical solution for low-level presence (LLP)'⁹³

The debate on asynchronous authorization and zero tolerance policy is not new. Stakeholders such as ESA and COCERAL had been voicing their concern prior to the transitional measures (which expired in 2007) and prior to the DG AGRI report in 2007. And concerns had been voiced prior to actions taken by DG SANCO to push forward this dossier. Over the years, different solutions (as these stakeholders call them) have been under discussion.

Firstly, there is the question of setting the threshold⁹⁴ at the 'right level'. While COPA-COGECA initially suggested 0.5%, ESA and EuropaBio suggested a threshold level of 0.9%. An important argument for ESA and EuropaBio is consistency and compatibility with existing legislation on labelling GM food and feed. This is another example of a reference point of

⁹³ COCERAL, FERM, COPA-COGECA, FEDIOL, EFM, UECBV, AVEC, CIAA & FEFAC 2009; COCERAL, EuropaBio, FEFAC & FEDIOL 2007b; 'COPA-COGECA Concerned over EU' 2010; COPA-COGECA 2010b; COPA-COGECA 2011b; CEN/ENEA 2010; COCERAL 2010; FEFAC 2010; COPA-COGECA Interview, 2011; ESA, Interview, 2011; EuropaBio, Interview, 2011, CIAA, Interview, 2011.

⁹⁴ Even though I, as well as stakeholders, speak of a threshold, the wording in this frame is particularly sensitive. To speak in terms of a threshold is not tolerated by the European Commission (DG SANCO E1, Interview, 2011), and some economic stakeholders are initially cautious about this word in interviews (albeit using it later, anyway). The reason is that the percentage (0.1%) that was eventually suggested by DG SANCO means *not* reopening existing legislation. And therefore, it is not – in a legal-technical definition – a threshold. Rather, this concerns a legal interpretation of a technical zero. It is, in the words of several economic stakeholders 'very complicated'.

action (which was also addressed in the previous frame). The argument thus has an administrative/legal character. Consistency simply means that the threshold percentage for adventurous presence of GM material that is not fully authorized in the EU shall be the same as the threshold for labelling rules on GM food. Another reason for a higher threshold is to reduce uncertainty. 'If you go lower than 0.9%, the uncertainty *with the method* will increase' (FEFAC, CEN/ENEA Workshop 2010, my emphasis).

And even though COPA-COGECA does not support such a high threshold, it argues according to the same principle – according to a reference point of action in other legal contexts. In this case, it points out the threshold for organic food products. If organic food does not have to be 100% organic, why ask for this in the area of GMOs? (COPA-COGECA, Interview, 2011). In other words, changing zero tolerance and establishing a threshold is not a dramatic change. COCERAL, EuropaBio, FEFAC and FEDIOL provide another point of reference: tolerances for the presence of EU-unapproved plant protection products or medicinal substances.

Secondly, biotech associations, conventional farmers, feed manufacturers, traders and food processors offer expertise in terms of referring to foreign experience and presenting what is typically called 'the Swiss solution' of 0,5%.⁹⁵ The Swiss solution is also mentioned by JRC. Thirdly, this frame is pushed by extending the need to encompass the *entire* food chain. CIAA has, at least in the public debate, taken on the role of extending this frame by linking together food and feed (e.g. CEN/ENEA Workshop, 2010). The argument is thus that technical solutions should also be extended to food, and not be reduced to only feed. The reason for this is economic: CIAA and the food industry also suffer from the economic consequences of asynchronous authorization and zero tolerance.

COPA-COGECA has also called for a relaxation of zero tolerance. In contrast to the other economic stakeholders like developers and traders, COPA-COGECA needs to balance very different interests within its association. This makes COPA-COGECA representatives introduce

⁹⁵ In Switzerland, traces of unapproved GM material of up to 0.5% are tolerated in food, 'if the respective GM crops are already authorized in another country where comparable procedures are followed, or if any danger to human health can be excluded after an adhoc science-based evaluation by the responsible authorities and if detection methods and reference materials are available' (CEN/ENEA Workshop, 2010).

arguments like freedom of choice for farmers and consumers when speaking about this policy debate. Competitiveness for farmers is clearly a top priority. Nevertheless, expressions like ‘it is not biotechnology for the sake of biotechnology *only*’ (COPA-COGECA, CEN/ENEA Workshop, 2010a) are intended to show a balanced position and distance in the debate. And when COPA-COGECA did actually post a position paper in its name *only* (in 2010b), it showed a standpoint that was not publicly voiced by other economic stakeholders: It emphasized the role of EFSA in finding a solution.⁹⁶

Stakeholders such as ESA and EuropaBio – by suggesting a *higher* threshold – push for a stronger role for the market. COPA-COGECA, on the other hand, emphasizes the administrative rationality more, by providing a platform for EFSA – an actor which otherwise has been rather absent in this policy debate. However, this frame is first and foremost based on an administrative rationality, as it holds claims, arguments and expertise that are technically legal (the legislative language is very technical).

This frame lacks an important actor that could have been expected here, namely the European Union Reference Laboratories in the JRC. According to respondents, finding a technical solution has less to do with detection methodology in the field of GMOs. It is not particularly method dependent. Rather, it is a political issue. Scientific expertise offers some kind of boundary for what is actually possible to test with detection methods. However, there is a consensus among all respondents (stakeholders from both groups and civil servants from DG SANCO) that scientific expertise (as in detection methodology, sampling and testing, quantitative method of analysis in laboratory environment) is not the basis for finding a solution. Rather, the solution is legal and political. In that sense, one part of the administrative logic, the bureaucratic side, is most important to uphold this frame (not the scientific side of administrative rationality).

⁹⁶ In contrast to these suggestions, the US wants a 5 per cent threshold (CEN/ENEA, Workshop, 2010). The United Soybean Board (who wants to see US soybeans traded on the world market) refers to tolerance levels of 3% in South Korea and 5% in Japan (CEN/ENEA Workshop 2010).

7.4.3 'Threshold levels increases contamination'⁹⁷

The zero tolerance policy is fundamentally important to NGOs, small farmer organisations, the organic agricultural movement and consumer co-operatives. Greenpeace expresses it as a key dossier when it comes to GMOs (Greenpeace, Interview, 2009). According to the European Farmers' Network (CPE), Consumer Cooperatives in Europe (EuroCoop), European Environmental Bureau (EEB), GM-free Ireland Network, Greenpeace, Friends of the Earth, International Federation of Organic Agricultural Movements EU Group, and Save our Seeds (SoS), a change of the EU zero tolerance policy will lead to contamination. 'Dropping zero tolerance' means, according to this frame, to replace it by 'contamination rules'.

This frame clearly builds upon the protection of the present administrative rationality from the biotechnology, food and animal feed industries. It intends to protect the European food supply from contamination by unapproved GMOs; protect the environment and citizens from the Commission's efforts that – if successful – will 'open wide the floodgates for imported GMO foodstuffs to further contaminate its food supply' (Benson, 2011). When this group of stakeholders counter-argue in the policy debate, and frame the problem as contamination, they speak of contamination as more than a threat to the environment only. First of all, contamination means seed contamination:

'Establishing thresholds for GMO contamination of seeds would lead to an uncontrollable and untraceable spread of GMOs, as seeds grow into reproducing plants which can multiply and outcross to wild relatives and persist in the environment' (Greenpeace & FoE, Position paper, 2008a:4).

Establishing thresholds for GMOs that are not authorized in the EU would lead to hidden contamination that is impossible to control (Greenpeace, Interview, 2011).

⁹⁷ FoE 2011a; FoE 2006; Food Standards Agency 2011; Benson 2010; Greenpeace & FoE 2008; Blue 2008; FoE 2010c; Greenpeace, Interview, 2011; DG SANCO CEN/ENEA 2010.

NGO stakeholders draw on administrative rationality to provide credibility here: Seed contamination is not only a problem in itself, it also undermines several EU provisions on GMOs. This is how verifying expertise is used in frames: Directive 2001/18, as well as the labelling and traceability Regulations 1929/2003, requires that GMOs released into the environment are monitored, labelled and traceable, and that they are withdrawn from the market if needed. If this policy were to be changed, NGO stakeholders argue that it would be practically impossible to guarantee these legal principles. It would be practically impossible to withdraw GM plants resulting from contaminated seeds.

Secondly, reference to empirical incidents of contamination provides legitimacy to the problem formulation in this frame. When pointing to contamination incidents, NGO stakeholders emphasize the frequency of contamination, the type of contamination as well as the contaminating country. Intertextuality from the EU's Rapid Alert System for Food and Feed (RASFF) is particularly important for these stakeholders, as RASFF is seen as an independent source of data (Greenpeace, Interview, 2011) for estimating incidents of trade disruptions and, as for this frame, contamination cases. An often referred to contamination case (by NGO stakeholders) is Herculex GM maize. This GM maize, produced by Pioneer/Dow Agrosciences, entered the EU via the ports of Dublin and Rotterdam in 2007 and was approved in the US, but not in the EU. The cargo was destined for animal feed and contained maize gluten for animal feed and distillers' dried grain. In this case, contamination means that the illegal Herculex maize also was found in this cargo.

Another prominent example is the rice contamination case of LL 601. During 2006 and 2007, traces of three varieties of unapproved GM rice owned by Bayer CropScience were found in US rice export to 30 countries worldwide. This was particularly troublesome, since no GM rice varieties were grown commercially in the US, and all US rice was assumed to be GM-free. EFSA did not have enough information to carry out an evaluation of this GM material, and the source of the admixture was never identified.

These examples point out what contamination means in practice. The frame draws on an administrative rationality, but also an economic rationality. Contamination is not only a problem from an environmental and regulatory perspective – unapproved GMOs found in the merchandising system in the EU also cause economic problems and

economic losses. This frame is thus also pushed by an economic rationality: It is simply a 'risky business', which causes worldwide economic damage. Greenpeace offers expertise linked to the economic governance logic in which it estimates economic impact in terms of farm level impacts, grain elevator/processor impacts including testing costs, export impacts, producer recalls and exporter impacts (Blue 2008). This is, in essence, socio-economic expertise. Similar to economic stakeholders, environmental NGOs estimate the impact on the food chain by estimating the cost of *contamination* of the food chain. Economic stakeholders, on the other hand, estimate the cost of policy. Nevertheless, they both focus on the presence of GM materials in imported agricultural consignments.

Other, potential incidents are also important in this frame. NGO stakeholders often mention that contamination can come from imports with GMOs which could be from experimental sites or GMO pharma crops. Another case is the 2000 StarLink contamination scandal in the US, where GM maize that had only been approved for feed was found in food, causing thousands of food products to be withdrawn from the market. Again, they draw on administrative rationality in combination with economic rationality stating that such incidents are contrary to the principles of EU GMO laws and will further weaken global standards – *and* cause severe economic costs. Nevertheless, research events like the LL rice in 2006, where GMOs in field trials find their way into the commercial crop supply have never been intended to be authorized. A technical solution according to DG SANCO would only cover asynchronous authorizations (DG SANCO, CEN/ENEA Workshop, 2010). In that way, NGOs draw on problems of contamination that policymakers try to cut off from the debate. While policymakers draw a legal boundary between different sources of low level presence (e.g. asynchronous authorization and research events in field trials), NGOs do not clarify that there *is* a suggested legal separation (not all kinds of GM traces found in imports *will* be accepted with a threshold level). And even if there is, contamination is still a risk, since, according to NGOs, per definition, a threshold level means contamination.

Furthermore, FoE and Greenpeace provide counter-expertise (a so-called 'reality check') in terms of figures based on RASFF-data: FoE estimates that the USA was responsible for about 90 per cent of all contaminations from 2004 till the end of June 2009. Including data from 31 July 2009 until end of that year, more than 70 per cent of contamination cases originated from

the United States (FoE, Position paper, 2010c). ‘Two other main producers of GM soy, Brazil and Argentina, have – according to EU data – caused not one single contamination case’. As in the case of Herculex GM maize, NGO stakeholders point this out; not only as a contamination problem, but as a contamination problem from the US: ‘none of the countries from which the EU imports most of its maize – Argentina, Brazil, Serbia and the Ukraine – has authorised or was actually growing Herculex. So when contamination was found in imports from the US that were refused at port, the EU still had its other major suppliers’.

This is how NGO stakeholders draw attention to other non-US suppliers and, again, claim that this policy debate is wrongly focused on the trading needs of the US and neglects other suppliers. This also shows why these frames not only push for an administrative, but also an economic rationality. Economic impact assessment and claims regarding global supply chains are also important for strengthening the authority of this frame.

The economic rationality is also expressed in this frame in another way, in terms of pointing to actors affected by contamination, namely conventional and organic producers. Allowing seed producers to sell contaminated seeds at levels without any label will make it difficult for all economic operators to keep contamination under the labelling threshold. Also, the testing itself is an economic burden. In that sense, changing the policy and introducing a threshold would increase costs: ‘Indeed, keeping one ton of seeds GMO-free will under all circumstances be much cheaper than testing the hundred tons of crops that these seeds will produce’ (Greenpeace and FoE, Position paper, 2008:4).

NGO stakeholders thus come to the conclusion, based on administrative as well as economic logics, that seed purity must be ensured and that a threshold should not be implemented. Environmental protection is fundamental in this frame. Yet, contamination is packaged in an administrative and economic rationality. Contamination in this frame tells more stories about the society than about the environment⁹⁸; it contextualizes the problem by pointing to incidents, contaminators (export countries), costs and coexistence problems. Such concerns are enforced with

⁹⁸ In fact, what is meant by contamination is not particularly elaborated.

reference to the market and legal rules. The environment/ecology ‘comes second’.

7.4.4 ‘Threshold level threat to EU GMO laws’⁹⁹

This frame clearly builds upon the previous one. Any kind of relaxation of the zero tolerance is seen as opening a policy door to environmental contamination:

‘Allowing a little contamination of food with unapproved genetic material is the top of a slippery slope... A little DNA can go long way’ (Institute of Science in Society, in Mitchell 2007: 1066).

But this issue frame shows even more– that NGOs push their frames according to a mixture of governance rationalities. Their message can not simply be regarded as ‘environmental claims’. Environmental concerns are the cornerstone, but the way in which they are packaged are administrative and deliberative, concerning the discriminatory nature of policy proposals and constituency or public opinion arguments.

First of all, this frame is upheld by drawing on administrative logic and pointing to EU regulation: ‘Europe’s laws on genetically modified foods are there for a reason – to protect the public and the environment’ (FoE, Press release, 2010d). ‘Allowing seed contamination would undermine several EU provisions on GMOs’ (FoE, Campaigners’ briefing, 2008b) and ‘it would ridicule the EU’s biosafety *laws*’ (Greenpeace, Interview, 2011, my emphasis).

Secondly, changing zero tolerance is not only a threat to the laws themselves, but to the consumers who are to be protected by the law. Here the constituency character of this frame becomes even stronger because NGOs take on the role of speaking on behalf of the public: Consumers may risk consuming animal products that have possibly been fed on feeds

⁹⁹ Mitchell 2007; FoE 2010c; Greenpeace & FoE 2008; FoE 2008b; FoE 2010d; Greenpeace, Interview, 2011; CPE, FoE & Greenpeace 2008; Corporate Europe Observatory 2011.

contaminated with unapproved GMOs, even potentially including experimental GM crops and crops engineered to produce medicines. This could directly affect food and humans, with unknown risks to health. Furthermore, weakening GMO laws on the contamination of imports will mock of European citizens who wish to avoid GMOs in their food. Consumers are referred to as having the right to say no to GM foods and feeds, and NGO stakeholders safeguard this right. Intertextuality is here provided from Eurobarometer (public opinion analysis regularly performed on behalf of the European Commission). The petition signed by one million Europeans in July 2006, demanding animal products from animals fed on GMOs to be labelled, is also an often referred to case of a public opinion argument. In the view of NGOs, allowing contaminated exports into the EU will even further reduce the availability of GM-free animal feed supported by the majority of EU consumers.

Thirdly, the administrative logic co-mingles with the deliberative logic in the following way. Pointing out the governance procedure for adopting solutions, a threshold level is seen as undemocratic. Introducing a threshold level as a technical solution would not have to include the voice of the EU Parliament. And not consulting the European Parliament, via the co-decision procedure, is seen as undemocratic:

‘[T]he Commission is only concerned about changing the law because under EU decision-making rules, this would mean that the European Parliament (EP) would have to give its opinion (called ‘co-decision’). This is something that the Commission wants to avoid at all costs, since, because of the controversy surrounding GMOs, it is unlikely that dropping zero tolerance would be agreed to by many MEPs, whose constituents are very opposed to GMOs. Therefore the Commission is looking for solutions that would enable it to quickly and quietly drop zero tolerance and weaken EU GMO laws WITHOUT going through the due democratic process’ (FoE, Campaigners briefing, 2008b:7–8).

The deliberative character of other arguments in this frame concerns undemocratic procedures in another way: Corporate Europe Observatory criticizes the close relationship between the food and feed chain (particularly FEFAC), and policymakers at DG SANCO. CEO writes that the previous General Director Mr Madelin himself had requested updated and more robust figures from economic stakeholders to ‘impress politicians’ (Corporate Europe Observatory 2011).

This frame is also upheld by pointing to foreign examples. Again, the US is the case in point. NGO stakeholders raise the question why the EU should accept non-approved GMOs when the USA – having its own zero tolerance policy in force – does not. Moreover, the US is targeted as responsible for undermining EU GMO laws. Dropping the zero tolerance would – according to their way of reasoning – only benefit US biotech industries and farmers. Dropping zero tolerance is thus seen as giving in to the USA. The intertextual link to demonstrate US pressure on the EU is often a dictum from the American Soybean Association president and the American Farm Bureau Federating saying: ‘I think the debate about higher prices and being able to meet the demand of people in the world for food is a perfect opportunity to make the case (for GMO crops)...We may have a *window of opportunity* here and I would encourage you to exploit that’ (CPE, FoE & Greenpeace, Position paper, 2008:3, my emphasis).

This, again, reinforces my argument that this group of stakeholders puts environmental concerns in an administrative frame. Attention is directed towards the society more than towards environmental safety issues such as biodiversity, the spread of novel genes, out-crossing and the like.

7.4.5 Conclusion

Under the heading ‘Threshold’, the issue frames continue to clash over solutions. While economic stakeholder frames push for a threshold allowing low- level presences and technically unavoidable unapproved GM events, the NGO stakeholder frames refer to this as contamination. The issue frames thus clash over the basic conceptualization: are these GM events to be regarded as a safety issue or not? While economic stakeholder frames move from problem definition to solution (threshold), NGO stakeholders do not participate in the debate on threshold levels and, instead, keep to their problem definition on contamination.

Another conclusion is that this group of frames is less scientific than it might seem at first. This is partly because environmental, agricultural and consumer NGOs do not suggest a threshold level, but protect the zero tolerance policy. However, economic stakeholder frames are not scientific

either. Instead, those issue frames are economic and push for an administrative rationality. The data and expertise put forward by economic stakeholders are clearly economic and market oriented and practical. Nevertheless, a common denominator from both groups is verifying expertise (e.g. threshold levels that would support or not support legislation), legal expertise (e.g. which threshold value is the most appropriate) and policy- relevant expertise. There are also important examples of lay expertise, when economic stakeholders refer to experiences from their own sectors to provide authority to the frame suggesting that absolute purity in crops and commodity chains is not possible. NGO stakeholder frames, on the other hand, are built on expertise and arguments of economic (e.g. economic impact assessment of contamination incidents), administrative (e.g. arguments regarding regulation) as well as deliberative character (procedures of policymaking taking into consideration the voice of consumers and the EU Parliament).

I also conclude that there is an absence of such scientific expert references that could come from either the European Food Safety Authority, laboratories in the JRC or from detection methodology. This policy debate is rather socio-economic and has an economic as well as legal-technical character.

7.5 From first-order to second-order analysis

This chapter was an attempt to examine the multiple understandings of what otherwise appears to be two homogeneous concepts (namely asynchronous authorization and zero tolerance), and to examine these understandings from the situated perspective of the key stakeholders involved. Frame analysis was used as an attempt to explore the ‘messiness’, or, in other words, to try to understand it through the lens of the involved actors’ own ways of seeing and acting. For this purpose, a first-order frame analysis was made in which some concepts in the analytical framework were applied. The attempt was to show that the meaning of ‘facts’ to political actors is, just as Fischer states, determined by political discourses and these meanings are what the political struggle first and foremost is about. The

problem definitions that enter the policy debate are thus understood as 'social constructions' built on an 'intermingling of empirical findings with social meanings and ideological orientations' (Fischer 2003:62). Several issue frames have been identified, named and grouped together under the headings of 'regulatory policy styles', 'EU livestock industry' and 'threshold level'. Multiple conclusions can be drawn from this chapter. Therefore, I will take the main conclusions from this chapter with me and develop them further in the second- order analysis in the next chapter.

CHAPTER EIGHT

Frames influencing policy outcomes

The previous chapter on asynchronous authorization and zero tolerance policy offered a first-order meaning of the discursive social world of (mainly) stakeholders. It was a chapter that had the purpose of coming close to practitioners' reality and making empirical observations through texts. This chapter continues to develop the analysis and answer the third research question of this thesis by carrying out a second-order theoretical interpretation of the issue frames themselves. Instead of identifying and examining the configuration of frames (inwards and backstage), the purpose here is to study more thoroughly the logic that the frames push for (forward). This calls for recapitulating a central clarification regarding frames.

In using the term frame, I propose to regard frames as a form of social practice rather than a purely discursive or linguistic practice. This has various implications. It implies that a frame is a mode of action; a form in which people may act upon the world, as well as a mode of representation. This is a view that has been made familiar by scholars in discourse analysis. According to this view, there is a dialectical relationship between frames and social structure: the latter is both a condition for, and an effect of, the former. On the one hand, frames (just as discourse) are shaped and constrained by a social structure on a societal level (i.e. institutions, law, norms). On the other hand, frames are socially constitutive. A frame contributes to the constitution of all those dimensions of social structure which in turn indirectly and directly shape and constrain it. In other words: Frames are shaped *by* social structure, but the point is that they also shape the social structure (cf. Fairclough 1993, chapter 3).

Therefore, it is not enough to ‘get inside the heads’ of the particular players involved in a policy dispute and try to determine what they have in mind (Fischer 2003). It is insufficient to identify frame-defining claims and the style of discourse that makes up different frames. The analysis needs to be connected to social practice. If following the discourse analysis suggested by Fairclough, the social practice would mean linking the study of text to ideology and hegemony. However, this thesis is oriented towards the theoretical field of frame analysis, rather than discourse analysis. The second-order theoretical concepts are here institutional frames of governance rationalities. The issue frame competition shall therefore be linked to the wider social struggle between institutional frames to explain how issue frames push for policy change. This process thus involves a combination of what one might call ‘micro-analysis’ and ‘macro-analysis’.

The chapter starts by summarizing the main findings from the last chapter by focusing on the groups of issue frames. The three first sections therefore deepen the analysis from the last chapter. I then continue with the second-order analysis and draw conclusions that explicitly answer the third research question of this thesis.

8.1 Ideas and structures of argumentation

8.1.1 Regulatory policy styles

The policy dispute on asynchronous authorization and zero tolerance policy contains various components. In the previous chapter I delineated the debate and identified three principal elements. First of all, the policy dispute is a regulatory debate concerning the GMO approval process in the EU and the time it takes for a GM product to move from risk assessment to risk management.

Under this particular heading I identified two economic stakeholder frames: The first one is termed ‘EU GMO approval process too slow’ and is based on frame extension. Stakeholders compare the EU GMO approval process to the US one and reach the conclusion that the former is slower.

This is problematic since the EU is thereby lagging behind – something that hampers trade. In addition, the EU GMO approval process itself is seen as problematic in terms of implementation because it does not live up to its own legal standards.

The second (economic stakeholder issue) frame presented continues to push for better implementation and international harmonization, and is termed ‘low-level presence is not contamination’. The idea with this frame is that EU- unauthorized GM events found in traded commodities entering the EU are not a safety issue. The events found are small and have been authorized elsewhere by other regulatory authorities, according to international standards, and are therefore to be seen as legal.

Under this heading I have also identified two NGO stakeholder frames: The first one is named ‘US GMO approval process too fast’ and, just as in the first economic stakeholder frame, is based on frame extension. A similar global regulatory outlook is applied. Instead of contrasting the EU to the US, environmental NGOs contrast the EU with Argentina, Brazil and China. The findings suggest that the US is aberrant – not the EU. The second NGO stakeholder frame presented continues to give authority to the EU regulatory approach and is termed ‘EU as regulatory norm’. The EU should be confident about its regulatory policy style and export it to other countries.

There is a consensus between economic and NGO stakeholders about the time it takes to approve GMOs in the US and in the EU. External intertextuality is here provided by DG AGRI and used by all stakeholders. However, the two groups of stakeholders interpret timeliness in completely different ways; in negative as well as positive terms, and according to their own particular interests. While economic stakeholders frame the GMO approval process in the EU as being too slow, NGOs frame the US as too fast. Both groups of stakeholders also make use of the same framing strategy, frame extension, and draw on foreign experience in order to make their case. Even so, they reach opposing conclusions. This might at first seem odd. Yet, after analysing the issue frames in relation to the structural frames (of governance rationalities), the picture becomes clearer.

The issue frames can be understood as positioned in the two wider frames of administrative rationality and economic rationality. The conflict between the issue frames concerns the balance between public authorities and market interests. Nevertheless, the conclusion here is that the frame conflict cannot

be reduced to either the market or regulation. The frame conflict cannot be reduced to stakeholder issue frames pushing for an economic rationality and NGO stakeholders pushing for an administrative rationality. Rather, administrative rationality is an important element in all frames. While economic stakeholders frame the administrative rationality in the EU as inefficient, NGO stakeholders frame it as the norm.

In order to understand the different interpretations of administrative rationality, one needs to look at the core values. The issue frames belonging to economic stakeholders suggest that regulatory authorities in the EU have failed. But in what terms have they failed? According to these stakeholders, there is a failure in implementing policies and, more importantly, implementing policy that keeps up with the US and safeguards international trade. Economic stakeholder frames offer a problem definition based on administrative *and* economic rationality; namely, economic norms for allocating values. The costs of the EU administrative governance rationality are simply too high, from the perspective of the market. It does not satisfy the needs of developers, traders, farmers and food operators. Important to note is that the economic rationality is linked to the administrative one. Contrary to what one might assume, the issue frames put forward by economic stakeholders are not based on economic rationality alone; they do not call for market principles to replace legal rules. They do not question EU authorities per se or suggest delegating authority to market actors. The request is for an administrative rationality that is less political, more scientific and – most importantly – sensitive to the needs of business operators both within the EU and outside its borders. In other words: An administrative rationality that is better informed by economic rationality. Or an administrative rationality that is better organized for the market. In practice, this seems to imply a regulatory convergence of the US and the EU: The latter needs to move closer to the US regulatory policy style.

Issue frames offered by environmental NGOs, farmers and consumer organizations on the other hand, seek to provide authority for the EU regulatory approach. The relationship between actors and established rules and procedures are understood as a rolemodel for other export countries to follow. Somewhat surprisingly, these stakeholders thus represent the defender of the status quo. They do not suggest more regulation, but rather retaining the present one. They argue that the administrative rationality should remain the same. And if it does, and other countries follow,

administrative rationality will also be able to operate together with the economic one. In other words: these frames do not shut down an economic logic per se.

When studying the different issue frames it also becomes clear that all stakeholders gather expertise and emphasize problems related to administrative rationality, as in regulatory procedures. But while economic stakeholders gather verifying expertise linked to the risk management side, NGO stakeholders gather data and claims on the risk assessment side. Nevertheless, expertise from both sides belongs to the administrative logic.

Examining intertextual links, we see how frames incorporate credibility by drawing on external authorities. And here economic stakeholder frames benefit from their strongest support: The need to speed up the EU GMO approval process is pushed for, not only by these stakeholders themselves, but by other powerful actors such as Mr Barroso's High Level Group (a political working group also called the Sherpa Group), with nominated persons from EU heads of state and governments. Support also comes from specific DGs in the European Commission (DG AGRI and JRC), as well as outside the Commission, an example being LEI Wageningen UR (the Agricultural Economics Research Institute in the Netherlands). In this way, intertextuality spins between the Commission, economic stakeholders and a research institute. And this intertextual spin reinforces the power behind these frames.

The conclusion so far is thus that the first group of frames concerns a debate about regulatory policy styles. Providing data and claims linked to an administrative logic and foreign experience are important to push frames and to provide legitimacy. The intertextual spin in economic stakeholder frames provides power and puts these frames in a dominant position. This suggests that the administrative logic will change in ways that harmonize better with the economic logic; that the GM approval process will become more receptive to the needs of the market; that the time it takes to approve a GMO in the EU will be shorter.

8.1.2 The EU livestock industry

This group of issue frames revolves around questions regarding the EU livestock industry. All stakeholders agree that there are certain problems facing this industry. However, their interpretations on the nature of the problem, financial, legal and socio-economic risks involved, and whether the EU policy on GMOs is to blame, are different.

Under this heading, I have found three economic stakeholder issue frames. The first one is 'EU dependency on imports of agricultural raw materials' and suggests that EU self-sufficiency is at risk. Statistics are used in order to describe just how dependent the EU livestock industry is on foreign materials such as soybeans and soybean meal. The second frame is 'Loss of trade and competitiveness' and has the purpose of describing all the extracosts for food and feed chain actors resulting from zero tolerance and asynchronous authorizations. The last frame is 'Socio-economic risks'. As a complement to financial costs and trade problems, this frame points out risks in terms of feed and food security, unemployment and animal health.

All three issue frames are similar in the following sense: They can all be grouped into the structural frame of economic governance rationality. As expected, they focus on costs and economic impact arguments to bring about a change in GMO governance. The frames suggest changing the administrative rationality in order to reduce costs and serve market needs. The expertise is, however, not entirely economic and trade-related, but rather a mixture of economic and administrative expertise. Furthermore, it is also lay, because it also comes from the food and feed sectors and from 'the floor'. Statistics (which are very hard – if not impossible – to verify) are a key framing device to create legitimacy and a sense of urgency. This is not surprising. The use of numbers is important to convey objectivity, size and importance. Numbers in these frames may be 'taken from the sky', so to speak, and economic calculations are likely to be exaggerated. Certainly, it involves both real and assumed problems. Still, economic calculations provide empirical credibility and help to convince others. Nevertheless, this is not just a matter of numbers. The expertise is a mixture of economic analysis and policy impact assessment. What at first seems to be just 'economic expertise' can here be broken down into: market information and statistics, economic modelling and forecasting, policy and legislation monitoring, business impact analysis, as well as trade and economic analysis.

In essence, these stakeholders calculate on how much a policy costs them. This brings us to intertextuality.

Intertextual links are clearly shared between the European Commission's DG AGRI and JRC, and economic stakeholders. The latter offer their own expertise, and links are also made to experts from LEI Wageningen UR. These documents create an important intertextual chain from which the same message resonates: The EU livestock industry is facing a crisis, with high financial costs, legal uncertainty and loss of competitiveness. More importantly, frame extension is established: There is a link between the dramatic increase in the prices and EU GMO laws. Europe is becoming a risky destination for exporters of agricultural raw material, and this is threatening EU feed and food security.

'Industry and trade groups FEDIOL, FEFAC and COCERAL with the European farming association COPA-COGECA, increase their warnings over the severity of the problem of scarce soybean supplies in the EU, after a meeting of the agriculture ministers yesterday failed again to take responsibility for dealing effectively with the issue. Without a clear and effective response – urgently – the problem will get far worse' (COCERAL, FEDIOL, FEFAC & COPA-COGECA, Press release, 2009a:1).

These frames provide a consistent storyline with an urgent message based on empirical evidence as well as assumptions: The problem is likely to get worse. They have repeatedly stressed an urgent need for action with catchphrases such as 'to avoid meltdown in [the] EU livestock industry' (CIAA, at JRC Workshop, 2008) and to avoid 'starving the EU of imports of vital commodities' (EuropaBio, Position paper, 2008b:2). Frame extension is essential to expand the boundary beyond the immediate interests of these actors. As a complement to agricultural commodity trade and feed imports, arguments concerning potential job losses, animal welfare, consumer safety and food security are also included in frames.

Three NGO stakeholder issue frames have been identified and named under this heading. The first one, 'Minimal disruption scenario – not worst case scenario', is clearly built on boundary framing. NGO stakeholders claim that the intertextual chain mentioned above has gone wrong: There has been a misinterpretation of the conclusions in the DG AGRI report, which has led actors to estimate the costs to the EU livestock industry as too

high. In the second frame, 'No link between GMO laws and livestock crisis', another type of boundary framing is performed. Here, NGO stakeholders argue that EU policy on GMOs cannot be blamed for problems facing the EU livestock sector. Performing this boundary framing makes them stand out. But since NGOs do acknowledge problems facing the EU livestock industry, they do not stand completely outside (of the intertextual chain). Instead, they present alternative intertextual linkages and seek to create legitimacy by referring to depictions, testimonies and statistics from the World Bank and UN FAO – links which no other actor seems to pick up. In that sense, NGO stakeholders are not successful in their boundary framing because they do not succeed in creating legitimacy for their intertextuality and issue frames.

The third frame presented is 'Independency realistic'. This frame is a normative one, completely at odds with the economic stakeholder frames. Here, NGO stakeholders argue that the EU livestock industry can source enough raw materials within the EU borders. Most importantly, NGO stakeholders make a normative leap from 'can' to 'ought': The EU should become self-sufficient in animal feed. Of course, the feed should be sustainable; meaning here: GM-free. NGOs also draw on economic expertise and provide sources such as the World Bank and the United Nations. However, other actors do not seem to 'pick up' the intertextual chain created by this group of stakeholders.

Altogether, the issue frames of economic stakeholders have more support. This means that it is easier for them to present their issue frames as facts and evidence, instead of interpretations. In the end, this suggests power and dominance in policy decision-making for the frame of economic governance rationality.

8.1.3 Threshold level

In this section, two issue frames from economic stakeholders have been identified: 'Absolute purity unrealistic' and 'technical solutions for LLP'. The first frame is knowledge-intense and upheld by referring to lay expertise on agricultural production, and economic expertise on global trade systems and bulk commodity chains. The intertextual distance is short, since

economic stakeholders refer to in-house expertise from ‘the floor’, actual observations and experiences encountered in everyday agricultural and trade practices and traditions. Those directly involved in the chain thus provide empirical credibility to the frame, which makes it particularly powerful.

The second issue frame presented is actually less knowledge-intense than what at first might seem to be the case. Arguing for a specific threshold level has – in the words of some economic stakeholders themselves – less to do with expertise and more to do with politics. To some extent, the policy proposal on threshold level has been shaped via communication with JRC, since it essentially concerns detection methodology. The chosen level has to be practically feasible (DG SANCO, Unit E1, Interview, 2011). This brings me to assessing the claims in this frame: In contrast to the lay expertise highlighted above, this frame is pushed for by mainly administrative expertise: evaluating whether policy proposals are fair and practically workable. ESA and EuropaBio suggested a threshold level of 0.9% for unapproved GMOs, in order to be consistent with labelling rules (on GM food and feed). FEFAC and ESA also play the discriminatory card: Threshold levels are used in other policy fields and are a natural part of legislation elsewhere – why should GMOs be an exception? Discriminatory arguments are also used together with arguments on costs and economic impact: The costs are too high and do not justify the absence of a threshold. Nevertheless, there is no explicit reference to expertise and certified experts regarding the actual threshold level. Economic stakeholders do not refer to detection methodology when suggesting a certain threshold level. And over the years, they have expressed a political apathy in which *any* threshold is seen to be better than none. The lack of political willingness to move this dossier, and to establish a threshold level, has taken all economic stakeholders by surprise.

Two NGO stakeholder issue frames are identified under this heading (‘Threshold level’). The first is ‘Threshold levels create environmental contamination’, and suggests that *any* threshold level will lead to environmental harm; namely, an uncontrollable and untraceable spread of GMOs. This calls for empirical evidence in order to provide credibility to this frame, which seems to be complicated: On the one hand, this frame seeks to undermine the entire point of departure – the problem definition – as suggested by economic stakeholders and parts of the European Commission. NGOs simply reject the notion that there have been enough

rapid alerts and actual trade obstructions in order to have any substantial effect on trade. In other words, the crisis is exaggerated. Trade has not been blocked. On the other hand, this frame suggests that there have been enough previous trade problems to show that environmental risks are and will become a real problem. The LL Rice 601 is an important case in point.

Nevertheless, environmental safety is actually not the only key message from NGOs, farmers and consumer organizations in this debate. In fact, their issue frames can be placed in the larger category of administrative rationality. The issue frames put forward by NGOs push for an administrative rationality. It (the issue frame) does not only address environmental claims but arguments regarding the discriminatory nature of policy proposals and constituency or public opinion arguments. Attention is directed more towards society, than the environment. Particularly the issue frame 'Threshold levels threat to EU GMO laws' puts the spotlight on the GMO regulatory framework protecting the environment *and* the public. And the threat here is not the EU, but another type of administrative rationality – the American one – that is more influenced by an economic rationality. Implementing a threshold is not only seen as causing environmental risks, but a first step to changing EU governance on GMOs, and adapting to the US regulatory policy style. Environmental safety risks as in out-crossing and gene flows are mentioned, but not elaborated upon explicitly. Instead, the focus on society and the attention to regulatory failures are supposed to create authority to these frames.

Issue frames under this heading have the biggest gap between the two groups of stakeholders. NGO stakeholders do not enter the discussion on threshold levels; they reject the need for a threshold, to begin with, and thus defend the status quo (zero tolerance). Again, we see that this is not a scientific debate, but a policy dispute that asks questions about the administrative rationality. The frames do not incorporate scientific expertise, but expertise that is socio-economic and socio-ecological.

8.2 Policy response and output

8.2.1 DG SANCO as frame-maker

This policy dispute has been ongoing since at least 2007. The European Commission and DG SANCO have, on several occasions, recognized the problem and called for ‘solutions’, including a threshold. Two sets of shadow frame- makers operate here: The European Commission and EU Member States. As clarified in chapter 4, ultimate decisions regarding GMOs are in the hands of risk managers. What, then, has been the end result of this policy dispute? To answer this question, some elaboration on earlier statements by DG SANCO and stakeholders is called for.

During the CEN/ENEA Workshop in 2010, the framing by DG SANCO became clearer (at least publicly). Some examples: In order to protect itself from accusations of passiveness and slow authorization procedure, DG SANCO referred to completely different GM dossiers; namely, the re-nationalization of GMO cultivation, and the new EFSA Guidance for Environmental Risk Assessment. Even though cultivation has no relevance for this policy dispute, the approval of the GM potato Amflora¹⁰⁰ was taken as an indicator for the new strength and output power of the European Commission: ‘This shows that the European Commission *can* take difficult decisions’ (DG SANCO, CEN/ENEA Workshop, 2010). Another promise was also made that a solution would soon be found – a solution which the previous Commission Colleague could not finalize before their mandate expired (DG SANCO, CEN/ENEA Workshop, 2010). The DG SANCO representative also referred to the new guidelines on GMO risk assessment as an example of how the authorization procedure would be speeded up to deliver a better output:

‘There will be new guidelines on GM food and feed which will be adopted soon. This will include a Member State agreement in terms of what applications have

¹⁰⁰ Developed by BASF and specifically designed to be used in the European potato starch industry.

to include. These will replace the current EFSA guidelines and the idea is that *if the Member States set the application criteria then they should accept risk assessment based on an assessment of these criteria*' (DG SANCO, CEN/ENEA Workshop, 2010, my emphasis).

This quote demonstrates three things: Firstly, the idea behind deliberative rationality. Participation will increase trust, which in the end will deliver policy and institutional efficiency. However, this has not been the case so far in this policy domain. Secondly, it shows the win-win promise from policymakers that deliberative and administrative logics strengthen each other. Thirdly, it directs attention to the role of EU MS in this policy field – not stakeholders.

DG SANCO also protected itself and directed attention away from itself and towards applicants by criticizing them for being 'sloppy' and by making them submit better applications: 'EFSA still has to send dossiers back for further information and this does not help the process to be timely' (DG SANCO, CEN/ENEA Workshop, 2010). Some examples of boundary framing shall also be highlighted. The issue frames calling for a speeding up of the authorization procedure and the claims of mutual recognition were *rejected*. DG SANCO maintained that it is very important for Third Countries to wait for the EU approvals, and that Argentina follows this approach. Third Country 'attacks' on the Commission's GMO policy were also said to be 'counterproductive' (DG SANCO, CEN/ENEA Workshop, 2010). In that sense, the issue frame pushed by NGOs termed 'EU as regulatory norm' was clearly supported and defended. Furthermore, so-called reference points of action, namely references to threshold levels in other policy fields, were dismissed on the basis that the GMO field is different and 'this [mutual recognition] approach will not work here' (DG SANCO, CEN/ENEA Workshop, 2010). A threshold level of 3% would not be 'feasible under the current legislation' (DG SANCO, CEN/ENEA Workshop, 2010). In both these cases, boundary framing is performed with the help of administrative expertise, and the initial packaging of this policy dispute. Stakeholders offer their technical legalistic and verifying expertise, but DG SANCO makes clear that it is the one making decisions on what is legally feasible.

The initial call from policymakers for a so-called technical solution within existing legislation is fundamental. Because of the technical packaging, references to the Codex Plant Guidelines and Third Country

safety assessment become irrelevant, and a higher threshold becomes unworkable. Again, the administrative rationality dominates this policy dispute. The public institutional way of thinking rules the process: 'The Commission does not think it is a good idea to open the legislation at this time, because once this is done, there is no certainty in terms of how it will be put back together' (DG SANCO, CEN/ENEA Workshop, 2010, my emphasis). Just as Jasanoff writes, policymakers 'find' the demarcations within the law. Economic stakeholders have found one demarcation within the law (mutual recognition of safety events) – but this is, according to the original boundary framing by DG SANCO, *wrong*. 'We hope that we get the qualified majority...Convince the Member States of the necessity of this solution, don't convince *me*...You have to work on this. Do your homework! It's the only thing I can say' (DG SANCO, CEN/ENEA Workshop, 2010). DG SANCO directed the attention away from itself and towards the EU MS. In EU risk management the final decision is left to political authorities, not independent regulators or the developers. This was made very clear.

8.2.2 The EU vote and LLP decision

On two occasions, a proposal to relax the EU zero tolerance policy and allow low-level presence (LLP) of unauthorized GM material in imports (referred to by industry news media as 'the GM feed vote', and by green media as 'the GM contamination vote') found its way to the agenda of the European Union's Standing Committee of the Food Chain and Animal Health (SCFAH). In November 2010, no qualified majority could be reached and the vote was thus postponed. Initially set for 9 February 2011, the vote was again postponed, this time to 22–23 February. News media reported that nine EU MS had serious concerns about the measure. Led by France, the opponents were Poland, Hungary, Cyprus, Malta, Greece, Latvia, Lithuania and Luxembourg. Statements were made that France called for a stronger role of the EFSA, which in turn wanted traces of GMOs found in shipments to go through a full risk analysis. Requests were also made regarding guarantees on the harmonization of controls and their reliability. On 22 February, a qualified majority of the Standing Committee decided to lift the zero tolerance and replace it with a 0.1% threshold level. This meant

accepting ‘minimal and technically unavoidable’ admixtures of GMOs in agricultural imports intended exclusively for animal feed – not for food products. One official explanation for the positive vote was to ‘secure grain supplies to the import-dependent bloc’ and to ‘avoid a repeat of supply disruptions in 2009, when U.S. soy shipments to Europe were blocked after unapproved GM material was found in some cargoes’. The limit ‘addresses the current uncertainty EU operators face when placing on the market feed based on imports of raw materials from third countries’, the Commission explained in a statement. According to an EU diplomat, France voted in favour this time (as opposed to earlier that month) because traces of GM would now have to be given a green light by EFSA. This Authority must give an assessment that the presence of 0.1% of GM products is not detrimental to health and the environment (‘EU expert approve trace’, 2011). Before coming into force, the new threshold of 0.1% GMO feed admixture has to be confirmed by the EU Parliament and EU Council, which have three months to either approve or reject the Committee’s decision before the rules can be adopted by the EU executives as law. After the vote in SCFCAH, the vote has been subject to scrutiny by the European Parliament and the Council for three months. Since neither the Parliament nor the Council objected to the Regulation during this period of time, the Commission adopted the Regulation on 24 June 2011 (Europa, Press release, 2011a).

8.3 Conclusions on framing a policy debate

8.3.1 Frame and stakeholder consistency

The EU food chain entails a long list of stakeholders. As shown in chapters 5 and 6, at least twenty stakeholders are members of the EFSA Stakeholder Platform and the DG SANCO Advisory Group. The potential for a wide range of stakeholder participation in this policy debate is thus considerable. Nevertheless, one conclusion is that the issue frames are pushed by two consistent groups of stakeholders: economic stakeholders and NGO stakeholders. And it is the high-stake stakeholders that are active frame-

makers. The policy dispute on asynchronous authorization and zero tolerance policy thus follows the long-established tradition of positioning itself for or against an issue in this field. Despite the wide range of issue frames involved and their complexity, the fundamental principle is that economic stakeholders push for a *policy change*, while NGOs *protect the status quo*. There are, in other words, two alliances in opposition: pro-GM lobbyists and so-called anti-GM lobbyists. On the one hand, one could expect to find more movement of stakeholders in, and between, frames; especially since this debate does not include aspects of cultivation, which is generally understood as the most polarized GMO issue. Even though the issue frames are very varied in terms of content, claims, expertise, etc., this GMO policy dispute, then, is also polarized. Movement of stakeholders between frames is absent. On the other hand, the consistency of issue frames and stakeholders mobilizing in two separate alliances is also logical. This is because in order to achieve consensus, and eventually dominance, the frames must be clear to the audience. It is thus beneficial for stakeholders to remain within their alliances. Furthermore, frames are not free-floating, but anchored in the institutions that sponsor them. There are thus organizational, ideological and instrumental restrictions preventing movement between frames.

8.3.2 The clash between rationalities and the dominance of administrative rationality

The policy dispute on asynchronous authorization and zero tolerance policy is a clash between economic and administrative rationalities. In short, ‘Regulatory policy style’ can be placed in the wider frame of administrative governance rationality; ‘impact on the EU livestock industry’ in the frame of economic rationality, and ‘Threshold level’ in the administrative one. Even though this policy dispute is typically referred to as a ‘feed and trade debate’, my analysis demonstrates that this debate mainly falls within the structural frame of administrative rationality, not the economic one. Furthermore, my analysis shows that it is not possible to reduce the policy dispute to a simple conclusion that economic stakeholders push for economic rationality and NGO stakeholders push for another rationality. This is not a competition

between the market (economic values) and other values (e.g. green or democratic values). In order for stakeholder issue frames to reach a dominant position, they must all draw on, and give power to, the administrative logic.

The administrative logic has a dominant position in the following way: in order for the issue frames to be seen as credible, and in order for stakeholders to be seen as legitimate knowledge producers and experts, it is crucial to speak in terms of regulatory improvements. Regardless of what the issue frames push for, they need to be relevant and respect the EU regulatory framework on GMOs and the EU itself as a regulatory authority. Neither market interests nor environmental interests attain legitimacy *in their own right*. Such principles need to be embedded in issue frames that also draw on the institutional frame of administrative rationality. Respect for the EU's choice to embed GMOs in a strong regulatory framework needs to be demonstrated.

Some examples: When economic stakeholders frame the EU GMO approval process as slow, it is not enough to contrast the pace with the time it takes for a GMO to be authorized in the US. In addition, it is important to base the frame on expertise addressing the flaws in the EU authorization procedure that cause the time delay: flaws showing that it does not live up to its own principles; flaws regarding a lack of implementation. In other words: flaws that – if resolved – would thereby support the EU regulatory policy style. NGOs' issue frames, on the other hand, do not only communicate environmental principles. Rather, they communicate the protection of regulatory principles. NGO stakeholders do not gain legitimacy for addressing contamination problems per se, but for protecting GMO *laws*; making sure the laws are enforced. And in order to create more legitimacy, the frames of NGO stakeholders do not merely address regulation for protecting the environment, but also consumers. The dominance of the administrative logic; the way issue frames are linked to the institutional frame of administrative governance, positions *regulatory respect first*. Issue frames cannot be pushed simply in accordance with a stakeholder's self-interests.

The dominance of the administrative logic is also demonstrated by the frequent use of administrative expertise. In the previous chapter I presented numerous examples of how frames draw support from verifying expertise and verifying claims: when findings are marshalled to support – or more

often cast doubt on – public authorities’ achievements in relation to their stated goals. In other words: frames embed knowledge that demonstrates the success or shortcomings of current policies or practices (cf. Boswell 2009, chapter 4). Verifying expertise is, especially in the case of GMOs, particularly important. Frames showing that policymakers do not live up to their promises, or showing how they can *better* live up to their promises, create a window of opportunity to change public opinion and to create pressure. Such frames are particularly sensitive in the case of GMO governance, which so clearly rests on a fragile layer of trust. If consumers and citizens hear that policymakers do not live up to their promises, break the law, etc., the frames will be more powerful as an agenda-setting tool. And even though the frame of administrative rationality dominates, administrative expertise is clearly linked to, and incorporates, economic expertise. Policy relevant expertise in my empirical material is found within agricultural economics, economic and policy impact assessment, market information, policy and legislation monitoring and business impact analysis, as well as trade and economic analysis. But in terms of the two logics, I place the administrative one in a more powerful position than the economic.

8.3.3 The power of boundary framing and frame extension

Boundary framing, just as frame extension, is an important strategy when framing. It is performed by all stakeholders as well as policymakers. The present work argues that it is not possible to conclude that NGOs are more likely to build their frames on boundary framing, and that economic stakeholders are more likely to build their frames on frame extension. These strategies are used by both alliances, as well as policymakers. Obviously, not all of them have been successful.

One important conclusion from the last chapter is that the most important type of boundary-work has been performed by policymakers, not stakeholders. Even though my empirical focus has been on stakeholders representing the food chain, the focus expanded to include policymakers operating in the background. This was unavoidable. In policy disputes, the most important type of boundary-work, namely boundary framing, is performed by policymakers within the European Commission and DG

SANCO. The latter, operating in the shadow of hierarchy, has performed boundary framing in two crucial ways: Firstly, by packaging policy in a certain way, calling for a technical solution which means making changes within the present regulatory framework. Nevertheless, in the end this does not exclude the option for a co-decision involving the European Parliament. But initially, co-decision seemed less of an option. Secondly, policymakers at DG SANCO have performed boundary framing by separating feed from food. Options have only been called for on the feedside, not the foodside. This may seem particularly surprising, given the new approach to food safety which at all times stresses the need to include the whole chain; to have an integrated feed and food perspective. On the other hand, this separation is not surprising, given the fact that GM food is still extremely controversial in the EU. From a political point of view, such a proposal would not be possible: 'Politically to do it [take a decision on a threshold level] on food is not wise. Why? He [Commissioner Dalli] wants to avoid a second tsunami after the potato decision' (DG SANCO, CEN/ENEA Workshop, 2010, my emphasis). GM feed is less controversial and less discussed in the public sphere. Reducing this policy dispute to a technical debate – not safety debate – helps GM feed to stay beneath the public radar.

Another important type of boundary framing, performed by economic stakeholders, enforces the same administrative logic and puts the debate in a non-safety package: Economic stakeholders separate safety and risk from legal presence. The message from DG SANCO, as well as economic stakeholders, is that this is not a safety debate – it is a technical debate. Low-level presence is not contamination; it is not dangerous. Instead, LLP is a normal result of conventional agricultural and trade practices; something that cannot be avoided, and for which a threshold should be accepted.

Another essential boundary framing can be observed when NGO stakeholders separate the EU's GMO laws from the EU livestock industry, arguing that the EU regulatory framework should not be blamed for the economic and legal pressure that is put on the industry, traders and farmers. According to NGO stakeholder frames, removing zero tolerance will not affect feed prices and availability. In that sense, NGO stakeholders claim that the entire policy debate rests on a false crisis; a false problem definition.

Frame extension, on the other hand, has also been used by both alliances of stakeholders. One type of frame extension is seen as particularly important; namely, to embed foreign experience in frames: refer to how

things are done – successfully – elsewhere. The issue frames pushed by economic stakeholders draw on foreign experience by pointing to the US regulatory policy style (which calls for a faster GMO approval process) and to the so- called ‘Swiss solution’ (which calls for a higher threshold, above 0.1%). NGO stakeholder issue frames, on the other hand, point to foreign experience in terms of export countries like Brazil, Argentina and China, which claim to be synchronized with the EU regulatory policy style.

In terms of the two alliances, the boundary-work performed by economic stakeholders has been most successful because similar ideas are reflected by the European Commission (as in several DGs of the EC). This is clearly shown in the intertextual chain that has cut off issue frames of NGO stakeholders and downplayed the safety perspective while highlighting the security perspective. In the new rules on GMOs, the frame ‘EU dependency on imports of agricultural raw materials’ offered by economic stakeholders is supported and has been directly translated to support a policy change and a new GM regulation. Figures on agricultural commodities imports are clearly stated, and risks are addressed as economic and legal ones – nothing else (see Europa, Press release, 2011a). Framing and boundary-work, particularly the frame extension of economic stakeholders have affected policy output. However, this is – as the coming sections will show – no clear-cut victory for this alliance of stakeholders.

8.3.4 Spinning intertextual chains to render economic expertise legitimate

Another conclusion is that the spinning of intertextual chains has been crucial in rendering economic expertise legitimate, and pushing for policy change. Asynchronous authorization and zero tolerance policy is not a scientific debate, as in scientific risk assessment. The EFSA and risk assessment operate in the background. This debate relies on knowledge claims and expertise, and the scientific research community also operates in the back. Instead, expertise comes mainly from stakeholders and the European Commission. To my surprise, this policy debate (which is said to be so important from an EU agricultural trade perspective) has *not* been

picked up by a scientific research community carrying out agro-economic, socio-economic or environmental risk research according to an independent set of data and research questions.

The main exception is LEI Wageningen UR, which entered the debate at a rather late stage, and produced commissioned agro-economic research reports. Besides this research institute, intertextual links are identified as coming from the stakeholders themselves and the European Commission, as in JRC and DG AGRI. Economic stakeholders, the European Commission and LEI Wageningen UR have been the most important knowledge producers for steering this debate. Another important conclusion is that the studies produced by the two officially legitimate knowledge producers – the European Commission and LEI Wageningen UR – would not have been possible without the data and expertise from economic stakeholders; the practical knowledge gathered on the floor and in the field in certain food and feed sectors.

The previous chapter also identified a dominant intertextual chain in which expertise has been repackaged in order to become legitimate and to push issue frames to reach the political agenda. This illustrates very well how frames incorporate expertise and function as an agenda-setting tool. Economic stakeholders have both independently and jointly produced knowledge that estimates the costs of policy on their sectors and on the food and feed chain. Nevertheless, their problem definition was not acknowledged until the DG AGRI report in 2007. This is stated by the economic stakeholders themselves. The report was then subsequently used to reinforce the message from these stakeholders back to the European Commission. This interaction has some characteristics of co-production, when raw data from economic stakeholders has been the basis for, or directly incorporated in, studies from JRC, DG AGRI and public research institutes. But since this is not a formal or public knowledge-sharing process, I term this phenomenon *intertextual chain* and *intertextual spinning*. Expertise is pushed forward by certain economic stakeholders, picked up by public authorities, translated, spinned, and set on the political agenda. Stakeholders can then pick up the studies from the public sphere, incorporate this expertise in their storytelling, and push their own issue frames with enhanced credibility back towards the European Commission.

This phenomenon has been crucial to the performance of frame extension: establishing a link between EU GMO laws and the problems

facing the EU livestock industry. It has created an important consensus among actors agreeing on the problem definition and on the need for an urgent solution. Economic stakeholders have thus been successful in terms of making other more legitimate actors adopt – and thereby give power to – their issue frames.

This spinning of intertextual chains and expertise in the shadow of hierarchy may, at first, seem dubious. It makes the reports produced by DG AGRI, JRC and LEI Wageningen UR seem biased – not independent. On the other hand, this shows the problem of independent expertise in the field of GMO policymaking. None of these actors would have the possibility to analyse this policy field without the information gathered by economic stakeholders. Public authorities and public research institutions are dependent on the raw data gathered by stakeholders from the food and feed chain. And some stakeholders do not want to, or cannot, release data into the public domain. Failures of risk management practices are, by definition, harmful to their business.

A clarification should also be made here regarding the economic expertise produced by these actors and the methodology underpinning the studies, because not all of them are equally legitimate. There is an important difference between expertise from DG AGRI and LEI Wageningen UR, which relates to the issue of credibility and authority. For stakeholders such as FEFAC, CIAA and COPA-COGECA, it is important to link their issue frames to LEI Wageningen UR and not only to DG AGRI. This is apparent when looking at position papers over time. The methodology of economic modelling, as in the DG AGRI report, clearly provides less credibility than the methodology underpinning the reports provided by LEI Wageningen UR. Nevertheless, this does not change the issue frames and the intertextual chain: The private expertise from stakeholders, as well as the official expertise from JRC, DG AGRI and LEI Wageningen UR, reinforce a coherent message and push for the structural frame of economic governance rationality to challenge the administrative one. Together, this intertextual chain creates a strong resonance that echoes between the European Commission, public research institutes and economic stakeholders. Important to note is that all these actors operate outside and towards DG SANCO. The intertextual chain is thus important in understanding the ability to form what can be referred to as a winning coalition and to affect

public policy. This logic is particularly important in the light of the institutional power-struggles examined in chapter 4.

8.3.5 A divided consumer voice and opposing frames on food

Another conclusion is that stakeholders with a food perspective have been divided in this debate. One surprise, which both alliances expressed to be unfortunate, is the non-participation of the consumer organization BEUC. In fact, BEUC has completely withdrawn from the field of GMOs and does not comment on any GMO dossier, including this one. It might be understandable that a consumer organization like BEUC regards the frames 'Impact on the EU livestock industry', perhaps also 'Threshold levels', as too distant to be of interest to its members. Nevertheless, some statements from BEUC could have been expected under the heading of 'Regulatory policy styles', in which issue frames clash over broader issues. However, BEUC has not given any or public support to any issue frame. The silence, on the other hand, can be understood as support to the frame 'low-level presence is not contamination' pushed by economic stakeholders, and the overall message that this is not a safety debate. If a threshold posed a substantial safety and health risk, then one could expect EU's consumers' organization no. 1 to prioritize this GMO dossier. Yet they did not. BEUC falling outside this policy debate can thus also be interpreted as a result of the success of some issue frames. This brings me to the difference between BEUC and another consumer organization, namely EuroCoop.

BEUC is a consumer organization which has been defined by DG SANCO (and also EFSA) as a legitimate expert to represent consumers in institutionalized arenas for stakeholder participation. Nevertheless, there are also other organizations representing consumers at European level. The European Community of Consumer Cooperatives, Euro Coop, is one of them, and it supports the issue frames pushed by NGOs. This stakeholder is a member in the Advisory Group (DG SANCO) and Stakeholder Platform (EFSA). Yet when NGOs receive support from EuroCoop and not BEUC, it most likely provides less credibility to their frames, in the eyes of policymakers.

The consumer voice is also divided in another way. In addition to the division between BEUC and EuroCoop, there are also opposing frames on food. Economic stakeholders, with the support of the Confederation of the Food and Drink industry (CIAA), frame this policy debate as mainly a feed trade debate – including food security issues. Their perspective on food is security – not safety. A threshold is not a threat to safety, but a need to secure a supply of food (because much of what goes into the food chain, like soya, also goes into the feed chain). The food perspective means securing supplies and enough food products on the shelves in supermarkets. The issue frames pushed by NGOs, on the other hand, suggest that this is not a feed trade debate – but a safety debate. If trace levels of unapproved GMOs enter the feed chain, they are not possible to control and may pose safety problems to consumers as well as the environment.

From a food and consumer perspective, the framing of food as a security problem (rather than safety problem) has won. The change of policy covers feed, not food. And a threshold is to be understood as a technical issue (concerning detection methodologies and a harmonized control system for MS) – not a safety issue. Nevertheless, the fact that the EU Member States have given EFSA a stronger role when imports are found to contain traces of EU- unapproved GMOs means that a safety perspective has also been embraced. In that sense, the policy change is also a minor victory for the frames pushed by NGO stakeholders. If BEUC had been vocal, the policy outcome might have been different; there might have been a movement between frames.

8.3.6 NGOs struggle for frame resonance

The lack of resonance for the issue frames pushed by NGOs can be explained in the following way:

Firstly, there is what I call an intertextual distance in the expertise put forward by these stakeholders. Economic stakeholders refer to expertise which is mainly economic. But more importantly – their expertise is also lay and practical because data is generated from their own sectors. The intertextual references for them are, in other words, short and close (what I term intertextual proximity). NGOs also refer to expertise with an economic

rationale. However, this expertise is characterized by an intertextual distance: Sources like the World Bank and United Nations clearly have credibility, yet these sources are more general in nature (i.e. price increases around the world and financial speculation) and are further away (not EU-specific).

Secondly, it seems easier to perform frame extension than boundary framing: It seems easier to put forward data showing policy impact on economic sectors than the lack thereof; easier to show a link between economic impact and policy, than the lack thereof.

Thirdly, NGO stakeholders mix expertise with an economic rationale with normative claims: The EU should strive to become self-sufficient in terms of feed ingredients and switch to what they interpret as a sustainable farming model. In this respect, another type of intertextual distance is created. NGO stakeholders refer to information that is perceived by others as falling outside the scope of the policy debate (i.e. the issue of farming model). Therefore, the issue frame named 'independency realistic' is seen by others as political and not credible (even though the issue frames presented by economic stakeholders are also political; they push for political change).

Fourthly, NGOs lack resourceful testimonies from third parties. While economic stakeholders can back up their frames by testimonies from authorities – such as the former DG Agriculture Commissioner Ms Fischer Boel – NGOs seem to lack an ambassador of equal weight. Environmental NGOs are supported by other NGOs and parts of the European Parliament. Nevertheless, I have found no intertextual references to the Directorate-General for the Environment. DG Environment is strikingly absent in this policy dispute that environmental NGOs claim to be so fundamental. And in the end, the European Parliament did not object to the new rules.

Fifthly, NGO frames also lose power from two types of early boundary framing performed by the European Commission. Since this policy debate was initially packaged as a technical issue, it has not undergone the same scrutiny by the European Parliament. And since this policy dispute started, the responsibility for GMO dossiers has been centralized. When the new Commission was appointed, José Manuel Barroso, its President, took the initiative to move the responsibility for GMOs to DG SANCO, under Commissioner John Dalli. The influence and support from DG Environment has thus been cut off, as DG SANCO now takes primary responsibility for GM approvals. Nevertheless, I have not found any

intertextual link to DG Environment prior to *or* after this boundary-work within the European Commission.

Lastly, NGO frames are based on publicly available data (RAFSS data for contamination incidents), and compete with confidential data. This is probably one explanation for why these two alliances reach different conclusions regarding the ‘trade blockages’ (how often imports have been stopped from entering the EU).

8.3.7 The absence of deliberative logic

In the previous chapter, the deliberative logic was interpreted as rather weak and seemed to operate in the background. Even though this logic was not in the forefront, both alliances did use deliberative rationality to push their frames.

Transparency – an important criterion for deliberative rationality – was important for both alliances of stakeholders. Nevertheless, they draw on transparency to suit their own interests. NGO stakeholders do so to undermine the legitimacy of the Barroso High Level Group. They did so by claiming that since the participants and function of this group were not made public, it was not legitimate, they claim. Economic stakeholders, on the other hand, draw on transparency to point out problems in risk management. The process by which GMO dossiers are taken from EFSA and put (by the European Commission) on the agenda for the EU MS representatives to vote on is not transparent. Therefore, the authorization procedure is not considered legitimate. Both alliances know that transparency is not always feasible, and that the work of the European Commission is also based on confidential communication and negotiations. As an example, one task for the European Commission is to ‘feel the temperature’ for when a GM dossier is ‘ready to go on the agenda’. A lack of transparency is built into this process. Nevertheless, both alliances draw on this logic in order to create credibility (for themselves). Inclusiveness is also an example of the deliberative rationality. Here, NGO stakeholder criticizes the option not to involve the European Parliament. In this regard, deliberative logic pushed by NGOs has been influential as it did (in the end) affect the policy outcome (co-decision was required).

8.4 From feed trade to harmonized control measures. Security – not safety.

Economic stakeholders are the successful group in terms of framing this policy debate. Frames have influenced policymaking as their message is reflected in policy outcomes. Economic stakeholders have been successful in establishing their frames as credible and themselves as legitimate knowledge producers and experts. The drawing of boundaries, outwards and inwards, the making of intertextual chains and the spinning of expertise, have been crucial to mobilizing and reaching frame alignment and consensus. The resolution and the final packaging are: *this is a security dispute, not a safety dispute, and it concerns feed – not food*. The vote has been taken to secure the supply of feed materials and to safeguard trade. And the vote has been taken to provide policing tools for the EU MS to control imports.

The EU Member States have agreed on a technical solution and a 0.1% tolerance for minimal and unavoidable admixtures of GMOs in agricultural imports. The zero tolerance policy has been loosened, but the tolerance is intended exclusively for animal feed and not for food products. The threshold value of 0.1% is regarded as the technical limit of detection. This is a conquest for the issue frames pushed by economic stakeholders. But there are several reasons why it is *not* entirely appropriate to speak of a so-called ‘victory for the GMO lobbyists’.

The framing processes of economic stakeholders have been successful only after at least four years. The intertextual chain has been spinned in the public domain since (at least) 2007. Even so, measures to implement a threshold took until the spring of 2011. The question can therefore be raised: If a consensus has been established for some time, why wait with a policy proposal? And why did the EU vote not come until the spring of 2011? This is a question this work cannot answer. But as indicated throughout this thesis, the institutional power-struggles are pervasive and, in the end, the ultimate power is in the hands of the EU Member States.

NGO stakeholder frames have, to some extent, *also* been successful in terms of policy output. The status quo has, just as their frames suggested, been maintained since 2007. The policy changes now cover only feed, not food. And the threshold is set at the lowest possible level. The policy

changes include a stronger role for the EFSA. And, very importantly: The proposal was based on comitology and co-decision, involving the European Parliament. This was also made clear during the CEN/ENEA Workshop, during which it was concluded that: 'Adoption through the comitology procedure is key: This should be an option for us to reduce media scares impacting on public acceptance' (CEN/ENEA Workshop, 2010).

Economic stakeholders have shared experiences and coordinated their message in their own platform meetings for the food and feed chain, organized workshops, invited members of the European Commission, EFSA and other public authorities to meetings, etc. 'We tried to coordinate ourselves to get hold of the issue' (CEN/ENEA Workshop, 2010). This coordination, which seems to have become more streamlined over the years (eventually also including food operators like CIAA), has certainly been important for reaching a dominant position. Nevertheless, this thesis shows that issue frames pushed by an alliance that is well- coordinated, powerful in terms of material and cognitive power resources, and that has access to networks, do not necessarily deliver the policy change that is hoped for. In this case, complex and credible frames pushed over a long time period did, after all, *not* cause any immense policy change.

Economic rationality has changed the administrative one, but the change is framed as an *improvement* of status quo, rather than a *change*: New GM regulation adopts a threshold level that is the *definition* of a technical zero. In other words: zero tolerance is maintained, albeit with harmonized rules for controls, sampling and detection. On the answer to the question 'Is this regulation in accordance with the zero tolerance policy on GMOs?', the following answer is given: 'Yes. Not only does the regulation not deviate from the zero tolerance policy but it renders this notion even clearer by means of defining the technical zero in realistic and operational terms' (Europa, Press release, 2011a). The message from policymakers is thus that regulatory changes will, so to speak, preserve and improve the status quo.

Lastly, a few words shall be said about how attention was directed *away from safety*. When economic stakeholders emphasize feed security, policymakers (came to) emphasize harmonized control systems. Economic stakeholders refer to the idea of mutual recognition, and the EU – as a member of Codex Alimentarius, which has recognized low- level presence (LLP) – as a problem. The argument is that as long as the Codex Plant Guidelines have been followed, Third Country safety assessments (not

authorization) would be considered valid (enough). Traces found in imports are, in other words, safe – according to these standards. However, this claim (based on legal interpretation) is *disregarded* by DG SANCO on the basis of boundary framing; on the basis that this policy debate has already been put in a technical-legal package. This packaging also makes LLP a non-safety problem, but – importantly – for *others reasons*. It makes LLP a non-safety problem from the point of view of the EU regulatory framework. Moreover, it does not only cut off the safety issue, but also directs attention towards harmonized controls, thus making the issue relevant for a group of actors that has not been publicly visible in this policy debate before, namely EU Member States. When I spoke to a policy official from DG SANCO, ‘harmonized control system’ and ‘policing’ were the keywords (DG SANCO, Interview, 2011) – not feed or trade. Policymakers have thus performed boundary framing and cut off ‘safety’, albeit with another legal-technical toolbox than economic stakeholders. And this should not be underestimated. It gives emphasis to the EU-dimension, instead of basing the decision on international standards, which might run the risk of the EU MS seeing the policy proposal as a form of foreign pressure. Either way, safety was thus excluded from the policy dispute.

With the proposal, all EU MS will now receive guidance on how to control imports (to start with, they have a threshold level), and the controls will be more harmonized (equal). EFSA will also be involved, and is tied more formally to this GMO dossier. While satisfying the needs of the market, it is thus possible to argue that the proposal will, in the end, actually enhance safety. As suggested by my analytical framework: the view always depends on where you place the window frame.

CHAPTER NINE

Conclusions and discussion

9.1 The dominance of administrative rationality

Many case studies suggest that there has been a shift from hierarchy towards markets and networks, so-called new modes of governance. Hierarchical forms of governance, combined with administrative rationality (which has been the dominant type of governance of states and supranational institutions), have gradually been accompanied or replaced by more decentralized forms of governance informed by economic and deliberative rationalities (Bäckstrand et al. 2010). The institutionalization of stakeholder consultations and the experimental approach towards stakeholders in the field of EU food safety and GMOs could be interpreted as a challenge to the EU as the centre of political action and a sign of dispersed sovereignty. However, this study calls for a more nuanced view. GMO governance is not an example of relocating authority from the public to the private, or from hierarchy to networks. Neither is this research an example of a changing logic from the administrative to the economic.

As rationalities of governance, EU food safety and GMO governance are first and foremost administrative. GMO governance is characterized by so-called hard law, with strong regulations and political control. The regulatory framework has expanded over time. Yet decisions have always been slow and arduous due to the fierce competition over the location of authority in this multi-level landscape. Environmental Risk Assessment Guidance, cultivation, asynchronous authorization and zero tolerance policy have, just as the new GMO legal framework and GMO labelling rules once did, produced power struggles between the following actors: the European Commission, DGs within the Commission, the Council, EU Member

States, stakeholders and the European Food Safety Authority. Administrative rationality dominates. The collaborative approach of involving stakeholders from the food and feed chain in EFSA and DG SANCO has not changed this. As the next section will explain, it is necessary to understand stakeholder participation in the shadow of hierarchy. Despite the multi-level characteristics, administrative rationality stands for centralizing power, making it more uniform and harmonized. The output of the policy debate on asynchronous authorization and zero tolerance policy is an example of this, creating harmonized rules for the control of imports of feed materials. Furthermore, the authorization procedure provides a strong role for the European Commission, DG SANCO and the Food Safety Authority. National involvement in authorization decisions is weak because Member States disagree too profoundly to act collectively. Hierarchy should be understood in political and epistemological terms. Even though Member States are now given more freedom on cultivation, EFSA and the Commission remain central sites of authority remain strong, as they ultimately draw the boundary around this freedom, and render these decisions acceptable. The final word is still in their hands.

Furthermore, administrative rationality subordinates economic rationality. Economic rationality is inferior, as there is little commercialization of GMOs in the EU, and a considerable number of national measures limits access to national markets. In other cases it is the market that has centralized authority, as the internal market and the free movement of foods create harmonization. Yet, in the case of GMOs, market actors are not even pushing for market expansion. Instead, retailers force GMOs out. The superiority of administrative rationality is also identified when examining the policy debate on asynchronous authorization and zero tolerance policy. Both economic and NGO stakeholders package their arguments and offer frames according to an administrative rationality above any other rationality. As an example, economic stakeholders claim that the EU GMO approval process itself is satisfactory – only the implementation is inadequate. And NGO stakeholders frame thresholds as a threat to EU GMO laws, letting environmental arguments come second. Moreover, administrative expertise is considered crucial by all actors. Packaging arguments and framing policy are done by so-called verifying expertise, where policy measures are claimed to either strengthen or weaken the legal

framework. All stakeholders have interests, yet their frames go beyond their immediate interests. Frames package arguments, ideas and norms as concerns over legal rules and principles. All stakeholders need to show respect for, and concern over, the EU regulatory framework of GMOs, in order to gain credibility as experts. Economic cost arguments and environmental interests are strong. Yet, referring to interests alone is not sufficient to become a legitimate expert.

9.2 A deliberative turn in the shadow of hierarchy

When looking at frames of governance rationalities in the EU food safety domain and concerning GMOs, it is apparent that institutions have adopted a participatory approach towards stakeholders. The results of this study depart from previous ones which showed that stakeholders were consulted in an ad hoc and informal fashion. As an example, Borrás wrote of a ‘notorious underdevelopment of consultation and participation procedures’ in this policy field (Borrás 2006:70). Much progress has been made since 2004–2005. Participation and engagement are now high on the agenda of the European Commission, and patterns of deliberative-style interactions can be found in DG SANCO as well as in EFSA. Deliberative rationality has created four types of stakeholder participation: stakeholder participation for (a) for policy advice, (b) process development, (c) for management, and (d) for risk assessment/risk communication. Stakeholders participate to contribute with expertise regarding policy proposals and legal developments; procedures for dialogue and how to improve the quality of consultations; expertise to enhance self-regulatory action and implementation of soft measures; and expertise regarding scientific opinions and criteria, as well as transparency and trust issues. It is therefore possible to conclude that there has been a deliberative turn in the EU food safety domain and concerning GMOs. The inclusion of actors representing the food and feed chain is not only a discursive phenomenon – these words and ideas have been materialized and are exercised in several arenas within these two institutions.

The deliberative rationality is directed towards participation, inclusion, dialogue and debate among interested parties; not typical deliberative principles such as consensus, transformation of preferences or social learning. Stakeholders come to these arenas to represent their members and their own interests. The preference of each stakeholder is already fixed, grounded in both internal rules and decision-making within each food chain stakeholder, and is difficult to change in the event of a dialogue. Furthermore, the deliberative turn takes place in the shadow of hierarchy, which means that it is situated in a hierarchical organization, operates by law in DG SANCO (Commission decision), by a management decision in EFSA, has specific rules of procedures, and is structured by policy officials who act as a facilitator and steer these processes. Stakeholders participate, but not in a leading role. Policy officials set the agenda, choose the timing of meetings, chair meetings, decide which stakeholders from the list should be invited to each meeting, balance representation according to their own criteria and decide which officials should attend. In other words: they make decisions about inclusion and exclusion; they make decisions on which organizations/associations/federations are to be regarded as legitimate stakeholders and which are not, and whose expertise is to be taken into account. They decide when to open a topic for a working group meeting, and when to limit it to a plenary meeting. And they allow or exclude certain dossiers from passing through stakeholder arenas. In that way, policy officials make a distinction between lobbyists outside, and legitimate stakeholders inside. The shadow of hierarchy, a term for the continued influence of EU institutions, is prevalent in all of the arenas examined here. This finding does not, however, challenge the previously stated conclusion that EU food safety governance has taken a deliberative turn. It does question the assumption that such a turn is enacted in the absence of control and oversight; questions the assumption that interest groups exercise an uncontrolled influence over policymakers and scientific experts in core political institutions in the EU.

For the stakeholders themselves, these arenas are welcomed and an important improvement of policymaking processes, but is not crucial to their mission and objectives. Meeting face-to-face in a conference room has not changed the way they work. Participation gives them access to policy officials in a more intimate setting, provides information and a possibility to be heard officially and publicly. It helps them to anticipate future policy

changes and legal developments; makes it possible for stakeholders to monitor policy officials, monitor positions of other stakeholders, and to get a broader perspective of issues present on the agenda. However, high-stake stakeholders like EuropaBio and Greenpeace emphasize that these arenas should not be overestimated. For economic stakeholders like EuropaBio, ESA and CIAA, a so-called 'black-boxed' approach, or 'creative contacts' with the European Commission, are more effective for their purposes. And for environmental NGOs, campaigns and public protests are prioritized. Even though policy officials now clearly structure and facilitate stakeholder participation, informing them about progress (what is happening, how and when), and the type of expertise needed, the deliberative turn seems more important to public institutions and policy officials than to the stakeholders themselves. This relates back to stakeholders representing certain interests. It is not possible for stakeholders to spontaneously move between frames in the light of a better argument. And there are ideological borders to how much they can learn from each other. Food chain stakeholders have their own constituencies, positions that have been taken, and borders that need to be protected. It is therefore important to emphasize that the deliberative turn is directed towards participation, and not consensus or transformation of preferences.

This connects with writings on neoliberal forms of governmentality (cf. Barry et al. 1996, in Bäckstrand et al. 2010:221). Governmental studies encourage us to rethink the role of the public authorities, typically the state. However, they can also be applied to a multi-level setting. Rather than interpreting the rise of new modes of governance as a trend that weakens the state in favour of new actors, the state is engaged in a process of 'responsibilization' (Burchell 1996, in Bäckstrand et al. 2010:221). This seems to accord with my observations. DG SANCO has called upon food chain stakeholders to actively undertake self-governing tasks, either through the market or civic networks. At the same time, civil servants at DG SANCO and EFSA act as facilitators of stakeholder consultations. These findings correspond to the changed logic of governance that redefines public institutions. From the point of view of this thesis, stakeholder consultations not only redefine EU institutions, but also increase their power. Instead of stakeholders lobbying from outside, they are participating inside, in the shadow of hierarchy. This brings an even greater control of EU public bodies that already have considerable power. Shadow of hierarchy makes it

possible to frame the agenda and exercise boundary-work, thus excluding a wider systemic critique favoured by some stakeholders.

9.3 Extended expertise

Whereas expertise used to be located either in bureaucratic organizations or in academia, it can now be found in a broad range of societal sites. Environmental policymakers receive support from climatologists and biologists, and employ expertise from forestry and marine life activists working with international groups that have environmental protection as their cause. Brussels-based immigration and asylum policy makes use of an array of international organizations, lobby groups and think-tanks. Foreign policy is advised not only by experts on foreign countries, but also by historians, journalists, and experts on religion. And officials from the Commission Directorate-Generals are active themselves in conferences and workshops, meet with researchers, sit on advisory boards for research programmes, and sometimes also publish academic articles (Maasen & Weingart 2005:5; Boswell 2008:478). These examples illustrate that the expertise sought by decision-makers is not limited to that within established fields of academic research, but reaches beyond the narrow definition of expertise. As highlighted in my theoretical chapter, a wider definition of expertise has been developed whereby consumers can be regarded as 'experts of everyday life', and farmers can be considered experts due to experience accumulated in the course of their professional activities. The number and types of institutions involved in the business of producing expert knowledge, from which advice may be sought, have broadened dramatically. My findings confirm this development and, at the same time, provide deeper knowledge about it.

Extended expertise in my research does not refer to think-tanks or journalists, but stakeholders. I have shown that there are not only scientists, policymakers and the public, but additionally a wider range of very powerful, active and influential representatives of affected interests that have a stake in food safety policy issues. After a decade of examining the

implications of public participation on national level, I believe I have, through this work, furthered the understanding about stakeholders participating at EU-level. As many before me, I left the laboratory and instead searched for what Nowotny et al. term the 'agora'; a structured 'public space which is 'shaped by the interaction of its actors/agents', and where science and society, the market and politics can commingle (2001:203).

Stakeholders participate in the realm of risk assessment and risk management because they have different positions in the food chain. They are expected to contribute sectoral expertise. Developers, technology providers, farmers, traders, processors, retailers, consumers and non-governmental organizations pool together different experiences and offer a broad approach for improving food safety and GMO governance. The focus is on diversity, pluralism and difference – not consensus. Stakeholders operate in different contexts, according to different needs, goals, and assumptions. They are all expected to bring forward their point of view, not to transform their preferences. It is also possible to speak of expertise as both vertical and horizontal: horizontal in terms of stakeholders having knowledge about animal health, animal welfare and plant health, and vertical in terms of integrating perspectives from the farm to the fork. At the same time, the practical management of all these stakeholders with sectoral expertise is turned horizontal. The Advisory Group at DG SANCO and the Platform at EFSA have the purpose of addressing horizontal matters that are common for the whole chain. Economic stakeholders state themselves that they will not discuss sector- specific problems: 'It is our business. It is not of interest to the animal welfare organizations' (EuropaBio 2011). Perhaps it is better to discuss expertise in terms of front and backstage. Sectoral expertise is more relevant in the working groups and in one-to-one exchanges between stakeholders and policy officials. At the front, in plenary meetings and in face-to-face interaction, stakeholders discuss overlapping and common problems, adding expertise of a more general nature. Putting stakeholder expertise in the spotlight lends itself to the discourse on expertise as contextualized and socially robust. Even though this discourse – from Gibbons et al. (1994) and Nowotny et al. (2001) – is presented in another context, it is applicable in this work. The problem with this discourse is that it is often unclear what this socially robust and extended knowledge actually is. One ambition of this research is to offer some insights.

In essence, my empirical material brings forward the social sciences, mainly the intersection between economic and legal expertise: agricultural economics, economic and policy impact assessment, market information, policy and legislation monitoring and business impact analysis, as well as trade and economic analysis. 'Risks' in this study have not been defined by scientists or according to risk assessment principles, nor can they be reduced to risk value judgments. Rather, risks have been contextualized according to a socio-economic and socio-ecological dimension, regarding trade, imports, cultivation, contamination and policymaking. Asynchronous authorization and zero tolerance policy are explicitly linked to the business side of companies and elicit in-house knowledge of those developing, trading and using biotech products. I have shown that risk does not only involve controversy over safety, but also security and supplies; and that claims regarding the environment and contamination come with legal and policy-relevant expertise. Consequently, this study helps to widen the definition of expertise, and to extend the debate on GMOs into the socio-scientific domain. This is a domain that cannot be dismissed as non-scientific and perception-driven – but one that is anchored in sites of knowledge production outside the established universities and research institutions.

Several scholars in the field of environment, economics, as well as health and education policy, have examined the impact of expert knowledge on policy. They have explored how far, and under what conditions, research can influence decision-making. What I have attempted to do is to go beyond the focus on the causal relation between knowledge and policy, by explaining how expertise is incorporated in activities of framing. Boswell (2009) devotes her book to a critique of assumptions about the instrumental role of expert knowledge in shaping policy. She argues that we should develop a better understanding of the alternative uses of research, as a symbolic resource for legitimizing policymakers or substantiating their preferences. I have made no assumptions about expertise as instrumental, legitimizing or substantiating. I do not find it possible to conclude that stakeholder participation in arena X is more symbolic than in arena Y. Instead, I have focused on the type of expertise used in framing activities, when acting in arenas for stakeholder participation, and when debating a policy issue.

This approach of including stakeholders officially, formally and regularly is supposed to lead to more effective decision-making. It is supposed to

render the outcome more legitimate. As discussed separately in this chapter, there is little evidence for this promise being fulfilled in the field of GMOs. In the case of GMOs, there are no indications that the debate has settled. On the contrary, there is continuously fierce competition, in which knowledge claims, position papers and contract reports are thrown at each other. Parallel to more participation, and more involvement of stakeholders, policymakers have opened up GMOs to more policy interventions and regulatory activities. The negative side to participation and extended expertise is that the outcome becomes even harder to control.

Scientific expertise from EFSA is not the only source for reaching a decision on GM approval. Expertise from other actors like national competent authorities and stakeholders is also taken into account. In addition, the renationalization of cultivation now means that a whole new set of socio-economic expertise needs to be processed within the political system. Actors, sites and criteria for what is to be counted as evidence for controlling GMO governance can already be found in abundance, and their number is ever-increasing. The production of expertise and counter-expertise has become a constant process of keeping issues on the political agenda. The burden for those taking decisions is thus also increasing. Obviously, this comes at a price. Again, the metaphor of a window becomes useful. As Entman writes, 'frames select and call attention to particular aspects of the reality described, which logically means that frames simultaneously direct attention away from other aspects' (1993:54). Directing resources, knowledge production, political attention, regulatory changes, time, etc. towards the field of GMOs means directing attention away from other policy fields. There is now a strong focus on GMOs from the perspective of cultivation/co-existence, Environmental Risk Assessment Guidance, and harmonization of control measures. This means that other food safety issues, even other policy areas, are not given as much attention. A relevant question is thus which risks go unnoticed, when the window remains so firmly placed on the wall with the abbreviation of just three letters: GMO.

9.4 Exercising policy influence

Frames matter. My research has highlighted which frames matter and how actors use them to push for an agenda. Many analysts assume that business associations and NGOs are hardly equals and that examining them in tandem obscures more than it reveals. This thesis demonstrates that a critical issue in policy conflicts is whose frame dominates the debate, and that this is not necessarily linked to financial or material resources. Rather, I have pointed out the following aspects as essential to exercising policy influence by framing: (a) coalitions, (b) intertextual proximity, (c) intertextual chains, (d) administrative rationality, and (e) a mixture between economic and administrative expertise.

This study confirms previous findings in social movement research highlighting the importance of actors working together in order to influence policy outcomes. Looking at stakeholders, they have mobilized in two coalitions: Biotech associations, conventional farmers, traders, food and feed processors, on the one hand, and NGOs, small-scale farmers and consumer organizations on the other. Retailers and the most established consumer organization in the EU do not position themselves in any clear way. The other stakeholders exercise policy influence in the same coalitions – be it the GMO authorization procedure or the specific policy debate on asynchronous authorization and zero tolerance policy. And while framing researchers can often identify actors moving between frames, in this work I have not discerned any such movement. This is most likely because stakeholders are interest groups with the purpose of holding a specific position and voicing a clear message. The specific characteristics of the actors involved, and the contested nature of the policy field under study, thus increase the likelihood for stakeholders operating in clear and opposing coalitions.

Intertextual proximity and intertextual chains are two new concepts I have introduced in this thesis, both of which have proven important to understanding framing and the power to influence policy outcomes. When economic stakeholders framed asynchronous authorization and zero tolerance policy, they used data and expertise that were close to them; that came from their own sectors, from the ‘floor’ and based on their own experience. As an example, the frame ‘EU dependency on imports of

agricultural raw materials' is acknowledged by policymakers and has had a direct impact on policy outcomes and the change of GMO rules. The importance of intertextual chains was also demonstrated in chapter 7. These had a crucial role in transforming the policy debate on asynchronous authorization and zero tolerance policy from feed trade to harmonized control measures, cutting off safety, and presenting policy outcomes as a security solution. In this chain, economic stakeholders, parts of the European Commission, private contractors and a public research institute have shared data, developed reports, and referred to each other, thus building together and pushing for similar frames and a common problem definition. This intertextual spinning has been promoted by public champions (e.g. Commissioners in the European Commission) and has proved important for rendering frames credible and adding a sense of urgency. Searching for intertextuality has revealed how different types of data, information and knowledge are incorporated in frames to make them credible. Expertise in this work has been described in different ways, ranging from administrative, economic and deliberative expertise to environmental risk assessment expertise, etc. Depending on the empirical focus and unit of analysis (e.g. arena for stakeholder participation), the type of expertise obviously differs. Yet, in this work one type of expertise has been identified as particularly important in regard to exercising policy influence; namely, verifying expertise. Regardless of stakeholders and regardless of frames containing economic or environmental arguments, it is important to package claims as either supporting or threatening legal rules and norms for policymaking. This puts the spotlight on the role of administrative rationality. As discussed at the beginning of this chapter, this rationality is in a dominant position in this policy field, and actors need to adapt their message so that claims do not merely reflect their own interests, but show concern and respect for the regulatory framework on GMOs.

Altogether, this research has offered new tools for understanding the manner in which frames are advanced, how actors use frames to exercise policy influence, and the way in which frames have political impact.

9.5 The future of agro-food biotechnology in the EU

The proponents of agro-food biotechnology emphasize the rate of adoption of GM crops, which they claim has been astonishing. Actors like EuropaBio point out the rapid spread in acreage devoted to such crops since 1996. And, to be sure, the total area of planted GM crops has grown worldwide. For example, while in 1996–2001 the total area planted worldwide was 1.7 million hectares, by 2009 this had increased to 134 million hectares. Yet as Williams emphasizes, the picture of the global production of GMOs is less dynamic in terms of (a) geographic expansion, (b) production, (c) product, and (d) cultivation aim. Despite the significant growth in the total acreage, only twenty-three countries were cultivating GM crops in 2007. Secondly, commercial production is concentrated in a few countries and is dominated by the US. Thirdly, this technology has only been applied to a limited range of crops, with four crops accounting for almost the entire global production. Fourthly, the dominant cultivation aim is still – more than fifteen years after the commercial introduction of this technology – herbicide tolerance and insect resistance. And this is followed by so-called stacked genes for the two properties – that is, a combination of herbicide tolerance and insect resistance (Williams 2009:161–162).

GMOs are also less prevalent in the EU than GMO critics would like to admit. In terms of GM cultivation and GM food products, the EU is a GM-free zone. As shown in chapter 4, the economic rationality behind GMO governance has little relevance in the EU. This is when the perspective of frames and boundary-work becomes a practical tool for understanding the GM situation in the EU. If a GM plant or microorganisms have been used in production, this must be clearly indicated by a label. However, numerous products are exempt from labelling obligations. These exemptions primarily concern additives and processing aids, but also apply to meat, milk, eggs and other animal products from livestock fed with GM plants. However, if this type of boundary – that delimits what is considered a GM product and not – changes; if the labelling rules on genetic engineering change, so that what has previously fallen outside the scope of the labelling directive (meat, milk, eggs and other animal products from livestock fed with GM plants) now

becomes included, the picture changes drastically. Then the EU would not be regarded as a GM-free zone. This is another example of the power of boundary-work performed by regulatory authorities in the field of risk governance. And while consumers rarely find labels indicating the use of genetic engineering in the EU, GMOs are entering through the back door, through feed imports. We thus experience a situation where consumers are looking through one type of frame, seeing one reality (no GM food products on the supermarket shelves), while the majority of food chain stakeholders are looking through another frame, and see another reality (a large and steadily increasing amount of GM materials entering the food chain). In my opinion it is necessary, and becomes even more urgent, to publicly address the inconsistency between these two frames. Economic stakeholders have no interest in publicly declaring that animal feed is by and large genetically modified, while opponents of GMOs have an interest in framing the EU as the world's last GM-free zone. It has been my intention to shift the focus from front stage (food) to backstage (feed). This begs the question of how important the main GM dossier examined in this work – namely asynchronous authorization and zero tolerance policy – is for the future of GMO governance in the EU.

GMO critics have been successful in their framing activities in the EU since GMOs first began to arrive in the 1990s. Firstly, they helped to bring about a *de facto* moratorium on the authorization of GM crops and foods for the EU market. Secondly, they won the fight for labelling and traceability requirements. Thirdly, they managed to close the market to GM foods (Kurzer & Cooper 2007). Fourthly, they have succeeded in bringing forward a socio-economic framework and moving decisions on cultivation closer to EU Member States. GMO critics have thus scored four significant victories and should therefore be understood as very powerful and influential. In terms of stakeholders (leaving out Member States), NGOs, small-scale farmers and consumer organizations are the most powerful stakeholders and important lobbyists in this field – not biotech developers, traders or food and feed processors. Asynchronous authorization and zero tolerance policy, subsequently reframed to policy for harmonized control measures, should be understood as the first defeat of the GM-critical movement. Zero tolerance is a GMO dossier where the needs of the market have clearly been acknowledged. In the history of GMOs in the EU, this is a rare acknowledgement. And it came during a time in the EU when the first

GMO potato (Amflora) was authorized for cultivation (the first such authorization in twelve years), and when the competence of DG Environment was replaced by that of DG SANCO.

The future of GMOs in the EU depends on several issues, with framing being an important part of this. As an example, the Barroso Commission frames biotechnology as essential to sustainable development and meeting targets on biofuels. Barroso argues that GM crops are needed for reducing Europe's dependency on unpredictable energy supplies. It remains to be seen if food processors and retailers continue their GMO-avoidance strategy, or if it simply becomes too costly when the rest of the world continues to expand the use of biotechnology in agriculture. So far, the costs of compliance with consumer preferences for GM-free foods have been minimal for consumers. But a time will come when somebody will have to pay higher prices for GM-free foods. And research shows that the protection of collective responsibility, such as agricultural models, the environment and biodiversity (that GM-free foods are often associated with), becomes less important in times of financial crises, when households experience tighter budgets. Consumers are price sensitive, and (private) price considerations may induce them to buy GM foods despite earlier (collective) concerns. The future of GMOs also depends on research regarding their effects on health. So far, there is a lack of scientific evidence demonstrating concrete, specific ill effects from GM foods (e.g. carcinogenic qualities). In contrast, the GM-critical movement can point to manifest, easily understood environmental costs of GMOs, such as monocultures and contamination in the fields (Kurzer & Cooper 2007). It is not the intention of this work to attempt to predict the future. My point is simply to state, again, that stakeholders and framing are essential components for understanding GMO governance in the EU, present and future.

9.6 The GMO-nanotech analogy

Nanotechnology is the manufacture and use of materials and structures at the nanometre level,¹⁰¹ and is expected to increasingly affect science, technology, and society. Nanomaterials have specific properties (e.g. larger relative surface areas) that can be applied in a wide range of fields, such as medicine, electronics, biomaterials, as well as food and agriculture. According to its supporters, this 'science of very small things' could have an impact on many areas of the food industry, including packaging, ingredients and delivery systems, food safety and quality, and methods for processing foods (Chun 2009).

Scientists develop a new technology they claim will revolutionize food production and create healthier foods. Critics raise concerns that the technology poses great risks to human health and the environment. Government agencies have difficulty regulating the technology. Sound familiar? The new technology is not genetic engineering, but nanotechnology (Roseboro 2006).

Comparing nanotechnology with GMOs is very popular (see Sendler & Kay 2006), and for important reasons. In a similar way to GMOs, nanotechnology is hyped as a dramatic improvement to its technological forerunner. While genetic engineering replaced hybridization, nanotechnology replaces microtechnology. Both improvements are revolutionary and come with a similar package of promises and risks. Just as GMOs, nanotechnology cuts through several policy domains and has great economic and industrial significance. Several DGs are involved in regulating nanotechnology, not only DG Research, DG Enterprise and Industry, DG Environment and DG SANCO, but also DG Information Society and Media as well as DG Education. The promises made by scientists and developers are many: Nanotechnology will improve everything from medicine, the environment, electronics, to food. A backlash would have

¹⁰¹ A nanometre is one- millionth of a millimetre. To give a comparative idea of this, 1 nm is the length of a chain of 5 to 10 atoms, and a human hair is about 80, 000 nm in diameter (DG SANCO 2011c).

significant economic consequences for this field; one filled with hopes of innovation and increased competitiveness. Nanotechnology also poses similar social, environmental and ethical questions and concerns as GMOs, such as environmental and health risks, translational corporate power, global justice, etc. Furthermore, NGOs have been quick to mobilize opposition and launched negative media campaigns. As an example, FoE calls for a moratorium on the release of nanomaterials and the use of nanotech applications 'until a regulatory framework is created, or the existing legislation is adapted, to ensure the safe development of nanotechnologies' (FoE 2011b). Altogether, the diffusion across several policy domains, promises, risks and NGO mobilization resemble the case of GMOs.

Nanotechnology will most likely become more accepted in other areas of application than food. And in the area of food, it will probably be more accepted for purposes such as packaging than as a nutrient supplier. Food-related issues are distinctly different and particularly sensitive, for the obvious reason that food goes directly into our bodies. Food is not just a substance consumed to provide nutritional support for the body; it is also associated with cultural aspects, traditions and taste. Novelty in food and agriculture therefore frequently stirs up public concerns in ways that, for example, novelty in information and communication technologies does not. It is therefore more likely that consumers will accept nanotechnology that improves products like sunscreens, televisions, tennis balls and paints, than technology that improves the texture of whole-grain bread or other food products.

Another difference should also be mentioned. The very purpose of GMOs is that they are released into the environment through cultivation, and then consumed by people or animals. Nanotechnology, on the other hand, is a matter of containment. The purpose here is to keep it out of the environment and out of the body. In that respect, the objectives of developers, regulators and environmental actors coincide from the start, so to speak. Another example of the difference is that the development of nanotechnology has come, from the start, with education efforts, making the introduction of this technology in society appear more responsible. Funding, research, development, and commercialization also appear more directed towards the public good. This contrasts with GMOs, which are characterized by the oligopolistic structure of actors involved, with the

dominance of a limited number of transnational corporations (TNCs) (Sendler & Kay 2006).

Seeing these similarities, but also being aware of the differences, is important when developing policies on nanotechnology that promote R&D and innovation while also maintaining a high level of security for the environment and consumers. DG SANCO works with an annual and wide-ranging workshop on nanotechnology and safety. Scientific hearings and a dialogue with stakeholders in the food chain have also been organized. This is a good sign, although the outcome, namely decision-making, could be more difficult to control. However, it is my opinion that more focus should be directed towards research and development. It is particularly important to create a more equal playing field with public funding and R&D, as this affects the possibility for public bodies to steer development and application towards the needs of society. If nanotechnology is the answer, it is important for public bodies to be able to ask: what was the question? This was not done adequately in the case of GMOs. Avoiding a heavy private concentration in the scientific and technological infrastructure is important, as this makes it easier to channel the needs of society and ask the so-called benefit question (see next section). Public and stakeholder participation in policy and risk assessment must therefore be complemented by participation in stages of the initial problem definition and development. In STS-studies this idea is sometimes referred to as 'extended peer review' or 'extended peer community'. Extending the review of research to individuals who have a stake in the outcome would be of interest to developers, as it opens up the possibility for them to direct resources towards products and processes that are regarded as relevant and legitimate by society. Nanotechnology, just like GMOs, is full of possibilities. Extended knowledge and debate must therefore also focus on priorities and needs. In other words, it is important not to cut off nanotechnology from the society that it will later operate in. Acknowledging differences (different applications, benefits, needs, risks, roles of actors, etc.), and having knowledge about the different frames operating in this policy field, will reduce the risk of nanotechnology being trapped in the same regulatory deadlock, power struggles and static roles as is the case for GMOs.

9.7 Final reflections

There is a consensus among science and industry communities that something went deeply wrong with *society* when GMOs were introduced, that this is still haunting this policy field, and that the problem was a lack of risk communication: Developers did not adequately communicate the benefits of this technology, respond to questions, or provide enough information. The standard reconstruction, from the perspective of the scientific and business communities, is that risk communication is the key lesson to be drawn from GMO controversies. If we would just *communicate* emergent technologies better to society, we will overcome the elite-public knowledge gap and can avoid another backlash, like the one on GM, so the argument goes (e.g. Levidow & Carr 2010, chapter 9).

This view, expressed by several economic stakeholders I met in Brussels, represents the so-called deficit model of science policymaking. Professionals view lay people as lacking sufficient knowledge about science and technology, and therefore in need of education that would enable them to see the world more like professional scientists. If just more information is transmitted to society, and the public gets the opportunity to understand technical problems from the professionals' point of view, it will become more positive and accept new technology (Yearley 2000). These ideas, which are summarized in the technocratic jargon of 'science speaks truth to power' and 'sound science alone', have long been criticized by the STS-community. Scholars in both the sociology of science and science policy have shown that representations of risk are inevitably hybrid judgments, dependent on both scientific and normative considerations (see Sheila Jasanoff, Erik Millstone, Brian Wynne, Alan Irwin).

Reducing GMO controversies to a problem of risk communication, and applying this conclusion to other technological fields, thus shows that lessons have not been learned. Blaming risk communication, or complaining about the overlap between science and politics, demonstrates that one does not understand, or have an interest in understanding, what the most prominent scholars in risk research claim: namely, that there is a co-production of knowledge and policy. Scientific knowledge and political order are co-produced at multiple stages in their joint evolution, from the laboratory to field studies, to the acceptance of causal explanations offered

by science, and their use in decision-making. In this co-production, science and policy derive legitimacy from each other (Jasanoff & Wynne 1998:6). Choices are made regarding analytical instruments and testing, criteria are set for the identification of risks, and priorities are made when evaluating them. Framing and boundary-work are key activities in science, *as well as* in politics. The stakeholder dialogue on EFSA's Environmental Risk Assessment Guidance illustrates this very well. It is possible to argue that science does not produce absolute truths, without falling into relativism. As Fischer writes: '[s]cience and technology are much more ordinary than we once thought, but still unique and special (Fischer 2009:140). And as expressed by a participant during EFSA's ERA consultative workshop, deciding on how to revise the guidelines is framing; namely, including some aspects while excluding others. It is therefore my opinion that stakeholder participation as a new mode of governance is a positive trend; positive in terms of clarifying the power of framing (see EFSA, audiovisual, 2011).

Collins and Evans write that Cumbrian farmers might well have had more success in their dealings with the scientists from the UK Ministry of Agriculture, Fisheries and Food (MAFF) and from British Nuclear Fuels Ltd (BNFL) if their concerns had been mediated by Greenpeace. In that way, these farmers' knowledge would have been expressed in terms that are more familiar to the scientists, thus making it more credible. This problem was recognized by AIDS treatment activists in the USA. They learned how to master the language of science, and they learned how to present their interests and knowledge to the wider community during the clinical trials process (Collina & Evans 2002:256). Environmental NGOs in the case of GMOs are very different from Cumbrian farmers and AIDS activists. Having a stakeholder like Greenpeace to speak for others does not necessarily provide credibility; the contrary may at times be the case. This work shows that NGOs participate in the DG SANCO Advisory Group and in the EFSA Stakeholder Platform. But most importantly, it shows how NGOs have widened the boundary – in the shadow of hierarchy – and are now participating in direct discussions with scientific experts from EFSA's GMO Panel. EFSA has always had a dialogue with NGOs, but this has taken place in meetings with only such organizations, or in the Stakeholder Platform. During spring 2011, the NGO TestBiotech engaged with the core-set (EFSA GMO Panel) and gave a presentation on the draft guidance for the selection of GM plant comparators. And as discussed in chapter 5,

being taken seriously by established scientists was not easy. As in many other cases, there is a tendency within the scientific community to protect its own borders, keep other actors outside, and de-legitimize them as interested parties.

For a counter-expert to try to climb up the stairs of expertise to an interactional position, perhaps even a contributory one, is difficult in any context. But what makes this climbing particularly difficult for the environmental NGOs discussed in this thesis involves not only the protective measures from the scientific community, but the framing activities of the NGOs themselves. When it comes to EFSA, environmental NGOs frame their message in an incoherent way. Their storylines are even contradictory. On the one hand, environmental NGOs want to be regarded as legitimate experts, not only legitimate stakeholders. They want to improve the ERA guidance; they want to be taken seriously, to discuss substantial matters – not only risk communication issues, as in the Stakeholder Platform. On the other hand, they not only criticize EFSA, but call for the cessation of the EFSA GMO Panel. They repeatedly undermine the epistemological authority of EFSA, and do not value participation in the Platform. Surely this inconsistency of wanting to improve EFSA, on the one hand, while on the other hand severely undermining it, does not enable an ascent towards any expert position. Other actors doubt that there is a genuine engagement and ambition from environmental NGOs to really improve the ERA Guidance. After constant improvements from EFSA, and little acknowledgement of these from NGOs, some wonder if NGOs will ever be satisfied. The inconsistency of framing can also be understood as epistemological flexibility. Environmental NGOs prioritize risk assessment issues, rather than policy advice at DG SANCO and risk communication in the Stakeholder Platform. And in the debate on asynchronous authorization and zero tolerance policy, one environmental NGO dismisses scientific reports from Wageningen University UR on the basis of their problem definition (it is unclear whether this spokesperson was even aware of the reports in the first place). The lesson to be learned from this is that frame inconsistency and obvious epistemological flexibility hinder a stakeholder from becoming a legitimate expert, not merely a legitimate stakeholder. And here economic stakeholders have an advantage: Because of more material resources, these stakeholders do not have to prioritize, as NGOs do. They have more personnel to review and follow the release of new reports, they

have more personnel to send to meetings, and more resources to streamline their message, controlling that frames are in line with each other.

Another lesson to be learned from the GMO controversies addressed here is that a technology cannot be separated from the wider societal context in which it is applied. As stated in my introduction, GMOs raise a wide range of questions, ranging from seed companies' control of GM crops research; the oligopolistic structure, with the dominance of a limited number of corporations; to food security and environmental sustainability. And as shown in chapter 4, the precautionary principle cannot be understood if the political context is not taken into account. Environmental safety is managed within the scope of risk analysis; until recently, socio-economic impacts were not. This path towards an acknowledgement of the socio-economic context of GMOs is, I believe, very important. It will be interesting to see what this actually means in practice. GMOs are, but not merely, about molecular, compositional, nutritional, and agronomic characteristics. They are, but not only, about the potential toxicity and allergenicity of GM products. Genetic engineering – as with other new technologies – also raises questions beyond health and biosafety. And with the new direction towards GM cultivation, it now becomes legitimate to address, for instance, agricultural practices linked to intellectual property regimes and social policy objectives. This is an innovative change since it places not only environmental risks, but also socio-economic ones, within the decision-making process, instead of keeping them outside 'in the cold'.

This is when ideology becomes a relevant point of reference. Some believe that socio-economic questions should be kept outside the political system, and be confined to the marketplace. When the narrow definition of safety is assessed, and the conclusion is 'safe', it should be up to individuals (farmers out in the field or consumers in the supermarket) to make the choice of purchase themselves. Others believe that GMOs are so special that this decision must be integrated into the political system, and not left to the market. The latter reasoning is that if GMOs are released into the environment and get into the feed and food chain, they are not possible to control. Therefore, asynchronous authorization and zero tolerance policy have been so important to environmental actors. This also explains the lack of movement of stakeholders between frames. Frames are not only institutionally sponsored and connected to interests, but also rooted in

ideology; namely, deeper ideas about the structure of forces in society and the mechanisms of economic distribution.

My study is in accord with the feminist literature in science and technology studies which emphasizes the so-called benefit question. Biotechnology is perhaps the best example of how novel technologies already in the laboratory raise big questions regarding social development. Technologies developed by a few (in the laboratory) affect many in their everyday life (in society). It should therefore be legitimate to, on the one hand, accept some kind of hierarchy between experts (respecting the role of EFSA), while on the other hand also working with stakeholder dialogue. It should also be possible to – within democratic institutions – ask for whom and for what purposes this technology is developed. The STS-community has been influential in pushing for a new mode of governance in which participatory tools now have become the norm in public policymaking. The road towards renationalization of GM cultivation in the EU opens up for feminist scholars in STS, facilitating and examining a new (legitimate) contextual understanding of biotechnology and knowledge production. Because if there is one thing that feminist science studies has contributed with, it is contextual knowledge (Trojer 2003:33–41).

This continuation of widening the debate on GMOs must come with the ambition of distinguishing one technological application from another. It is surprising to me that, after 15 years of commercial cultivation, GMOs are still discussed in terms of pro-GM and anti-GM. The Swedish Gene Technology Advisory Board often makes a pedagogic comparison: ‘genetic engineering is like electricity. It can be used for lighting a lamp and it can be used for the electric chair’ (Uddenberg 2010). This also turns the spotlight to the media, which must take a larger responsibility for distinguishing GM food from feed, cultivation from asynchronous authorization, etc. At the same time, this also brings us back to the benefit question: For whom and for what purposes should a technological application be used? Environmental NGOs can accept genetic engineering for certain purposes. According to them it can be used for stress resistance, addressing global concerns over water scarcity. It can facilitate growing food crops in areas where salt, heat and drought are problems. But their point is, genetic engineering has so far been limited to creating resistance to herbicides (external herbicides as in Roundup, or internally in the plant itself). Questions of benefit and relevance are important. ‘A genetic engineered

violet carnation? I don't know. How many will benefit from this? What is the value?' (Uddenberg 2010). Choosing the empirical focus of asynchronous authorization and zero tolerance policy, rather than EFSA's Environmental Risk Assessment Guidance, has brought into light (a) the socio-economic context and the different claims, needs, wants and benefits of stakeholders operating in the food chain, (b) issues typically omitted by STS-scholars (such as GM trade and feed), and (c) expertise that is typically disregarded as 'non-scientific' and black-boxed as (just) 'policy-relevant'. In that way, my aim with this work is to assist in shifting the focus, not only in the GMO debate, but also within the STS-community itself. Not only controversies regarding 'hard science' should be investigated by STS-researchers.

Inviting stakeholders from the food chain to be part of risk assessment and risk management poses critical democratic questions that need to be addressed in future research. This work builds upon insights from deliberative democratic theory. However, liberal accounts of democracy raise important questions regarding representation and accountability: Are different parts of the food chain equally represented? To what extent do stakeholders actually represent public interests? And in what way are stakeholders held accountable when participating in the arenas addressed in this thesis? The literature on accountability is replete with different definitions, ranging from simply holding organizations responsible for their performance, to highly detailed technical specifications. The distinction between hierarchical accountability and peer/reputational accountability seems particularly helpful for deepening the knowledge about stakeholder participation addressed in this work. As a complement to merely examining if and how stakeholders are held accountable according to a certain set of standards, accountability can be studied in terms of reputational reward and punishment, mutual valuations and image. Non-hierarchical accounts of accountability, with a less clear-cut principal-agent relationship, are therefore also relevant for future research.

Appendix

Appendix 1: Method of analysis

The method for analysing and interpreting structural and issue frames has, to some extent, been outlined in the theoretical. Nevertheless, the theoretical framework does not reveal anything with regard to the following two processes here conceptualize as method of analysis, namely: breaking down the empirical material (the coding-process) and building it up in a new form (the analysis). Both of these processes, especially the last one, are typically overlooked in the framing literature. I would therefore like elaborate on both of them.

Breaking down the data – content analysis and coding

The largest volume of material to be analysed for this thesis derives from written documentations: text. There exist several methods for analysing the meanings and deeper implications of what is said in a text, ranging from objective hermeneutics, grounded theory to argumentative analysis and discourse analysis (see Titscher et al. 2000; Bergström & Boréus 2000). I make use of *content analysis* in a broad, qualitative way. Content analysis is defined by Phillip Weber as ‘a research method that uses a set of procedures to make valid inferences from text’ (Weber 1990:9). The main purpose with qualitative content analysis is to break down and reduce the data, to make it comprehensible by using a set of categories derived from the theoretical framework (Weber 1990:15). Content analysis is usually referred to as a quantitative method with the purpose to quantify, namely to count the

frequency of phenomena in text. However, I use content analysis in a qualitative way (Bergström & Boréus 2000:44–46). The qualitative element and the reading, interpretation and grouping of text segments are the main purpose with my approach. Bergström and Boréus (2000) and Titscher et al. (2000) raise certain demands on content analysis, for instance (1) objectivity, (2) system and (3) generalisability. Objectivity relates to reliability and means that the result of the content analysis should not vary over time or depending on the researcher performing the analysis. System, on the other hand, relates to validity in the sense that it concerns to what extent the researcher really measures what is relevant for the research questions.

[I]n content analysis procedures the categories should be so clearly defined that different codes can achieve the same result. This means that the categories must be specifiable by a body of theory and by a set of coding rules which are invariant to the user's interpretation (Cicourel 1964, in Titscher et al. 2000:9).

I have tried to meet these demands in two explicit ways: Firstly, by being transparent about the coding-schema and interview manual, and secondly, by using software in qualitative research. However, it should also be stated that I do not agree that the extravagant approach by Titscher et al. (2000) is always possible. Methods are important for second order observation – to observe the observers (Luhman 1990 in Titscher et al. 2000:16). However, the outcome of interpretative procedures, such as content analysis, also depends on the creativity of the researcher and the researchers' pre-assumptions. It is simply not possible to create absolute replicates. Nevertheless, researchers need to try and be transparent about procedures pursued.

Instead of content analysis, it would have been possible to work with discourse analysis. Bacchi (2005) highlights two central analytical traditions in discourse theory: 'discourse analysis' (the focus on patterns of speech) and 'analysis of discourses' (the ways in which issues are given a particular meaning within a specific social setting). This thesis could position itself in the second tradition: *the analysis of discourses*. Instead of focusing on linguistic devices, speech patterns or conversation, my aim could be to

identity conceptual schemas (discourses) that produce particular understandings of asynchronous authorization and zero tolerance policy.¹⁰² The discursive approach has certain advantages. If a critical discourse analysis (CDA)¹⁰³ was chosen, there would be a number of practical and relevant analytical tools to work. I am – just like CDA – interested in the relationship between textual and social processes. Clearly, there seem to be many similarities between framing and the analysis of discourses. The theoretical language itself is also highly applicable. And while there are several methodology books on discourse analysis, there is none of framing. Nevertheless, there were at least two important reasons for choosing content analysis and framing instead of discourse analysis: I was simply interested in what I understand to be a ‘limited version’ of discourse analysis. However, I acknowledge the similarities between the two methods and have therefore incorporated a practical discursive tool in this thesis, namely intertextuality (how texts are giving their meaning in relation to other texts).

Coding

Coding-tool: MaxQDA

A qualitative approach often includes a need to interpret data through the identification and possible coding of themes, concepts, processes, context etc. in order to build explanations or theories, or to test or enlarge a theory (Lewins and Silver 2007: chapter 5). This can be done manually, or with the help of a software programme. I chose to work with a qualitative software programme called MaxQDA, simply because it facilitates all work related to

¹⁰² I would then be interested in the dominant discourses and ‘discourses in the plural’ (Bacchi 2005:2000).

¹⁰³ CDA is not a single school of thought, discipline or paradigm. Rather, it is an umbrella term covering a number of distinct but related approaches to the analysis of speech and text that has to do with the social or political domain. Yet, with respect to CDA, I refer to Norman Fairclough.

data-management and coding substantially. Besides, it brings me closer to the data while also adding on transparency and rigour. Interactivity between different tools in software also makes the work flexible and efficient¹⁰⁴. There are several strong arguments for working with MaxQDA: A personal preference for the user interface¹⁰⁵, the availability and functionality of colour coding, closeness to data, the retrieved function and memo-manager. The closeness to data is perhaps the strongest argument for working with a software programme. Besides, it makes all work related to data management much more efficient and flexible. The role of software in qualitative data analysis has been discussed by many. Important to note is that the exploration of data is not neutral and that the responsibility of the analysis still lies with the researcher.

‘A common misapprehension is that in some way the programs do the analysis for you, or produce some concrete results on their own. ... The results are connections and explanations you draw out of your materials – not something produced by the computer’ (Crang 1997, in Andersson 2007:54).

Software does not specify whether or how to generate codes or apply them to data. Whether coding manually or using software, ‘you will build up a system to organize data and your ideas about it’ (Lewis and Silver 2007:81-82, my emphasis). Software can enhance the process of analysis and result in increased rigour, transparency and quality. However, it can also become unwieldy. With regard to the number of functions used, code systems and memos, it can often be the case that ‘less is more’. To use too many

¹⁰⁴ There are several available Computer Assisted Qualitative Data Analysis (CAQDAS) packages on the market: ATLAS. Ti5, HyperRESEARCH 2.6, MaxQDA2, QDA Miner 2.0, NVivo7, Qualrus and Transana 2. Levins and Silver (2007) focus attention and compare three leading CAQDAS programs: (a) ATLAS.Ti5, (b) MaxQDA2 and (c) NVivo7.

¹⁰⁵ The user interface consists of four main windows: (a) *Document System* (data files), (b) *Text Browser* (allows the viewing of data files), (c) *Code System* (houses the codes) and (d) *Retrieved Segments* window (shows text segments based on the codes). This user interface is powerful in its design (you work with all windows open simultaneously), flexible (all windows can be resized) and intuitive.

functions, codes and memos will simply fragmentize one's thinking. Therefore, one should avoid unnecessary clutter (Lewins and Silver 2007).

Coding-process

Even though my whole research process has been clearly deductive according to predefined areas of relevance and interest, the codes themselves have been generated inductively from salient aspects identified in the data. After reading through some material, and concluding that the material would fit with the theoretical framework, I began coding text inductively and with two types of codes: color coding and in-vivo coding. The first type of coding had the purpose to separate arenas for stakeholder participation-material from the material concerning asynchronous authorization and zero tolerance policy. The following codes were used for identifying arenas: EFSA Stakeholder Platform, Advisory Group on the Food Chain and Animal and Plant Health, Nutrition Platform, DG SANCO Stakeholder Dialogue Group, external arenas, High-Level Groups. The second set of codes concerned the policy debate on asynchronous authorization and zero tolerance policy and listed the following codes: approval process, contamination, definitions, dependency on feed imports, DG AGRI economic scenarios, false problems, prices and costs, working group discussion, low-level presence and threshold. A third set of 'other' codes used were: GMO evaluation, coexistence, environmental risk assessment, food chain, safeguard measures, risk management and actors. This process can be described as a continuous 'naming' of documents, text-segments, observations and claims. It is a process of reducing the material, to break down data into many different significant aspects in order to make it manageable.

Building it back together – frame analysis

What happened after pushing the text-retrieval function in a software programme and receiving the output result - the coding scheme hierarchy? This is a step in the analytical process about which little is written. My approach to building texts back together was deductive. Coded segments and groups of similar text were coded, yet this time according to the theoretical framework. This process is organic since it essentially implies two things: arranging the categorised and coded material in line with theoretical concepts and – simultaneously – arranging text segments in a linear way to build up an analytical story. The problem with frame analysis is that there are no shared criteria about how to perform such analysis, nor are there rules to ascertain whether a frame has been ‘correctly’ interpreted. To make a convincing case, it is therefore important that the analysts can show how meanings and experiences are related in the frame; that it is done in a way that can be verified. The theoretical concepts, used as tools, have been operationalised in the theoretical chapter. Thereby, I knew how to search for certain frames such as frames of governance rationalities. Nevertheless, the theoretical chapter did not specify how to proceed when naming and framing (what I refer to as the more inductive approach): How to know when frames emerge from the empirical material? Furthermore, all frames are certainly not of interest to this study. An important question is thus how to identify relevant frames derived from the empirical material. In this study, ‘inductive frames’ are conceptualized as: ‘specific, recurrent and thematic ideas and structures of argumentation that organize experience and push for an agenda’. Analysing stakeholder frames implies to identify recurring themes and thought styles from the empirical material, to characterize and to group them. This ongoing work will result in issue frames. Frames with similar recurrent themes will thus be placed together. The ‘messiness’ in the debate and claims-making about the specific GMO reform proposals will thus be reduced in order to make patterns visible and create a sort of order of recurrent themes and thought styles.

Appendix 2: Texts for coding¹⁰⁶

Table 22: Texts for coding

Actors	Period	Texts	Vol
DG SANCO	2005 – 2011	Policy documents, powerpoint slides, consultation procedures, agendas, summary records, list of members, speeches.	37
EFSA	2005-2011	Policy documents, powerpoint slides, consultation procedures, agendas, summary records, list of members, speeches, audiovisual.	25
External contractors (e.g. LEI Wageningen UR)	2007-2011	Research reports, evaluations.	10
JRC	2007-2011	Research reports, powerpoint slides.	5
DG AGRI	2007-2011	Reports.	2
Other EU sources	2007-2011	Press releases, rules and regulation.	15
COPA-COGECA	2007-2011	Press releases, powerpoint slides.	10
ESA	2007-2011	Press releases, position papers, policy briefings, reports, letters, powerpoint slides.	8
Greenpeace	2007-2011	Press releases, position papers, policy briefings, reports, letters, powerpoint slides.	15

¹⁰⁶ Many texts, like position papers, are signed by several stakeholders. They are only referred to once, or in other words: only counted for by one organization. This list does not include information from websites or other readings.

FoE	2007-2011	Press releases, position papers, policy briefings, reports, letters, powerpoint slides.	25
CIAA	2007-2011	Powerpoint slides, annual reports.	4
EuropaBio	2007-2011	Press releases, position papers, policy briefings, reports, letters, powerpoint slides, newsletters.	20
UECBV	2007-2011	Position papers, letters.	4
COCERAL	2007-2011	Press releases, powerpoint slides, newsletters.	10
FEFAC	2007-2011	Press releases, powerpoint slides, newsletters, annual reports.	10
BEUC	2007-2011	Powerpoint slides.	2
Press articles	2007-2011	E.g. EurActiv, AllAboutFeed, Corporate Europe Observatory.	30

Appendix 3: Interview guide¹⁰⁷

Letter and interview guide used for economic stakeholders (CIAA, ESA, EuropaBio, COPA-COGECA, COCERAL, UECBV), February 2011.

Dear Mr/Mrs,

My name is Beatrice Bengtsson, PhD. Candidate at the Research Policy Institute at Lund University, Sweden. My supervisor is Associate Professor Mikael Klintman.

In this letter you will find:

- An abstract of my doctoral thesis
- Questions that I hope you are willing to answer when we meet for the interview in Brussels
- Information regarding confidentiality and practical matters
- Contact information to me and my supervisor

I look forward to meet you and want to thank you for your cooperation!

Best regards,
Beatrice Bengtsson

Questions to economic stakeholders

These questions are not asked with the intention to verify the truthfulness of your organization's claims. Instead, I am interested in the way that policy issues are framed: which type of arguments/knowledge claims are included and excluded from a debate, and how your organization draws boundaries between what *it* perceives as 'right and wrong'. I would greatly appreciate if you could help me better understand your organization's point of view.

¹⁰⁷ This is an example of one of my interview guides. It has been modified when used to interview other actors.

Knowledge base (general)

- Your organization relies on a wide range of knowledge based sources (i.e. EFSA, ISAAA etc.). How would you describe your organization's knowledge base and expertise in the field of GMO/asynchronous authorization and zero tolerance policy?

GMO (general)

- Your organization draws on a wide range of scientific results. Which is the most comprehensive scientific evidence showing that GM crops are safe for the environment *and* human health?

Asynchronous authorization and zero tolerance policy (general)

- It seems to be just a handful of key documents steering this debate, the Cardy-Brown case study (industry stakeholders), the DG AGRI report, JRC report and the LEI study (Wageningen), am I right? Are there other key important studies? Why have not public research institutions, that are doing research on socio-economic risks, been more involved? Or have they?
- Are any actors or any perspectives absent in this debate? If so, which ones?

Lifting zero tolerance

- The zero tolerance is now being lifted and replaced with a 0.1% threshold for feed, not food. Why has it taken so long, would you say?
- What is your organization's opinion about the zero tolerance remaining for food for human consumption?
- What is your view on the current development concerning the procedure for decision-making? Challenges and opportunities?

International trade

- Zero tolerance policy has a negative impact on international trade. How many shipments of feed containing unauthorised GM feed has been rejected at EU ports since the zero tolerance policy was

introduced in 2007? Which study is most important to understand the impact of zero tolerance on trade?

Approval process and timeliness

- Industry stakeholders frame the EU approval process for GM products as problematic due to internal (MS ignoring EFSA opinions) and external reasons (time-difference between EU and USA). Do you see any indications that the EU GMO approval process will be speeded up? How much harmonisation between the EU and US regulatory policy style is necessary, according to your organization?

Threshold levels

- All industry stakeholders agree on the importance of a threshold level – but they differ in their position on which level they prefer – which level does your organization prefer and why?
- How will this threshold be enforced in practice? What are the challenges, and how does your organization contribute to solve them?
- Are threshold levels based on politics or on science, or a mixture of both?

Low-level presence and risk

- Industry stakeholders state that zero tolerance is not a risk issue. When GMO appears in traded commodities entering the EU, this is not a risk because this GMO has already been approved outside the EU. Low level presence is officially authorized, albeit by another regulatory authority. What evidence does support the view of export countries having a fully legitimate approval procedure?

Dependency on foreign raw material

- There is a consensus among stakeholders that EU is dependent on foreign raw material from imports used for feed. Several studies elaborate on this dependency. References come from stakeholders themselves and the European Commission. Does your organization use any data from public research institutions?

Impact on livestock and feed industry

- Economic stakeholders refer to the worst case scenario in the DG AGRI report. Is this a common interpretation of the DG AGRI results? From where does your organization draw support for the worst case scenario, beside of this study?
- Zero tolerance policy has a negative effect on a wide range of aspects (trade, livestock industry, animal welfare, employment). Evidence to support this comes from industry stakeholders themselves and studies by DG AGRI, JRC, and LEI Wageningen. Does your organization also rely on other research?

Purity in crops

- Environmental organizations claim absolute purity to be realistic while economic stakeholders do not. How would you explain this difference? Is it philosophical, strategic, based on science or something else?

EFSA Stakeholder Platform and DG SANCO Advisory Group

- EFSA Stakeholder Platform has received a lot of criticism (lack of in-depth discussion etc.). Has the platform improved? How relevant is EFSA Platform for your work in general?
- Are you satisfied with the way GMO/asynchronous authorization and zero tolerance has been dealt with in DG SANCO advisory group? What is your experience of the working group meetings? To what extent is this forum based on a qualified debate?
- To what extent has the debate on asynchronous authorization and zero tolerance policy been grounded in these two (different) arenas?

DG SANCO (general)

- Are there, according to your understanding, any limits for which type of GMO issues that can be dealt with in EFSA Stakeholder Platform and DG SANCO Advisory Group? Are these forums open for any 'small' or any 'big' GMO topics?

Confidentiality and practical matters

I understand that GMO is a sensitive topic and that you have internal rules for deciding which information to be released into the public domain. Therefore, you must specify to me in advance or during the interview if there is anything you cannot answer or that require confidentiality.

With your permission, I will:

- Tape the interview session (this is important for me to remember your answers correctly)
- Use the information from the interview for my thesis (and nothing else)
- Refer to your organization in the text *and* in the list of references

Quotations will, of course, only be used in a restrictive manner and with your permission.

I will need to refer to our conversation in my list of references. It is up to you to decide if I can write both name and organization (in the list of references) or if I should just refer to the organization (as in the text).

Appendix 4: Risk analysis of foods and biotechnology

At an international level, various international institutions work in the field of food safety and biotechnology. The most important standard setting body is the Codex Alimentarius Commission (Latin for 'food book'). This is a collection of internationally recognized standards, codes of practice, guidelines and other recommendations relating to foods, food production and food safety. Its texts are developed and maintained by the Codex Alimentarius Commission (Codex), a body that was established in 1963 by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO). In devising food safety regulations, countries are encouraged to follow standards issued by this body and adapting to the authoritative discourse of risk analysis (Winickoff & Bushey 2010). In this new food safety regime, risk analysis is broken up into three 'distinct but closely linked' components: risk assessment, risk management, and risk communication (Codex Alimentarius 2001).

Table 23: Risk analysis

Risk analysis	A process consisting of three components: risk assessment, risk management and risk communication.
Risk assessment	A scientifically based process consisting of the following steps: hazard identification; hazard characterization; exposure assessment; risk characterization.
Risk management	The process, distinct from risk assessment, of weighing policy alternatives in consultation with all interested parties, considering risk assessment and other factors relevant for the health protection of consumers and for the promotion of fair trade

	practices, and, if needed, selecting appropriate prevention and control options.
Risk communication	The interactive exchange of information and opinions throughout the risk analysis process concerning risk, risk-related factors and risk perceptions, among risk assessors, risk managers, consumers, industry, the academic community and other interested parties, including the explanation of risk assessment findings and the basis of risk management decisions (Codex Alimentarius (2001:43-44).

Risk analysis has, with the help of WTO, become the ‘very grammar of Codex decision making and of the emergent global regulatory regime for food’ (Winickoff and Bushey 2010:364). The functional separation of administrative responsibility was built into the decision to set up the European Food Safety Authority (EFSA), and is a fundamental principle in the General Food Law (EC 2002). Risk is a function of the probability of an adverse health effect and the severity of that effect, consequential to a hazard (General Food Law, Art. 3(9)). On the basis of scientific risk assessment, decision makers define political objectives to determine the level of risk acceptable for the society. Article 6(3) stipulates that risk management shall take into account *not* only the results of risk assessment, but also the precautionary principle and ‘other factors legitimate to the matter under consideration’. The precautionary principle – now defined in Article 7 in the General Food Law (GFL) – allows decision makers to act without having to wait until the reality and seriousness of a risk to health are fully demonstrated, if the available information identifies possible harmful effects on human health of a product or activity. Other legitimate factors include societal, economic, traditional, ethical and environmental factors and the feasibility of controls (see Kuiper & Davis 2010). The intriguing question, often addressed in the policy field of GMOs, is to which extent risk managers can base their decisions on factors other than science to remain in compliance with the supranational risk regulation regime established by the WTO (Szajkowska 2009; Weimer 2010).

References

Bibliography

- Alemanno, A. (2006) 'Food safety and the single European market, in Ansell, C., & Vogel, D. (Eds.), *What's the beef? The contested governance of European food safety*. Cambridge: the MIT Press: 237–258.
- Andersson, T. (2007). *En gemensam europeisk skogspolitik? En integrationsteoretisk studie av ett politikområde på tillväxt* (Doctoral dissertation). Statsvetenskapliga Institutionen. Umeå Universitet.
- Ansell, C., Maxwell, R., & Sicurelli, D. (2006) 'Protesting Food: Ngos and Political Mobilization in Europe, in Ansell, C., & Vogel, D. (Eds.), *What's the beef? The contested governance of European food safety*. Cambridge: the MIT Press: 97–122.
- Ansell, C. K., & Vogel, D. (Eds) (2006). *What's the beef?: the contested governance of European food safety*. MIT Press.
- Arnstein, S.R. (1969). A Ladder of Citizen Participation. *Journal of the American Planning Association*, 35(4), 216–224.
- Bacchi, C. (2000). Policy as discourse: What does it mean? Where does it get us? *Discourse: Studies in the Cultural Politics of Education* 21(1), 45–57.
- Bal, R., W. E. Bijker, & R. Hendriks. (2002). *Paradox van wetenschappelijk gezag. Over demaatschappelijke invloed van adviezen van de Gezondheidsraad, 1985–2001*. The Hague, the Netherlands: Gezondheidsraad.
- Beauregard, S. (2009). *Food Policy for People: Incorporating Food Sovereignty Principles into State Governance*. Senior Comprehensive Report, Urban and Environmental Policy Institute, Occidental College, Los Angeles, April. Retrieved from oxy.edu/uepi/uep/index.htm
- Beland Lindahl, K. (2008). *Frame Analysis, Place Perceptions and the Politics of Natural Resource Management. Exploring a forest policy controversy in Sweden* (Doctoral dissertation). Faculty of Natural Resources and Agricultural

Sciences Department of Urban and Rural Development. Uppsala University.

- Benford, R.D. (1997). An Insider's Critique of the Social Movement Framing Perspective, *Sociological Inquiry* 67(4): 409–430.
- Benford, R.D., & Snow, D.A. (2000) Framing Processes and Social Movements: An Overview and Assessment, *Annu. Rev. Sociol.* 26:611–39.
- Bengtsson, B. & Klintman, M. (2010) 'Stakeholder participation in the EU governance of GMO in the food chain' in Bäckstrand, K., Khan, J., Kronsell, A., & Lovbrand, E. (Eds.) *Environmental Politics and Deliberative Democracy: Examining the Promise of New Modes of Governance*. Edward Elgar Pub: 105–122.
- Benhabib, S. (1996), 'Toward a deliberative model of democratic legitimacy' in Benhabib, S (ed.), *Democracy and Difference: Contesting the Boundaries of the Political*, Princeton, NJ: Princeton University Press. 67–94.
- Bergström, G. & Boréus, K. (2000) (Eds.). *Textens mening och makt: metodbok i samhällsvetenskaplig text- och diskursanalys*. Lund: Studentlitteratur.
- Beyers, J., & Kerremans, B. (2004). Bureaucrats, Politicians, and Societal Interests. *Comparative Political Studies*, 37(10), 1119–1150.
- Blok, A. (2007). Experts on public trial: on democratizing expertise through a Danish consensus conference. *Public Understanding of Science*, 16(2), 163–182.
- Bodiguel, L., & Cardwell, M. (2010). *The Regulation of Genetically Modified Organisms: Comparative Approaches*. Oxford University Press, USA.
- Bolan, R. S. (1999). Rationality revisited: An alternative perspective on reason in management and planning. *Journal of Management History*, 5(2), 68–86.
- Borrás, S. (2006). Legitimate governance of risk at the EU level? The case of genetically modified organisms. *Technological Forecasting and Social Change*, 73(1), 61–75.
- Boström, M., & Klintman, M. (2008). *Eco-Standards, Product Labelling and Green Consumerism*. Hampshire, UK: Palgrave Macmillan.
- Boswell, C. (2009). *The Political Uses of Expert Knowledge: Immigration Policy and Social Research* (1st ed.). Cambridge University Press.
- Boswell, C. (2009). The Political Uses of Expert Knowledge: Immigration Policy and Social Research (1st ed.). Cambridge University Press.
- Botha, G. M., & Viljoen, C. D. (2009). South Africa: A case study for voluntary GM labelling. *Food Chemistry*, 112(4), 1060–1064.
- Bouwen, P. (2004). Exchanging access goods for access: a comparative study of business lobbying in the European Union institutions, *European Journal of Political Research*, 43(3), 337–369.

- Broscheid, A., & Coen, D. (2007). Lobbying activity and fora creation in the EU: empirically exploring the nature of the policy good. *Journal of European Public Policy*, 14(3), 346–365.
- Burton, D. (2000). *Research Training for Social Scientists: A Handbook for Postgraduate Researchers*. Sage Publications Ltd.
- Bäckstrand, K., Khan, J., Kronsell, A., & Lovbrand, E. (Eds) (2010). *Environmental Politics and Deliberative Democracy: Examining the Promise of New Modes of Governance*. Edward Elgar Pub.
- Chun, A.L. (2009). Will the public swallow nanofood? *Nature Nanotechnology*, 4(12), 790–791.
- Coen, D. (1997). The evolution of the large firm as a political actor in the European Union, *Journal of European Public Policy*, 4(1): 91–108.
- Coen, D., & Richardson, J. J. (2009). *Lobbying the European Union: institutions, actors, and issues*. Oxford University Press.
- Collins, H. M., & Evans, R. (2002). The Third Wave of Science Studies. *Social Studies of Science*, 32(2), 235–296.
- Collins, H., & Evans, R. (2007). *Rethinking Expertise* (1st ed.). University Of Chicago Press.
- Cook, G. (2004). *Genetically Modified Language: The Discourse of Arguments for GM Crops and Food* (1st ed.). Routledge.
- Corburn, J. (2007). Community knowledge in environmental health science: co-producing policy expertise. *Environmental Science & Policy*, 10(2), 150–161.
- Davison, J. (2010). GM plants: Science, politics and EC regulations. *Plant Science*, 178(2), 94–98.
- De Marchi, B. (2003). Public participation and risk governance. *Science and Public Policy*, 20(3), 171–176.
- Dean, M. M. (1999). *Governmentality*: Power and Rule in Modern Society (1st ed.). Sage Publications Ltd.
- Doherty, B. (2006). Friends of the Earth International: Negotiating a transnational identity. *Environmental Politics*, 15(5), 860–880.
- Eberlein, B., & Kerwer, D. (2004). New Governance in the EU: A Theoretical Perspective. *Journal of Common Market Studies*, 42(1), 121–142.
- Eden, S., Donaldson, A., & Walker, G. (2006). Green groups and grey areas: scientific boundary-work, nongovernmental organisations, and environmental knowledge. *Environment and Planning A*, 38(6), 1061–1076.
- Eising, R. (2008). *Interest groups in EU policy-making*. <http://europeangovernance.livingreviews.org/Articles/lreg-2008-4/>

- Entman, R. M. (1993). Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication*, 43(4), 51–58.
- Entman, R. M. (2003). Projections of power: Framing news, public opinion, and U.S. foreign policy. Chicago: University of Chicago Press.
- Eriksen, E. O., & Fossum, J. E. (2000). *Democracy in the European Union: Integration Through Deliberation?* (1st ed.). Routledge.
- Evans, R. (2007). Social networks and private spaces in economic forecasting. *Studies In History and Philosophy of Science Part A*, 38(4), 686–697.
- Everson, M., & Vos, E. (2009). *Uncertain risks regulated*. Routledge.
- Fairclough, N. (1993). *Discourse and Social Change*. Polity Press.
- Ferreti, M.P. 'Participatory Strategies in the Regulation of GMO Products in the EU' in Steffek, J., Kissling, C., & Nanz, P. (Eds). (2008). *Civil Society Participation in European and Global Governance: A Cure for the Democratic Deficit?* (First Edition.). Palgrave Macmillan: 166–184.
- Fischer, F. (2003). *Reframing public policy: discursive politics and deliberative practices*. Oxford University Press.
- Fischer, F. (2009). Democracy and expertise: reorienting policy inquiry. Oxford University Press.
- Fischer, F., & Forester, J. (1993). *The Argumentative turn in policy analysis and planning*. Duke University Press.
- Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, 12(2), 219–245.
- Forsyth, T. (2007). *Critical Political Ecology*. Taylor & Francis.
- Friant-Perrot, M. (2010) 'The European Union Regulatory Regime for Genetically Modified Organisms and its Integration into Community Food law and Policy' in Bodiguel, L., & Cardwell, M. (Eds). *The Regulation of Genetically Modified Organisms: Comparative Approaches*. Oxford University Press, USA: 79–100.
- Fuchs, D., Kalfagianni, A., & Arentsen, M. (2009). 'Retail Power, Private Standards, and Sustainability in the Global Food System, in Clapp, J., & Fuchs, D. (Eds.). *Corporate Power in Global Agrifood Governance* (1st ed.). The MIT Press:155–186.
- Fukuda-Parr, S. (2006). *The Gene Revolution: GM Crops and Unequal Development*. Earthscan Ltd.
- Gamson, W. A. (1992). *Talking politics*. New York: Cambridge University Press.
- Gamson, W.A., & Meyer, D.S. (1996), 'Framing political opportunity' in McAdam, D., McCarthy, J. D., & Zald, M. N (Eds.). *Comparative perspectives on social movements: political opportunities, mobilizing structures, and cultural framings*, Cambridge University Press:275–291.

- Gibbons, P. M., Limoges, D. C., Nowotny, P. H., Schwartzman, S., Scott, P. P., & Trow, M. (1994). *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. Sage Publications Ltd.
- Gieryn, T. (1995) 'Boundaries of Science' in S. Jasanoff, G. Markle, J. Petersen and T. Pinch (Eds). *Handbook of science and technology studies* (eds). Thousand Oaks, London, New Delhi: Sage Publications: 393–443.
- Glover, D. (2010). The corporate shaping of GM crops as a technology for the poor. *Journal of Peasant Studies*, 37(1), 67–90.
- Goffman, E. (1974/1986). *Frame analysis: An essay on the organization of experience*. Boston: Northeastern University Press.
- Gottweis, H (1998) *Governing Molecules: The Discursive Politics of Genetic Engineering in Europe and the United States*, Cambridge, MA: MIT Press.
- Gottweis, H. (2003) 'Theoretical strategies of poststructuralist policy analysis: towards an analytics of government', in Hajer & Wagenaar (Eds). *Deliberative Public Policy Analysis – Understanding Governance in the Network Society*, Cambridge University Press, UK: 247–265.
- Gray, B. (2003). 'Framing of environmental disputes' in R. J. Lewicki, B. Gray, and M. Elliott (Eds.). *Making sense of intractable environmental conflicts: concepts and cases*. Island Press, Washington, D.C., USA:11–34.
- Greenwood, J. (2007). *Interest Representation in the European Union* (2nd ed.). Palgrave Macmillan.
- Greenwood, J and Webster, R (2000) Are EU Business Associations Governable? *European Integration Papers online*, <http://eiop.or.at/eiop/eiop-e.htm>
- Hacking, I. (1999). *The social construction of what?*. Cambridge, MA and London, England: Harvard University Press.
- Hagendijk, R., & Irwin, A. (2006). Public Deliberation and Governance: Engaging with Science and Technology in Contemporary Europe. *Minerva*, 44(2), 167–184.
- Hajer, M. A., & Wagenaar, H. (2003). *Deliberative policy analysis: understanding governance in the network society*. Cambridge University Press.
- Hajer, M.A, & Versteeg, W. (2005). A decade of discourse analysis of environmental politics: Achievements, challenges, perspectives. *Journal of Environmental Policy & Planning*, 7(3), 175–184.
- Hallström Tamm, K., & Boström, M. (2010). *Transnational Multi-Stakeholder Standardization: Organizing Fragile Non-State Authority*. Edward Elgar Pub.
- Haraway, D. J. (1990). *Simians, Cyborgs, and Women: The Reinvention of Nature*. Routledge.
- Henson, S., & Caswell, J. (1999). Food safety regulation: an overview of contemporary issues. *Food Policy*, 24(6), 589–603.

- Hasan, M. R. (2010). From Policy Research to Political Advocacy. *India Quarterly: A Journal of International Affairs*, 66(3), 287 –302.
- Hay, C. (2002). *Political Analysis: A Critical Introduction*. Palgrave Macmillan.
- Hay, C. (2002). *Political Analysis: A Critical Introduction*. Palgrave Macmillan.
- Henson, S., & Caswell, J. (1999). Food safety regulation: an overview of contemporary issues. *Food Policy*, 24(6), 589-603.
- Héritier, A., & Lehmkuhl, D. (2008). The Shadow of Hierarchy and New Modes of Governance. *Journal of Public Policy*, 28(01), 1–17.
- Hisschemöller, M. (2005). 'Participation as Knowledge Production and the Limits of Democracy' in Maasen, S., & Weingart, P. (Eds.). (2005). *Democratization of Expertise?* (Vol. 24). Berlin/Heidelberg: Springer-Verlag: 189–209.
- Holm, L., & Halkier, B. (2009). EU food safety policy: localising contested governance. *European Societies*, 11(4), 473–493.
- Horlick-Jones, T., & B. De Marchi (1995), The crisis of scientific expertise in fin de siècle Europe. *Science and Public Policy*, 22(3): 139–45
- Hunt, S.A., Benford, R.D. and Snow, D.A. (1994) Identity fields in E. Larana, H. Johnston, J. Gusfield (Eds.) in *New social movements: From ideology to identity*. Philadelphia: Temple University Press.
- Ihlen, Ø., & Nitz, M. (2008). Framing Contests in Environmental Disputes: Paying Attention to Media and Cultural Master Frames. *International Journal of Strategic Communication*, 2(1), 1–18.
- Irwin, A. (2001). Constructing the scientific citizen: Science and democracy in the biosciences. *Public Understanding of Science*, 10(1), 1 –18.
- Irwin, A. (2006). The Politics of Talk. *Social Studies of Science*, 36(2), 299 –320.
- Irwin, A (2008). STS Perspectives on Scientific Governance in Hackett, E. J., Amsterdamska, O., Lynch, M. E., Wajcman, J., & Bijker, W. E. (eds). *The Handbook of Science and Technology Studies* (third edition.). The MIT Press: 583–607.
- Jarman, H. (2008) The Other Side of the Coin: Knowledge, NGOs and EU Trade Policy, *Politics*. 28(1): 26–32.
- Jasanoff, S. (1987). Contested Boundaries in Policy-Relevant Science. *Social Studies of Science*, 17(3):195–230.
- Jasanoff, S. (1998). 'Contingent Knowledge: Implications for Implementation and Compliance', in *Engaging Countries* (Ed.) E.Weiss and H. Jacobson. MIT Press.
- Jasanoff, S. (2003). Breaking the Waves in Science Studies. *Social Studies of Science*, 33(3), 389 –400.

- Jasanoff, S. (Ed) (2004) *State of Knowledge: The Co-production of Science and Social Order*. London: Routledge.
- Jasanoff, S. (2005). *Designs on nature: science and democracy in Europe and the United States*. Princeton University Press.
- Jasanoff, S, Colwell R, Dresselhaus S et al. (1997). Conversations with the community: AAAS at the millennium. *Science* 278: 2066–2067.
- Jasanoff, S. & Wynne, B. (1998) 'Science and decision making', in S. Rayner & E. Malone (Eds.), *Human Choice and Climate Change Volume 1: The Societal Framework*. Columbus, OH: Battelle Press: 1–88.
- Johansson, A. (2009). *Biopolitics and reflexivity: a study of GMO policymaking in the European Union* (Doctoral dissertation). Department of Technology and Social Change, Linköping University.
- Keck, M. E., & Sikkink, K. (1998). *Activists Beyond Borders: Advocacy Networks in International Politics*. Cornell University Press.
- Kershen, D. L. (2010). Trade and commerce in improved crops and food: an essay on food security. *New Biotechnology*, 27(5), 623–627.
- Kleine, K. (2009). 'Precaution or Protection of Interests? The implementation difficulties of GMO legislation discussed, in Lelieveldt, H. & Boonen, C. (eds). *From Brussels to Mussels. A comparative perspective on food and public policy*. Rosevelt Academy. Retrieved from http://www.roac.nl/roac/_files/Teacher%20Publications/publications%20herman%20lelieveldt/FromBrusselstoMussels.pdf
- Klintman, M. (2002). The Genetically Modified (GM) Food Labelling Controversy: Ideological and Epistemic Crossovers. *Social Studies of Science*, 32(1), 71–91.
- Klintman, M., & Kronsell, A. (2010). Challenges to Legitimacy in Food Safety Governance? The Case of the European Food Safety Authority (EFSA). *Journal of European Integration*, 32(3), 309–327.
- Kuiper, H.A. (2009). 'The role of scientific experts in risk regulation of foods' in Everson, M., & Vos, E. (Eds.), *Uncertain Risk Regulated*, Routledge: 289–398.
- Kuiper, H. A., & Davies, H. V. (2010). The SAFE FOODS Risk Analysis Framework suitable for GMOs? A case study. *Food Control*, 21(12), 1662–1676.
- Kurzer, P., & Cooper, A. (2007). Consumer Activism, EU Institutions and Global Markets: The Struggle Over Biotech Foods. *Journal of Public Policy*, 27(02), 103–128.
- Lang, T. (2003) Food Industrialization and Food Power: Implications for Food Governance. *Development, Policy Review*, 21(5–6), 555–568.

- Law, J. (1993). *Organizing Modernity: Social Order and Social Theory*. Wiley-Blackwell.
- Lee, M. (2010) 'Multi-level Governance of Genetically Modified organisms in the European Union: Ambiguity and Hierarchy' in Bodiguel, L., & Cardwell, M. (eds). *The Regulation of Genetically Modified Organisms: Comparative Approaches*. Oxford University Press, USA: 101–122.
- Levidow, L. (2001). Precautionary Uncertainty. *Social Studies of Science*, 31(6), 842–874.
- Levidow, L. (2007). European Public Participation as Risk Governance: Enhancing Democratic Accountability for Agbiotech Policy? *East Asian Science, Technology and Society: an International Journal*, 1(1), 19–51.
- Levidow, L., & Boschert, K. (2008). Coexistence or contradiction? GM crops versus alternative agricultures in Europe. *Geoforum*, 39(1), 174–190.
- Levidow, L., & Carr, S. (2010). *GM Food on Trial: Testing European Democracy*. T & F Books US.
- Levidow, L., Murphy, J., & Carr, S. (2007). Recasting Substantial Equivalence: transatlantic governance of GM food, *Science, Technology and Human Values* 32(1): 26–64.
- Lewins, A., & Silver, D. C. (2007). *Using Software in Qualitative Research: A Step-by-Step Guide*. Sage Publications Ltd.
- Lidskog, R. (2008). Scientised citizens and democratised science. Re-assessing the expert-lay divide. *Journal of Risk Research*, 11(1), 69–86.
- Maasen, S., & Weingart, P. (Eds.). (2005). *Democratization of Expertise?* (Vol. 24). Berlin/Heidelberg: Springer-Verlag.
- Majone, G. (1996). *Regulating Europe* (1st ed.). Routledge.
- Mahoney, C. (2008). *Brussels Versus the Beltway: Advocacy in the United States and the European Union*. Georgetown University Press.
- Meadowcroft, J. (2004), 'Deliberative Democracy' in Durant, Robert F., Fiorino, Daniel J. and Rosemary O'Leary (Eds), *Environmental Governance Reconsidered. Challenges, Choices and Opportunities*. Cambridge MA and London: The MIT Press, 183–217.
- Meins, E. (2003). *Politics and public outrage: explaining transatlantic and intra-European diversity of regulations on food irradiation and genetically modified food* (Doctoral dissertation). LIT Verlag Münster.
- Merriam, S.B. (1994). *Fallstudien som forskningsmetod*, Lund: Studentlitteratur.
- Mitchell, P. (2007). Europe's anti-GM stance to presage animal feed shortage? *Nature Biotechnology*. 25. 1065–1066.
- Moran, M., Rein, M., & Goodin, R. E. (2006). *The Oxford Handbook of Public Policy*. Oxford University Press, USA.

- Murphy, J., & Levidow, L. (2006). *Governing the Transatlantic Conflict over Agricultural Biotechnology: Contending Coalitions, Trade Liberalisation and Standard Setting*. Routledge.
- Nowotny H., Scott P., Gibbons M. (2001). *Re-Thinking Science: Knowledge and the public in an age of uncertainty*, Cambridge (UK): Polity Press in association with Blackwell Publishers.
- Oels, A (2006) 'Evaluating Stakeholder Dialogues' in Stollkleemann, S., & Welp, M. (eds). *Stakeholder Dialogues in Natural Resources Management*. Berlin, Heidelberg: Springer Berlin Heidelberg: 117–151.
- Packer, R. (2006). *The Politics of BSE*. Palgrave Macmillan.
- Papadopoulos Y. & Warin P. (2007). Are innovative, participatory and deliberative procedures in policy making democratic and effective? *European Journal of Political Research* 46(4), 445–472.
- Pierre, J., & Peters, B. G. (2000). *Governance, Politics and the State*. Palgrave Macmillan.
- Polletta, F. & Kai Ho, H. (2009) 'Frames and their consequences' in Goodin, R. E., & Tilly, C. (Eds.). *The Oxford handbook of contextual political analysis*. Oxford University Press:187–2003.
- Punch, D. K. F. (2005). *Introduction to Social Research: Quantitative and Qualitative Approaches* (2nd ed.). Sage Publications Ltd.
- Rein, M., & Schön, D. (1996). Frame-critical policy analysis and frame-reflective policy practice. *Knowledge and Policy*, 9(1), 85–104.
- Renn, O. (2008). *Risk Governance: Coping with Uncertainty in a Complex World*. Earthscan.
- Rowe, G., & Frewer, L. J. (2000). Public Participation Methods: A Framework for Evaluation. *Science, Technology & Human Values*, 25(1), 3 –29.
- Sandler, R., & Kay, W. D. (2006). The GMO-Nanotech (Dis)Analogy? *Bulletin of Science, Technology & Society*, 26(1), 57 -62.
- Scharpf, F. W. (1999) *Governing in Europe: Effective and democratic?* Oxford: Oxford University Press.
- Schout, A., & Jordan, A. (2005). Coordinated European Governance: Self-Organizing or Centrally Steered? *Public Administration*, 83(1), 201–220.
- Schön, D. A., & Rein, M. (1994). *Frame Reflection: Toward The Resolution Of Intractable Policy Controversies*. Basic Books.
- Sell, S. K., & Prakash, A. (2004). Using Ideas Strategically: The Contest Between Business and NGO Networks in Intellectual Property Rights. *International Studies Quarterly*, 48(1), 143-175.
- Séralini, G.-E., Cellier, D., & Vendomois, J. S. (2007). New Analysis of a Rat Feeding Study with a Genetically Modified Maize Reveals Signs of

- Hepatorenal Toxicity. *Archives of Environmental Contamination and Toxicology*, 52(4), 596–602.
- Shaffer, G., & Pollack, M.A. 'The EU regulatory system for Gmos' in Everson, M., & Vos, E. (eds). *Uncertain risks regulated*. Routledge: 269–294.
- Silver, I. (1997) Constructing 'Social Change' through Philanthropy: Boundary Framing and the Atriculation of Vocabularies of Motives for Social Movement Participation *Sociological Inquiry*, 67(4), 488–503
- Skogstad, G. (2003). Legitimacy and/or policy effectiveness? Networked governance and GMO regulation in the European union. *Journal of European Public Policy*, 10(3), 321–38.
- Skogstad, G. (2006). 'Regulating food safety risks in the European union: A Comparative Perspective', in Ansell, C., & Vogel, D. (Eds.), *What's the beef? The contested governance of European food safety*. Cambridge: MIT Press: 213–236.
- Snow, D. A., & Benford, R.D. (1988) Ideology, Frame Resonance, and Participant Mobilization, *International Social Movement Research* 1: 197–217.
- Snow, D. A., Rochford, E. B., Worden, S. K., & Benford, R. D. (1986). Frame Alignment Processes, Micromobilization, and Movement Participation. *American Sociological Review*, 51(4), 464–481.
- Soneryd, L. (2009). 'Regulating Coexistence: The Creation of New Discursive Sites for the Battle over GM Crops' in Lidskog, R., Soneryd, L., & Uggla, Y. (Eds). *Transboundary Risk Governance*. EarthScan: 91–109.
- Stirling, A. (2008). 'Opening Up' and 'Closing Down.' *Science, Technology & Human Values*, 33(2), 262–294.
- Stollkleemann, S., & Welp, M. (Eds.). (2006). Stakeholder Dialogues in Natural Resources Management. Berlin, Heidelberg: Springer Berlin Heidelberg.
- Stripple J, (2010), 'Weberian climate policy: Administrative rationality organised as a market' in Bäckstrand, K., Khan, J., Kronsell, A., & Lovbrand, E. (Eds) (2010). *Environmental Politics and Deliberative Democracy: Examining the Promise of New Modes of Governance*. Edward Elgar Pub.
- Tamm Hallström, K. and Boström, M. (2010). *Transnational Multi-Stakeholder Standardization. Organizing Fragile Non-State Authority*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar.
- Tanasescu, I. (2009). *The European Commission and interest groups: towards a deliberative interpretation of stakeholder involvement in EU policy-making*. Asp / Vubpress / Upa.
- Tannen, D. (1993). *Framing in Discourse*. Oxford University Press, USA.

- Tiberghien, Y. (2009). Competitive Governance and the Quest for Legitimacy in the EU: the Battle over the Regulation of GMOs since the mid-1990s. *Journal of European Integration*, 31(3), 389–407.
- Titscher, S., Meyer, M., Wodak, P. R., & Vetter, E. (2000). *Methods of Text and Discourse Analysis*. Sage Publications Ltd.
- Toke, D. (2004). *The politics of GM food: a comparative study of the UK, USA, and EU*. Routledge.
- Triandafyllidou, A. Fotiou, A. (1998). Sustainability and modernity in the European union: a frame theory approach to policymaking. *Sociological Research Online* 3(1): <http://www.socresonline.org.uk/3/1/2.html>
- Trienekens, J., & Zuurbier, P. (2008). Quality and safety standards in the food industry, developments and challenges. *International Journal of Production Economics*, 113(1), 107–122.
- Trojer, L. (2003). Genusforskning inom teknikvetenskapen - en drivbänk för forskningsförändring. Högskoleverket. Retrieved from <http://www.hsv.se/download/18.539a949110f3d5914ec800082636/isbn91-88874-93-1.pdf>
- Turnpenny, J., Nilsson, M., Russel, D., Jordan, A., Hertin, J., & Nykvist, B. (2008). Why is integrating policy assessment so hard? A comparative analysis of the institutional capacities and constraints. *Journal of Environmental Planning and Management*, 51(6), 759–775.
- Van de Kerkhof, M. (2006). Making a difference: On the constraints of consensus building and the relevance of deliberation in stakeholder dialogues. *Policy Sciences*, 39, 279–299.
- Vincent, S. G., & Shriver, T. E. (2009). Framing Contests in Environmental Decision-making: A Case Study of the Tar Creek (Oklahoma) Superfund Site. *American Journal of Environmental Sciences*, 5(2), 164–178.
- Vos, E. (2009). ‘The EU regulatory system on food safety: between trust and safety’ in Everson, M., & Vos, E. (Eds.), *Uncertain Risk Regulated*, Routledge: 249–268
- Vos, E. (2000) EU food safety regulation in the aftermath of the BSE crisis. *Journal of Consumer Policy*, 23(3), 227–55.
- Weimer, M. (2010). Applying precaution in EU authorisation of genetically modified products: challenges and suggestions for reform. *European Law Journal*, 16(5), 624–657.
- Wentholt, M. T. A., Rowe, G., König, A., Marvin, H. J. P., & Frewer, L. J. (2009). The views of key stakeholders on an evolving food risk governance framework: Results from a Delphi study. *Food Policy*, 34(6), 539–548.
- Williams, M. (2009). ‘Feeding the World? Transnational Corporations and the Promotion of Genetically Modified Food, in Clapp, J., & Fuchs, D. (Eds.).

- Corporate Power in Global Agrifood Governance* (1st ed.). The MIT Press:155–186.
- Wynne, B. (1992). Misunderstood misunderstanding: social identities and public uptake of science. *Public Understanding of Science*, 1(3), 281–304.
- Wynne, B. (2003). Seasick on the Third Wave? Subverting the Hegemony of Propositionalism: Response to Collins & Evans (2002). *Social Studies of Science*, 33(3), 401–417.
- Wynne B. et al. (2001) 'Public Attitudes towards Agricultural Biotechnologies in Europe (PABE)', final report of project with five partners country teams (Spain, Italy, Germany, France, UK), funded by DG-Research, Brussels. Centre for the Study of Environmental Change (CSEC), Lancaster University,
http://www.lancs.ac.uk/fss/projects/ieppp/pabe/docs/pabe_finalreport.doc
- Yakova, I. (2005–2006). Czech Republic, 'Europe' and its farmers: How is agricultural interest intermediation affected by accession to the EU. *European Political economy Review*. 2(2):112–142.
- Yanow, D. (2003) 'Accessing local knowledge', in Hajer & Wagenaar (eds). *Deliberative Public Policy Analysis – Understanding Governance in the Network Society*, Cambridge University Press, UK: 228–246.
- Yearley, S. (2000). Making systematic sense of public discontents with expert knowledge: two analytical approaches and a case study. *Public Understanding of Science*, 9(2), 105–122.
- Zoch, L. M., Collins, E. L., Sisco, H. F., & Supa, D. H. (2008). Empowering the activist: Using framing devices on activist organizations' web sites. *Public Relations Review*, 34(4), 351–358.

European Union sources

- Bourzai, B., Hassi, S., Wojciechowski, J., Graefe zu Baringdorf, F.W., Aita, V., Olajos, P., Hegyi, G., & Lavarra, V. (2008). *EU GMO legislation and animal feed imports to the EU* [MEP letter to President of the European Commission]. Retrieved from http://www.foeeurope.org/GMOs/animal_feed/MEPletter_to_Commission_on_zero_tolerance_25June08.pdf (accessed 5 March, 2010).
- Coen, D. (2007). *Lobbying in the European Union*. European Parliament briefing paper. PE 393.266. Retrieved from http://www.eurosfair.pr.fr/7pc/doc/1211469722_lobbying_eu.pdf
- Council of Ministers (2008). Council Conclusions on Genetically Modified Organisms (GMOs). 16882/08 Retrieved from <http://register.consilium.europa.eu/pdf/en/08/st16/st16882.en08.pdf>
- DG AGRI (2007). *Economic Impact of Unapproved GMOs on EU Feed Imports and Livestock Production*. Retrieved from http://ec.europa.eu/agriculture/envir/gmo/economic_impactGMOs_en.pdf
- DG SANCO (n.d.a). *Policy options regarding the issue of low level presence of non approved GMOs in feed and foodstuffs*. Document obtained by FoE. Retrieved from http://www.foeeurope.org/GMOs/animal_feed/zero_tolerance_DG_Sanco_draft_technical_solution.pdf (accessed 4 April, 2010).
- DG SANCO (n.d.b). *Evaluation of the EU legislative framework in the field of GM food and feed*. Directorate E – Safety of the food chain. E 1 – Biotechnology and plant health.
- DG SANCO (2007a). *Healthy Democracy. Conclusions and Actions following the DG SANCO 2006 Peer Review Group on Stakeholder Involvement*. Retrieved from http://ec.europa.eu/health/archive/ph_overview/documents/stakeholders_en.pdf (accessed 20 September, 2008).
- DG SANCO (2007b). *Stakeholder Involvement Event*. Retrieved from http://ec.europa.eu/dgs/health_consumer/stakeholders/stakeholder_involvement_report.pdf (accessed 20 September, 2008).
- DG SANCO (2008a). *Future challenges paper: 2009–2014*. Retrieved from http://ec.europa.eu/dgs/health_consumer/future_challenges/future_challenges_paper.pdf (accessed 20 September, 2008).

- DG SANCO (2008b). *DG SANCO Stakeholder Dialogue Group webpage*. http://ec.europa.eu/dgs/health_consumer/sdg/index_en.htm (accessed 10 February, 2009).
- DG SANCO (2008c). *Advisory Group*. Retrieved from http://ec.europa.eu/food/committees/advisory/index_en.htm (accessed 20 March, 2009).
- DG SANCO (2008d). *Draft summary report of the Working Group of the Advisory Group on the Food Chain and Animal and Plant Health. On technical solution for asynchronous authorization of GMOs in the feed sector*. Document obtained via FEFAC. Retrieved from <http://www.fefac.org/file.pdf?FileID=19158&CacheMode=Fresh> (accessed 20 March, 2009).
- DG SANCO (2009). *Progress report on DG Health & Consumers'. Healthy Democracy Process*. Retrieved from http://ec.europa.eu/dgs/health_consumer/sdg/docs/HD_Progress_Report_Feb2009.pdf
- DG SANCO (2010a). *Nutrition and physical activity*. Retrieved from http://ec.europa.eu/health/nutrition_physical_activity/key_documents/index_en.htm
- DG SANCO (2010b). *GMOs in a nutshell*. Retrieved from http://ec.europa.eu/food/food/biotechnology/qanda/f1_en.htm#f
- DG SANCO (2011a). *Rules on GMOs in the EU – Ban on GMOs cultivation*. Retrieved from http://ec.europa.eu/food/food/biotechnology/gmo_ban_cultivation_en.htm
- DG SANCO (2011b). *Comitology Planner*. Retrieved from http://ec.europa.eu/dgs/health_consumer/dgs_consultations/comitology_planner_en.htm
- DG SANCO (2011c). *Nanotechnology*. Retrieved from http://ec.europa.eu/health/nanotechnology/policy/index_en.htm
- EC (n.d.). *Conclusions of the Chair – (of Barroso's Sherpa group)*. n.p. Document obtained by FoE. Retrieved from http://www.foeurope.org/GMOs/sherpas/Sherpa_meeting_17july_conclusions.pdf (accessed 10 January, 2010).
- EC (2000). White Paper on Food Safety. COM (1999) 719 final. January 12. Retrieved from http://ec.europa.eu/dgs/health_consumer/library/pub/pub06_en.pdf
- EC (2001a). White Paper on European Governance. COM (2001) 428 final. July 25. Retrieved from http://eur-lex.europa.eu/LexUriServ/site/en/com/2001/com2001_0428en01.pdf

- EC (2001b). Directive 2001/18EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organism and repealing Council Directive 90/220/EEC. *Official Journal of the European Communities*, L106. 1–39.
- EC (2002a). Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. *Official Journal of the European Communities*, L31, 1–24.
- EC (2002b). Communication on the collection and use of expertise: principles and guidelines COM (2002) 713 final. December 11. Retrieved from http://ec.europa.eu/governance/docs/comm_expertise_en.pdf
- EC (2002c). Communication from the Commission. Consultation document: Towards a reinforced culture of consultation and dialogue – Proposal for general principles and minimum standards for consultation of interested parties by the Commission. COM (2002) 277 final. June 5. Retrieved from <http://www.thecre.com/eu-oira/pdf/propose.pdf>
- EC (2003a). Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed. *Official Journal of the European Communities*, L268, 1–23. Retrieved from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0126:0128:EN:PDF>
- EC (2003b). Regulation (EC) no 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18EC. *Official Journal of the European Communities*, L268, 24–28.
- EC (2004a). Commission Decision of 6 August 2004 concerning the creation of an advisory group on the food chain and animal and plant health. *Official Journal of the European Communities*, L275/17, 1–3. Retrieved from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:275:0017:0019:EN:PDF>
- EC (2004b). Communication from the Commission concerning the creation of an advisory group on the food chain and animal and plant health and the establishment of a consultation procedure on the food chain and animal and plant health through representative European bodies. Retrieved from http://ec.europa.eu/food/committees/advisory/sanco_01678-01-00_en.pdf

- EC (2010). *European Commission, Comitology Register*. Retrieved from <http://ec.europa.eu/transparency/regcomitology/index.cfm?do=FAQ.FAQ>
- EC (2011). Commission Decision on the members of the advisory group on the food chain and animal and plant health of 14 April 2011 Official Journal of the European Communities, L101/126, 1–3. Retrieved from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:101:0126:0128:EN:PDF>
- EFSA (n.d.) *List of members*. Retrieved from <http://www.efsa.europa.eu/en/membership/docs/cpmembers.pdf> (accessed 5 January, 2009).
- EFSA (2008a). *EFSA Management Board*. Retrieved from <http://www.efsa.europa.eu/en/efsawho/mb.htm> (accessed 5 January, 2009).
- EFSA (2008b). *Stakeholder initiatives*. Retrieved from <http://www.efsa.europa.eu/en/networks/stakeholders.htm> (accessed 5 January, 2009).
- EFSA (2009a). *Calls and consultations*. Retrieved from <http://www.efsa.europa.eu/en/calls.htm> (accessed 5 January, 2009).
- EFSA (2009b). *EFSA and GMO risk assessment for human and animal health and the environment. EFSA meeting summary report*, 14–15 September 2009, Brussels, Belgium. Retrieved from <http://www.efsa.europa.eu/fr/scpublications/publication/gmo090914p1.pdf>
- EFSA (2009c). *EU Risk Assessment of GMOs Roles of EFSA, Member States and European Commission* [Powerpoint slides]. Retrieve from <http://www.efsa.europa.eu/en/events/documents/gmo090914-p1.pdf> (accessed 15 February, 2009).
- EFSA (2009d). *EFSA actions on Council of the European Union conclusions on Genetically Modified Organisms*. Retrieved from <http://www.efsa.europa.eu/en/gmotopics/docs/gmoefsaactions.pdf> (accessed 5 January, 2009).
- EFSA (2010a). *Annual Colloquium*. Retrieved from <http://www.efsa.europa.eu/en/stakeholders/colloque.htm>
- EFSA (2010b). *Scientific colloquium on emerging risk in food: From identification to communication*. Summary report from the 15th meeting in the EFSA Scientific Colloquium Series. Retrieved from http://www.eurosfair.pr.fr/7pc/doc/1303283641_tmad11015enc_002.pdf
- EFSA (2010c). *EU Risk Assessment of GMOs. Role of EFSA* [Powerpoint slides]. Retrieved from

- <http://www.bruxelles.enea.it/Eventi/GMORES2010/BergmanEFSA.pdf>
(accessed 10 June, 2010).
- EFSA (2010d). *The Reflection Paper on the engagement of stakeholders on EFSA's activities* [Powerpoint slides]. Retrieved from <http://www.efsa.europa.eu/en/events/documents/stakeholder101209-p05.pdf> (accessed 5 January, 2011).
- EFSA (2010e). Stakeholder consultative platform: Terms of reference. Retrieved from <http://www.efsa.europa.eu/en/consultativeplatform/docs/cptor.pdf> (accessed 15 January, 2010).
- EFSA (2010f). *EFSA Meeting with non-governmental organizations on genetically modified organisms (GMOs)*. Draft Agenda. Retrieved from <http://www.efsa.europa.eu/en/events/event/gmo100929-a.pdf> (accessed 19 November, 2010).
- EFSA (2011). EFSA stakeholder consultative workshop on the draft guidance on selection of comparators for the risk assessment of GM plants [Audiovisual]. Retrieved from <http://www.flyonthewall.com/FlyBroadcast/efsa.europa.eu/StakeholdersMeeting0311/index.php?language=english&stream=wmv> (accessed 10 June, 2011).
- Europa (2006). *Experts gather in Vienna to discuss co-existence of genetically-modified crops with conventional and organic farming* [Press release]. Retrieved from <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/06/427> (accessed 8 February, 2010).
- Europa (2007). *Peter Mandelson. European Biotechnology Info Day* [Press release]. Retrieved from <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/07/397&format=HTML&aged=0&language=EN&guiLanguage=en> (accessed 7 June, 2011).
- Europa (2010a). *Questions and Answers on Genetically Modified Organisms (GMO's)*. [Press release]. Retrieved from <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/58&format=HTML&aged=0&language=EN&guiLanguage=en> (accessed 15 June, 2011).
- Europa (2010b). *Commission announces upcoming proposal on choice for Member States to cultivate or not GMO's and approves 5 decisions on GMO's* [Press release]. Retrieved from <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/222&format=HTML&aged=0&language=EN&guiLanguage=en> (accessed 5 July, 2011).
- Europa (2011a). *Questions and answers on the low level presence (LLP) of GMOs in feed imports*, Retrieved from

- <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/11/451&format=HTML&aged=0&language=EN&guiLanguage=en>
- Europa (2011b). *GMOs: Commission publishes report on socio-economic aspects of GMO cultivation in Europe* [Press release]. Retrieved from <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/477> (accessed 2 July, 2011).
- Europa (2011c). *Statistics for the Transparency Register*. Retrieved from <http://ec.europa.eu/transparencyregister/public/consultation/statistics.do?action=prepareView> (accessed 20 August, 2011).
- Fischer Boel, M. (2009). *GMOs: letting the voice of science speak. Speech presented at European Policy Centre, Brussels*. Retrieved from <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/09/474&format=PDF&aged=0&language=EN> (accessed 8 June, 2011).
- JRC (2008). *Scientific and technical contribution to the development of an overall health strategy in the area of GMOs*. Contract CT 30249. Retrieved from http://ec.europa.eu/dgs/jrc/downloads/jrc_20080910_gmo_study_en.pdf
- JRC/IPTS Workshop in Seville (2008, November). Global commercial pipeline of new GM Crops.
- Lehmann, W. (2003). *Lobbying in the European Union: Current Rules and Practices*. European Parliament Working Paper. Constitutional Affairs Series. AFCE 104 EN. Retrieved from http://ec.europa.eu/civil_society/interest_groups/docs/workingdocparl.pdf
- Stein, J.A., & Rodríguez-Cerezo, E. (2009). *The global pipeline of new GM crops. Implications of asynchronous approval for international trade*. JRC & IPTS Report. EUR 23846 EN. Retrieved from <http://ftp.jrc.es/EURdoc/JRC51799.pdf>

Interviews¹⁰⁸

- Andersson, H. C. Member of the EFSA GMO Panel and toxicologist at the Swedish National Food Administration. *Uppsala 9 January 2009.*
- Babuscio, T. Secretary General at the European cereals, rice, feedstuffs, oilseeds, olive oil, oils and fats and agrosupply trade (COCERAL), Brussels. *Brussels 18 February 2011.*
- Capodiecì, L. G. Food Policy Adviser at the European Livestock and Meat Trading Union (UECBV), Brussels. *Brussels 17 February 2011.*
- Cnudde, F. Senior Manager, Green Biotechnology Europe, The European Association for Bioindustries (EuropaBio), Brussels. *Brussels 17 February 2011.*
- DeCroos, M. Assistant on Food Policy & Consumer, Internal Market & Consumer Affairs and Fiscal Affairs. The Retail, Wholesale and International Trade Representation to the EU (EuroCommerce), Brussels. *Brussels 4 May 2009.*
- DG SANCO, European Commission, Unit 03 - Science and stakeholder relations, *Brussels. 5 May 2009.*
- DG SANCO, European Commission, Unit 03 - Science and stakeholder relations, Brussels. *Brussels 5 May 2009.*
- DG SANCO, European Commission, E1 – Biotechnology, Brussels. *Brussels 16 February 2011.*
- Döring, A. Secretary General of The European Feed Manufacturers' Federation (FEFAC), Brussels. *Brussels 14 February 2011.*
- Eklöf, S. Administrator at the Swedish Board of Agriculture, Crop Production Department, Jönköping. *Jönköping 23 January 2009.*
- Feller, Roxane. Senior Policy Adviser, The united voice of farmers and their co-operatives in the European Union (COPA-COGECA). *Brussels 8 May 2009.*

¹⁰⁸ Positions noted are the ones held at the time the interviews were conducted.

- Foldal, S. Senior Officer at the Swedish National Food Administration, the Secretariat, Uppsala. Participant in the Healthy Democracy Process. *Uppsala 9 January 2009.*
- Greenpeace, GMO Policy Officer, Greenpeace European Unit. *Brussels 16 February 2011.*
- Henriksson, J. International secretary at the Swedish Consumer Association (Sveriges Konsumenter), Stockholm. *Stockholm 24 February 2009.*
- Ingerstam, B. President of The Swedish Consumer Coalition (Sveriges Konsumenter i Samverkan), Stockholm. *Telephone interview, 5 February 2009.*
- Karlsson, M. President of the Swedish Society for Nature Conservation (Naturskyddsföreningen) and President of the European Environmental Bureau (EEB). *Stockholm 10 January 2009.*
- Kettlitz, B. Director of Food Policy Science and R&D, Confederation of the Food and Drink Industries of the EU (CIAA), Brussels. *Brussels 5 May 2009 (1) and 15 February 2011 (2).*
- Kurowska, Z. Chief Government Inspector at the Swedish National Food Administration, Uppsala. *Uppsala 9 January 2009.*
- Lund, B. Swedish National Food Administration, Food Standards Department, Uppsala. *Uppsala, January 2009.*
- Martin, C. Policy Advisor, Food, Health, Environment and Safety Department, The European Consumers' Organisation (BEUC), Brussels. *Brussels 15 February 2011.*
- McCaughy, K. Campaign manager at Swedish Greenpeace (Greenpeace), Stockholm. *Stockholm 7 January 2009.*
- Moll, N. Director Green Biotechnology Europe, The European Association for Bioindustries (EuropaBio), Brussels. *Brussels 8 May 2009.*
- Pellegrino, P. Senior Adviser on Internal Market/Consumer and Fiscal Affairs, The Retail, Wholesale and International Trade Representation to the EU (EuroCommerce), Brussels. *Brussels 4 May 2009.*
- Petit, A. Director of Commodities and Trade, The united voice of farmers and their co-operatives in the European Union (COPA-COGECA). *Brussels 16 February 2011.*
- Ström, H. Administrator at the Swedish Board of Agriculture, Crop Production Department, Jönköping. *Jönköping 23 January 2009.*

- Veale, R. Head of the Department, Food, Health, Environment and Safety Department, The European Consumers' Organisation (BEUC), Brussels. *Brussels 15 February 2011.*
- Vetier, M. EU GMO Policy Officer, Greenpeace European Unit (Greenpeace). *Brussels 7 May 2009.*
- von Essen, G. Secretary General at the European Seed Association (ESA), Brussels. *Brussels 16 February 2011.*

News media

- Austria criticises EFSA on GMO bias. (2007, June 29). EurActiv, Retrieved from <http://www.euractiv.com/en/food/austria-criticises-efsa-gmo-bias/article-153305>
- Austria pushes for GMO opt-out clause. (2009, July 15). Checkbiotech, Retrieved from <http://checkbiotech.org/node/26674>
- Benson, J. (2011, February 5). EU Commission tries to destroy zero tolerance policy for GMO food contamination. NaturalNews, Retrieved from http://www.naturalnews.com/031224_GMOs_contamination.html
- Coghlan, A. (2010, January 29). Genetically modified seeds 'are everywhere'. New Scientist, Retrieved from <http://www.newscientist.com/article/mg20527453.800-genetically-modified-seeds-are-everywhere.html>
- COPA-COGECA Concerned over EU GM Proposal (2010, July 15). The CropSite, Retrieved from <http://www.thecropsite.com/news/6402/copacogeca-concerned-over-eu-gm-proposal>
- Dalli to take responsibility for biotech in new Commission (2009, December 7). AgBiotech Reporter. Retrieved from http://www.agrow.com/multimedia/archive/00088/ABR-v2-n23_88082a.pdf
- Dunn, J. (2010, July 7). EFSA invites NGOs to discuss welcomed draft GMO Environmental Risk Assessment Guidelines. AFN Thought for Food, Retrieved from

- <http://www.ausfoodnews.com.au/2010/07/07/efsa-invites-ngos-to-discuss-welcomed-draft-gmo-environmental-risk-assessment-guidelines.html>
- Etty, T.F.M. (2010). Brussels Cunningly Paves the Way for Genetically Modified Crops. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1725440
- EU experts approve trace of GM in feed imports: Official (2011, February 23). EurActiv, Retrieved from <http://www.euractiv.com/en/cap/eu-experts-approve-trace-gm-feed-imports-official-news-502442>
- EU GMO proposals draw widespread criticism (2010, July 16). EurActiv, Retrieved from <http://www.euractiv.com/en/cap/eu-countries-get-more-leeway-gmos-news-496263>
- GMOs: We shouldn't mix the precautionary principle and public perception (2007, October 30). EurActiv, Retrieved from <http://www.euractiv.com/en/cap/gmos-shouldn-mix-precautionary-principle-public-perception/article-168021>
- GMO zero tolerance devastating for EU feed industry (2007, July 19). AllAboutFeed. Retrieved from <http://www.allaboutfeed.net/news/gmo-zero-tolerance-devastating-for-eu-feed-industry-id921.html>
- Holland, N. (2011, July 4). Food safety panel members 'update' declarations of interest – admitting industry ties. Corporate Europe Observatory, Retrieved from <http://www.corporateeurope.org/agribusiness/news/2011/07/04/food-safety-panel-admits-industry-ties>
- Marsden, R. (2011, July 5). MEPs vote to nationalise GM crop production. The Parliament, Retrieved from <http://www.theparliament.com/latest-news/article/newsarticle/meps-vote-to-nationalise-gm-crop-production/>
- Moran, N. (2011, July 7). GM crops opt-out will make Europe a science museum. Science/Business, Retrieved from <http://www.sciencebusiness.net/news/75239/GM-crops-opt-out-will-make-Europe-a-science-museum>
- O'Donnel, P. & Rankin, J. (2008, June 26). Barroso lacks sherpas for GM escape route. EuropeanVoice, Retrieved from <http://www.europeanvoice.com/article/imported/barroso-lacks-sherpas-for-gm-escape-route/61370.aspx>
- O'Donnel, P. (2008, August 28). 'Industry is held hostage by some member states'. EuropeanVoice, Retrieved from

- http://www.europabio.org/documents/EuropeanVoice_Willy%20De%20Greef280808.pdf
- Roseboro, K. (2006, September). From GMO to Nano: A Familiar Debate over A New Technology. The Organic & Non-GMO Report. Retrieved from http://www.organicconsumers.org/articles/article_1946.cfm
- Shut down EFSA GMO panel. (2008, November 3). GMWatch, Retrieved from <http://www.gmwatch.org/latest-listing/1-news-items/3224-shut-down-efsa-gmo-panel>

Stakeholder documents

- Blue, E. N. (2008). *Risky Business*. Greenpeace report. Retrieved from <http://www.greenpeace.org/raw/content/international/press/reports/risky-business.pdf>
- CEN/ENEA Workshop (2010, March). *GMO Asynchronous and Asymmetric approvals: bringing lasting solutions to identified problems*. Retrieved from <http://www.bruxelles.enea.it/Eventi/GMO180310/Programma180310.pdf>
- CIAA (2007). *Review of CIAA priorities and objectives for better regulation. In the light of the Commission proposals to simplify EU legislation*. CPT/003/07E-Final. Retrieved from http://www.ciaa.eu/documents/positions/CIAA_review_BR_Comm_A_P.pdf
- CIAA (2008). *Policy recommendations. Input into the High Level Group on the Competitiveness of the Agro-food Industry*. Retrieved from http://www.ciaa.be/documents/brochures/CPT00209E_Annex1.pdf
- COCERAL at the CEN/ENEA Workshop in Brussels (2010). *The Bulk Commodity Handling System and the EU's Dependency on Imports of Agricultural Raw Materials* [Powerpoint slides].
- COCERAL, EuropaBio, FEFAC & FEDIOL. (2007a). *Reference and key message document. Commission report 'Economic Impact of Unapproved*

- GMOs on EU feed imports and livestock production* [Position paper]. Retrieved from <http://www.fefac.org/file.pdf?FileID=7762> (accessed 5 January, 2010).
- COCERAL, EuropaBio, FEFAC & FEDIOL (2007b). *Commission report 'Economic Impact of Unapproved GMOs on EU feed imports and livestock production* [Position paper]. Retrieved from <http://www.fefac.org/file.pdf?FileID=7762> (accessed 5 January, 2010).
- COCERAL, UECBV & FEFAC (2008). *Concern over viability of EU livestock sector* [Press release]. Retrieved from http://www.ifif.org/files/08_PR_16_E.pdf (accessed 5 January, 2010).
- COCERAL, FEDIOL & FEFAC (2008). *Zero tolerance regime for unauthorized GMOs and economic consequences thereof* [Letter to Committee on Agriculture and Rural Development]. Retrieved from <http://www.fefac.org/file.pdf?FileID=13760> (accessed 5 January, 2010).
- COCERAL, FEDIOL, FEFAC & COPA-COGECA (2009). *Food and feed market crisis looms larger than ever as ministers avoid soy import problem again* [Press release]. Retrieved from <http://www.fefac.org/file.pdf?FileID=22883> (accessed 5 January, 2010).
- COCERAL, FERM, COPA-COGECA, FEDIOL, EFM, UECBV, AVEC, CIAA & FEFAC (2009). *Dear President* [Letter to President of the European Commission]. Retrieved from <http://www.ask-force.org/web/Feed/Letter-big-Producers-Tolerance-Value-Barroso-20090624.pdf> (accessed 5 January, 2010).
- COCERAL, FEFAC, FEDIOL, FERM, CIAA & COPA-COGECA at CEN/ENEA in Brussels (2010). *The view from EU industry stakeholders: Implications of EU GM Approval System on the EU's Food & Feed Chain*. [Powerpoint slides]. Retrieved from <http://www.bruxelles.enea.it/Eventi/GMORES2010/BabuscioEUPart1.pdf> (accessed 5 January, 2010).
- COPA-COGECA at the CEN/ENEA Workshop in Brussels (2010a). *The view from EU industry stakeholders: Implications of EU GM Approval System on the EU's Food & Feed Chain* [Powerpoint slides].
- COPA-COGECA (2010). *COPA-COGECA voice concerns about new EU commission proposal to introduce national authorisation on GM cultivation* [Press release]. Retrieved from www.copa-

- cogeca.be/Download.ashx?ID=662790&fmt=pdf (accessed 10 March, 2011).
- COPA-COGECA (2011a). *The united voice of farmers and their cooperatives in the European Union* [Powerpoint slides]. Retrieved from http://ec.europa.eu/food/animal/diseases/strategy/docs/copa_cogeca_en.pdf (accessed 7 June, 2011).
- COPA-COGECA (2011b). *COPA-COGECA urges member states to find solution to low level presence of GMOs not yet authorized in feed, otherwise more EU farmers out of business* [Press release]. Retrieved from www.copa-cogeca.be/Download.ashx?ID=736987&fmt=pdf (accessed 7 June, 2011).
- CPE, FoE & Greenpeace (2008). *EU animal feed imports and GMO policy* [Position paper]. Retrieved from <http://www.greenpeace.org/raw/content/eu-unit/press-centre/policy-papers-briefings/eu-animal-feed-imports-and-gmo-policy.pdf> (accessed 10 January, 2009).
- CPE, EEB, FoE, GMO-Free Ireland, Greenpeace, EuroCoop, IFOAM & SoS (2008). *Zero tolerance regime for unauthorised GMOs and economic consequences thereof* [Letter to MEP]. Retrieved from http://www.foeeurope.org/GMOs/animal_feed/Ltr_animal%20feed_EP_questions_FINAL.pdf (accessed 10 January, 2009).
- Corporate Europe Observatory (2011). *Animal Feed Industry's attempt to [no full title due to hacking of database]* Retrieved from http://www.corporateeurope.org/system/files/files/article/FEFAC_article.pdf
- EUFIC (2010). *4th Anniversary of the EU Platform for Action on Diet, Physical Activity & Health* [Audio podcast]. Retrieved from <http://www.eufic.org/page/en/page/MEDIACENTRE/podid/4th-Anniversary-of-the-EU-Platform/> (accessed 8 April, 2010).
- ESA (2008). *European Commission's orientation debate on GMOs confirms existing rules and procedures – but fails to show leadership on the future policy* [Press release]. Retrieved from http://www.euroseeds.org/archive/PP2008/ESA_08.0308.pdf (accessed 10 January, 2009).
- ESA & EuropaBio (2007). *Adventitious presence, bringing clarity to confusion* [Position paper]. Retrieved from

- http://www.europabio.org/positions/GBE/AP%20seed_260307.pdf
(accessed 10 January, 2009).
- EuropaBio (2006a). *Re: The EU's approval process for biotechnology derived crops* [Position paper]. Retrieved from <http://www.europabio.org/positions/ToBarroso040406.pdf> (accessed 10 January, 2009).
- EuropaBio (2006b). *Member States should focus on implementing the existing Community process, a process that they helped put in place* [Position paper]. Retrieved from http://www.europabio.org/articles/Press%20statement_Env%20Council%20GM%20debate_March%202006_060309.doc (accessed 10 January, 2009).
- EuropaBio (2008a). *Biotech food is safe: is anyone going to tell the consumer?* [Press release]. Retrieved from http://www.europabio.org/articles/GBE/press%20release_biotech%20food%20is%20safe_is%20anyone%20going%20to%20tell%20the%20consumer_100908.pdf (accessed 10 January, 2010).
- EuropaBio (2008b). *Farm animals say yes to low level presence of GM* [Position paper]. Retrieved from <http://www.europabio.org/positions/GBE/LLPfactsheet%20Feb-2008.pdf> (accessed 10 January, 2010).
- EuropaBio (2008c). *Brussels day* [Position paper]. Retrieved from http://www.europabio.org/positions/BrusselsDay/LLP_2008.pdf (accessed 10 January, 2009).
- EuropaBio (2008d). *Presentations at the workshop on GMO pipeline, JRC, Seville*. Retrieved from http://www.europabio.org/europabio_jrcnov08.htm (accessed 10 January, 2010).
- EuropaBio (2009a). *Green biotech manifesto* [Position paper]. Retrieved from http://www.europabio.org/positions/GBE/PP_0906XX_GBE_Manifesto_2009.PDF (accessed 20 January, 2010).
- EuropaBio (2009b). *Why make tough laws on GMOs and then break them?* [Position paper]. Retrieved from http://www.europabio.org/PressReleases/green/090302_why_make_though_laws_GMO_then_break.pdf (accessed 20 January, 2010).

- EuropaBio (2010a). *Greenpeace briefing* [Position paper]. Retrieved from <http://www.europabio.org/positions/GBE/Genepeace%20Flyer%20-%20Blurring%20the%20lines%20between%20Facts%20and%20Fiction.pdf> (accessed 8 June, 2010).
- EuropaBio (2010b). *Comments on the DG SANCO Report Identifying Future Challenges 2009-2014* [Position paper]. Retrieved from http://ec.europa.eu/dgs/health_consumer/future_challenges/docs/EuropaBio.pdf (accessed 7 April, 2010).
- EuropaBio (2011). *What is Agricultural Biotech?*. Retrieved from http://www.europabio.org/green_biotech/GBE_about.htm
- FEFAC (2008a). *Asynchronous authorizations of GMOs* [Position paper]. Retrieved from <http://www.fefac.org/file.pdf?FileID=15060> (accessed 17 January, 2010).
- FEFAC (2008b). *Asynchronous authorizations Q&As* [Position paper]. Retrieved from <http://www.fefac.org/file.pdf?FileID=15061> (accessed 17 January, 2010).
- FEFAC (2008c). *News of the Feed & Food Chain* [Newsletter]. Retrieved from <http://www.fefac.org/file.pdf?FileID=14929> (accessed 17 January, 2010).
- FEFAC (2009). *Feed & Food. Statistical Yearbook 2009*. Retrieved from <http://www.fefac.org/file.pdf?FileID=32696> (accessed 17 January, 2010).
- FEFAC at the CEN/ENEA Workshop in Brussels (2010). *The view from EU industry stakeholders: Implications of EU GM Approval System on the EU's Food & Feed Chain* [Powerpoint slides].
- FoE (2006). *Food Standard Agency faces legal challenge over GM-contaminated rice* [Press release]. Retrieved from http://www.foe.co.uk/resource/press_releases/food_standard_agency_faces_18092006.html (accessed 25 January, 2010).
- FoE (2007a). *GMO approval procedure and zero tolerance regime and the economic consequences thereof* [Media briefing]. Retrieved from http://www.foeeurope.org/GMOs/2007/FoEE_GMO_Livestock_171207.pdf (accessed 25 January, 2010).
- FoE (2007b). *Too close for comfort. The relationship between the biotech industry and the European Commission*. FoE report. Retrieved from

- <http://www.foeeurope.org/corporates/pdf/too-close-for-comfort.pdf> (accessed 25 January, 2010).
- FoE (2007c). *The rise in animal feed prices and potential impacts in the EU. Causes and links to GMO policy* [Position paper]. Retrieved from http://www.foeeurope.org/GMOs/animal_feed/GMO_Livestock_briefing.pdf (accessed 25 January, 2010).
- FoE (2008a). *Analysis. DG Agriculture's report 'Economic Impact of unapproved GMOs on EU feed imports and livestock production'. A commentary by Friends of the Earth Europe*. Retrieved from http://www.foeeurope.org/GMOs/position_papers/Analysis_DG_AGR_report_May2008.pdf (accessed 25 January, 2010).
- FoE (2008b). *Animal feed crisis and EU GMO laws – is there a link?* [Campaigners' briefing]. Retrieved from http://www.foeeurope.org/GMOs/ZERO_TOLERANCE_Campaigner_briefing_FINAL.pdf (accessed 25 January, 2010).
- FoE (2010a). *EU debates GMOs at the highest levels*. Retrieved from http://www.foeeurope.org/GMOs/GMOs_highlevel_discussion.html
- FoE (2010b). *Zero tolerance – acting to prevent widespread GMO contamination*. Retrieved from http://www.foeeurope.org/GMOs/zero_tolerance.html
- FoE (2010c). *No link between animal feed crisis and EU zero tolerance policy* [Position paper]. Retrieved from http://www.foeeurope.org/GMOs/zero_tolerance_paper_2010.pdf (accessed 18 June, 2010).
- FoE (2010d). *GMOs, Food and Farming campaign*. Retrieved from http://www.foeeurope.org/GMOs/GMOs_highlevel_discussion.html
- FoE (2011a). *EU to vote on new GMO contamination rules* [Press release]. Retrieved from http://www.foeeurope.org/press/2011/Feb7_EU_to_vote_new_GMO_contamination_rules.html
- FoE (2011b). *Nanotechnology*. Retrieved from <http://www.foeeurope.org/activities/nanotechnology/index.htm>
- Greenpeace (2006) *The GMO Approval Process in Europe: failures and opportunities* [Powerpoint slides]. Retrieved from http://www.gmo-free-regions.org/fileadmin/files/ws_b5_gall.ppt (accessed 4 February, 2010).

- Greenpeace (2008). *The EU GMO environmental risk assessment needs reforming* [Position paper]. Retrieved from <http://www.greenpeace.org/raw/content/eu-unit/press-centre/policy-papers-briefings/Reform-of-EU-GMO-risk-assessment.pdf> (accessed 4 February, 2010).
- Greenpeace & FoE (2008). *Briefing note on the EU's GMO reform debate* [Position paper]. Retrieved from http://www.foeeurope.org/GP_FoEE_200808_Briefing_Adhoc_GMO_workinggroup_FINAL.pdf (accessed 4 February, 2010).
- Greenpeace, FoE & ECV (2008). *EU's 'zero tolerance' for unapproved GMOs under threat at upcoming Standing Committee*. [Letter for National Ministers and experts attending the Standing Committee on the Food Chain and Animal Health]. Retrieved from http://www.foeeurope.org/GMOs/animal_feed/GP_FoE_CPE_2008_07_Letter_zero_tolerance.pdf (accessed 4 February, 2010).
- Greenpeace, FoE & European Coordination Via Campesina (2008). *Concerns: EU's 'zero tolerance' for unapproved GMOs under threat at upcoming Standing Committee* [Letter to national ministers and experts]. Retrieved from http://www.foeeurope.org/GMOs/animal_feed/GP_FoE_CPE_2008_07_Letter_zero_tolerance.pdf (accessed 4 February, 2010).
- Greenpeace, EuroCoop, IFOAM, SoS, CPE, EEB, FoE, GMO-Free Ireland (2008). *Answer to oral question to European Commission, European plenary session*. Retrieved from http://www.foeeurope.org/GMOs/animal_feed/ANNEX_Ltr_animal%20feed_EP_questions_FINAL.pdf (accessed 4 February, 2010).
- Meyer, H. (2011). *GM plant environmental risk assessment: pros and cons of different approaches* [Powerpoint slides]. ENSSER. Retrieved from <http://www.ensser.org/fileadmin/files/gmo110331-p2.pdf> (accessed 5 May, 2011).
- Then, C. (2011). *Risk assessment of genetically engineered plants 'when no comparator is available'* [Powerpoint slides]. Retrieved from <http://www.efsa.europa.eu/en/gmplants/docs/gmo110331-p16.pdf>.
- Then, C., & Bauer-Panskus, A. (2010). *European Food Safety Authority: A playing field for the biotech industry*. TestBiotech report. Retrieved from http://www.testbiotech.de/sites/default/files/EFSA_Playing_Field_of_ILSI.pdf

- Then, C. & Potthof, C., (2009) *Risk reloaded – risk analysis of genetically engineered plants within the European Union*. TestBiotech report. Retrieved from <http://www.testbiotech.org/en/node/180>
- UECBV (2008). *RE: European Red Meat Market Crisis* [Letter to Mr Markos Kyprianou]. Retrieved from <http://www.uecbv.eu/doc/UECBV-L-020-2008-EN-110208.pdf> (accessed 15 February, 2010).
- UECBV (2009). *RE: GMOs issue/Quick Overview of the General State of Play/Recent progress* [Position paper].

Other sources

- Aramyan, L.H., van Wagenberg, C.P.A., & Backus, G.B.C. (2009). *EU policy on GM soy. Tolerance threshold and asynchronic approval*. LEI Wageningen UR Report 2009-52. Retrieved from <http://edepot.wur.nl/7856>
- Cardy-Brown & Co Ltd (2008). *Impacts of EU Unauthorised GM's on the feed & livestock sectors*. Retrieved from <http://www.fefac.org/file.pdf?FileID=15694&CacheMode=Fresh>
- Codex Alimentarius (2001). *Codex Alimentarius Commission – Procedural manual* (12th ed.). Rome: Codex Alimentarius Commission, Joint FAO/WHO Food Standards Program, Food and Agriculture Organization of the United Nations. Retrieved from <http://www.fao.org/DOCREP/005/Y2200E/y2200e00.htm>
- Food Standards Agency (2011). *Illegal GM rice update*. Retrieved from <http://www.food.gov.uk/news/newsarchive/2006/oct/gmrice>
- GMO Compass (2009). *Gene technology: Zero tolerance for non-authorised plants under discussion*. Retrieved from http://www.gmo-compass.org/eng/news/457.zero_tolerance_non_authorised_gm_plants_under_discussion.html (accessed 5 February, 2009).
- GMO Compass (2011a), *The two laws governing genetically modified plants*, Retrieved from http://www.gmo-compass.org/eng/regulation/regulatory_process/158.two_laws_governing_genetically_modified_plants.html (accessed 13 April, 2011).

- GMO Compass (2011b), *The Long Road to Authorisation*, Retrieved from http://www.gmo-compass.org/eng/regulation/regulatory_process/157.eu_gmo_authorisation_procedures.html (accessed 13 April, 2011).
- GMO Compass (2011c), *Labelling of GMO Products: Freedom of Choice for Consumers*, Retrieved from <http://www.gmo-compass.org/eng/regulation/labelling/> (accessed 13 April, 2011).
- GMO Compass (2011d), Cultivation of GM plants: Rapid increase worldwide, cautious start in Europe, Retrieved from http://www.gmo-compass.org/eng/agri_biotechnology/gmo_planting/
- GMO Safety (2011), *No secrets in safety matters*, Retrieved from <http://www.gmo-safety.eu/archive/246.secrets-safety-matters.html> (accessed 13 April, 2011).
- Graham Brookes GBC Ltd (2008). *Economic impacts of low level presence of not yet approved GMOs on the EU food sector*. Retrieved from <http://www.agrodigital.com/images/estudio.pdf>
- Holland, N. (2004). *Power struggles over biotech in Brussels. Biotech companies, NGOs and EU institutions in unfinished battle over new rules for GM in food and agriculture*. Retrieved from <http://archive.corporateeurope.org/biotechbrussels.pdf>
- Kurowska, Z. *Genetically Modified Organisms (GMO) – the legislative framework*, Lecture presented at the Swedish University of Agricultural Sciences. Ulltuna 8 Februari 2009.
- Nowicki, P. et al. (2010). *Study on the Implications of Asynchronous GMO Approvals for EU Imports of Animal Feed Products*. LEI Wageningen UR Report (Contract No. 30-CE-0317175/00-74). Retrieved from http://ec.europa.eu/agriculture/analysis/external/asynchronous-gmo-approvals/full-text_en.pdf
- The evaluation partnership (2010). *Evaluation of the European platform for action on diet physical activity and health*. Specific contract no 2. Retrieved from http://ec.europa.eu/health/nutrition_physical_activity/docs/evaluation_frep_en.pdf
- Uddenberg, N. (2010). Panel participant at the conference 'Hur stor är risken?', Naturhistoriska Riksmuseet in Stockholm, 16 Mars.
- van Dijk Ingénieurs Conseils with Arcadia International EEIG (2005), *Evaluation of EFSA*, Contract FIN-0105. Retrieved from

http://www.efsa.europa.eu/it/home/publication/final_report_evaluation1.pdf
van der Zeijden, P., & van der Horst, R. (2008). *Self-Regulation Practices in SANCO Policy Areas*. EIM Business & Policy Research. Retrieved from http://ec.europa.eu/dgs/health_consumer/self_regulation/docs/self-reg-SANCO-final.pdf

Websites

BEUC

<http://www.beuc.org/Content/Default.asp>

CELCAA

<http://www.celcaa.eu/>

CIAA

<http://www.ciaa.be/asp/index.asp>

COCERAL

<http://www.coceral.com/cms/beitrag/10010169/227870>

COPA-COGECA

http://www.copa_cogeca.be/Main.aspx?page=HomePage

CPE

<http://www.csa-be.org/spip.php?article333>

DG SANCO

http://ec.europa.eu/dgs/health_consumer/index_en.htm

EEB

<http://www.eeb.org/>

EFSA

<http://www.efsa.europa.eu/>

EuroCoop

<http://www.eurocoop.org/>

EuropaBio

<http://www.europabio.org/>
ECVC
<http://www.eurovia.org/?lang=en>
ESA
<http://www.euroseeds.org/>
EuroCommerce
<http://www.eurocommerce.be/>
FEDIOL
<http://www.fediol.be/site/>
FEFAC
<http://www.fefac.org/>
FoE Europe
<http://www.foeeurope.org/>
Greenpeace EU Unit
<http://www.greenpeace.org/eu-unit/en/>
IFOAM EU-Group
<http://www.ifoam-eu.org/>
LEI Wageningen UR
<http://www.wur.nl/UK/>
UECBV
<http://www.uecbv.eu/en/>