

# Making government more reflexive: The role of Regulatory Impact Assessment

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# Making government more reflexive: The role of Regulatory Impact Assessment

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## **Thesis**

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## Summary

The thesis explores whether and how analytical activities during the policy formulation process - typically referred to as Regulatory Impact Assessment (RIA) - contribute to a reorientation of policy-making towards the goals of sustainable development. During the 1990s and the 2000s, many OECD countries introduced, extended or formalised procedures for RIA. Many of these reforms also stated to aim at giving more regard to sustainability issues. In the political science literature on environmental policy integration, such appraisal procedures have been considered as an important instrument to ensure that environmental effects of new measures play a more prominent role in decision-making processes.

Based on extensive empirical analysis involving a review of all RIA procedures in the EU as well as 59 case studies of individual assessments, the research aims to establish to what extent and under what conditions these procedures contribute to sustainable development in practice.

The research finds that RIA offers opportunities to give more prominence to ecological concerns in sectoral policy-making practice, but also contains a considerable risk that narrow assessment practices contribute to sidelining sustainable development. The research observes not only a large implementation gap, but reveals that even in cases where a substantial RIA is undertaken, the process functions very differently from what has been envisioned both in guidance documents and in the environmental policy integration literature. After analysing the actual roles of assessment knowledge in policy processes, the study concludes that the positivist perspective underlying both theory and practice of policy appraisal is inadequate to account for its political and practical uses.

The thesis then moves on to adopt the more post-positivist perspective of reflexive governance which implies a fundamentally different set of expectations about the uses and effects of policy appraisal. By reinterpreting the empirical material from this theoretical lens, the study finds considerable potential for RIA to serve as a reflexive governance arrangement, but also identifies a number of structural limitations. Five approaches for making RIA more reflexive are identified: focusing on the function of opening up rather than closing down decision-making; increasing participation; defining process rather than material standards; extending the appraisal towards frame reflexivity; and understanding RIA as boundary work. The thesis concludes with the argument that the reflexive governance literature should not only develop and study new government arrangements outside the core institutions of representative democracies, but undertake more efforts to identify opportunities to reshape the working of the classical-modernist institutions in more reflexive ways to foster more integrative and sustainable policy-making/to improve environmental governance.

*“If geologists themselves, rather stolid and serious types, see humanity as a force of the same amplitude as volcanoes or even of plate tectonics, one thing is now certain: we have no hope whatsoever – no more hope in the future than we had in the past – of seeing a definitive distinction between Science and Politics.*

Bruno Latour, *An Inquiry into Modes of Existence*, 2013

*“Governance matters, but so does government.”*

Albert Weale, *Governance, Government and the Pursuit of Sustainability*, 2009

## **1. Introduction**

### **1.1 Background, objectives and research context**

The multiple global and local ecological crises humanity is facing today have raised the stakes of the academic and political discussion on environmental governance. Numerous national and international studies – most prominently the IPCC reports (e.g. IPCC 2014) and the Millennium Ecosystem Assessment (Millennium Ecosystem Assessment 2005) – have highlighted the extent to which human activities are damaging natural resources, thereby undermining vital ecosystem services. Since around the middle of the last century, global socio-economic development – as described by indicators such as population, economic activity, transportation, food production and energy use – has sharply accelerated (Steffen et al. 2015). The risk of crossing ecosystem boundaries with the consequence of abrupt and irreversible environmental changes is increasing. The impact of human activity on planetary ecological systems is now such that geologists are discussing whether we have entered a new geological epoch - the Anthropocene (ibid.). Given the fundamental changes required to steer away from the dynamics of an ever-faster over-exploitation of natural resources and sinks, the environmental crisis is, above all and at its core, a governance challenge (Adger and Jordan 2009). The question how our governance institutions can be re-shaped to be able to break with current crisis dynamics and steer towards pathways which respect environmental limits has become urgent and existential.

The multi-faceted body of academic knowledge which attempts to respond to this challenge from a political science perspective has – depending on context and emphasis – been referred to as environmental or sustainability governance literature (cf. for example Weale et al. 2002, Lafferty 2004, Jänicke and Jörgens 2006, Voß, Bauknecht, et al. 2006, Jordan and Lenschow 2008, Adger and Jordan 2009 to cite just a few major monographs in this area). The majority of contributors to this literature are political scientists from across Europe, especially the UK, Germany and the Netherlands, as well as from North America. Key questions ad-

dressed in this literature are, for example: How can environmental concerns be given more weight in political decision-making across all areas of policy? What institutional frameworks can strengthen long-term and diffuse environmental interests vis-à-vis short-term economic considerations? How can policy and society consciously steer the development of complex socio-technical systems towards less energy and resource intensive pathways? What knowledge is required in policy-making to avoid negative environmental effects and to invent new, sustainable, social and technological solutions? How can robust and legitimate decisions be made in the face of uncertainty about environmental effects? What degree of precaution is reasonable in these circumstances? What is the role of both hierarchical (government) and non-hierarchical (governance) methods and arrangements of decision-making in environmental policy? How can accountability and legitimacy be secured in new modes of governance? This thesis aims to contribute to this literature. It addresses one particular aspect of sustainability governance: the analytical activities during the policy formulation process, typically referred to as 'Regulatory Impact Assessment' (RIA). It aims to understand *whether and how Regulatory Impact Assessment promotes the consideration of environmental and sustainability concerns in policy-making.*

Being written over the course of about twelve years, this thesis describes an academic journey during which both the questions asked and the answers given have evolved. When the first journal article (chapter 2 of the thesis) was published in 2003, there was a general optimism about the ability to reconcile economic, social and environmental requirements by fundamentally transforming approaches to collective decision-making. During the years following the UN Conference on Environment and Development in 1992, numerous policy processes were initiated at global, national and local levels to advance sustainable development and to implement the manifold outputs of the conference, especially the Rio Declaration on Environment and Development and the Agenda 21.

One of the policy principles which played a prominent role in this process – especially in industrialised countries – was environmental policy integration. It was developed to systematically and strategically address the basic challenge formulated almost three decades ago in the seminal report by the World Commission on Environment and Development "Our Common Future": "The mandates of ministries of industry include production targets, while the accompanying pollution is left to ministries of the environment. Electricity boards produce power, while the acid pollution they also produce is left to other bodies to clean up. The present challenge is

to give the central economic and sectoral ministries the responsibilities for the quality of those parts of the human environment affected by their decisions [...]” (World Commission on Environment and Development 1987, p. 11).

The 1990s and 2000s saw a surge in academic publications on environmental policy integration in political science (e.g. Lenschow 1997, Weale 1998, Buller 2002, Jordan 2002, Lafferty and Hovden 2002, Lewanski 2002, Müller 2002, Jacob and Volkery 2004, Jacob, Volkery, et al. 2008) and legal studies (e.g. Calliess 1998, De Sadeleer and Leubusher 2002, Nollkaemper 2002). The main aims of these contributions were to clarify the implications of the principle of environmental policy integration, to assess potentials for its realisation and to evaluate the different measures and strategies taken for its implementation.

The academic literature has developed the concept of environmental policy integration as an essentially prescriptive programme with a supposedly straightforward rationale. The material substance of the principle of environmental policy integration was often taken for granted: Environmental policy integration is understood as the requirement that policy areas such as energy, planning and transport should minimise negative environmental impacts when designing and implementing policy measures. The focus of both theory and practice of environmental policy integration was on procedures to implement the principle in practice (Jordan and Lenschow 1999, p. 31). Environmental policy integration is therefore largely understood as a “procedural principle” (Lenschow 2002, p. 7). The main barrier to implementing environmental policy integration is found in the functionally differentiated bureaucracies with their strong organisational subcultures and their close links to powerful polluter interests (Hey 2002, Lenschow 2002). The environmental policy integration literature typically analyses and prescribes mechanisms that aim to motivate sectoral departments to seriously consider environmental issues. In addition to policy appraisal<sup>1</sup> studied here, these mechanisms include a range of communicative, organisational and procedural instruments (Jacob, Volkery, et al. 2008).

Although environmental policy integration has been a common reference point in environmental thought since the 1970s and has been enshrined in European treaty law since 1987, serious institutional reforms to challenge the dominant pattern of

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<sup>1</sup> In the following, the terms ‘policy appraisal’ and ‘policy assessment’ are used interchangeably. ‘Regulatory Impact Assessment’ (also referred to as Regulatory Impact Analysis, especially in North America) is a specific form of policy appraisal which is integrated into the process of law-making and often formalised through administrative regulations (cf. chapter 3).

'additive' environmental policy making (Jänicke 1992) only spread during the 1990s and early 2000s. During this time, a broad range of mechanisms to promote environmental policy integration were implemented at European Union (EU) and Member State level as well as in many other OECD countries. These have included, for example, the adoption of environmental provisions in constitutions, sectoral<sup>2</sup> environmental strategies, interdepartmental working groups, green cabinets, green budgeting as well as the environmental or integrated RIA procedures studied in this thesis. The most important political initiatives to implement the principle of environmental policy integration at EU level were the inclusion of the principle in the EC Treaty (originally Art. 130r EEC Treaty, today Art. 11 TFEU), the introduction of an integrated procedure for RIA and the so-called Cardiff process (a sectoral reporting and monitoring mechanism which was initiated by the European Council at the Cardiff summit in 1998 and requested individual Council formations to integrate environmental considerations into their various activities).

While a large number of mechanisms and institutions to implement the principle of environmental policy integration had been initiated, the effectiveness of these processes had not been systematically analysed (cf. Jordan and Lenschow 2008, p. 335). A key objective of this thesis is to contribute to an emerging literature evaluating such mechanisms (other contributions are, for example, Lafferty and Hovden 2002, EEA 2005, Jordan and Lenschow 2008) with a focus on RIA. In the environmental policy integration literature, policy appraisal procedures are considered as an important instrument to ensure that environmental effects of new measures become more visible in the policy formulation process (e.g. Russel 2007, Jordan and Lenschow 2008). In the typology of instruments for environmental policy integration (Jacob, Volkery, et al. 2008), policy appraisal is subsumed under the group of procedural instruments, the other groups being communicative and organisational instruments. Jacob et al (2008) argue that procedural instruments such as policy appraisal "can be assumed to be the most immediately consequential for [environmental policy integration] as they affect the substance of policy decisions. They are meant to alter the core procedures for decision-making" (Jacob, Volkery, et al. 2008, p. 28). Significantly, environmental policy integration was not the only driver for the trend towards more structured ex ante policy appraisal. Simultaneously, the research and practice of 'better regulation' also (re-)discovered the in-

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<sup>2</sup> Following the terminology used in EU policy making and in some parts of the literature on environmental policy integration, the terms 'sector' and 'sectoral' are used to designate policy areas other than environmental policy (i.e. energy policy, agricultural policy and so on).

strument of policy appraisal as a way to improve the quality, transparency and efficiency of regulation and sometimes also as a way to reduce regulation (Wilkinson et al. 2005, CEC 2006). The combined impetus of these two distinct agendas certainly broadened the appeal of RIA across the OECD.

This choice of research focus in this thesis was prompted by a surge of institutional activity in this area: During the 1990s and the 2000s, many OECD countries introduced, extended, formalised or reformed procedures for the ex ante analysis of the potential effects of new policies. The most prominent case was the Impact Assessment procedure that was introduced by the European Commission in 2003. To accompany this process, the European Commission funded a range of research projects. Chapters 3, 4 and 5 of this thesis are outputs from three of these studies.<sup>3</sup>

The key interest of the European Commission as a funder – and the initial focus of this research – was to support the design and implementation of European Impact Assessment in practice: How does RIA actually work? What are opportunities for and barriers to improving the evidence base of policy-making through ex ante policy appraisal? What tools and methods are available and can be developed to support RIA? What can the European Commission learn from practice at national level in Europe and beyond? However, the empirical research into RIA quickly raised more fundamental issues as it showed not only a large implementation gap but also a huge mismatch between the ways the assessment procedure was described in formal documents and the ways in which it worked in practice. Therefore, the focus of the research shifted towards attempts at gaining a deeper understanding of processes at the interface between science and policy in the context of RIA: On which conceptions of the relationship between science and policy were RIA procedures based and how did these conceptions affect the design of procedures? Which function was RIA expected to have in the policy process and were there alternative ways of framing this role? How was knowledge produced and used in RIA?

In addressing these questions about the role and use of expertise in policy-making, the study could build on a long tradition of research. It has long been recognised that public administrations have to address very complex problems with limited resources in terms of time, staff and analytical capacity with the effect that a ra-

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<sup>3</sup> “Evaluating Integrated Impact Assessments” (EVIA), Project No. 028889, 6<sup>th</sup> Framework Programme, “Methods and Tools for Integrated Sustainability Assessment” (MATISSE), Project No. 4059, 6<sup>th</sup> Framework Programme and “Indicators and Quantitative Tools for Improving the Process of Sustainability Impact Assessment” (IQ TOOLS), Project No. 502078, 6<sup>th</sup> Framework Programme.

tional-comprehensive approach to decision-making is the exception rather than the norm (Lindblom 1959). Nonetheless, many scholars – especially in North America – have promoted the rational-comprehensive approach and have studied how advanced technical and scientific knowledge can be brought into political decision-making despite these limitations (cf. Hoppe 1999). This line of research emphasises the value of sophisticated quantitative analysis, for example modelling, forecasting, cost-benefit analysis, opinion research and statistical analysis in guiding decision-making and avoiding policy failure. It focuses on how to increase the analytical capacity both inside government and in the non-governmental sector (e.g. Howlett 2009).

Since the self-proclaimed ‘argumentative turn in policy analysis’ (Fischer and Forester 1993) the mainstream, positivist approach to policy analysis has been strongly criticised. The critique is based on several decades of work in sociology, especially the field of science and technology studies, which has emphasised the social embeddedness of all types of knowledge (Latour and Woolgar 1979, Bijker et al. 1987, Woolgar 1988, Barnes et al. 1996, Jasanoff 2004).

The fundamental idea underlying positivism in policy analysis is that “policy interventions should be based on causal laws of society and verified by neutral empirical observation” (cf. Dryzek 1993, p. 218). This claim has been rejected by post-positivist analysis on the basis that general causal laws of society do not exist and that goals and values in public policy are multidimensional as well as contested (*ibid.*). A perspective which takes the broader decision context into account casts doubt on the assumption that larger data sets and more sophisticated analytical methodologies inevitably lead to better decisions. Much of the more recent academic work on policy analysis is directed at deconstructing and providing alternatives to this model of “speaking truth to power” (Wildavsky 1979). This type of research emphasises, *inter alia*, the role of competing rationalities, the importance of framing decisions, biases inherent in methodological choices, the role of uncertainty, as well as the need to link cognitive and participatory appraisal (Dryzek 1990, Dryzek 1993, Fischer 1998, Hoppe 1999, Cash et al. 2002, Hajer and Wagenaar 2003, Stirling 2008). Consequently, instead of focusing exclusively on the scientific credibility of knowledge (e.g. the academic credentials as provided by rigorous peer review), researchers and others operating at the science-policy interface should pay attention to its salience (*i.e.* relevance to the decision situation) and legitimacy (*i.e.* whether it is based on appropriate perspectives, values and concerns Cash et al. 2002).

As Dryzek has observed, however, “the history of policy analysis as practiced since the 1940s does not reveal a clear and clean switch away from approaches beholden to objectivism and instrumental rationality and toward more argumentative orientations. Indeed, whether based in public sector organizations, corporations, universities, foundations, or think tanks, most analyses [...] still cling to these traditional methodologies” (Dryzek 1993). The relative continuity of practice in policy analysis was perceived by many observers as a divide between the instrumental-rational approach and its post-positivist critique. The common wisdom of such a polarisation was challenged by an influential paper by Owens et al (2004). They suggested that reflexive learning opportunities may well arise through more instrumental forms of policy assessment but admitted that more empirical work was needed to confirm their assertion. The empirical research of this thesis shows that the implicit ontological and epistemological perspectives are indeed a crucial factor for the design and implementation of RIA procedures. Therefore, exploring the assumptions behind different ways of setting up RIA and how these assumptions affect the practice of RIA is a key element of this research.

After the publication of the four research papers that make up the core of this work (see chapter 2-5), the academic journey of this thesis came to a long halt. In 2009, I left University to take up a new position in the German Advisory Council on the Environment (Sachverständigenrat für Umweltfragen), a high-level government-funded academic advisory body on environmental policy issues in Germany. Here, I could witness processes at the interface between science and environmental policy from close-up and on a continuous basis. In particular, I experienced on a day-to-day basis how expert knowledge on environmental policy is produced as well as how it is perceived and used by policy-makers, ministerial staff, stakeholders outside government, media, and citizens. These four years of experience in an advisory council were followed by a stint at the Federal Ministry for the Environment where I was involved in some of the most controversial and high-profile policy issues in German environmental policy, namely the Government’s monitoring of the national energy transition, the reform of the renewable energy act and the future design of the German energy market. Here, I found myself in the role of a ‘desk officer’, i.e. in the type of position of which I had studied the behavioural patterns, cultural context and incentive structures for several years.

During my work at the interface between environmental policy and academic research, a number of observations struck me and renewed my interest in pursuing my previous research agenda. First, my personal experience appeared to suggest



that organisational and procedural initiatives to promote the integration of environmental issues into policy-making have left few traces in the day-to-day work of administration. In Germany, environmental policy integration was largely addressed through the wider overall frame of the National Sustainable Development Strategy. Key instruments adopted in this context were the extension of RIA to explicitly cover sustainability, indicator-based sustainability reporting, as well as a high-level ministerial committee for sustainable development (SRU 2011, Bundesregierung 2012). Although Germany has widely been seen as a leader in sustainability policy (e.g. Stigson et al. 2009, SRU 2012), in my experience these mechanisms have not developed any broad appeal or significant influence on policy-making outside the environmental niche in Germany.

This personal experience is in line with the findings of the literature on environmental policy integration looking at a wider set of countries and jurisdictions. Overall, the evaluations of different mechanisms for environmental policy integration in practice – to which this thesis contributes – have produced disappointing results (cf. for example Hey 2002, Jordan 2002, Jacob and Volkery 2006, contributions in Jordan and Lenschow 2008). Although many countries have implemented a wide array of instruments to explicitly promote environmental policy integration, Jordan and Lenschow (2008) conclude in their state-of-the-art review of environmental policy integration that the adoption of the principle of environmental policy integration is “weak and soft” (ibid., p. 338), that there is an “almost complete absence of a coordinated and comprehensive design for implementing it in practice” (ibid., p. 338), and that we know “precious little” about the actual policy outcomes, i.e. the influence on the state of the environment (ibid., p. 337). Albert Weale adds in his foreword to the book: “Sustainable development was never going to be easy. The merit – the depressing merit – of this book is that it shows the many different ways in which it is difficult” (Weale 2008, p. xvi).

On the other hand, I was surprised to see that somewhat paradoxically there is a remarkable degree of environmental policy integration going on in German policy making independently from specifically designated initiatives. This can be seen most prominently in the field of energy policy where Germany is undertaking a massive effort in moving its national energy supply from a fossil fuel-based system to one which relies predominantly on renewable sources (BMW and BMU 2010, BMW 2014). Although the German energy transition benefits from popular support, it is clearly an overall state-led project rather than a grassroots initiative. In the context of the energy transition, integration processes are occurring on a range

of different levels and in a host of different arenas of policy-making. They concern the federal as well as regional and local levels, generic energy policy as well as more specialised areas such as grid and electricity market regulation. One notable example is the change of policy style and direction which occurred in the federal ministry of economic affairs, partly resulting from the integration of a large administrative division dealing with renewable energy (the so-called 'division for energy transition') which was moved there from the federal environment ministry at the end of 2013. Similar (although much slower) processes of change are visible in other administrations, for example agriculture, research, and housing.

Moreover, there are an increasing number of reflexive, participatory, transparent and evidence-based processes of policy formulation in Germany. Although the formal process of RIA continues to play a marginal role, policy appraisals outside this procedure appear to become more transparent and more widespread. One example is the monitoring system put in place to assess the progress of the energy transition towards a renewables-based energy system (BMWi 2014). Under this system, monitoring reports are published annually by the government and evaluated by a group of independent energy experts. The indicators used in the monitoring process were selected with inputs from public consultation. The aim of the monitoring system is to promote learning in the context of a sustainability transition: "The Energiewende [...] breaks new ground in many areas. This is why it is important to monitor this development continuously and closely" (BMWi 2012, p. 2). Similar initiatives also exist in other policy areas, such as resource policy (e.g. the German Resource Efficiency Programme and the Citizens' Dialogue "GesprächStoff"). Other examples from the field of energy policy are the amendment of the renewable energy act, the electricity market design, and the planning of the German electricity grid. In all three cases, the Government carried out large public consultation processes instead of following the traditional neo-corporatist model of hearings with only selected interest groups and at a late stage in the decision-making process.

In personal communication, desk officers developing such processes have stated, however, that these approaches to more transparent, participatory and knowledge-based policy formulation at German federal level are neither part of a well thought-out strategy nor the response to an explicit directive from the top of the hierarchy. Rather, officers appear to respond to a societal demand for more transparency and involvement, see benefits from promoting a policy intervention by providing evidence, and in some cases perceive a practical need to involve a wide range of

perspectives in order to develop robust policies. The concrete set-up of these processes is typically shaped by ad-hoc decisions by bureaucrats in charge, an observation that would well explain the wide range of different formats used for consultation. Being a relatively recent trend, these developments have not been systematically researched.

Overall, these observations motivated me to re-consider and continue my previous research with a more optimistic outlook. Previously, the conclusion of chapters 3, 4 and 5 had been sobering: Desk officers often see RIA as a required formality without value because it does not help them mediate the relationship between science and policy making. RIA rarely works in the way it is described in guidance documents and has typically limited impact on the policy-process. It is typically conceived as a narrow analysis with an inherent bias against long-term and complex impacts (such as environmental effects). Although chapter 5 contained reflections on how to develop RIA towards a discursively rational process, such a new model of ex ante policy analysis seemed far from the reality at the time. It also remained unclear whether key actors would have an interest in pursuing such an agenda.

Given my perception that administrations are beginning to develop a strategic interest in more transparent, participatory and knowledge-based policy formulation processes, I began to ask myself whether there may be a more promising future for RIA. At the same time, the analysis made clear that this would require a fundamentally revised vision of the role RIA-type activities could and should play in policy-making. Throughout this study, the instrumental expectations of both the environmental policy integration literature and the policy appraisal guidance documents provided the backdrop against which assessment practice was described, evaluated and analysed. During the research, it emerged that the ecological modernisation perspective – while pointing at highly relevant factors – had an overly instrumental view of the required processes of change. The ecological modernisation literature (as well as the framework developed from it in chapter 2) recognises in principle the importance of learning, not only in the narrow instrumental sense but also in the sense of a change of values and belief systems (Sabatier and Jenkins-Smith 1988). It does not, however, realise the full implications of the insights from sociology, especially the field of science and technology studies, which has emphasised the social embeddedness of all types of knowledge, including that of scientific experts (Latour and Woolgar 1979, Bijker et al. 1987, Woolgar 1988, Barnes et al. 1996, Jasanoff 2004). While much of the work in this thesis was directed at showing why and in what ways these instrumental expectations are mis-

guided, they have not explicitly been supplemented by a set of theoretically more convincing expectations.

The aim of the additional research chapter 6 is to reflect on such a potential and emerging new role for RIA. The theoretical perspective chosen for this task is the concept of reflexive governance. The relatively recent strand of literature on reflexive governance has been developed over the last decade (De Schutter and Deakin 2005, Grin 2006, Rip 2006, Voß and Kemp 2006, Hendriks and Grin 2007, Newig et al. 2008, Feindt 2012, Stirling 2014) but draws on much older academic discourses on both governance (Rhodes 1997, Pierre and Peters 2000, Kooiman 2003, Rhodes 2007) and reflexive modernisation (Beck 1986, Beck 1993, Beck et al. 1994). The concept of reflexive governance has a decidedly more post-positivist and sometimes constructivist perspective than the concept of environmental policy integration. Acknowledging the limits to societal capacity for steering as well as the uncertain and contested nature of scientific knowledge, it is a suitable basis for reflections on the potential role for RIA in policy-making, in particular for enhancing environmental considerations.

Setting this study into the context of reflexive governance brings up another issue: With the empirical focus of this research being on RIA, this study concerns itself with the process of law-making. This is well in line with the literature on environmental policy integration which is largely focused on traditional public policy and state institutions. The sustainability governance literature, in contrast, addresses a much wider set of institutions for collective decision-making. Running through this literature is a widespread disillusionment about the ability of 'the state' to address urgent contemporary problems. This scepticism about the state is partly fuelled by the realisation that many of the procedures, tools and instruments for 'greening government' had little tangible effect on the substance of decision-making while at the same time evidence is growing about the rising threat which currently dominant socio-economic development pathways pose for vital ecosystems and the global climate (e.g. IPCC 2014, EEA 2015, Steffen et al. 2015). Most authors therefore tend to downplay the impact of state-led policies and instead emphasise bottom-up change, both in national (Ohlhorst et al. 2014) and international discourses (Hielscher et al. 2011, Leach et al. 2012, WBGU 2014, Hajer et al. 2015).<sup>4</sup> Against this backdrop, an additional aim of the concluding chapter is to reflect more broad-

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<sup>4</sup> This corresponds to a trend in the wider academic literature on governance which typically disregards institutions of representative democracy, cf. Prosser (2014) who observes that the institution of parliament is curiously absent from prominent handbooks on governance.

ly on the role of the state in collective decision-making for sustainability and to critically discuss the analytical and empirical focus of the reflexive governance literature.

## **1.2 Research questions, methodology and overview of the argument**

Having described the basic aims of this thesis in a chronological context, the aim of the following section is to present the research questions in a logical order. *The overall question addressed by the research is whether and how Regulatory Impact Assessment promotes the consideration of environmental and sustainability concerns in policy-making.* This question is approached through a number of more specific research questions which will now be discussed in turn.

1. *What kinds of processes are conceptually required to improve the consideration of environmental concerns in collective decision-making and to reorient such decision-making towards sustainable development?*

The first question that needs to be addressed in an effort to improve the consideration of environmental and sustainability concerns in policy-making through RIA is that of our conception or mental model of this process. The literature on environmental policy integration, however, has remained unspecific about what is being integrated, how and to what effect. It has rarely been critically discussed what 'the consideration of environmental concerns in decision-making' implies in detail. The role of power, knowledge and institutions in environmental policy integration has remained unclear. The only major academic debate in this literature in the 2000s was about the normative basis of environmental policy integration: Should the principle of environmental policy integration involve a 'principled priority' for environmental objectives (known as 'strong environmental policy integration', see Lafferty and Hovden 2002, Jordan and Lenschow 2008, p. 148) or should it merely involve the requirement to take environmental issues 'into account' (known as 'weak environmental policy integration', cf. Hill and Jordan 1993, Jordan and Lenschow 2008, p. 11). Beyond this discussion, environmental policy integration was seen to be "conventional wisdom" (Jordan 1998, Lenschow 2002, p. 4).

The method adopted to answer this question is an analysis of the relevant academic literature with regard to the qualitative description of theoretically assumed or empirically established causal links between processes and institutions on the one hand and policy outputs on the other. More specifically, chapter 2 carries out a comprehensive review of the policy-oriented literature on ecological modernisation

theory (cf. Weale 1992, Jänicke 1993, Wallace 1995, Andersen and Massa 2000, Buttel 2000, Mol and Sonnenfeld 2000, Murphy 2000) which has done most to develop the conceptual foundations of environmental policy integration. As the link between the two bodies of knowledge has not been widely acknowledged in the literature, drawing out the underlying rationale for environmental policy integration stemming from the theory of ecological modernisation is conceptually innovative. On this basis, chapter 2 then develops a framework for the analysis and evaluation of institutional strategies for environmental policy integration.

In the latter part of the thesis, chapter 6 revisits this research question, but draws on the more recently developed theoretical perspective of reflexive governance (De Schutter and Deakin 2005, Grin 2006, Rip 2006, Voß and Kemp 2006, Hendriks and Grin 2007, Newig et al. 2008, Feindt 2012, Stirling 2014). It first analyses the differences between ecological modernisation and environmental policy integration on the one hand and reflexive modernisation and reflexive governance on the other. It then explores what kinds of processes are conceptually required to improve the consideration of environmental concerns in collective decision-making from the perspective of the reflexive governance literature. It finally derives a set of evaluation criteria for governance arrangements such as RIA.

## 2. *How is Regulatory Impact Assessment framed and institutionalised across the EU?*

Having established conceptually-based expectations towards processes of environmental policy integration and reflexive governance, the next step is to turn to the empirical analysis in the specific field of RIA. The first aim is to understand how procedures for RIA are designed in different countries across Europe. This includes the question about the conceptualisation of the role of assessment and the stated purpose of the procedures as well as a comparison of institutional designs (for example the foreseen appraisal process, the scope of analysis, prescribed methodologies, and requirements for stakeholder involvement).

Two research methods are adopted to answer research question 2. First, chapter 3 traces the historical development of policy assessment in Europe through a review of the relevant academic literature as well as policy documents. Here, the aim is to establish the general thinking about the objectives and potential benefits of formalised ex ante policy appraisal as well as the actors and driving forces promoting these kinds of procedures in Europe. Second, chapters 4 and 5 review individual RIA procedures. The main method adopted in all analyses relating to the overall

procedure is qualitative document analysis, validated with telephone or face-to-face interviews (for example with officials working in administrative units coordinating the procedure) where this was needed to complement or validate written information. The sources are legal frameworks, guidance documents, evaluation reports, academic analyses and policy documents. Chapter 3 is a scoping analysis which reviews the experiences at EU level, in the Netherlands, Canada and the UK. The four jurisdictions have been chosen because they were recognised as pioneers in promoting RIA but also represent a variety of institutional arrangements and functions of policy appraisal. Chapter 4 is based on country studies of four jurisdictions (EU, Germany, Sweden and the UK) which provide the framework of subsequent in-depth analysis of individual policy cases (see research questions 3, 4 and 5 below). These four jurisdictions have been selected because the systems vary in relation to formalisation, institutional set-up and overall orientation of RIA.

While chapters 3 and 4 study appraisal only in a small selection of jurisdictions, chapter 5 systematically reviews appraisal procedures across the whole of the EU. It provides the most comprehensive analysis of RIA in Europe to date. It draws on 28 individual country studies (EU level and 27 Member States<sup>5</sup>) using a standardised template containing 21 individual evaluation criteria (e.g. the aims stated in key policy documents, the legal bindingness of the procedure, or the presence and role of an administrative unit coordinating the procedure). The results are compiled in a spreadsheet.

### 3. *What kind of knowledge is generated in Regulatory Impact Assessment?*

In the environmental policy integration literature, RIA is seen as a potentially powerful instrument to promote the consideration of ecological issues in sectoral policy decisions (Jacob, Volkery, et al. 2008, p. 28). The rationale behind this assumption is that generally knowledge about environmental threats and dangerous trends (such as climate change and biodiversity loss) is increasing, but recognition of this knowledge in political decision-making has remained limited. Policy appraisal, therefore, is expected to bring this relatively marginalised knowledge on environmental effects into real world policy decisions. Under research question 3, we explore precisely what kind of knowledge is generated in RIA in practice. This in-

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<sup>5</sup> Austria, Cyprus, Greece, Latvia, Luxemburg, Malta do not have a RIA system in place and are therefore not studied in detail.

cludes for example the questions whether knowledge is qualitative or quantitative, gathered from which methodologies, and whether it is narrowly focused on a particular angle or broadly covering the policy issue in question.

The kind of knowledge generated in RIA is partly determined by the overall objective and design of the procedure. For example, in some jurisdictions, guidance documents favour the use of certain assessment methodologies and are thus guiding the process of knowledge creation in predictable ways. Therefore, the approach and methods described under research question 2 are also used to gain insights in relation to research question 3. This broad procedural-level evaluation is complemented with and validated against in-depth studies of individual policy cases. Here, chapter 4 reports on a study of 37 individual cases of policy assessments carried out at EU level as well as in Germany, Sweden and the UK. Chapter 5 continues this line of inquiry but draws on a different empirical basis: in addition, another 22 individual case studies carried out at EU level as well as in Denmark, the Netherlands, Poland and the UK are included. All case studies are based on a combination of desk research (relating to the assessment report and other relevant policy documents) and face-to-face interviews with desk officers in charge of the RIA as well as with external stakeholders (e.g. business, NGOs, government officials from other departments).

#### 4. *How is knowledge from Regulatory Impact Assessment used in decision-making?*

Having established what kind of knowledge is produced in RIA, the logical next step is to ask who uses this knowledge in what way in the policy formulation process: Has information generated in RIA helped to shape the policy design? If so, has it done this in fundamental ways (e.g. highlighting radically different policy choices) or in an incremental style (e.g. informing decisions about specific design implementation options)? Has knowledge from RIA also been used in ways other than informing policy formulation, for example to justify predetermined decisions? How does the actual use of knowledge compare to the anticipated role of RIA as set out in guidance documents?

Research question 4 is approached with the same methodology as the previous research question. Again, the broad, desk-based analysis of RIA procedures and guidelines gives first insights: The set-up of the appraisal system provides a certain frame for the use of knowledge, for example because it determines who can access the assessment knowledge at what point in time. A more thorough under-



standing of how knowledge from RIA may have been used to learn, persuade or demonstrate, can only be accessed through detailed empirical research. Therefore, research question 4 is mainly addressed in the individual policy case studies contained in chapters 4 and 5. The aim of chapter 4 is to develop a typology of different types of knowledge use and to gather evidence on how these can be identified empirically. Chapter 5 addresses the same issue, but refers to positivist and post-positivist conceptualisations of the role of knowledge in policy-making as the theoretical lens.

5. *Can Regulatory Impact Assessment promote the consideration of sustainable development in policy-making and how are the conception and design of assessment procedures influencing this potential?*

Research questions 2, 3 and 4 have to some extent stepped back from the overarching question whether and how assessment promotes the consideration of environmental and sustainability concerns in policy-making: Instead of narrowly focusing on environmental policy integration from the start, the aim is to understand the wider dynamics of RIA at the interface between science and policy. Research question 5 aims to analyse the insights into the framing and institutionalisation of RIA as well as the production and use of knowledge from the perspective of sustainable development. It explores the extent to which the implementation of RIA procedures can support (or indeed hinder) the integration of environmental concerns into policy-making and the role played in this context by the specific design of RIA procedures.

A key aim of this final research question, therefore, is to confront the empirical material with the conceptual discussion of sustainability governance. Chapter 3 provides an evaluation of opportunities for and barriers to enhancing environmental policy integration. Chapter 6 develops this line of analysis further using reflexive governance as an alternative theoretical perspective. Chapter 6 first explores the commonalities and differences between environmental policy integration (with ecological modernisation theory as its basis) and reflexive governance (grounded in reflexive modernisation theory). It draws out the opportunities which the concept of reflexive governance offers to more adequately understand the issues raised by the empirical research and to explore potentials for the further development of RIA. In order to use these opportunities, chapter 6 introduces a new analytical framework derived from the reflexive governance literature and applies this to the empirical material underlying this thesis. The chapter thereby bridges consolidated in-

sights into the limitations of traditional regulatory impact assessment with current thinking about the potential of more reflexive governance arrangements for substantial integration of environmental concerns into policy-making.

## 2. Analysing institutional strategies for environmental policy integration: The case of EU enterprise policy

Hertin, J. and F. Berkhout (2003). *Analysing institutional strategies for environmental policy integration: The case of EU enterprise policy*. *Journal of Environmental Policy and Planning* 5(1): 39-56.

### 2.1 Introduction

At first sight, the basic idea of environmental policy integration seems uncontroversial. The state of the environment is affected not only by environmental policy, but also by the decisions of energy, planning, industry and other domains. It follows that an environmental strategy can be effective only if it also influences policies in other domains. However, different government departments tend to pursue contradictory policies with regard to the environment. Governments have long been regarded as being composed of heterogeneous and diverging interests (Rhodes 1997), but this phenomenon is particularly prevalent in the environmental domain (Weale 1992). The problem of cross-cutting environmental issues was recognized shortly after 'the environment' first appeared as a serious policy issue on national and international agendas in the early 1970s. Integration between economic and environmental policies was one of the main demands of the classic texts on the environment such as *A Blueprint for Survival* (Goldsmith et al. 1972), the *World Conservation Strategy* (IUCN 1980) and *Our Common Future* (WCED 1987):

The mandates of ministries of industry include production targets, while the accompanying pollution is left to ministries of the environment. Electricity boards produce power, while the acid pollution they also produce is left to other bodies to clean up. The present challenge is to give the central economic and sectoral ministries the responsibilities for the quality of those parts of the human environment affected by their decisions... (WCED 1987, p. 11).

Although the question how an integrated approach to the environment can be positively implemented has been continuously debated since the 1970s, the practice of environmental policy making remains largely unchanged (cf. Lenschow 2002). It still is generally characterized by specialized environmental administrations, power struggles between environmental and sectoral departments and by environmental regulations imposed on conventional development activities (for example, road building, intensive farming, and fossil-fuel based electricity generation).

This dominant pattern of environmental policy making has only recently been tackled through serious institutional reforms.<sup>6</sup> Major initiatives aiming at a 'greening of

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<sup>6</sup> An exception to this rule was, for example, the US National Environmental Policy Act of 1969 (Pub. L.91-190, 42 U.S.C. 4321-4347, 1 January 1970), which required federal

government' have, for example, been launched in the Netherlands, Sweden, Finland and the UK. At an EU level, the principle of environmental policy integration has not only gained political significance through its inclusion in Article 6 of the EU Treaty but it has also been the subject of significant, new policy initiatives, most notably the so-called Cardiff process. These policy initiatives have been accompanied by a wave of academic research on environmental policy integration, which includes sectoral case studies (Hey 1996), national case studies (Jordan 2002, Lewanski 2002, Müller 2002) best-practice orientated accounts (Jordan and Lenschow 2000) , evaluations of specific policy initiatives (Schepelmann 2000, Fergusson et al. 2001, Kraemer 2001), analyses of policy institutions and processes involved in environmental policy integration (Liberatore 1997, Wilkinson 1997) and larger multi-sectoral studies with a theoretical perspective (Kraack et al. 2001). With their different approaches these studies have generated a range of important insights, especially into opportunities for and barriers to integration, and into the varying contextual conditions of integration in different policy sectors and national settings. Despite the wealth of recent studies, the notion of environmental policy integration still suffers from the absence of a clear and practicable conceptualization (Kraack et al. 2001, p. 13). Although it can generally be taken to describe the 'inclusion of environmental concerns in processes and decisions of public policy making that are predominantly charged with issues other than the environment, both academic publications and policy documents often remain ambiguous on the question of what exactly environmental policy integration entails: does environmental policy integration describe a procedural requirement or is it an "autonomous normative principle" (Nollkaemper 2002)? What precisely should be integrated: policy objectives, decision-making structures, knowledge and capabilities, or policy instruments? Does it involve a changed balance of power between sectoral and environmental administrations, or is integration a question of expertise and organizational routines? Unless the specific objectives and mechanisms of environmental policy integration are clearly defined, it is difficult to fruitfully analyse the potential of this approach, to compare the strengths and weaknesses of different institutional strategies and to assess the success of individual initiatives.

This paper aims to address these questions, suggesting a theoretically informed framework for the analysis and evaluation of different institutional approaches to environmental policy integration in theory and practice. Operationalising environ-

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agencies to carry out environmental impact assessments for major project developments (Taylor, 1984).

mental policy integration for empirical research, the framework allows both the systematic evaluation of single institutional integration strategies (assessing the extent to which they have achieved their aims) and a comparison between different strategies (identifying similarities and differences, appropriateness for a specific institutional context, etc.).

In developing the evaluation framework, the paper will draw on the ecological modernization literature, especially contributions from the discipline of policy studies. This literature appears to be particularly suitable as a basis for the development of an environmental policy integration framework for at least two reasons. First, as we will show below, there is strong resonance between the core ideas underlying the two concepts. In particular, both challenge the assumption that the environmental policy process needs to be dominated by a conflict between pro- and anti-environment coalitions and stress the importance of pollution prevention at source. Second, several of the protagonists of the policy-orientated ecological modernization literature have analysed the specific problems associated with departmentalized environmental policy, thereby laying the conceptual foundations for environmental policy integration (for example Jänicke 1990, Jänicke 1992, Weale 1992, Gouldson and Murphy 1996, Weale 1998, Murphy and Gouldson 2000).

The paper will start by analysing the shortcomings of departmentalized environmental policy from an ecological modernization perspective. Drawing on this analysis to define the aims of environmental policy integration, the second section will propose a framework for the analysis of institutional integration strategies. The following parts of the paper apply the framework to a specific initiative for environmental policy integration on the level of the European Union. The final section will draw conclusions about the opportunities for and limits of sectoral strategies for integration.

## **2.2 Modernizing Policy: The Critique of ‘Additive’ Environmental Administration**

Over the last 20 years, thinking about environmental policy has undergone a fundamental process of transformation, in which the new emphasis on environmental policy integration is only one element. As Weale (1992) has shown, this transformation was associated with a fundamental reconceptualisation of the environment – economy relationship during the 1980s and 1990s, which can be described as ‘ecological modernization’.

As many have observed, the growing literature analysing processes of ecological modernization is heterogeneous, not easy to delineate, and comprises a range of disciplinary perspectives (for recent reviews, see Andersen and Massa 2000, Buttel 2000, Mol and Sonnenfeld 2000, Murphy 2000). The different contributions have in common that they explore the idea that while modernization and industrialization have in the past been the cause of many major environmental problems, economic development does not necessarily lead to increasing environmental damage. The central hypothesis is that the same forces that drive technical change and economic development can - under certain circumstances - improve the quality of the environment. The remedy for environmental problems, then, lies in a process of modernization steered towards environmental improvements, rather than a fundamentally different development pathway.

This hypothesis is explored by a diverse range of contributions, not all of which refer explicitly to the ecological modernization concept. Empirical studies from a variety of disciplines have attempted empirically to test the core hypothesis of ecological modernization. These include macro-level studies about the relationship between GDP and environmental pressures (Shafik and Bandyopadhyay 1992, Jänicke et al. 1993, De Bruyn 1998, Esty and Porter 2001, Jänicke 2001), firm-level assessments of the link between financial and environmental performance (cf. Edwards 1998) and engineering studies that assess technical potentials to minimize the detrimental environmental effects of products and production processes (Weizsäcker et al. 1996). At the same time, a growing sociological literature uses ecological modernization as a theoretical lens for the study of social change (cf. Buttel 2000). It analyses how modern industrial societies respond to the challenge of environmental degradation, examining, for example, institutional changes in the core institutions of industrial production (Spaargaren and Mol 1992, Mol 1995), roles and strategies of advocates of environmental reform (Mol 2000), as well as the role of consumption in these transformation processes (Spaargaren 1997, Spaargaren and van Vliet 2000).

This paper focuses on a third strand of literature, which examines the role of public policy aimed at bringing about ecologically orientated modernization processes - the second body of work on ecological modernization according to Mol's classification (Mol 1995, p. 27). Ecological modernization is not seen as an autonomous process purely driven by the inherent dynamics of technological and economic development (Mol and Spaargaren 2000, p. 23). Rather, it is thought to unfold through a process of reflexive institutional transformation, in which public policy is

a central element (Buttel 2000). The ability of society to exploit the potentially synergistic relationship between modernization and environmental protection through a steering of technological change has been conceptualized as the 'ecological modernisation capacity of society' (Jänicke 1992). Based on a comparative study of conditions for environmental policy success, this concept emphasizes the importance of the political system for ecological modernization.

Maintaining that existing policy-making structures in Europe, by and large, do not correspond to the principles of ecological modernization, this more applied and policy-orientated literature formulates a "prescriptive programme of policy reform" (Weale 1992, Jänicke 1993, Wallace 1995, Gouldson and Murphy 1996, Blazejczak et al. 1999, see also Andersen and Massa 2000, Murphy and Gouldson 2000). At the heart of this conception is a prescriptive typology of strategies to control pollution, ranging from clean-up/dilution and end-of-pipe technology (remedial strategies) to cleaner technologies and structural change (preventative strategies) (Andersen 1994, p. 18, Jänicke 2001, p. 2). The key objective of an ecological modernization of policy is to promote a shift of responses along this axis, especially through the innovation and diffusion of new technologies. This line of analysis brings to the centre of attention the policy processes, strategies and instruments that encourage environmentally orientated technical change. While most of this work is focused on the design and mix of policy instruments and the relationship between government and industry (for example Wallace 1995), some attention has also been given to intra-governmental processes of public policy making.

The ecological modernization literature is deeply critical of the way in which environmental policy has traditionally been embedded in administrative structures. When the environment was beginning to be established as an independent policy field in the early 1970s, most industrialized countries set up institutions specifically dedicated to the protection of the natural environment – for example, ministries, agencies, reporting mechanisms, framework laws and expert advisory committees (Jørgens 1996). The institutionalization pattern followed the Weberian model of rational and effective administration. It is based on functional differentiated organization, a principle that is a deeply rooted and virtually universal characteristic of public administration. It involves the definition of manageable areas of policy that are allocated to specialized units. These can develop the necessary expertise and build up policy networks with stakeholders inside and outside government, thereby enabling the organization to handle the complexity associated with the policy areas typically covered by government departments.

Applied to the area of the environment, this model manifested itself in a specific approach to pollution control. Environmental departments were given responsibility for the manifestations of pollution. They approached environmental problems technocratically: treating different aspects of pollution separately, applying standard routines of pollution abatement, combating symptoms rather than tackling sources, etc. (Jänicke 1990). This segregated institutionalization of the environment neglects the origins of pollution problems that occur as the result of a wide range of sectoral activities such as production, transport and agriculture. Sectoral policy initiatives, however, are commonly formulated with little or no regard to the environment. This might be partly due to a lack of capacity, but also reflects more deeply-rooted institutional factors. Administrations act in policy communities with different belief systems (Weale 1992), which are related to disciplinary and professional cultures, sources of information, and institutional arrangements. These define what the administration perceives as its role and mission, which has, in the case of sectoral departments, traditionally not included environmental concerns (for example, the overriding concern has conventionally been the supply of cheap and secure energy, rather than preventing climate change or minimizing local air pollution).

In principle, this problem of a 'misfit' between problem structure and administrative structure could be overcome through conscious co-ordination efforts. However, locating environmental and sectoral responsibilities in separate parts of government is seen to draw them into an antagonistic rather than a co-operative relationship (cf. Weale 1992). This partly reflects tensions between the respective political constituencies but is also due to the fact that environmental policy initiatives often 'infringe' on the responsibilities of sectoral administrations. As a consequence, status, power and resources are often at stake in environmental disputes, placing an additional strain on inter-departmental relationships (Weale 1992).

The combination of an administrative 'misfit' and antagonistic relationships leads to patterns of communication and decision-making that, from an ecological modernization perspective, have several shortcomings:

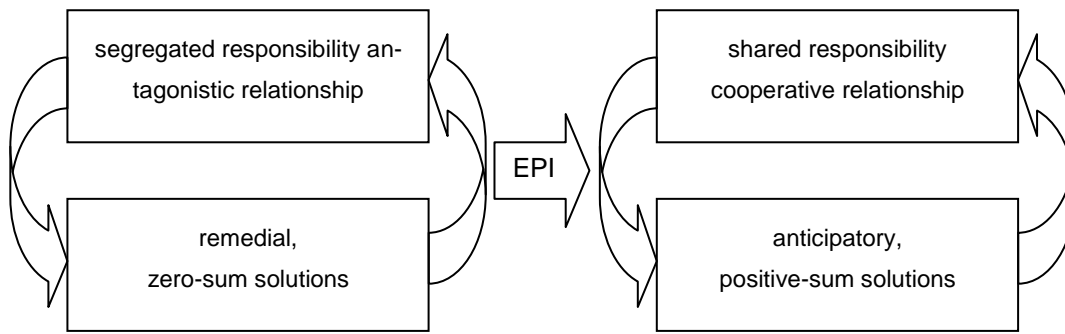
- *Lack of incentives for innovation.* The opportunities for environmental departments to prevail in inter-departmental bargaining processes are few and far between. Historically, they have a lower status than sectoral departments such as transport, energy and agriculture, mainly because their interests are asymmetric (Wilson 1980). While polluter interests tend to be driven by strong economic motives and represented by well-resourced advocacy groups, envi-



ronmental interests are more dispersed and possess less direct political leverage. As a result, it is a common experience that the ambitions of environmental proposals are considerably reduced during intra-governmental negotiations. A policy that does not sufficiently depart from the status quo is unable to provide both the economic incentives and the political signal needed to stimulate the innovation and diffusion of new technologies (Wallace 1995, Blazejczak et al. 1999).

- *Bias against integrated technological responses.* In order to minimize 'interference', sector departments have an interest in reducing the involvement of environmental administration in the process of policy formulation. When the environmental ministry voices its concerns in the later stages of sectoral policy design, the opportunities to embed environmental safeguards are limited. Inter-departmental conflicts are resolved at this stage through compromises that satisfy the interests of both agencies but may be highly inefficient. Either contradictory policies are implemented in parallel, or costly end-of-pipe technologies are added to a controversial project to make it acceptable for environmental departments (Jänicke 1990). The relationship between intra-governmental relationships and policy outcomes can be self-reinforcing. Where environmental policy tends to take the form of restrictions and costs imposed on sectoral projects, assuming a defensive role becomes the most promising strategy. It has also been observed that, paradoxically, environmental departments aiming to extend their budgets could lose interest in preventative action: "For government, the self preservation instincts of those institutions that have been established to administer this form of policy [additive pollution control] ensure that this approach continues" (Gouldson and Murphy 1996, p. 12).
- *Unstable innovation context.* The processes of bargaining associated with conflictual intra-governmental policy making lead to mixed political signals and uncertainty in policy direction. This is diametrically opposed to the political conditions seen to encourage environmental innovation – that is, a reliable, stable, knowledge-based and long-term policy based on consensual decision-making (Blazejczak et al. 1999). The resulting absence of a stable, long-term perspective for the emergence of markets acts as a barrier to investment in research and development, and slows the pace of innovation (Wallace 1995).

Figure 1: Relationship between administrative structures and policy outcomes



Source: Own compilation

In short, the critique argues that departmentalized administrative structures create a bias towards policies that are unable to exploit the eco-efficiency potentials of modern technology: “The corollary of an additive environmental bureaucracy is an additive, end-of-pipe abatement technology” (Jänicke 1992, p. 84). While a traditional trade-off view of environmental policy would suggest that these patterns of decision-making are the consequence of the specific characteristics of ecological problems (costs associated with environmental protection, common-good character of the environment, and so on) ecological modernization sees it as the outcome of particular institutional settings, ‘which can be transformed’. If relationships between environmental and sectoral ministries were co-operative and focused on joint problem solving, environmental policy could successfully promote cost-efficient or even profitable technological or structural responses. The option of win-win solutions is likely to allow sectoral departments to take a constructive position in negotiations, thus improving the co-operation between the departments. From this perspective, the main objective of environmental policy integration is to enable environmental policy making to shift from a traditional antagonistic model to a new co-operative model (see Figure 1).

### 2.3 Analysing environmental policy integration as a Process of Administrative Change

Although environmental policy integration is clearly a substantive and normative concept, policy initiatives to implement environmental policy integration are by nature largely procedural. Given the aim of this paper to provide a framework for the analysis and evaluation of environmental policy integration initiatives, the conceptualization of environmental policy integration in this section will therefore focus on policy processes and outputs. It could be argued that policy outcomes should also

be examined because environmental policy integration makes no sense unless it leads to better (that is, more effective and more cost-efficient) environmental policy. However, it is a well-recognized problem of policy evaluation that, more often than not, the link between policy measures or processes and policy outcomes is extremely difficult to establish (Carter et al. 1992, p. 14ff.). Although the critique presented above does not prescribe a specific model of integration, it points towards a number of generic elements of environmental policy integration that may be expected to promote a shift between a segregated and an integrated mode of environmental policy.

*Table 1: Core functions of environmental policy integration*

<b>Function of environmental policy integration</b>	<b>Examples of evidence of integration</b>
sectoral agenda setting	<ul style="list-style-type: none"> <li>- environmental protection part of mission statement</li> <li>- assessment of environment impacts of sector policies</li> <li>- environment regular agenda item at high-level meetings</li> </ul>
horizontal communication	<ul style="list-style-type: none"> <li>- interdepartmental working groups / committees</li> <li>- routine early consultation on sectoral policies and projects</li> </ul>
sectoral capacity building	<ul style="list-style-type: none"> <li>- environment unit</li> <li>- environmental information services</li> <li>- system of officials charged with environment</li> <li>- high-level environmental official ('green minister')</li> </ul>
policy learning	<ul style="list-style-type: none"> <li>- 'positive' framing of environmental issues</li> <li>- constructive inter-departmental cooperation</li> </ul>

Source: Own compilation

### **2.3.1 Sectoral Agenda Setting**

Environmental policy integration requires first and foremost, that environmental concerns are on the political agenda of sectoral administrations. A shift from remedial to anticipatory policies called for by the advocates of ecological modernization can only occur if the administration (i) is aware of unintended environmental effects of sectoral projects, (ii) recognizes them as relevant for its own strategy and (iii) takes steps to improve environmental outcomes. The construction of political agendas is a complex process, which is affected by many factors other than 'objective' problem pressure (Cobb and Elder 1972) - for example, beliefs, political will and institutional arrangements. More specific characteristics of agenda-setting in the context of environmental policy integration could be, for example: inclusion of

environmental objectives into the overall mission statement of a department (e.g. promoting an economically successful and eco-efficient industry); presence of environmental mechanisms in standard operating procedures (requirement of strategic environmental assessments, inclusion of internal environmental expertise in decision-making processes, etc.); and inclusion of environmental provisions in sectoral policy initiatives and outputs (see Table 1).

### **2.3.2 Horizontal Communication**

Successful environmental policy integration does not make environmental administration redundant. Relying exclusively on the environmental expertise in the departments of transport, agriculture, energy and so on, would involve building up duplicate and inefficient structures and neglecting the generic elements of environmental policy. It can, therefore, be assumed that integrated environmental policy would also have to be based on well-functioning horizontal communication between administrative units with different responsibilities. The exchange of knowledge between environmental and non-environmental sectors can have different specific functions depending on the policy sector, the policy and the stage of development. Two main aims can be distinguished. First, horizontal communication should ensure that the environmental agendas of different sectors form a consistent overall strategy, thus working towards the stable framework conditions that promote technological innovation. Second, it will provide the scientific and technical expertise of the environmental department needed for the development of environmental measures at the source. The interaction between sectoral and environmental administrations can take different forms: formalized interdepartmental consultation processes, issue-specific joint working groups, frequent ad hoc meetings and informal discussions, etc.

### **2.3.3 Sectoral Capacity Building**

Horizontal communication will only lead to integrated policies if the sector administration possesses the capacity to appropriate, process and implement environmental knowledge. Assessing the potential ecological effects of policies is a difficult and contentious task, especially where complex changes to a system of rules (for example, changes to the land-use planning system) are concerned rather than a decision on a well-circumscribed project (for example, a new road). Specific expertise is also needed to recognize win-win opportunities and to exploit them through the formulation of innovation-orientated policies. The question of how envi-

ronmental innovation capacity is best institutionalized will depend on the specific context of the sector, but creating a specialized environment unit within the department is unlikely to be sufficient. An integrated environmental capability requires relevant financial, technical and human resources and incentives in different parts of the organization. These can take many different institutional forms – for example, a system of officials charged with environmental responsibilities, internal information services, training, specific budgets for external consultancy.

#### **2.3.4 Policy Learning**

Finally, environmental policy integration is aimed at a more fundamental process of policy learning. Here, policy learning is not understood in the sense of instrumental learning often referred to in the management and organizational learning literature (cf. Dierkes et al. 1999). Rather, it means social learning in the wider sense of a change of values and belief systems over time (Sabatier and Jenkins-Smith 1988). Public policies are based on a certain framing of a problem, assumptions about causal relationships and so on (Pressman and Wildavsky 1979). From an ecological modernization perspective, the shortcomings of departmentalized policy stem partly from the fact that environmental measures are often perceived as a threat to established sectoral interests. If, in contrast, sectoral (and environmental) departments 'learned' that environmental concerns can be reconciled with other policy objectives, paralysing turf disputes would be avoided and strategies to prevent pollution at the source facilitated. While it might not always be possible to distinguish a change in political rhetoric from 'genuine' changes of attitude, there are developments that can be taken as indications of policy learning (for example, changed framing of environmental issues in policy documents, attitude in inter-departmental negotiations).

#### **2.4 Integrating the Environment into EU Industry Policy**

By applying the framework to a specific initiative for environmental policy integration on the level of the European Union, this section will assess whether the Cardiff process has led to environmental policy integration (in the sense of an administrative process of change) in EU industry and enterprise policy. The analysis will comprise the first phase of the process from the Luxembourg to the Gothenburg European Council (December 1997 to June 2001). This case study draws on a desk-based review of policy documents and on a series of interviews in the Euro-

pean Commission and EU member states carried out between April 2000 and May 2001.<sup>7</sup>

#### **2.4.1 Background and Development of the Cardiff Process**

With the exception of a few front-runner states such as Sweden and the Netherlands, little real effort was made until recently to overcome the departmentalized character of environmental policy. Since the early 1990s, environmental policy integration has moved gradually up political agendas and a number of countries have experimented with different types of institutional reform (Joas 1999, Jordan and Lenschow 2000, Lewanski 2002). Most common reform approaches involved the integration of departments (merging the environmental department with a key sectoral ministry), mechanisms to promote horizontal co-operation (inter-ministerial working groups, 'green' ministers, consultation procedures, etc.), and a high-level integration strategy based on political leadership (for example, environmental policy plans or sustainable development strategies).

The EU committed itself to the environmental policy integration principle early on. Integration constituted one of the key objectives in the Third Environmental Action Programme (1983). The Single European Act (1987) formally incorporated the integration principle into the EEC Treaty, demanding that "environmental protection requirements shall be a component of the Community's other policies" (Article 130r). But it was the Amsterdam Treaty (1997) that gave environmental policy integration its current political significance, by introducing it into the Part One of the EC Treaty, which established the principles of the Community:

Environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities referred to in Article 3 [listing of all Community activities], in particular with a view to promoting sustainable development (Art. 6).

The reality of EU policy making has not matched these ambitions. It is widely understood that policies have often lacked coherence and that most EU institutions have traditionally been organized in a hierarchical and segmented fashion. The formations of the Council, in particular, have been criticized for their lack of coordinating mechanisms. As a response to these deficits, new institutional co-

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<sup>7</sup> Twelve in-depth interviews were carried out in DG Enterprise, with individuals charged with environmental issues in ministries of economic affairs in member states, in DG Environment and with external observers. Interviewees were granted anonymity. Additional information was gathered through short interviews, informal contacts, participation in meetings, etc.

operation mechanisms were introduced or reinforced – for example, extended inter-service consultation, task forces and corresponding units. In the environmental area, a system of new mechanisms was introduced after 1993 (Wilkinson 1997). It included a system of environmental correspondents within each Directorate-General (DG), incentives for staff rotation, environmental appraisal procedures and check lists, and the Green Star appraisal system for environmentally sensitive proposals. The European Commission itself admitted, however, that the effect of these reforms was limited (Wilkinson 1997, p. 164). The Forward Studies Unit of the European Commission found evidence “to suggest that there is frequently a tendency towards minimising the possible influence of these tools” (Lebessis and Paterson 2000).

Disappointing results of co-ordination mechanisms, a reinforced mandate through the Amsterdam Treaty and growing environmental tensions in some policy areas created pressure for further action on environmental policy integration. At the end of 1997, the European Council launched work on a new environmental policy integration initiative based on the development of sectoral integration strategies. The overall mandate for the process was provided by the Cardiff European Council (June 1998), which gave its name to the process. Most importantly, the Cardiff European Council:

- “invited the Commission to report to future European Councils on the progress in meeting the requirements of the Amsterdam Treaty”;
- “invited all relevant formations of the Council to establish their own integration strategies within their respective policy areas”; and
- “requested identification of indicators for monitoring progress with the environmental integration strategies in different sectors” (European Council 1998).

Successive European Councils specified nine key sectors that led the work on environmental policy integration and asked them to present their integration strategies at the Gothenburg Council in June 2001.

In response to this mandate, sectoral Councils and their respective DGs launched a series of internal and external meetings, documents, studies that are commonly referred to as the ‘Cardiff process’. The overall aim of these activities was to develop sectoral integration strategies: a process through which non-environmental policy sectors assess the environmental implications of their decision-making, set out action plans to reduce negative and enhance positive environmental effects and evaluate the success of the process. Although the approach taken in the Cardiff process is not unique – a similar sector-based strategy has been adopted in

Denmark (Jordan and Lenschow 2000) – it is distinct from conventional approaches to environmental policy integration. In particular, it is characterized by a high degree of decentralization and sectoral autonomy. Based on a fairly general mandate by the European Council individual Council formations and their administrations are given the task to define environmental priorities and to set out action plans.

#### **2.4.2 The Case of EU Industry and Enterprise Policy**

Did the Cardiff process lead to environmental policy integration in the policy sectors it was designed to change? Industry policy is for two reasons an interesting case for the study of environmental policy integration. The main aim of EU industry policy is to encourage a competitive, innovative, adaptive and collaborative European industry and to improve the commercial exploitation of innovation, research and technological development (cf. EC Treaty, Title XVI). Industry policy is therefore directly charged with those drivers – innovation and technology – at the heart of ecological modernization. On the other hand, industry and economic affairs departments have traditionally been the strongest internal opponents of environment departments. Unlike other sectors, such as energy and transport, the industry sector was until very recently still largely unaffected by the environmental agenda. The sector, therefore, provides potentially large opportunities as well as large challenges for environmental policy integration. After a brief chronological description, we will assess the industry/enterprise policy integration strategy according to the four attributes of integration developed above: agenda setting, capacity building, policy learning and communication.

The industry sector was invited to develop an environmental integration strategy by the Vienna Council in December 1998. In response, the Industry Council expressed a general commitment to the Cardiff process. Unlike most other sectors, the Industry Council emphasized the need to integrate all three pillars of sustainable development. This interpretation of Article 6 of the EC Treaty was internally criticized by DG Environment, where some perceived it as an attempt to water down the Cardiff mandate (interview DG Environment). However, interviewees in DG Enterprise maintained that the decision was an expression of concern for social issues. The Industry Council conclusion was generally optimistic in tone (“well defined and environmentally sound policies may have a great potential to contribute to increased competitiveness of industry and create employment opportunities”), but its wording suggests that the Council intended to emphasize that envi-



ronmental protection is only one aim amongst others (Industry Council 1999). One year after Vienna, the Industry Council published a report on integration, which invited the Commission to “submit, as soon as possible, to the Council, as a contribution to the strategy, an action plan for promoting integration” (Industry Council 1999, p. 9). The report included strong elements of a positive environmental discourse (“environment does not merely present threats and limitations to industry but will offer huge business opportunities”) and put strong emphasis on those instruments and policy areas that were seen to be more compatible with competitiveness – for example, voluntary actions, market-based instruments, eco-efficiency, environmental management (Industry Council 1999).

In the first phase of strategy development, the Commission played an active role. Existing institutional structures, especially the Environment Unit within DG III and the informal network of ‘environmental focal points’ in member states’ ministries of industry and economic affairs allowed the Commission to respond quickly to the Cardiff process. Its first contribution to the strategy was a Commission staff working paper (CEC 1999). This set out, in very general terms, the interactions between sustainable development and industrial policies. The paper emphasized the need to integrate all three pillars of sustainable development, and stressed the importance of economic instruments and assessment tools. This document was initially conceived as a Commission Communication but this was opposed by DG Environment on the grounds that it was not sufficiently ambitious (interview DG Environment).

At the end of 1999, the reorganization of the European Commission took place. The old Industry Directorate-General (DG III) was merged with the DG for Small and Medium-sized Enterprises and the Innovation Directorate from the Information Society DG. The new DG Enterprise had a broader remit and included new non-industrial sectors. This reorganization led to a more generic view of competitiveness, innovation and technological change. As a result, initial plans to base the integration strategy on a sector-based assessment of environmental impacts were revised (interview DG Enterprise). While the new DG Enterprise had to define the new area of ‘enterprise policy’, work on an integration strategy lacked a clear focus. Furthermore, Fabio Colasanti took up the position of Director General in early 2000. Interviewees stated that while the integration process had previously been encouraged and co-ordinated from the top under former Director Generals, the importance of the Cardiff process on the internal agenda declined significantly after this change. For example, the DG decided not to respond to the call from the

Council for an “action plan” on integration, because “... the hierarchy didn’t see any point in an action plan. They couldn’t see an action plan that would be operational” (interview DG Enterprise).

The Industry Council Conclusion on the integration strategy submitted to the Gothenburg European Council (Industry Council 2001) re-iterates earlier positions. It maintains the commitment to a strategy for the integration of sustainable development into enterprise policy, including objectives, a timetable and indicators. This contrasts with the fact that very little substantial progress has been made. DG Enterprise and the Industry Council were unable or unwilling to present a comprehensive assessment of environmental issues in the sector, an action plan, or a reporting mechanism. The development of an operational industry/enterprise integration strategy has been postponed until the end of 2004.

#### **2.4.2.1 Sectoral Agenda Setting**

The Cardiff process has clearly contributed to the foregrounding of environmental issues on the institutional agenda of the Industry Council and within DG Enterprise. Before Cardiff, the Industry Council had not had a substantial discussion of environmental issues since 1992. Although DG Enterprise launched a number of environmental initiatives, these lacked a strong political mandate by the Industry Council. Because of the Cardiff process, both institutions were forced to engage more than before in discussions about ways of addressing environmental issues. In particular, the Industry Council asked DG Enterprise to report biannually on the progress made on the contribution of enterprise policy to sustainable development. Consultations, meetings and discussions carried out during the Cardiff process involved a substantial number of officials who do not conventionally deal with sustainability issues. This need to engage contributed to raising the awareness of officials. It also seems likely that the process generated environmental initiatives in the sector (policies on issues such as eco-efficiency and responsible entrepreneurship) with a salience and continuity.

On the other hand, none of the internal and official strategy documents reviewed above systematically mapped the interrelations between the sector and the environment. The focus of the strategy was never clearly defined. Although the strategy is nominally focused on all three pillars of sustainable development, most concrete examples and initiatives refer to the environmental dimension. It is indeed remarkable how little the process contributed to providing a coherent framework that clarifies problems, opportunities and responsibilities at the interface between

sustainable development and enterprise policy. As a result, the agenda-setting process that took place remained diffuse. Other sectoral strategies – for example in the energy and transport sector – have shown that it is possible to make considerably more progress in this respect (Kraemer et al. 2002).

#### **2.4.2.2 Horizontal Communication**

Although the Cardiff process does not explicitly aim to improve horizontal communication, it has led in some sectors to new co-operation. For example, the Environment and Transport Councils decided to hold a joint meeting in the context of the process, and a broader set of sectors collaborated with the European Environment Agency in the development of integration indicators. In the enterprise sector, however, there is little evidence to suggest similar effects. On the contrary, DG Enterprise made it clear that it did not want a heavy involvement of DG Environment or the European Environment Agency in the development of a strategy document and a monitoring mechanism (interview DG Enterprise). This was officially justified through the decision to develop an integration strategy that gives equal weight to all three pillars of sustainable development, rather than just focusing on the environment. An observation by a DG Enterprise official, however, suggests that behind this lay the attempt by the sector not to give DG Environment an opportunity to ‘interfere’ in sectoral issues: “they [DG Environment] don’t want to integrate the environment, they want to integrate DG Environment policies” (interview DG Enterprise). Overall, it appears that neither DG Enterprise nor the Industry Council chose to use the Cardiff process as a vehicle for horizontal communication. Although there have been instances of communication, they were sporadic and no attempts were made to institutionalize them.

#### **2.4.2.3 Sectoral Capacity Building**

The impact of the Cardiff process on capacity building is considerably more difficult to assess. It can be observed that the Industry/Enterprise DG possesses some institutional capacity and that this has been built up gradually during the 1990s. A number of sectoral units work on environmental issues on a regular basis – for example, in relation to the car industry, chemicals and eco-labels. Recently, an email network was introduced to provide all DG Enterprise units with regular information about environmental issues. In particular, there is a unit specifically charged with environmental aspects of enterprise policy, which is small but growing. Although this unit pre-dates the Cardiff process, it has been at the centre of

efforts to engage with the process, partly also as a way of securing and expanding its position within the DG. From one perspective, these environmental units replicate administrative specialization (a perceived obstacle to integration) at a micro-scale. 'Sectoral' environmental units may also suffer from marginalization from the more powerful policy divisions within the sector. The Cardiff process, therefore, appears to have afforded an existing, not very powerful policy interest group with a new means of promoting its interests, rather than creating the conditions for the development of integrated capabilities. Overall, it seems that the integration strategy has not fundamentally affected internal structures.

#### **2.4.2.4 Policy Learning**

Most Cardiff documents from the industry sector adopt a positive environmental discourse. The 1999 Industry Council conclusions on the Cardiff process express the view that "well defined and environmentally sound policies may have a great potential to contribute to increased competitiveness of industry and create employment opportunities" (Industry Council 1999). The potentials for a positive-sum game between environmental and economic aspects are most explicitly spelled out in the Commission staff working paper:

Environment and industrial policies are both important pillars for the achievement of sustainable development...The efforts to achieve a high level of environmental protection may encourage industrial innovation and increase competitiveness. And it is clear that a highly competitive economy is better placed for pursuing a high level of environmental protection and promoting employment (CEC 1999).

Traditional defensive arguments (for example, the need to avoid excessive cost and administrative burden for industry, environmental regulation as a threat to international competitiveness, the principle of proportionality of measures) are rarely employed in these statements. On the other hand, the request that environmental policy integration should be 'mirrored' by the integration of competitiveness concerns into environmental policy (Kraack et al. 2001, p. 220) suggests that DG Enterprise retained a defensive position.

There also seems to be a disjuncture between a largely eco-modernist discourse in high-level policy documents and far more sceptical positions taken on a working level. Interviews as well as internal documents confirm that parts of the DG continue to hold more traditional views. For example, in internal meetings in relation to the Cardiff process, DG Enterprise officials frequently emphasized the need to strike a balance between environmental concerns and the need to preserve the

competitiveness of European industry. It remains to be seen whether the Cardiff process will, over time, affect views held on all levels of the institution.

This range of attitudes also applies to the relationship between DG Environment and DG Enterprise, which seems to vary depending on the nature of the policy issues (interview DG Enterprise). While policies in relation to the regulation of chemicals tend to be dominated by antagonistic fights over competencies, a more constructive relationship exists on issues such as integrated product policy (Berkhout and Smith 1999). Overall, the relationships between DG Enterprise and DG Environment are not seen to have improved through the Cardiff process (interview DG Enterprise).

## **2.5 Conclusions**

This paper argued that environmental policy integration strategies can be fruitfully evaluated on the basis of four specific functions of environmental policy integration: agenda setting, horizontal communication, capacity building and policy learning. The application of the framework to the current status of the Cardiff process in EU industry policy showed that its impact has varied in relation to different functions of integration. It appears that considerable agenda setting has taken place. The Cardiff process has obliged policy makers and officials to consider the link with industry/enterprise policy and generated a stronger political mandate for further environmental activities. Although Cardiff seems to have contributed to the development of some new environmental capacity in DG Enterprise, it was clearly insufficient to respond adequately to the mandate of the European Council. There is also no evidence that the sectoral environmental policy integration strategy has led to a substantial increase in horizontal communication. While a shift towards a more positive attitude towards the environment is noticeable in high-level policy documents, the Cardiff process has not challenged the sectoral belief systems and institutional power structures in a more fundamental way. The relationships between the industry and the environment sector remain antagonistic in most areas. Overall, the impact of the initial three years of the Cardiff process on EU industry and enterprise policy has been modest.

Our case study has confirmed the somewhat disappointing results of other analyses (Schepelmann 2000, Kraemer 2001, Kraemer et al. 2002): not only is progress towards the formal requirements of the Cardiff process patchy, but there is also little evidence to suggest that it has brought the EU closer to resolving its key programmatic contradictions. This contrasts with the enthusiasm with which the

Cardiff process has been welcomed, and leads to the question as to what contribution sectoral integration strategies can make to environmental policy integration.

Past environmental policy integration strategies and mechanisms have often been unsuccessful because other policy sectors have found ways to reduce the influence of environmental rules and procedures that they saw as threats to their institutional interests. The potential benefit of sectoral integration strategies lies in their attempt to overcome this problem of sectoral resistance through a decentralized, bottom-up process. Although the Council mandate includes elements of a top-down approach (namely the request for target-setting, timetables and monitoring) sectoral integration processes essentially represent a bottom-up environmental policy integration strategy (for a distinction, see Wilkinson 1997). They are based on persuasion rather than power and give policy sectors an active role in framing the integration agenda. Sectoral integration strategies aim to challenge the traditional understanding of a trade-off relationship between sectoral and environmental aims. Rather than just adding environmental procedures, they undertake to integrate environmental concerns into the core objectives of all parts of government.

The bottom-up nature of sectoral integration strategies has, on the other hand, two main drawbacks. First, sectoral processes can result in diverging, or even incompatible strategies, because they do not provide a coherent framework for environmental strategy. Their inability to enhance horizontal communication represents a barrier to inter-departmental learning. Second, the case of EU industry/enterprise policy shows that unwilling sectors can use the autonomy granted by a sectoral approach to delay action. Without strong political leadership commitment to environmental policy integration, integration can lead to a 'dilution' (Liberatore 1997) rather than a strengthening of environmental policy. The long history of rhetoric and symbolic action in the EU and in many member states has shown that integration requires substantial political pressure. It is unlikely that the Cardiff process will lead to substantial changes in EU policy making unless the top-down elements of the process are strengthened or new pressures are added.

The specific weaknesses of sectoral integration strategies suggest that they will not be successful by themselves. Environmental policy integration requires a heterogeneous set of conditions, such as political will or pressure, suitable procedures, resources and knowledge. The different aspects of environmental policy integration can only be addressed usefully through a mix of strategies because the ability of different approaches to provide each of these conditions varies. In particular, any successful environmental policy integration strategy has to involve a

balanced combination of top-down elements of political leadership by the core executive with bottom-up approaches suitable to engage sectors in constructive ways. It also needs to be based on the recognition that institutional routines and belief systems tend to be deeply embedded and fixed. Rather than conceiving an environmental policy integration strategy as a formal and linear administrative process, it needs to be understood as an ongoing, long-term process consciously designed to promote internal capacity and policy learning.

### 3. Policy appraisal

*Hertin, J., K. Jacob and A. Volkery (2008). Policy Appraisal. In: Innovation in Environmental Policy? Integrating environment for sustainability. A. Jordan and A. Lenschow. Cheltenham, Edward Elgar: 114-133.*

#### 3.1 Introduction

The ex ante appraisal of policies has been a standard procedure in government for a long time. It has been used in many countries to improve the quality of regulation, to reduce implementation costs and to achieve cross cutting objectives such as sustainable development, economic competitiveness or human health. While not an entirely new policy instrument, ex ante policy appraisal has recently attracted a remarkable level of attention. A considerable number of policy-making institutions at all levels of governance have started to revise their appraisal procedures with a view to strengthening, broadening and integrating ex ante policy assessment.

This new impetus for broader and more integrated forms of appraisal has often been supported by those promoting environmental policy because it appears to offer new opportunities for strengthening environmental policy integration and facilitating sustainable development. However, concerns have been voiced that this trend could lead to a sidelining of environmental issues if the appraisal process is dominated by concerns such as over-regulation and economic competitiveness (Wilkinson et al. 2005).

In this chapter, we analyse a number of policy appraisal systems in order to understand the contribution they make or could make to environmental policy integration. We will analyse four cases of comparatively advanced appraisal procedures (in Canada, the United Kingdom, the Netherlands and the European Commission), highlighting the variety of institutional arrangements and functions of policy appraisal.

The remainder of this chapter is organized as follows: The following section (3.1) gives a brief overview of the history of ex ante policy appraisal. Section 3.2 analyses its conceptual foundations. Section 3.3 presents the four case studies, looking at both the institutional set-up of the four appraisal systems and their performance in practice. It compares and contrasts the different systems and analyses their strengths and weaknesses from the perspective of overall effectiveness and the consideration of environmental concerns. The final section (3.4) proposes a number of conclusions about the potential contribution of ex ante policy appraisal to environmental policy integration.



## **3.2 History**

### **3.2.1 The origins of policy appraisal**

The integrated ex ante assessment of impacts of regulatory proposals, programmes or policies can be traced back to three different origins: environmental project assessments, regulatory impact assessments and sectoral assessments procedures.

From the very beginning of modern environmental policy in the late 1960s, the environmental assessment of large projects (for example construction and infrastructure schemes) was introduced as an obligatory tool in a many OECD countries, starting with the USA (see Chapter 13). Focusing on potential negative impacts, Environmental Impact Assessment (EIA) aims to provide decision-makers with the information needed to minimize damage to the environment. Often, however, decisions taken already at an earlier stage of planning limit the scope for reducing the environmental impacts of a project. The project level assessment thus may be of only marginal benefit for the environmental. Hence, there have been calls to introduce mandatory assessment procedures at an earlier stage of the process i.e. covering policies, plans and programmes (see Chapter 7). This form of Strategic Environmental Assessment (SEA) was developed in the 1980s and diffused more widely during the 1990s. From an environmental perspective, the procedures for integrated policy appraisal analysed in this chapter represent a further 'upstreaming' of assessment in the decision-making process.

A second root of integrated policy appraisals is RIA which first developed in the early 1970s, mainly in Anglo-Saxon countries. RIA assesses the economic costs and benefits of new regulation, aiming to both avoid unnecessary or overly costly regulation and improve the design of policy. This is supposed to decrease the costs of regulation for both business (and other target groups) and public authorities, thereby enhancing economic competitiveness and contributing to a stabilization of public spending. Although it is difficult to obtain a complete overview of these activities because they are frequently informal or confidential, it is clear that RIA has fairly rapidly diffused throughout the OECD during the 1980s and 1990s (OECD 1997, Radaelli 2004, Radaelli 2005). There is now also a strong trend towards devoting more efforts in appraisal processes to assessing and reducing administrative burdens. Many countries follow the Dutch example and adopt a standardised methodology (the so-called Standard Cost Model) to calculate and then

reduce the costs for business complying with information obligations stemming from government regulation.

Alongside EIA and RIA, a number of other specific appraisal procedures have been developed to promote more joined up thinking and working in government. They cover cross-cutting issues such as human health, the concerns of small and medium enterprises, the environment and different aspects of social welfare. Often consisting of simple forms or checklists, these 'single issue assessments' have the aim of making the policy department aware of unintended - and usually negative - consequences and of finding ways of minimising these through better cross-sectoral policy coordination.

### **3.2.2 The shift to integrated policy appraisal**

A number of administrations, most prominently the European Commission, have recently begun to develop more integrated appraisal procedures. Such move from a sectoral to an integrated approach implies multiple and sometimes conflicting objectives. In this chapter we ask whether this integration benefits sustainability in general and environmental policy integration in particular. It seems plausible that integrated policy appraisal should promote the integration of environmental concerns: Sectoral departments would be obliged to consider the unintended environmental impacts of their policy proposals at a stage where decisions are not yet reached and there may be potential for win-win solutions (Hertin and Berkhout 2003). Environmental ministries (and perhaps agencies and NGOs) would be consulted early in the process, promoting cross-sectoral networking and, possibly, policy learning. There are, however, also critics who think that integrated assessment may sideline environmental concerns if the procedure is dominated by the de-regulation agenda (Wilkinson et al. 2005). Some of the arguments in favour and against integrated assessment re-iterate the debate about the effects of merging environmental and sectoral ministries (Weale 1992), where integration without a change in power relations within government is considered by some as ineffective or even counter-productive (see Chapter 3). One of the concerns is that integrated appraisal could make it easier for powerful sectoral ministries to challenge environmental policy on competitiveness grounds while doing little to help environmental ministries successfully voice their concerns. NGOs also see the risk that they could lose their capacity to advance their position through a conflict-oriented mode of action if they subscribe to an integrated appraisal procedure which is structurally biased against the environment (see for example the critique of the EU's latest

chemicals policy produced by the European Environmental Bureau and the World Wide Fund)<sup>8</sup>, or the critical statement by the European Environment and Sustainable Development Advisory Councils on EU Impact Assessment.<sup>9</sup>

### **3.2.3 Conceptual background: Ex ante appraisal and the policy process**

Policy appraisal is based on the assumption that policy-making can – at least to a certain extent – be designed according to principles of rational discourse and linear problem-solving (Radaelli 2005). Typically, the procedures set out a sequence of analytical steps that mirror the phases of a linear and rational model of the policy process. The process normally begins with the identification of a policy problem or objective, runs through an analysis of options and respective impacts and leads to a weighing up of alternatives with a final selection of the 'best' policy choice (see for example OECD 1997, and CEC 2005). In this conception, policy assessment is - at least implicitly - based on a number of assumptions. It suggests that policies are: designed to address identified problems or objectives; that the impacts of planned policies can be anticipated with a certain degree of accuracy; that there is a central decision-maker who selects a policy option on the basis of expected net benefits; and that, implicitly, the provision of more and better information leads to more rational policies. A careful analysis of the problem and the appraisal of available options should, it is claimed, identify mutually acceptable solutions in an efficient manner. Where competing objectives exist (as in relation to a policy goal like sustainability), trade-offs can be made explicit, compromises reached and compensatory measures implemented.

Many scholars of political science argue, however, that while the policy cycle may under certain circumstances be a useful heuristic device, this rational, linear conception of the policy process is not empirically valid (Sabatier and Jenkins-Smith 1993). Influential authors emphasise that political decision-making is characterised by discontinuities, dynamic change and a loose coupling between problems and policies (Kingdon 1984, Sabatier and Jenkins-Smith 1999). It has also long been accepted that there is no unitary decision-maker or central steering mechanism. Instead, policy decisions are the outcome of complex actor and interest constellations. Third, knowledge is seen to have a far more complex and varied role in the

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<sup>8</sup> See <http://www.eeb.org/activities/chemicals/20050113-EEB-WWF-KPMG-brief-final.pdf> [accessed on 2 November 2006].

<sup>9</sup> See [http://www.eeac-net.org/download/EEAC%20WG%20Gov\\_IA%20statement\\_final\\_18-5-06.pdf](http://www.eeac-net.org/download/EEAC%20WG%20Gov_IA%20statement_final_18-5-06.pdf) [accessed on 2 November 2006].

policy process than the positivist model would suggest (DeLeon 1997, see also Owens et al. 2004). A range of influential authors with a more post-positivist orientation emphasise the important role of ideas, argumentation and discourse in shaping policy debates and ultimately decision-making (Majone 1989, Fischer and Forester 1993). In this view, knowledge is not merely constituted by factual information that is generated to help solve problems. Instead, knowledge is more broadly defined as including ideas and argument. It is seen to be used by different actors - typically in a competitive fashion - to structure policy problems and solutions (see also Radaelli 1995). Policy appraisal, then, gives interest groups another opportunity to intervene early in the process of decision-making and provides an additional forum for lobbying activities and political conflict. In short, it may be an additional arena for inter and intra-sectoral politics rather than a way to overcome them through rational argument.

Against this background institutional design becomes important for determining the robustness of the different appraisal procedure. This concerns especially the clarity of rules for selecting proposals and coordinating the appraisal process, i.e. the actors in charge, but also the definition of framework conditions, i.e. regarding the transparency of the process.

### **3.3 Deployment: practical experiences**

#### **3.3.1 United Kingdom**

The UK is well-recognized for traditionally having both efficient inter-ministerial coordination procedures (Bulmer and Burch 1998) and extensive systems for administrative target-setting and performance evaluation (Carter et al. 1992). Weale et al. (2000) have also observed that the UK has a tendency to deal with environmental policy problems by making changes to the policy process or the machinery of government (see also Chapter 12). It is therefore not surprising that the UK began to experiment with environmental and sustainability appraisal earlier and more extensively than most other countries.

Over the last decade or so, a range of policy appraisal methodologies were developed within different departments, several of which are at least partly concerned with environmental issues<sup>10</sup>. A specific Environmental Policy Assessment proce-

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<sup>10</sup> Examples include the Department of Environment, Transport and the Regions' 'Policy appraisal and the environment' guide, the Department for Transport's 'New Approach to Appraisal', Regulatory Impact Assessment, Strategic Environmental Assessment, the Green Ministers' screening requirements, the Treasury policy guidance 'Tax and the environment' and the Cabinet Office's 'Policy makers checklist'.

cedure was first introduced in the 1990s by the environmental ministry as a tool for promoting the 'greening of government' (DETR 1998), but it was not very widely used (Russel 2007). The profile of environmental policy appraisal increased after Labour came into government in 1997, but it remained essentially a voluntary procedure with very limited uptake.

In parallel to this, the scope of mainstream regulatory appraisal (i.e. RIA) has been broadened. RIA was first introduced in the mid-1980s when it focused on the analysis of business compliance costs. The commitment to RIA was reinforced in 1998, when Prime Minister Blair announced that assessments would be carried out for all major policy proposals. It has also been extended to include unintended consequences, distributional effects and indirect costs. In principle, environmental impacts were covered by RIA, but in practice they did not usually play a major role in the assessments and little guidance was given on how to identify and evaluate environmental effects (Cabinet Office 2003).

To promote environmental policy integration while at the same time addressing the problem of there being too many issue-specific appraisals, the environmental and transport department developed Integrated Policy Appraisal. This was a checklist tool that aimed to bring together the three departmental procedures to cover issues that were judged to be insufficiently addressed by RIA. In 2004, Integrated Policy Appraisal was abandoned and key elements of the checklist were integrated into the system of RIA overseen by the Cabinet Office.

The resulting system of integrated RIA is characterized by the following features:

- It is mandatory for all significant legislative initiatives (implementation was brought up to 90 per cent in recent years);
- coordination and quality assurance is provided by the Cabinet Office and backed by personal commitment of the Prime Minister;
- assessment is made of costs and benefits of unintended impacts as well as intended effects;
- monetization is strongly encouraged and guidance on cost-benefit analysis is provided;
- environmental impacts are integrated in the form of a generic question to assess direct and indirect costs ('which may be economic, social and environmental') and a list of questions on specific environmental issues.

Although sustainability concerns still play a limited role in the British system of RIA (National Audit Office 2006), the formal strengthening of the environmental perspective has been considered as at least a partial success by the environmental department because it has moved into the mainstream appraisal procedure. It remains to be seen, however, whether this formal change has a significant effect on assessment practice because it is left to the responsible policy unit to decide which impacts to consider and most RIAs only look at a small set of selected impacts in detail.

### **3.3.2 The European Commission**

Similar to the UK, the policy appraisal system within the European Commission has also recently undergone a re-organization that aims to bring together different strands of appraisal previously developed in a rather disconnected manner. These include ex ante evaluations that are legally required under certain circumstances (e.g. budgetary evaluation, business impact assessment and EIA) as well as those that are not (e.g. gender assessment, trade impact assessment, and small and medium sized enterprises (SME) assessment). This re-organization of policy appraisal in the EU was partly a result of the 'better regulation' agenda which has received increasing emphasis. This reflects a number of factors, not least Europe's disappointing economic performance in comparison with the US, China and India and its inability to meet the economic and employment targets set out in the EU's Lisbon strategy. The ultimate aim of implementing a new and more integrated form of appraisal was to improve the quality of regulation, promote greater stakeholder interaction and ensure the costs of regulation are proportionate to benefits (CEC 2002).

In parallel, the idea of sustainability impact assessment was referred to in the Gothenburg Presidency Conclusions as an instrument to implement the EU Sustainable Development Strategy (see Chapter 8). Environmental policy appraisal in the European Commission had had a rather difficult heritage. A 'Green Star' system was introduced in the mid-1990s. Under this procedure, proposed new legislation with particular relevance to the environment (marked with a Green Star) was planned to go through a process of environmental appraisal. As explained in Chapter 8, this system was never systematically implemented (Kraack et al. 2001) due to lack of methodologies and resources as well as opposition from sectoral directorates general who felt 'controlled' by DG Environment (Hertin and Berkhout

2003). In fact, Wilkinson (1997, p. 163) found 'no evidence that any such environmental appraisals ha[d ever] been undertaken'.

In 2002, plans for Sustainability Impact Assessment were integrated into the new Impact Assessment (IA) procedure (CEC 2002). This dual objective of IA is clearly expressed in the Commission Communication: 'The Commission intends to launch impact assessment as a tool to improve the quality and coherence of the policy development process. It will contribute to an effective and efficient regulatory environment and further, to a more coherent implementation of the European strategy for Sustainable Development' (CEC 2002). The procedure was introduced gradually throughout 2003 and 2004. Currently, its main characteristics are as follows:

- IA should be carried out for 'key legislative proposals as well as the most important cross-cutting policy-defining non-legislative proposals' and replaces previously separate RIAs.
- The assessment is carried out by the directorate-general responsible for the policy proposal during the process of decision-making in consultation with other directorate-general and external stakeholders; external consultants may also be involved.
- The overall process is coordinated by the Secretariat-General in the European Commission; quality assurance shall be reached through inter-administrative consultation.
- The results of the appraisal are documented in an IA report which is published on a central web-site to ensure high transparency and better forward planning.
- Analysts are encouraged to quantify or monetize impacts where possible and to explore impacts qualitatively where quantification would be inappropriate.
- European Commission is working to provide better training as well as qualitative and quantitative tools for IA.

Several recent analyses of the IA system reveal that many assessments were of modest quality (Hertin et al. 2004, Wilkinson et al. 2004, IMV 2006). For example, many only consider one policy option, are narrowly focused on direct economic impacts and explore social and environmental impacts only briefly. Moreover, the coverage is uneven (some policy areas undertake very few or no IAs), the evidence basis is sometimes weak, and few are transparent about how and by whom the assessment was carried out. The procedure was also rolled out at a slower pace than initially planned. For 2003, the first year of operation, 43 proposals had

been identified as requiring an Impact Assessment, but only 21 of those were completed (IMV 2006). Current IA practice also highlights the potential tension – although not outright contradiction - between the better regulation and competitiveness agenda pursued by the Lisbon process on the one hand and the sustainable development agenda on the other (see also Chapter 8). This has become particularly apparent during the process of assessing some of the more controversial policy proposals that have emerged from the Commission in recent years, such as the reform of the EU's sugar and chemical policies.

Nonetheless, our analysis of IA reports (Hertin et al. 2004) shows that most policies with a substantial environmental dimension are assessed against environmental criteria. Although the treatment of - particularly unintended - environmental effects could rarely be considered as appropriate in terms of scope and rigour, it is clear that the introduction of IA has opened-up the policy-making process in the European Commission and - unlike the Green Star procedure - served to improve transparency and forward planning (Jordan and Schout 2006). Anecdotal evidence from our stakeholder interviews suggests that the IA procedure may have triggered learning processes and opened the decision process to new knowledge (Hertin et al. 2004). Whether this has led to 'substantive' environmental policy integration in the sense of a changing policy output remains, however, open to question.

### 3.3.3 The Netherlands

The Netherlands has a strong tradition of policy planning and coordination. For instance, it pioneered the development of SEA in the mid-1980s. *Ex ante* policy appraisal was introduced, however, only as early as of 1994, with two central procedures: the Business Effect-Test (B-Test) and the Environmental Test (E-Test). The preparations for the introduction of such assessments were initiated in the context of the revised National Environmental Policy Plan after 1992. Additional momentum for the introduction came in 1994 from the Quality of Legislation initiative which aimed at a more stringent evaluation of proposed legislation. Here, the underlying goal was (as in the UK and the EU) to increase economic productivity and promote more effective administration.

The E-Test and B-Test procedures aimed at improving the quality of regulation, reducing negative effects on business and implementing environmental policy. A *Joint Support Centre for Draft Regulation* (the so called 'help desk') was set up by the ministries of economic affairs and environment to coordinate appraisals and provide technical back up (cf. Marsden 1999). A joint ministerial working group was



responsible for selecting proposals. A Proposed Legislation Desk, a joint unit of the ministries of economic affairs, environment and justice, decides jointly with the lead ministry which aspects merit an extended policy appraisal. However, an internal evaluation found the system was too cumbersome, was located too low down in the bureaucratic hierarchy and lacked transparency (cf. Volkery and Ehrhardt 2004). The system was restructured in 2001/2002, when it was simplified and tasks and responsibilities were decentralized.

The current system is characterized by the following features:

- The tests are mandatory for all legislative proposals that might significantly impact on business, environment or administrative burdens;
- Four central tools are run separately in the early phase of the regulative formation process: Business Impact Assessment, Environmental Assessment, Practice and Enforceability Assessment and Cost-Benefit-Analysis;
- The procedure is predominantly qualitative: the assessments mainly require a simple, criteria-based qualitative assessment; cost-benefit analysis is rarely used.
- The process is staged: after the first Quick Scan (preliminary assessment) by the lead ministry an extended policy appraisal has to be performed for selected proposals.
- There is no high-level coordination by a central institution (e.g. the Prime Minister's office). The Proposed Legislation Desk is in charge of the quality control, but its powers are limited to giving advice. Quality control is also provided by the ministry of justice that is responsible for legal approval. In case of disapproval the legislative report has to be included in the submission of the proposal to the cabinet.
- There is a high degree of secrecy and little transparency. Assessment reports are not available to the public, but restricted to internal use.

Although the Dutch system explicitly aims to promote the integration of environmental and social issues into other policy domains, it does not really provide a truly integrated perspective. The tools for business (B) and environment (E) testing/appraisal are mostly run independently and the results are rarely analysed from an integrated perspective. This might be explained by the low degree of central steering. The Dutch system places strong emphasis on technical support, but there is no central unit that could put pressure on ministries to comply with central re-

quirements. The Proposed Legislation Desk cannot fill this gap because it largely functions as a technical advice body.

To conclude, although policy appraisal has been in place for a number of years, the rate of implementation appears to be quite low. In contrast to other procedures, policy appraisal in the Netherlands relies strongly on simple checklists and makes little use of quantitative analysis. Furthermore, the transparency of the system is low and stakeholders do not contribute directly.

### **3.3.4 Canada**

Canada has been a pioneer and consistent leader in the area of regulatory reform for over 25 years. The agenda for regulatory reform emerged at the end of the 1970s; the government adopted a comprehensive Regulatory Reform Strategy in 1986. Its main principles are the restriction of growth of regulation, the principle that benefits of regulation should exceed its costs, early public consultation and the reduction of administrative burden. In 1992, the Government adopted the overarching goal of 'maximizing net benefit to Canadians'. A central focus was on increasing international competitiveness and removing barriers to internal trade (cf. Volkery 2004).

Since that time, Canada has worked continuously to improve what is now a mature and well-functioning system of regulatory governance. Each ministry is responsible for conducting RIAs on its policies, but the Treasury Board and the Regulatory Affairs and Orders in Council Secretariat of the Privy Council Office play a strong coordination role. RIA is required by Cabinet directives that regulate the process for making federal acts and regulations. The key document with regard to RIA is the Cabinet Directive on Canada Regulatory Policy from 1999. Over the years, it has permeated the overall departmental policy-making culture. Quantitative cost-benefit analysis has been strengthened and it is now mandatory for all proposals with costs exceeding Canadian \$10 million.

The system is characterized by the following features:

- RIA is mandatory for all legislation and aims to cover the early stages of the policy process.
- There is a strong political commitment to RIA through approval and signature by responsible ministers. It is supported by a wide array of guidelines and manuals, which are constantly up-dated. Training has been improved through interactive, web-based instruments.

- Strong central coordination is provided by the Treasury Board which oversees the overall process. It is supported by the Regulatory Affairs and Orders in Council, which provides central quality control. Both institutions have the power to refuse the submission of the proposal to Cabinet if documents are missing or if the statement is seriously flawed.
- Consultation plays an important role: after approval, the proposal is 'pre-published' to collect public comments over a period of 30 days. For final submission to the Treasury Board, the department must amend the statement reflecting the received information, the action taken and the rationale behind it. After the final proposal has been approved by the minister, the Regulatory Affairs and Orders in Council will again verify all documents.
- External auditing and quality control are mainly provided by the General Auditor and the Parliament. All departments fulfil watchdog functions with regard to their policy areas and intervene if they consider the proposal or the assessment as seriously flawed (Wilburn 2004).
- Environmental impacts are treated separately under the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals (a form of SEA). Environmental assessment has to be performed by the responsible departments or agencies, all of which have appointed a coordination officer for SEA. These officers keep contact with the Canadian Environmental Assessment Agency that oversees and coordinates the SEA process.

Although Canada is often regarded as a pioneer in terms of the institutionalization of policy appraisal and the quality of its outcomes, its RIA process is nonetheless strongly biased towards an assessment of economic costs and benefits. It mostly focuses on business compliance cost, competitiveness concerns and overall administrative burdens. Environmental concerns have only been integrated to a limited degree. Like the Dutch approach, the Canadian RIA system does not provide a genuinely integrated assessment of possible impacts. Against this background, the Commissioner on the Environment and Sustainable Development (located at the General Auditors Office) has strongly criticized departments and agencies for insufficient action regarding the integration of sustainability concerns into RIAs (Commissioner on the Environment and Sustainable Development 2004). NGOs have reiterated these criticisms, complaining that all major areas of governmental action, especially the budget, remain out of bounds to sustainability appraisal

(Hazell 2004). The Environmental Assessment Agency, however, notes that progress has been made (Wilburn 2004).

### **3.3.5 Summary discussion**

Our comparison of the IA systems in the four jurisdictions shows that there are similarities in their basic orientation. All four procedures aim to:

- improve the evidence base of policy decisions;
- improve regulatory quality and streamline regulation;
- increase stakeholder involvement, accountability and transparency in policy-making; and
- promote policy integration and the consideration of cross-cutting objectives.

There are differences, however, with regard to the emphasis on particular functions and the underlying rationale for the entire system. In Canada and the UK, policy appraisal was introduced to reduce administrative costs, avoid unnecessary rules and increase accountability. Only later has the system been broadened to address other objectives such as sustainability and environmental policy integration. Regulatory and environmental policy appraisals were originally carried out separately in both the UK and Canada, with rather poor implementation of the latter (Jordan and Lenschow 2000). Whereas the degree of coupling remains low in Canada, environmental appraisal has now been formally integrated into RIA in the UK. RIA has traditionally been less developed in the European Commission and in the Netherlands and consequently the twin objectives of regulatory efficiency and sustainability have been on a more equal footing from the beginning. Interestingly, this does not mean that integration is necessarily a more prominent feature in the latter two systems. While the European Commission's IA procedure does indeed seek to combine sustainability and regulatory assessment, the Netherlands have introduced a Business Effect-Test and Environmental Test as completely separate procedures.

The way in which the requirement for IA is formally defined appears to have little impact on the effectiveness of the procedure in practice. Although all four systems make ex ante appraisal mandatory for policies with large potential impacts, implementation rates vary from almost full implementation (the UK) to a very limited level of uptake (the Netherlands). The question of how much effort to put into appraising policies is answered in different - and sometimes complementary - ways in the four jurisdictions. Thus, formal monetary thresholds exist in Canada; the principle

of proportionality is used in the EU and the UK; a staged assessment process occurs in the Netherlands, the EU and the UK; and differentiated methodologies are used in the Netherlands (Business Impact Assessment, Environmental Assessment, Practice and Enforceability Assessment and Cost-Benefit-Analysis). Although the conditions under which policy appraisal is mandatory are relatively clearly defined, there is less stringency regarding the required scope of the assessment.

From the perspective of environmental policy integration, the question of how policy proposals are selected for appraisal is crucially important. In all four jurisdictions, the responsible ministry is ultimately in charge of framing the assessment, although in some cases (e.g. the European Commission) inter-departmental steering groups have an influence on this decision. This also used to be the case in the Netherlands, but the process was seen as overly burdensome and the scoping decision has been given back to the respective sectoral ministry. In all four systems, lists of potential impact areas are supposed to broaden the perspective of the officials in charge of policy development. Practice shows, however, that this is not sufficient if policy appraisal is to function as a tool for environmental policy integration: in the two cases with integrated procedures (namely, the UK and the EU), assessment reports tend to cover only direct, short term and economic costs and benefits, often considering unintended effects only in a cursory way.

Another important difference concerns the mechanism and extent of central coordination. Probably as a result of the strong tradition in regulatory reform in the UK and Canada, both systems have a powerful coordinating body (the Cabinet Office and the Treasury Board, respectively). By contrast, there is hardly any central control in the Netherlands and the EU, where coordinating units play a rather technical role and evaluation is mainly left to departments themselves (see also Jordan and Schout 2006). In Canada and the UK, the central coordinating body also provides a certain level of quality assurance and is entitled to block the adoption of a proposal if the appraisal is considered to be flawed or otherwise insufficient. Although this has rarely happened in practice, the presence of an external evaluator is an important driver for implementation - although not necessarily quality - in both countries. A similar role is played by the General Auditor and its Commissioner for Sustainable Development in relation to environmental appraisals in Canada.

A range of approaches also exist with regards to the methodologies used to appraise potential impacts of new policies. In the UK and in Canada, the assessment guidelines strongly encourage the quantification of impacts, particularly the use of

cost-benefit analysis. The guidelines issued by the European Commission also promote quantitative analysis but at the same time recommend a flexible strategy where the analytical technique is chosen depending on the issue under consideration. In the Netherlands, more qualitative methods are favoured. In practice, however, the differences are less pronounced because methodological difficulties and limited resources for IA mean that extensive and detailed quantitative assessment is the exception rather than the rule in all four jurisdictions. Perhaps due to the scale of interests at stake, the European Commission tends to use formal assessment methods and tools more often than the other three jurisdictions. From an environmental perspective, using quantitative methodologies can have the benefit of facilitating the integration of previously neglected ecological impacts into decision-making. On the other hand, policy appraisal in the UK (and to some extent in the European Commission) shows that a heavy reliance on cost-benefit analysis tends to bias against the consideration of environmental factors, which are notoriously difficult to quantify particularly over the long run.

Finally, the four appraisal systems differ with respect to their openness and transparency. The systems in Canada, the UK and the European Commission explicitly aim to increase the transparency of rulemaking through the publication of assessment results, disclosure of the methodologies used and stakeholder consultation. In these three jurisdictions, public scrutiny functions as an important driver for better compliance with the assessment guidelines. IA reports also provide NGOs and other actors with an opportunity to analyse and question the criteria which underlie policy decisions which affect the environment. By contrast, in the Dutch system, appraisal is seen as an administrative procedure, and there are no provisions for participation and disclosure. It is not surprising that the Netherlands also has the lowest implementation rate amongst the four jurisdictions analysed.

Table 2: Comparison of Impact Assessment systems in four jurisdictions

	<b>European Commission</b>	<b>Netherlands</b>	<b>Canada</b>	<b>UK</b>
<b>Orientation</b>				
Function of the IA procedure (derived from guidance documents)	better regulation policy integration use of evidence involvement	better regulation policy integration use of evidence	better regulation use of evidence involvement	better regulation use of evidence involvement
<b>Institutionalisation</b>				
Central coordination mechanisms	weak	weak	strong	strong
Integration of env'l assessment	integrated	separate	separate	integrated
Focus on quantification	medium	weak	strong	strong
Transparency provisions	strong	weak	medium	medium
<b>Performance</b>				
Implementation of the procedure	fairly good	moderate	moderate	good
Scope, detail, quality of analysis	variable, but fairly good	modest	modest	modest
Timing in practice	variable	variable	variable, but often late	variable, but often late

Source: Own compilation

### 3.4 Conclusions

Overall, we would like to argue that the ex ante appraisal of generic national-level policies represents a number of opportunities to pursue environmental policy integration. Our analysis of the appraisal procedures in four jurisdictions reveals a number of new entry points that could allow environmental issues to become more embedded in sectoral policy-making. In particular, they:

- promote the involvement of environmental administrations in cross-sectoral policy making: the provisions for interdepartmental consultation which are usually part of policy appraisal procedures create new opportunities for the environmental departments to influence decisions in other ministries. Although this does not change the power structure within government, the requirements for early consultation give them an opportunity to identify potential environmental impacts before any decisions have been taken. However, in order to exploit these opportunities, environmental departments must be sufficiently motivated and resourced. At present, this is far from being the case: many environmental departments seem to believe that the sectors should 'own' envi-

ronmental problems for themselves, with little involvement from them (Jordan and Schout 2006).

- provide the centre of government with a new steering instrument: much of the literature on environmental policy integration concludes that successful integration is ultimately a question of political will and that environmental responsibilities need to be institutionalized at the centre of government (for example the prime minister's office). In the UK and Canada, policy appraisal has the potential of being used by the Prime Ministers to oversee and potentially control other parts of government. If environmental concerns are high on the political agenda, policy appraisal is potentially a powerful tool for environmental policy integration.
- increase the role of environmental NGOs: increased involvement of stakeholders and the disclosure of decision criteria and anticipated impacts open up new opportunities for environmental NGOs to scrutinize the decision-making process. Under conditions of transparency, pursuing private objectives at the expense of public interests becomes more difficult.
- create opportunities for ex post evaluation: the ex ante formulation of objectives, intended benefits and other anticipated effects provides opportunities for a systematic and critical ex post evaluation of policies. This could further promote a balanced consideration of generic objectives in the decision making process.

There is no simple answer to the question whether an integrated appraisal system is more suitable to promoting environmental policy integration than a purely environmentally focused one. On the one hand, separate environmental appraisal procedures have often been ignored by sectoral departments (e.g. previous appraisal procedures in the UK and the European Commission, and the current E-Test in the Netherlands), particularly when it was coupled with a low degree of central coordination and monitoring. This is not just because sectoral ministries lack the expertise or interest for addressing those issues, but also because they want to avoid drawing attention to environmental costs that could undermine support for the policy. Therefore, integrating 'weak' environmental issues into a mandatory procedure which also deals with the 'hard' issues of competitiveness and public finances may involve a potential upgrading on the political agenda.



On the other hand, integrated IA procedures have in practice not usually been genuinely 'integrated' in the sense of a coherent, balanced consideration of impacts. Even in the European Commission, which explicitly emphasizes the objective of sustainability, most appraisals focus on short-term (mostly economic) costs and benefits. Unless there are mechanisms in place that ensure that unintended social and environmental effects are carefully considered (Canada and the European Commission come closest to this ideal), there is a risk that integrated policy appraisal becomes a new label for what is in practice little more than conventional RIA. Moreover, merging regulatory and environmental appraisal procedures also involves potential for conflict: regulatory reform aims to reduce the burden of regulation on business and society. This involves setting higher standards for the justification of policy intervention, which will often contradict the regulatory needs of addressing challenges such as climate change and biodiversity loss. Which of these objectives prevails is to some extent a question of political priorities, which vary between and within jurisdictions. But there is also common ground which carefully designed appraisal procedures can help to explore. To achieve this, policy appraisal has to be used to open up the political process by including a wide range of interests and values, making them explicit and considering marginal views and neglected issues. If it is conceived as a purely internal tool for analysis or captured by political interests, however, there is a risk that it will close down the political process in order to identify the 'best' solution, or legitimize pre-existing decisions or justify a course of action advocated by the strongest set of interests. A carefully designed appraisal system can help to address these risks.

#### **4. Rationalising the policy mess? Ex ante policy assessment and the utilisation of knowledge in the policy process**

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##### **4.1 Introduction**

“We are”, to quote a paper published recently in the pages of this journal, living in “interesting times for anyone concerned with the theory and practice of appraisal” (Owens et al. 2004, p. 1944). Formal procedures for policy level ex ante assessment are currently experiencing a remarkable level of interest in the EU (Radaelli 2005, Jacob et al. 2007), but also well beyond (OECD 1997, OECD 2004). These procedures come in different guises, such as RIA, Sustainability Impact Assessment and Impact Assessment (IA), and seek to achieve different things (Radaelli 2005). Broadly speaking they all aim to identify the major impacts of a proposed new policy, are carried out before the final decision on the policy is taken, follow a formal administrative procedure and result in a formal report or statement. While the set-up and diffusion of these procedures has been the focus of a number of comparative studies (e.g. OECD 1997, and OECD 2004, Radaelli 2005), the existing literature has little to say about what, if any, impact they have on the actual processes and outputs of policy making. This is somewhat curious given that their underlying aim is precisely ‘to inform decision makers by predicting and evaluating the consequences of various activities according to certain conventions’ (Owens et al. 2004, p. 1944).

Our purpose in this paper is to go beyond simply describing the different assessment procedures in various jurisdictions and/or reviewing their quality based on documentary analyses of the resulting statements (e.g. Lee and Kirkpatrick 2004, Wilkinson et al. 2004). Crucially, we explore the role played by formal ex ante assessments in the wider policy-making process. In the past the consensus has generally been that policy assessment and evaluation have only very limited effect on policy decisions (Weiss 1999, Owens et al. 2004). We might expect the recent uptake of policy-level procedures to have altered this somewhat pessimistic picture. First, prevailing assessment processes tend to be ‘end of pipe’ that is, they are conducted when there is less in policy terms to play for. Recent efforts to ‘up-stream’ assessment to the earlier stages of decision making should - we might think - have opened up opportunities for assessment knowledge to induce deeper policy changes. Second, the problem was traditionally cast in terms of how to get

policy makers to listen to knowledge developed externally (Nutley et al. 2007). Ex ante policy assessment, in contrast, requires policy makers themselves to collate and evaluate evidence *before* making policy.

However, the design of many assessment procedures primarily draws on a rational-instrumental view of public policy making. This view corresponds with a linear model of problem solving. It is found in the handbooks and guidance handed out to policy makers, which typically set out a sequence of steps to be followed. This process normally begins with the identification of a policy problem or objective, runs through an analysis of the main options and their respective impacts, and culminates with an identification of the 'best' one (see for example OECD 1997, CEC 2005). This view of policy making contains a number of (implicit) assumptions about the policy process and the role of knowledge within it. For example, it suggests that: policies are designed to address specific problems or objectives; the impacts of planned policies can be anticipated with a degree of accuracy; there is a central decision maker who selects a policy option on the basis of expected net benefits; and 'better' information necessarily leads to more 'rational' policies. It is notable, however, that many studies have shown that, in practice, many assessments depart from these ideals (e.g. Wilkinson et al. 2004, NAO 2006), which suggests that alternative approaches to policy assessment are worthy of further exploration.

It is curious that this basic rationale for, and design of, policy assessment has been so little affected by at least three decades of research in political science, sociology, administrative studies, and other disciplines. Without attempting to summarise a varied and complex literature, three main aspects can be highlighted. First, most scholars of political science argue that, while the rational-instrumental conception of the policy process may under certain circumstances be a useful heuristic device, it is not an empirically robust model (see Sabatier and Jenkins-Smith 1993, for a critique and an overview of alternative approaches). Political decision-making is, they argue, characterised by sudden discontinuities, and a far looser coupling between problems and policies (Kingdon 1984, Sabatier and Jenkins-Smith 1999). Second, it has long been accepted that rarely is there a single, unitary, decision maker; most policy decisions are the outcome of complex actor and interest constellations, bounded by institutional path dependencies (e.g. Sabatier 1999). Third, knowledge is seen to perform many more roles in the policy process than the linear, rational-instrumental, model would suggest (DeLeon 1997, see also Owens et al. 2004). Importantly, a range of authors with a more post-positivist orientation

have emphasised the important role played by ideas, arguments, and discourse in shaping policy debates and ultimately decision making (Majone 1989, Fischer and Forester 1993). According to this view, knowledge is not merely constituted by factual information generated to help solve problems; it is also used strategically by different actors - typically in a highly competitive fashion - to structure policy problems and solutions to advance their positions (see also Radaelli 1995). A whole branch of the public policy literature - which is sometimes labelled the 'study of knowledge utilisation' - grappled with the worrying finding that knowledge is rarely used as a basis for decision making (e.g. Caplan et al. 1975, Knorr 1977, Francis et al. 1980, Deshpande 1981, Corwin and Louis 1982). A raft of studies concluded that decision makers rarely 'learn' from knowledge in a straightforwardly rational way. First, a wide range of barriers impede the flow of information from researchers to decision makers. For example: shortcomings in the research itself; problems in spelling out findings in an accessible and relevant way; a lack of access to policy makers; shortages in resources, skills, and incentives; and the transformation of messages during the communication process (Romsdahl 2005). Second, decision makers often use knowledge to pursue their own self-interests (Owens 2005).

In summary, while existing studies emphasise different dimensions, there is broad agreement on the importance of three main types of knowledge use (cf. Weiss 1999, p. 141, Romsdahl 2005, p. 470):

- Conceptual learning: when knowledge 'enlightens' policy makers by slowly feeding new information, ideas, and perspectives into the policy system, challenging existing beliefs and opening up new opportunities for policy change.
- Instrumental learning: when knowledge directly informs concrete decisions by providing specific information on the design of policies.
- Political use: when knowledge is put forward to attain political objectives. For example, it may justify decisions already taken, disarm opponents, or postpone a decision.

More recent research has therefore sought to understand how knowledge is used in different ways by different actors (e.g. Anderson and Biddle 1991, Weiss 1999, Nilsson 2006), including attempts to trace more subtle long-term learning effects (for example Bulmer 1987, Anderson and Biddle 1991). These studies have tended to find that assessments have an important longer-term role in policy formation.

It has, however, been recognised that these slow effects can be extremely difficult to trace, even to the point of being completely “invisible to the naked eye” (Weiss 1999, p. 472).

In a recent paper in this journal, Owens et al (2004) rightly rejected the polarisation between the linear, rational-instrumental model set out above and its post-positivist critique on both empirical and theoretical grounds. They challenge the view that policy analysis must be fundamentally reinvented, suggesting that learning opportunities may well arise through more traditional forms of policy assessment. They claim: “experience suggests that even quite technical procedures have, as an unintended effect, provided important apertures for deliberation and learning” (page 1950). However, they admit that much more empirical work is needed to confirm their assertion. Do such opportunities currently exist and under what conditions might they be possible in the future? These are the issue that we address in this paper.

In this paper we attempt to rise to this challenge by exploring the scope for initiating deliberation and learning through some of the assessment procedures that are now proliferating across the OECD. We focus on routinised forms of ex ante assessment activities undertaken or initiated by policy-making units in the administrative parts of government. We consider the role of what are essentially internal assessment procedures, directly undertaken, or at least commissioned, by the unit in charge of policy to inform its activities. Our focus on internal assessments therefore allows us to focus on exploring the different uses of assessment knowledge and their determinants *within* policy making. Although research has moved on from the rational-instrumentalist underpinnings of the very early knowledge utilisation literature, their empirically based typologies of knowledge use remain valid. Therefore, we shall use them to structure our empirical findings. Note that we use the term ‘political use’ not as a negative divergence from the rational-instrumental model (i.e. the strategic misuse of knowledge), but as a more nuanced concept that relates to the extent to which it has become an object of political negotiation, or been used to support a political position. This perspective draws on a post-positivist epistemology which recognises that knowledge is never value free and that the boundaries between knowledge and policy are fluid (cf. Barnes et al. 1996). For example, when a ministry compiles a dataset to justify a proposed policy, it is using knowledge politically. Whether or not this use of knowledge is valid and legitimate depends on the context in question: for example, whether potential negative effects were also represented, whether the data were unbiased (or se-

lected to reflect the upper or lower range of estimates), or whether critical assumptions were disclosed.

In our analysis we focus on three countries (Germany, Sweden, and the United Kingdom) and the EU. We have chosen these four jurisdictions because, although all four have adopted some form of policy assessment, they vary in terms of their institutional setup and orientation. For convenience, we refer to them all as examples of 'policy assessment'. We opted to focus on a selection of thirty-seven policy cases which cover a broad range of policy sectors and types of policy intervention (e.g. regulations, strategies, and economic instruments, see Table 3). The larger number of cases studied in the EU is due to the accessibility of the European Commission's documentation and policy officials, which allowed us to cover more cases with the same resources.

Our analysis is organised around four research questions:

1. How is the role of assessment conceptualised and what is the stated purpose of the procedure? Here, our main reference points are the legal frameworks and guidance documents published by different parts of government. Our aim is to test our assumption that the dominant model of policy-level assessment is still rational-instrumental.
2. To what extent does assessment follow formal rules and guidelines? When and where do assessment practices depart from the guidance set out in the handbooks and, if so, why? Specific attention is given to whether a gap exists between the rationality of the procedures and whether the 'messiness' of everyday policy processes is manifest in practice.
3. Which function(s) does *ex ante* assessment fulfil in practice? Does it serve different functions for different actors? Here, we aim to explore whether it is possible to detect the opportunities for policy learning referred to by Owens et al (2004), or if other functions are more dominant.
4. Which factors determine the function of assessment practice in the policy making process? Is there systematic variation between policy areas, instruments, and actors? With this question we aim to draw out generic explanations for our results.

Table 3: Policy cases analysed in the four jurisdictions.

	Cases analysed
<b>EU</b> (17 cases, 22 interviews)	<ul style="list-style-type: none"> <li>- Groundwater Daughter Directive</li> <li>- Framework Decision on the Principle of Availability</li> <li>- Capital Adequacy Directive</li> <li>- Communication on winning the battle against global climate change</li> <li>- Framework Programme on Solidarity and management of Migration Flows</li> <li>- Environment and Health Action Plan</li> <li>- Directive on the retention of data</li> <li>- Directive on legal protection of designs</li> <li>- Euro-Mediterranean Partnership Work Programme</li> <li>- Regulation concerning the Visa Information System</li> <li>- Recast of the Gender Equality Directives</li> <li>- Regulation on Timber Imports</li> <li>- Regulation on Sugar Reform</li> <li>- Rural Development Strategy</li> <li>- Thematic Strategy on Air Pollution</li> <li>- Decision on FP7 for research</li> <li>- Directive on car taxation</li> </ul>
<b>Germany</b> (7 cases, 18 interviews)	<ul style="list-style-type: none"> <li>- Farm Premium Law</li> <li>- Genetic Technology Law</li> <li>- Flood Protection Law</li> <li>- SEA laws</li> <li>- Federal Transport Infrastructure Plan</li> <li>- 2005 Climate Change Programme</li> <li>- Federal Airport Concept</li> </ul>
<b>Sweden</b> (7 cases, 14 interviews)	<ul style="list-style-type: none"> <li>- EC CO2 trading directive</li> <li>- Climate Change follow up study</li> <li>- Climate strategy</li> <li>- Public transport</li> <li>- Sustainable production and consumption patterns</li> <li>- Biofuels in transport sector</li> <li>- Transport taxation</li> </ul>
<b>UK</b> (7 cases, 16 interviews)	<ul style="list-style-type: none"> <li>- Landfill Allowances Regulations</li> <li>- Kyoto project-based mechanisms and the EU ETS</li> <li>- Data capture and sharing powers for the border agencies</li> <li>- National Lottery Bill</li> <li>- NHS (Pharmaceutical Services) Regulations</li> <li>- Working Time in Road Transport</li> <li>- Offshore Petroleum Activities</li> </ul>

Source: Own compilation

Note: in order to preserve the anonymity of our sources, the labelling of the interview quotes below does not correspond to the ordering in this table.

For each jurisdiction we drew on two principal sources of data. Relevant documents (namely, on the assessment system, its origins, and objectives; the official guidance; the resulting assessment reports; and publications by relevant stakeholders) provided a broad basis for our analysis. Tracing the creation and diffusion

of knowledge in everyday policy process could only be achieved through in-depth interviews with those that participated in them. Semi-structured interviews with officials responsible for the policy in question were therefore identified as a principal data source. Overall, more than sixty interviews were conducted: nineteen with actors involved in supporting and/or promoting assessment, or with an obvious stake in the process (e.g. nongovernmental organisations) and forty three with the officials that completed the assessments.

## **4.2 The use of assessment knowledge in practice**

### **4.2.1 How is the role of assessment conceptualised?**

In the *EU*, the prevailing system of policy-level assessment is the European Commission's IA. This system was introduced in 2002 and combines elements of Sustainability Impact Assessment and RIA. It only applies to major new policy initiatives. The basic conception of the procedure is rational instrumental (CEC 2005). However, this is attenuated in several key respects. First, the main handbook states that the assessment should be “an aid to political decision-making, not a substitute for it” (page 4). The aim of the options analysis is put modestly: “this *may* then allow the conclusion to be drawn that one option stands out above the others” (page 39, our emphasis). Second, this guidance draws attention to the limits of analysis, reminding policy officials to “flag up uncertainties and assumptions in the final ... report” (page 39). Third, the importance of the analysis process is emphasised, and consultation with stakeholders is considered to be a vital part of the assessment. Crucially, stakeholders do not simply provide information on impacts; they should also be allowed to express views on the nature of the problem and the framing of policy objectives.

Policy assessment in *Germany* is formally known as ‘assessment of the effects of law’ (or Gesetzesfolgenabschätzung), but most German officials refer to it as RIA. It is set up as a rather narrow, downstream, assessment of the legal, administrative, and budgetary impacts of proposed new laws. Implementation is weak, and comprehensive guidance was only introduced very recently. The requirements are briefly set out in the Joint Rules of Procedure of the federal ministries which essentially state that all significant effects of new laws have to be assessed by the lead ministry in cooperation with other concerned ministries and with input from relevant stakeholders. Although the objectives remain implicit, the focus is on ensuring that the costs of the law or regulation are justified by its benefits. The stated aim is to “identify the best regulation alternative” (BMI 2006, p. 3) through nine successive



assessment steps, with the core element being the “assessment and comparison of benefits and costs”. Another indication of the rationalist conception of assessment in Germany is that guidance documents say almost nothing about the process of analysis.

In *Sweden* some provisions for assessment at the ministry level are under development, but the more important opportunity for conducting policy assessments (and thus connecting knowledge to policy making) are the ‘committees of inquiry’. These committees are temporary bodies set up by ministries to comprehensively review knowledge of the policy issues at hand and make proposals to the government. Each committee typically lasts for 1 to 3 years, creating more-or-less concrete proposals for strategies or policies. The official guidance sets out good practice, but does not give specific guidance - for example, on methods and tools. The guidance conceptualises assessment as an instrumental process, but with important caveats. For example, the scope and focus of individual assessments is clarified by the specific instructions issued by the ministry ‘client’ vis-à-vis the options and impacts to be considered. Furthermore, political parties are represented in all major committees, and final recommendations are negotiated politically. In other words, it does not make a strict separation between knowledge generation and political decision making.

In the *UK*, RIA is the main policy assessment system. This is coordinated centrally by the Cabinet Office. The system predominantly aims to promote ‘better regulation’ through producing an “assessment of the impact [on business, charity or the voluntary sector] of policy options in terms of the costs, benefits and risks of a proposal” (Cabinet Office 2003, , paragraph 1.1). The official guidance conceptualises assessment as a rational and linear process (Cabinet Office 2007), although it emphasises that it should be a continuous process starting at the earliest stage of the policy-making process. However, the guidance acknowledges that policy assessment should not be a purely expert-based activity. The aim of consultation is not just to provide relevant information, but also increase transparency and public participation (Cabinet Office 2003).

#### **4.2.2 To what extent does policy level assessment follow formal rules and guidelines?**

In the *EU*, although policy assessment has improved the transparency of European rule-making, it does not achieve the ambitious objective of basing policy decisions on robust, integrated assessment knowledge. Actual policy assessment

practice is biased towards economic impacts and administrative costs. Unintended consequences and those in other policy areas tend to be neglected and the quality of analysis varies widely. Tool use is rather limited, with a focus on very simple tools such as checklists. The extent and quality of consultation varies from case to case, but often the perspectives included are from the established stakeholders who have been involved in the policy area before. Many - although not all - assessments justify policy proposals that are to a large extent already determined. Policy assessment is often therefore perceived as having a narrow purpose, namely that of informing the detailed policy design and achieving greater societal buy-in. Fundamentally different options (including the 'no action' alternative) are rarely considered, let alone explored fully.

In practice, the *German* procedure is only partially and often formalistically implemented. The framing tends to be extremely narrow; typically, it only addresses administrative costs, direct economic costs and price effects. In many cases, it is considered as an 'annoying duty' (interview 2, Germany, Environment Ministry) that has to be met with minimal effort. Actual analysis is in some cases replaced by pre-set sentences, for example 'the costs cannot be quantified' or 'alternatives: none'. This minimalist attitude is, however, not universal. In a considerable number of cases, efforts are made - sometimes due to pressure from the Economic Affairs and Finance Ministries - to assess economic and administrative costs. Where this is done, the assessment tends to rely on figures provided by stakeholders, often remaining incomplete. There also appears to be a strong reluctance to include conditional or uncertain information. Although the exact timing varies, policy assessment is typically a one-off activity towards the end of the policy formulation process. The policy assessment documentation rarely contains any information about the way in which analysis was carried out, options rejected, parties consulted, underlying assumptions etc. Stakeholders are not usually involved except - in some cases - as a passive source of data. While policy assessment does not function as an ex ante policy assessment system, it should be mentioned that there are other, often extensive assessment activities which surround the policy-formulation process at federal level. They remain, however, outside the context of the formal policy assessment procedure, but are typically carried out in an ad hoc, informal, fragmented manner which is not transparent to outsiders.

In practice, the generic guidance in *Sweden* plays a very minor role compared to the specific instructions given to each committee by the ministry. In most cases, the guidance is followed in the sense that each impact category is briefly assessed

or at least mentioned, but they receive only minimal attention. The actual use of the 'Committee Handbook' is also low (Regeringskansliet 2005). In practice, the specific instructions to the committees frame the assessment. This has a formal component; that is the publicly available written instructions issued by the government, and an informal one, that is the continuous contacts between the Committee secretariat and the ministry. There are few formal requirements regarding participation and consultations, methods or tools, or ways in which the committee results should be used. Weaknesses in these regards therefore cannot be attributed to an implementation failure. On the contrary, most committees appear to be very good on delivering what the ministry requests of them.

Our research confirms some of the other criticisms levelled at the *UK's* policy assessment system (e.g. NAO 2006) that is, while compliance with the requirement to produce policy assessments is high, they remain narrowly focused on direct economic costs. Narrowing the scope of assessment to what are perceived to be a smaller number of critical categories is one way in which officials pursue their ministry's core policy objectives. The policy assessment process is weak at exploring different ways of meeting a policy goal. In our sample, policy assessments did not radically change the overall direction of policy: "it is often squeezed in at the very end" (Interview, UK case B). Consequently, policy assessments tend to contain a limited range of options, sometimes artificial constructions created to comply with the requirements: "often [this] is disguised by analysing different options which deliver similar results" (Interview, UK, case E). We found that informal consultation with key groups tends to occur before and in parallel with the public consultation process.

#### **4.2.3 Which function(s) does ex ante assessment fulfill in practice?**

In many of the cases analysed, policy assessment in the EU engendered a certain degree of instrumental learning, but this was limited by the way in which 'the problem' was defined and by previous policy commitments. The impact of assessment knowledge on policy design was very small compared with the impact of external lobbying. One factor that limits the potential for conceptual learning is the narrow focus of the assessments, which often simply confirm preconceived views. In nearly all the cases examined, policy assessment had little effect on stakeholder positions. The use of incomplete datasets and inevitable reliance on speculative assumptions can in some cases lead to contradictory results and more room for a political use of knowledge: "We rely on data [from industry] but [they] are not al-

ways keen to give it" (interview, EU, case G). While the relative transparency of the assessment system appears to have supported learning, it has also given interest groups the opportunity to engage in more political uses of knowledge. In several cases, lobby groups have consciously tried to influence decisions by criticising the assessment and/or providing alternative analyses of their own. Whether the policy assessment process has promoted consensus amongst stakeholders remains doubtful. In the most politicised cases, consultation may actually have led to more entrenched positions.

Very few resources are devoted to RIA in Germany and knowledge use is highly politicised. Both the late timing of many policy assessments and the way in which assessment knowledge is presented suggest that they tend to be used to provide an ex post justification of preconceived ideas. This was confirmed by several of our interviewees: "The RIA is just a little hoop we have to jump through. ...We try to assess the costs because we are required to do it by the Joint Rules of Procedure. Also the other impacts considered in the Explanatory Memorandum serve the defence of the proposal, something we put forward when the law is criticised" (interview 2, Germany, Environment Ministry). More interesting and varied was the use of the knowledge from informal assessment activities. In most cases, significant resources were devoted to external studies, workshops, expert groups, or internal analysis. These activities tended to result in instrumental learning, mostly about the detailed design of the policy. Conceptual learning (in the sense of a fundamental rethinking of the prevailing problem) only occurred in one of the seven cases. Political use of assessment knowledge by the lead ministry as well as by other ministries and external stakeholders could be observed in the majority of cases: "Scientific input plays an important role, but not in a straightforward way. Everybody has their own researchers. There is a certain competition [about claims and research input], we use our own budgets to commission studies that substantiate the interests of the different ministries. ... It is only partly true that ministerial administration works rationally. With technical arguments alone you don't get through" (interview 3, Germany, Environment Ministry). The interplay between science and policy is commonly neither purely rational-instrumental nor purely political: "Sometimes a study can also be a pure lobby instrument, but generally people - both those who commission the studies and the research institutes - are weary of making themselves look ridiculous. Everybody just tries to use the existing leeway... in their favour" (interview 3, Germany, Environment Ministry).

In *Sweden* most committees engage in instrumental fact-finding. There is a fair amount of both instrumental and conceptual learning among their members. In relation to actual decision-making processes, however, the knowledge is primarily used politically. There are several reasons. First, the instructions to committees are developed by the ministry in charge which means that problem framings, policy directions, and key priorities are set out in advance."The assessments are determined by the task you are given. It also depends on what you want to achieve, what is more or less relevant, how deep you want to go. The political sphere is not a research domain, you do not search for those truths, and it is in the end a question of achieving political goals" (interview, Sweden, case F2). Second, the key function of the committee is not learning but building a political consensus by navigating between established political positions. In parliamentary committees, political negotiations between the political parties are the basis for the recommendations to the government, implying that they are already backed by a parliamentary majority. Agency officials and experts tend to be excluded from the final negotiations and proposals. In expert committees where politicians are not directly involved, the political negotiation might take place after the ministry has received the proposals. Expert committees are also normally highly perceptive to the political context and anchor the proposals at the political level through continuous contacts with the political parties and the government. Hence, in both parliamentary and expert committees the political aspects of assessment knowledge use are even more accentuated than the formal guidance implies. Our interviewees have reported very intricate political processes within and around the committees, including the deliberate withholding of information, the scheduling of committee inquiries after key decisions have already been made, and selecting expert members to deliver certain types of knowledge. These appear particularly in the latter stages of the committee process, and the political bargaining between the political parties about what to recommend is, however, often unconnected from the main assessment process.

In practice, the focus of the analysis on direct economic and administrative costs means that there is usually little or no scope for conceptual learning in the UK. Undertaking a comprehensive policy assessment is seen as too complex and time-consuming. Policy assessment is not used as an instrument to highlight and explore trade-offs; on the contrary, troublesome matters like this tend to be downplayed. Major decisions are made before the policy assessment process has even started. Instrumental learning occurs in some cases, but typically only in relation to

the minor details of a policy. The political use of assessment knowledge is more dominant, since the assessment of direct costs (and, to a lesser extent, benefits) often functions as a way of justifying the impacts of the predecided policy. Moreover, officials “are very risk averse and often choose the solution that is safest and least controversial” (interview, UK, case B).

Both conceptual and instrumental learning are also limited by what some policy officials perceive as a rather artificial nature of policy assessments - that is, that they require a formal assessment of (sometimes unrealistic) policy options even though in most cases the issues were already known about. There is little evidence that stakeholders alter their preconceived positions based on policy assessments.

#### **4.2.4 What factors determine the function of assessment practice?**

In the EU we found that the Commission's policy assessment procedure broadly follows the rational-instrumental model, but that guidance documents promote a relatively process-conscious assessment approach which recognises the limits of rational analysis. However, policy assessment practice does not usually conform to the ambitious goals in terms of scope of analysis and variety of methods. The involvement of stakeholders is somewhat limited, although it still goes much beyond practice in the other jurisdictions. We found plenty of small-scale instrumental learning, some instances of political use of assessment knowledge, and several cases where assessment knowledge did not play any significant role.

There are several potential explanations for the apparent failure to widen the scope of assessment using more diverse methodologies. First, there are inherent difficulties in analysing broader impacts. Even when policy units are willing to go beyond an analysis of direct costs, they are confronted with complexities, uncertainties, shortages of data, and a lack of well-established assessment methods. This is reinforced by a risk-averse attitude amongst policy officials and the pressure to quickly quantify impacts. Second, the organisational culture of the directorate-general (i.e. ministry) leading the assessment strongly shapes its overall focus. Given the difficulties making clear causal links between policies and impacts, assessments focus on effects in key areas of departmental interests. Third, the availability of financial resources, time, and technical knowledge appears to be a significant constraint in many cases. Fourth, some policy officials see policy assessment as an inappropriate or unwarranted requirement, particularly in relation to specific issues whose solutions seem obvious. Fifth, many decisions are based on pre-existing legal or political commitments: “You don't sit down with a blank

sheet” (interview, EU, case E). Finally, dominant political priorities - namely, the concern about Europe's competitiveness – shape the focus of assessment. In most cases these factors have restricted the role of policy assessment knowledge to instrumental learning about narrow issues such as implementation pathways.

In Germany our analysis revealed that the prevailing policy assessment procedure corresponds closely to the rational-instrumental model, but also that the implementation gap is particularly large. Formal policy assessment produces little knowledge and/or produces it for political purposes. This appears to have strengthened informal assessment activities that have taken over some of the instrumental learning functions that policy assessment is supposed to have. A key reason for this state of affairs is that key actors do not have an interest in, or experience of, transparent assessment practices which do not resonate with the legalistic administrative culture. Politicians tend to see policy assessment as restricting their discretion and so concentrate on defending their preferred solution(s). Policy makers in ministries tend to see it as counterproductive to their effort to push a legislative proposal through the legislative process. It seems plausible that this effect is particularly strong in the German political system where the presence of a large number of veto players (coalition parties, Länder, constitutional court) tends to slow or impede the political decision process. Major stakeholder groups with access to ministries also tend to benefit from traditional corporatist styles of consultation and tend not to press for transparency.

Given these fundamental barriers, any formal policy assessment system would face resistance, but our research suggests that, while policy assessment understands policy as a rational problem-solving activity, the daily reality in Germany is one of constant political bargaining. The expectation that impacts can be anticipated and should be precise ironically leads to the effect that much relevant information is not included because it does not live up to this ideal. The lack of knowledge input and validation by stakeholders also contributes to the low quality of policy assessment. The vertical separation of competencies in the German federal system (where Länder are typically responsible for implementing federal laws) compounds the lack of detailed technical knowledge available.

In Sweden we find that the formal guidance emphasises an instrumental role for assessment knowledge but also that the setup explicitly recognises the political dimensions. This distinguishes Sweden from the other three jurisdictions. The instrumental and political uses of assessments that dominate the Swedish cases are strongly linked to the particular institutional arrangements surrounding the ‘commit-

tee of inquiry' system. First of all, the institutional separation between the committee and the ministry creates a gap between the knowledge and the policy making, and the committees reside closer to policy making than knowledge-making institutions: "The committee members don't frame it as a scientific report ... a committee inquiry is not written that way" (interview, Sweden, case F1).

Second, resource and time limitations restrict broader explorations in most cases: "[E]ven if we had the resources, in the end there is always someone that has to do the job ... .You concentrate on what you judge as most essential" (interview, Sweden, case E). Another factor is the strong steer imposed by the respective ministry, narrowing the selection of participants. The written instructions and informal steering of the process precludes conceptual learning because it is so strongly geared towards political decision making, not learning.

However, it must be noted that the rules surrounding committees in Sweden usually provide various stakeholders the opportunity to bring 'their' knowledge to the table, which opens up opportunities for more political uses as well as learning between different interest groups. Indeed, as in Germany, the political bargaining logic dominates committee processes more than the instrumental rationality that permeates the official guidance: even when committees are of 'expert' rather than 'parliamentary' types, they still need to anchor their proposals politically to ensure that it can sail through the ministry and parliamentary processes. The Swedish experience therefore suggests that political uses cannot be clearly separated from conceptual ones: a fair amount of 'enlightenment' sometimes occurs among the members of the committees as they are confronted with (and are forced to assimilate) alternative knowledge.

Finally, policy assessment in the UK follows an economic rationality, but the guidance emphasises the importance of making assessment iterative and transparent. Actual policy assessment reports, however, focus on impacts that can be easily quantified, giving a limited view of costs and benefits and mostly fulfilling a role of narrow instrumental learning. Political use of policy assessment knowledge largely occurs in the sense of legitimising decisions that have already been taken. Stakeholders do not tend to engage with the assessment because of a (perceived or actual) lack of expertise and because policy assessment is not seen as having a major impact on decisions.

The focus on economic impacts and administrative costs is a clear consequence of the dominance of the competitiveness paradigm in the UK. The Better Regulation Executive, which is located in the very heart of government and has the high-level



political support of the prime minister, promotes policy assessment primarily as a means to reduce regulatory burdens. Consequently, issues that by their very nature require regulatory intervention (e.g. the environment) risk being marginalised in the assessment process. In addition, in many cases the objectives are already defined by EU law or existing policies which are only slightly amended. In the case of significant new policies, the goals often derive from senior policy officials or from ministers, who “try to make their names by proposing big regulations” (generic interview 1, UK). The result is that “ministers won't thank you if you don't come up with what they want” (interview, UK, case E). The mismatch between the ambitions of policy assessment and the practice of policy making is therefore obvious.

### **4.3 Conclusions**

In this paper we set out to analyse whether the proliferation of ex ante assessment procedures has created new knowledge-generation opportunities, which in turn have informed processes of policy deliberation and, eventually, learning and policy change. We also investigated how far the conceptualisation and use of policy assessment systems reflect the three models of knowledge use in policy making. Our empirical answers to these questions are summarised in Table 4. Despite considerable differences in administrative culture, institutional context, and procedural design, we discovered that the intended role of ex ante policy assessment in the four jurisdictions is actually broadly similar. All four systems aim to provide technical information to help policy makers select the ‘best’ policy option – that is, an instrument intended to make policy more ‘rational’. Only in the case of the European Commission's system have post-positivist ideas left a noticeable impression on the assessment guidance, particularly in relation to processes and recommended methods. But the practice of policy assessment is mostly contingent upon the prevailing political context in the four jurisdictions. Overall, we have seen that assessment knowledge serves a range of functions which frequently vary between actors and jurisdictions, and over time. With the exception of cases where there was no significant production of knowledge (because assessment was not done at all or was done formalistically), ex ante policy assessment led to some degree of instrumental learning. This normally concerned the detail of policy design and tended to be selective in its focus on achieving political objectives at the lowest economic and administrative costs. This does not, however, imply that policy assessment has achieved its aim of ‘rationalising the policy mess’. Generally, we found that, while assessments inform policy designs at the margins, the political

context shaped the outcome of decision processes. In the large majority of cases a range of constraints meant that the assessment procedure could not steer the decision-making process in the manner envisaged in the guidance documents. The strength and type of constraints varied but tended to include preexisting political commitments, legal requirements, and the views of powerful stakeholders, public opinion, and existing legal and institutional frameworks (Turnpenny et al. 2008). If the policy choice was perceived to be limited by these factors, officials had little motivation to commit resources to an open assessment of all the options and impacts. While policy assessments have made contributions to broader policy change in some cases, we found few examples of conceptual learning – that is, where an assessment fundamentally challenged prevailing problem definitions or policy approaches.

*Table 4: Comparison of the four assessment systems*

	<b>EU</b>	<b>Germany</b>	<b>Sweden</b>	<b>UK</b>
<b>Main assessment procedure</b>	Impact Assessment	Regulatory Impact Assessment ('assessment of the effects of law')	Committees of inquiry	Regulatory Impact Assessment
<b>Main purpose of assessment</b>	Aid to political decision making; participatory	To identify best policy option; rationalist and expert based	Aid political decision making; closely linked to political process	To identify the most cost-efficient option; expert and stakeholder based
<b>Compliance with formal guidance</b>	Good, but focus remains on economic impacts	Low: narrow focus on administrative and direct economic costs	Compliance with informal ministerial instructions rather than formal rules	Considerable, but with a narrow focus on economic costs and benefits
<b>Functions of assessment knowledge</b>	Some instrumental learning; little/no conceptual learning; some political use	Some instrumental learning; no conceptual learning; many political uses	Significant instrumental learning; some conceptual learning and political usage	Some instrumental learning; little/no conceptual learning; some political usage
<b>Factors limiting learning</b>	Political; issue complexities; organisational cultures; resources constraints	Political and administrative ('executive federalism')	Fragmented institutional set-up; lack of resources and time; political pressure to deliver ministerial goals	Political, legal, and administrative

Source: Own compilation

This can partly be explained by the fact that many assessments ignore unintended consequences and/or external costs. Particularly in Germany and the UK the analysis tended to focus on direct economic and administrative costs, leaving little

space for reflection to occur in relation to bigger issues such as problem framings, causal effects, alternative measures, and so on. That said, the assessments we examined took place over relatively short time scales, typically ranging from a few weeks to one or two years. As it is well established in the literature that conceptual policy learning processes occur over much longer time periods, our analyses may have underestimated their importance.

Significantly, we found a variety of more political usages of knowledge. Most common in the analysed cases was a form of use that could be termed justificatory. Here, the lead ministry used the assessment report to justify a specific measure on the basis of its superiority over alternative courses of action. This type of knowledge use is often criticised, but it undoubtedly serves to make policy making more transparent and thus is often defended by policy officials as a legitimate and necessary way of going about their work. Similarly, other actors (such as sector ministries or interest groups) often use or produce assessment knowledge for their own political purposes – for example, by putting forward cost estimates, reinterpreting data, or assessing certain types of impacts that were not covered by the assessment. This much more strategic type of knowledge use can legitimately broaden the knowledge base of policy making, but it can also involve the conscious manipulation of evidence (e.g. in the form of overstating the costs of regulation). Strategic use tended to occur in relation to issues with high ‘decision stakes’. In some cases, assessment processes even became an additional venue for conflict. This was particularly the case if key actors had the expertise and information to engage in a factual discussion, and if knowledge claims could be used to support their position. In other cases, however, we observed that assessment processes became largely irrelevant in the face of intense political controversy: “Once the debate has become heated, stakeholders – us included – don’t actually look at the facts anymore, but they fall into an adversarial pattern” (interview 2, Germany, Environment Ministry).

Finally, we also observed a few cases where the production and use of assessment knowledge also served to signal a political response to a perceived problem in the absence of actual policy measures (for example, when these are considered politically, legally, financially, or technically unfeasible). As the behaviour has commonalities with the well-established phenomenon of symbolic legislation (Dwyer 1990), we refer to it as a type of symbolic knowledge use.

It has been interesting to observe that the interpretation of assessment knowledge uses is far from clear-cut. Although it can be difficult to judge whether interviewees

gave an honest account of their role, there were strong divergences between the views offered by different actors. It seemed that both officials and stakeholders often genuinely considered themselves as one of the more fact oriented and 'rational' actors (that is, engaging mostly in learning and justificatory knowledge use), while accusing other players of using research in a biased, strategic, or symbolic way. While this may (at least to some extent) be an unavoidable part of the political game, it also points towards the importance of competing rationalities and the blurred boundaries between science and policy, facts and norms. This view is at odds with models that assume that the relationship between science and politics can be clearly defined. Pielke (2007), for example, argues that knowledge producers have a choice in how they position themselves in relation to policy and politics, and that this decision corresponds to particular views of science and democracy. Instead, we would argue that these roles vary from one decision (or assessment) context to the next. It also seems to vary over time, with the political uses of knowledge being more dominant in the later stages of decision making when political capital has already been invested in promoting a particular policy direction.

Although we have, as Owens et al (2004) predicted, found it difficult to gather systematic evidence on the gap between the 'rational' conceptualisation of assessment and the 'messy reality' of everyday policy making, it does appear to be a considerable barrier to learning. In fact, we would argue that, when learning occurred in our cases, it was despite rather than because of the instrumental conception of the prevailing assessment procedure. We see at least three main manifestations of this conflictual relationship. First, the rational-instrumental assessment model draws the attention of both policy officials and evaluators towards the more 'technical' elements of an assessment (for example, the number of options studied, the degree of quantification, and the availability of data sources). A conceptual learning approach, by contrast, would be expected to draw attention to the process, framing, and scope of assessment. The lack of reflection about which actors should be involved, at what stage, and for what purpose meant that learning opportunities were often missed. Second, there was (as also noted by Turner (2007)) a notable reluctance to draw upon incomplete quantitative information or to use more structured qualitative methods such as decision trees or impact matrices to describe impacts. This attitude can at least partly be explained by the positivist framing of most policy assessment procedures, which put an onus on precision, neutrality, and comprehensiveness. In practice, however, it leads to a narrowing down in assessment practice towards things like administrative and economic

costs that can be fairly reliably assessed. Third, assessment procedures and guidance documents do not really help policy officials to mediate the relationship between 'rational' science and 'messy' policy making. Many of the handbooks and guidance documents portray them as technicians whose task is to make 'messy' policy decisions 'more rational'. As a consequence, many of the officials we interviewed felt uneasy about, and frustrated with, assessment procedures that – at least in their view – have little to do with the 'way things work in practice'. This has led in some cases to the emergence of a *de minimis* or 'tick box' attitude that views assessment not as a decision support instrument but a bureaucratic hurdle to be quickly overcome.

While the overall setting and structure of *ex ante* policy assessment means that its potential to foster broader policy learning is likely to remain small, a design of procedures that is more conscious of process and of the barriers to knowledge use should enable *ex ante* policy assessment to play a more fruitful role in policy making. In this paper we have provided a start; more longitudinal empirical studies are now required to better test for the presence of some of the more subtle long-term learning effects of assessment knowledge. While we may never be able to fully 'rationalise the policy mess', with time we should at least be able to establish the conditions under which assessment knowledge plays a more prominent and constructive role in political decision making.

## **5. The production and use of knowledge in Regulatory Impact Assessment: An empirical analysis**

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### **5.1 Introduction**

There are few institutional venues in which knowledge, politics, and policy-making are more closely interlinked than in Regulatory Impact Assessment (RIA). RIA is commonly understood as the formal appraisal activities initiated or coordinated by government administrations during the process of developing specific policy instruments. RIA can take different forms and is frequently made up of several procedures (e.g. competitiveness, environmental, health and administrative burden assessments). What makes RIA a fascinating case for the analysis of the role of knowledge in policy-making is the fact that it has quasi-scientific ambitions, but also takes place at the heart of government where political decisions are transformed into laws, regulations and other policy instruments. The paper analyses both the production and the use of knowledge in the context of RIA with the aim of shedding more light on the different functions knowledge can play in policy processes. Using positivist and post-positivist conceptualisations of the role of knowledge in policy-making as the theoretical lens, it compares and contrasts how RIA is conceived in policy documents and how it functions in practice. The paper is based on an empirical research project analysing RIA procedures across the European Union. The research draws on a desk-based review of relevant policy documents and evaluations as well as interviews with government officials and stakeholders. The paper begins by giving a brief account of ways in which the role of knowledge in policy-making is theorised (section 5.2). It then provides an analysis of how RIA procedures are conceived and set up in EU Member States and in the European Commission (section 5.3). Section 5.4 contrasts this with the practice of RIA drawing on in-depth studies in five selected jurisdictions. The final section (5.5) explores whether and how RIA can serve as a procedure for more open, discursive and cooperative policy-making processes if procedures are informed not by naive rationalist ideas, but more nuanced and realistic concepts of the production and use of knowledge in decision making.

## 5.2 Conceptualisations of the role of knowledge in policy-making

RIA aims to enhance public policy-making by systematically integrating the stock of available knowledge into these processes. This goal brings into play the epistemological issue of the type of knowledge which is thought to enable the improvement of policy-making. A distinction of different types of policy-relevant knowledge that is often put forward in literature is that between the *technical-rationalist* and the *post-positivist* orientation (Fay 1975, Radin 2000, Stone 2002, Owens et al. 2004, Stirling 2005). This section gives a brief overview of the two orientations as both are important theoretical reference points for the analysis of the interface between knowledge and policy. The technical-rationalist orientation has been the dominant perspective upon policy-relevant knowledge and retains much influence today even though the post-positivist approach has formulated an influential critique of the foundations of the technical-rationalist epistemology.

The technical-rational orientation has been dominant since the 1950s, and builds upon a positivist epistemology in which scientific knowledge is objectively validated by application of sound methodology. Scientific information is considered to be value-free and as such has no political content; the application of such knowledge enables the political debate to be 'liberated' from interest-based and value-led knowledge claims. A defining characteristic of the technical-rational model is its schematic representation of decision-making processes. Such a schematic approach is preferred over a messy and more naturalistic representation of the policy domain, because the assumption is that the 'rationality' of a process can be determined in relation to the way decisions would have been made in a 'perfect' world (Pesch 2007).

Applied to the phenomenon of policy-making, the technical-rational model invokes decisions as the outcome of a process that can be analytically subdivided into logical steps. With that, a *linear sequence* of stages in the decision-making process emerges, each of those stages having its defining features. In its most condensed form, the sequence of policy steps is as follows: first, a *policy goal* has to be decided upon; second, a *population of policy options* with which this goal can be achieved has to be mapped out; third, out of this set of policy options, the *most efficient* measure is selected.

One of the crucial elements of rationality is the intentionality with which decisions are made. Every step in the decision entails that choices are deliberately made. Logically, this intentionality implies that there is someone or something that actual-

ly reasons. In other words, the technical-rational model invokes a *unitary agent* to whom decisions can be attributed.

Even the most arduous technical-rationalist will admit that this scheme does not concur with empirical reality. There are necessary and contingent features that prevent the rational scheme from being effectuated into real life. Herbert Simon (1997) pointed to the fact that due to limitations in resources and human neurological capacities it is impossible to take the whole population of possible policy tools into account – we have to be content with 'bounded rationality' in that respect. Similar limitations to rationality also apply to collective actors which are often treated as individual agents (Pesch 2005).

The aspiration of the technical-rational policy analyst is to enhance the 'rationality' of the policy process: the empirical reality is assessed against the ideal represented by the technical-rational template. Deviations from that template will be interpreted as less rational or even irrational.

Advice can take place at several levels. A policy analyst can contrast empirical decision-making processes with the idealized representation and thus advise on how the process could be made 'more rational'. For instance, such an advice could concern claims about goals that have to be made explicit or more realistic, so that it becomes easier to identify means to achieve them. Policy analysts can also support decision-makers by giving advice on instruments that are available to achieve the given objectives. A further approach is to provide analytical methodologies that enable actors to apply rational criteria to the choice between different alternatives. One may think here of ways of quantifying the costs and benefits associated with certain policy instrument. Following this perspective, policy analysis increases the rationality of decisions by allowing agencies composed of several individuals to reach agreement about certain goals or certain policy tools. In other words, a plurality of voices is harmonized into one singular voice. This harmonization process is first based upon the neutral and objective character of the knowledge produced by the policy analysis, and second upon the positivist assumption that reality can be described by a consistent and coherent knowledge basis. These two characteristics help unite political agents, who are divided with respect to their interests or value systems, by turning to a unified body of knowledge that is neutral and value-free.

In contrast, the post-positivist orientation comprises a number of alternative approaches to the technical-rational model sketched above. Following Owens et al., (2004), we can distinguish three interrelated forms of challenges to the technical-



rational model. A first form of critique argues that the technical-rational model is theoretically inadequate. This claim is predominantly based upon the way that a distinction between the realm of 'facts' and that of 'values'. The legitimacy of this distinction has not only been heavily disputed from a social-constructivist perspective, but even technical-rational policy analysts themselves do not live up to it: Their efforts to reframe political argument into technical terms in order to facilitate rational decision-making implies that value claims can indeed be translated into knowledge claims.

A second form of critique holds that the technical-rational model is politically inadequate because it is seen to harbour the danger that prevailing structures of power, interest, and value are reinforced through the 'scientisation of politics' (Weingart 1999, Hoppe 2005). In its inability to acknowledge the core of politics, the technical-rational model fails to produce legitimate decisions. Instead of opening up decision-making processes to all groups of society - particularly social minorities, the technical-rational model facilitates 'closure' by implicitly excluding those groups (Stirling 2005).

The argument of political inadequacy can be extended to the claim that eventually the technical-rational model is practically inadequate. The exposure to shortcomings that are suggested by the claims that the technical-rational model is both theoretically and politically inadequate will almost inevitably lead to the loss of credibility of such analysis techniques and of the policies that result from them.

Conceptualising a policy analysis that overcomes these inadequacies, post-positivists have stressed the relativity of policy-relevant knowledge. Knowledge that can be used in policy is often not the kind of knowledge that can be produced by science (Lindblom and Cohen 1979, Ravetz 1985). Therefore, the strict criteria that are applied to create legitimate scientific claims cannot be maintained, which implies that policy-relevant knowledge can typically only have provisional value. In many cases, policy can only be based on knowledge that is surrounded by uncertainties and bounded by normative assumptions, which demands policy analysts to be very cautious in their advice. As the reliability of scientific information is questioned, other forms of knowledge gain status. In other words, the production of policy-relevant knowledge is pulled out of the confinement of the scientific domain, and now it is seen as an endeavour which is intrinsic to the policy domain itself, developed by a myriad of public actors (Scharpf 1997).

In policy analysis, these insights have led to an emphasis on the contextualized and linguistic nature of policy-relevant knowledge claims in the policy realm. In

relation to the first aspect, following Rein and Schön (1991), policy problems are constructed through frames in which facts, values, theories and interests are integrated. Hence, the frame of a policy analyst may be of a different nature than that of citizen or a stakeholder. Using the notion of 'frames', the struggle for policy becomes a fight over the power to frame a policy problem (and therefore also policy solutions) in a certain way (cf. Majone 1989). Experts are then not seen as 'guardians of the truth', but as political agents who try to enforce their discursive version of the truth upon the public sphere (cf. Foucault 1996). Hajer (1994) shows how different 'discourse coalitions' may emerge to articulate an issue so that it facilitates a certain scientific and political approach. These insights into the discursive nature of policy-formation suggest that the crucial task of policy analysts is to make these processes more democratic by developing participatory methods that facilitate the empowerment of groups and individuals who are usually excluded from participation (Dryzek 2000).

The post-positivist critique has not only shown that the role of knowledge in policy rarely corresponds to this model, but has more fundamentally questioned the appropriateness of this model to serve as an ideal type on both functional and normative grounds. However, some scholars argue that the differences between technical-rational and post-positivist models of policy appraisal should not be overstated (e.g. Owens et al. 2004). This is firstly because elements of both the models are typically combined in theory and practice. A second reason is that the role and function of policy analysis heavily depends on the context, particularly the nature of the policy issue at stake. By far not all policy issues involve matters that have high societal stakes and a large degree of scientific complexity. In those instances, a technical-rational approach is preferable, as post-positivist approaches generally require more resources and do not necessarily guarantee a satisfactory result (Ravetz 1985, Hisschemöller and Hoppe 2001).

We would, however, maintain the distinction between the two models for analytical purposes, as it enables us to recognize tacit inclinations and implicit assumptions in certain practices in policy analysis, and determine possible shortcomings in the light of the theoretical arguments presented above. Analysing the theory and practice of RIA through the lens of these two theoretical perspectives, we will show that in general the concept of RIA is presented almost fully in line with the technical-rational model of policy analysis. However, an analysis of concrete policy proposals highlights that practice does not conform with the model, but that it confirms its empirical inadequacy. This leads us to consider ways in which RIA-procedures

could take more account of post-positivist, i.e. more realistic as well as normatively grounded ideas.

### **5.3 The conceptualisation of RIA in policy documents**

RIA is commonly understood as a set of formal analytical activities initiated and coordinated by government administrations in the process of designing specific policies. The OECD defines Impact Assessment as “information-based analytical approach to assess probable costs, consequences, and side effects of planned policy instruments (laws, regulations, etc.)” (OECD 2001, p. 10). The large majority of OECD countries have one or several formal RIA procedures in place (Radaelli 2005, Jacob and Volkery 2006), although they vary with regard to their institutional arrangements, specific orientations and implementation. The aims of RIA are described in different terms, but a common objective is to improve decision making processes by systematically collecting information about the likely impacts of a planned policy and thereby providing the basis deciding on the ‘best’ policy. In many countries, RIA is strongly related to a ‘better regulation’ agenda that aims to improve the quality of regulation, reduce administrative burden and make a positive contribution to economic competitiveness. Recently, in many countries the scope has been broadened and requirements to assess different dimensions of sustainable development have been added as additional aspects.

In this section, we analyse how RIA procedures are conceived and set up, particularly with regard to how RIA knowledge is supposed to be produced and used in the policy process. It draws on an extensive review of RIA procedures across the European Union. Individual country studies were carried out for all 27 EU Member States<sup>11</sup> and for the European Union. The presentation of the empirical material will be structured around the key formal elements of RIA procedures: the objectives, the design of the process, timing, the audience, involved actors and preferred methodologies.

#### **5.3.1 The stated objectives of RIA**

Surprisingly, the policy documents underlying RIA procedures in the different EU member states often do not state an explicit objective. It appears to be taken for granted that better information straightforwardly leads to ‘better’ decisions, while a

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<sup>11</sup> Austria, Cyprus, Greece, Latvia, Luxemburg, Malta do not have a RIA system in place and have therefore not been studied in detail.

normative dimension is not perceived. Such an assumed value free concept indicates a prevalence of the rationalist concept. A lack of purpose and guidance is also apparent in those guidelines that require an assessment of 'all' impacts of a planned regulation without any further specification. Where an aim is stated, reducing costs imposed by regulation is the most frequently cited objective (e.g. Denmark, Belgium, France, Hungary, Italy, Poland, Portugal, Spain, UK). A smaller number of countries also mention the improvement of competitiveness as an important goal of RIA. The assumption typically made is that reducing regulatory and administrative burden can be achieved without compromising policy objectives. Fostering sustainable development is an explicitly mentioned goal only in the Netherlands and the European Commission. Broadly, the concept of RIA follows a rationalist idea: The assessment is perceived as a value-free effort, objectives are provided either by the policy itself or they are lying outside the scope of RIA. It is meant to inform decision makers (or even a unitary decision maker) who are separate from those involved in the assessment process. With regard to the objectives we did not find much evidence of alternative epistemological approaches. For example, RIA procedures tend not to place any emphasis on discursive objectives, for example developing shared interpretations of policy problems or building a broader consensus on an acceptable distribution of costs.

### **5.3.2 The RIA process**

RIA procedures are typically set out as a linear process with sequence of analytical steps that mirror the phases of problem-solving. It normally begins with the identification of a policy problem or objective by the rule making unit, runs through an analysis of options and respective impacts which leads to a weighing up of alternatives with a final selection of the 'best' policy choice (see for example OECD 1997, and CEC 2005). This linear process which assumes a political will or objective that may be somewhat refined during the RIA, but which in general is exogenously given. It does not explicitly give room for or make reference to processes of negotiating and bargaining to identify compromises that are acceptable for a political majority. Instead, the assessment is designed on the basis of the assumption that there is one most efficient way of achieving the given objectives. This conception of RIA is based at least implicitly - on a number of assumptions: that policies are designed to address well-defined problems or objectives, that impacts of planned policies can be anticipated with a certain degree of accuracy, that different types of impacts can be weighed up against each other and that the a final choice (or at

least a clear recommendation) can be reached on the basis of the analysis. It is not uncommon that procedures use concepts and terminology stemming from an economic methodology - for example 'expected net benefit' or 'cost-benefit-ratio'. In many countries, the guidelines acknowledge that proposals change during policy formulation and that the RIA process should in principle be iterative. While the process is staged in some countries (e.g. in the form of a broad scoping phase and a fuller assessment stage), only a few systems systematically linked this to the political process. Only a few jurisdictions (e.g. UK) explicitly foresee an evaluation step, thereby conceiving it as a cyclical rather than a linear process. The RIA process is typically designed to end with a policy recommendation or decision. In a number of jurisdictions, guidance documents that set out the RIA process in detail are missing altogether, suggesting either a lack of awareness of process issues or a generally low priority of the procedure.

### **5.3.3 Timing and audience**

The foreseen timing of RIA varies considerably between jurisdictions. Several jurisdictions require that RIA should begin 'at an early stage', i.e. as soon as a policy measure is considered (Czech Republic, European Commission, Germany, Ireland, Italy, Poland, UK). Others foresee the assessment once a proposal has been drafted (Lithuania, Netherlands, Slovakia). In general, requirements regarding the timing are not very specific. The audience of the assessment is not always made explicit either, but can usually be derived from approach, the timing and the level of transparency. In jurisdictions where RIA reports either do not exist (i.e. the gathered knowledge is not put together into a formal document) or are not systematically published, the main audience are government officials themselves and their hierarchy. In most countries, a summary of the results of the RIA is made public, often only as part of a short explanatory memorandum (e.g. Belgium, Denmark, France, Germany, Italy, Netherlands, Poland, Slovakia, Slovenia). In Portugal, a publication of the RIA requires a cabinet decision. Where RIA summaries are submitted to parliament in conjunction with the proposed policy, an important function of RIA is seen as providing parliamentarians with the information necessary to make a political decision on the proposed regulation. Stakeholders (and, to a lesser extent, citizens) are seen as an important audience only in jurisdictions where RIA reports are systematically published (e.g. UK, Ireland, EU). Overall, the dominant view appears to be that RIA is a purely analytical task that is (and should be) separated from the political sphere. It is part of the balanced decision making by

officers that are assumed to be neutral and to take into account all relevant aspects of which they are aware. There are few examples of guidelines that make explicit reference to the relationship between RIA and administrative and political hierarchy. Implicitly, the dominant assumption seems to be that RIA knowledge can play the role of 'enlightening' the political leadership.

#### **5.3.4 Involvement of political institutions**

RIA is in all jurisdictions mainly a duty of the administrative unit responsible for the drafting of the proposal. The lead policy unit is perceived as the actor with both the competence and responsibility required to conduct an assessment and to adjust the proposal accordingly. There is little involvement of other political institutions, for example the parliament or representations of regions or localities. The EU is the only jurisdiction which has adopted an inter-institutional regulation on RIA procedures. On the other hand, it is notable that no RIA procedure makes provisions to systematically outsource the assessment to external consultants, researchers or dedicated agencies (with the exception of administrative burden assessments). This indicates that there is a certain acknowledgement that RIA is not a purely scientific process. We did not find any examples of Member States that require RIA for proposals or significant amendments by parliament. The Swedish and Finnish Committee procedures<sup>12</sup> can be seen as an interesting exception. These committees are made up of members of parliament, civil society and government. However, setting up such committees is not obligatory but based on a political decision, while the routine RIA is left to the ministries or agencies. In some countries - for example the UK - where the parliament is charged with overseeing the process, RIA procedures have been reviewed by a parliamentary committee. A common model is that RIA results become part of an Explanatory Memorandum that accompanies that proposal when it is tabled in parliament. In general, there seems to be the prevailing view on RIA as a tool to inform officers that will be enabled to develop a balanced proposal based on rational arguing, while an involvement of other institutions is hardly foreseen at all.

#### **5.3.5 Involvement of external stakeholders**

In most of the studied jurisdictions, RIA procedures do not foresee an active involvement of external stakeholders. The role of actors such as interest groups,

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<sup>12</sup> Finland has formally abandoned the Committee RIA procedure, but it is still practiced in some instances.

NGOs, and local authorities is to comment on the substance of the proposal through routine consultation procedures such as hearings and written consultation. Many jurisdictions see stakeholders as an audience of RIA to be informed about the outcome of the assessment (see 'timing and audience'). Exceptions are the EU, Ireland, the Czech Republic and the UK, where policy documents emphasise that stakeholders hold relevant knowledge (especially on unintended consequences), that involvement can increase public buy-in and that consultation on the proposal should be an integral part of the process (see for example CEC 2005, and Cabinet Office 2007). Overall, this means that the foreseen external involvement varies considerably, but three main models of participation can be identified: stakeholders are given the role of providing or validating factual information, they should be informed ex post about the assessment through an RIA statement, or they do not have any involvement. There was no case where participation is foreseen in the phase of designing the assessment.

### **5.3.6 Role of coordinating units**

In all jurisdictions, RIA processes are managed and performed decentrally by individual departments. Central coordinating units are mostly either not mentioned at all or are foreseen in a role of support rather than enforcement. Notable exceptions are Poland and UK where Prime Minister's offices play the role of monitoring the quality of individual assessments, and the European Commission which has recently introduced an influential Impact Assessment Board made up of high-level officials. Specialised departments that support or oversee the assessments of other ministries can be found in a number of countries, most often the ministry of justice (e.g. Estonia, Finland, Hungary), finance (e.g. Slovakia), the interior (e.g. Germany) or economic affairs (e.g. Poland). Few countries have set up interdepartmental units that share the responsibility for the process, e.g. in the Netherlands, with the ministries of Justice, Environment and Economy responsible for the RIA. There were no cases where a ministry of the environment or social affairs is given the main responsibility. The rather weak degree of central steering is a sign that RIA is seen as a technical task rather than a political activity. It is interesting to note, however, that this has recently begun to change: During the reform procedures in the last few years several countries have upgraded the responsibility for RIA in the hierarchy or shifted it to the heart of government (e.g. the prime minister's office). Others have strengthened central steering through the introduction of review bodies (e.g. Germany, Netherlands, EU). The role of these bodies often

includes both support and control functions, but their relation to the power structure in the political system remains ill-defined.

### **5.3.7 Interdepartmental cooperation**

The majority of jurisdictions have not established any formal mechanisms for interdepartmental cooperation in the process of RIA. Overall, there seems to be an assumption that the lead policy unit has access to all relevant expertise or that routine consultation and negotiation processes (in particular in the process of drafting of new regulations) can fulfil the function of knowledge transfer between ministries. For those countries that formally require the coordination between the ministries, two models can be distinguished. A number of countries have formalised procedures for the circulation of RIA reports or summaries (e.g. Germany, Ireland, Poland, UK). In Germany, departments are entitled to insist on the assessment of a specific impact. The second model is the establishment of interdepartmental working groups which work together on framing and conducting the assessment. This is, however, only foreseen in few jurisdictions (Czech Republic, EU, and in the Swedish and Finnish Committee system), sometimes only under certain circumstances.

### **5.3.8 Role of analytical methodologies**

There are only two types of methodologies that are commonly mentioned in RIA-related policy documents: cost-benefit analysis (including variants such as cost-effectiveness analysis) and administrative burdens assessment (mainly using the Standard Cost Model). A number of countries favour economic analysis as the main framework of analysis (France, the Czech Republic, Italy, UK, Germany and Finland). Only a few jurisdictions mention other quantitative and qualitative methods such as multi-criteria analysis and risk analysis (most notably the EU, but also Hungary, Poland and Ireland). Simple checklist tools are also recommended in the UK, Netherlands and Portugal. Overall, the proposed methods focus on specific issues rather than providing incentives to analyse and weigh-up a broad range of potential impacts including side effects. More open, exploratory methods (e.g. scenario analysis) and those geared towards capturing uncertainties (e.g. sensitivity analysis) are also not covered. The selection of methodologies by jurisdictional guidelines confirms the focus of RIA on producing 'hard', decision-guiding information in line with a positivist epistemology. The suggested methods are clearly not geared towards objectives that would be considered important from the per-



spective of a post-positivist epistemology, for example clarifying or validating assumptions, searching appropriate problem framings, and analysing dominant and alternative discourses.

### **5.3.9 Conclusion: RIA as a neutral, expert-based 'fact-finding'**

To summarise, it can be concluded that policy documents conceive RIA mainly as an expert-based, neutral fact-finding process to inform officers to develop a balanced proposal based on rational reasoning. It is performed by the administrative unit, in most countries without formal requirements to include other actors or political institutions. In its ideal type it is meant to be free of normative choices, which are left to parliament and cabinet. It seems - at least implicitly - to be based on the idea that there is a unitary decision maker who should be informed through a quasi-scientific assessment. The missing attention to process issues may partly be attributed to a general lack of effort in designing effective assessment procedures, but also reflects that the relationship between knowledge and policy is seen as straightforward. With a few exceptions, the conception of RIA draws heavily on a positivist epistemology. RIA procedures still follow a model of 'speaking truth to power'. They are - at least in the way they are set out on paper - almost unaffected by the 'post-positivist turn in policy analysis' (Hoppe 1999). In the subsequent section we will investigate to what extent RIA practice conforms to this view of the relationship between knowledge and policy.

## **5.4 The practice of RIA at the interface between knowledge and politics**

Our analysis of RIA procedures in the previous section was based on a desk study of policy documents, RIA guidelines and evaluations in all 27 EU Member States. The study of RIA practice in this section also draws on this desk study, but complements it with an in-depth analysis of 22 individual cases of RIA in five different jurisdictions (Denmark, EU, Netherlands, Poland and UK). The five RIA systems were selected because of their fairly extensive experience with policy assessment, while at the same time representing a variety of different approaches of RIA and representing different types of political and economic systems. In each of the jurisdictions, a range of individual policy cases were selected. The cases were chosen to represent different policy areas and instruments, but include policy initiatives of a certain political and economic significance. A certain bias may arise from the selection of countries: We have selected those which have a number of years of experience with RIA and a certain level of practice to ensure the presence of as-

assessment activities that can be usefully studied. This requirement already limited the number of countries as RIA requirements have often been only recently introduced or implementation remains rudimentary. This bias towards well-performing countries is, however, less problematic as the barriers to RIA identified in these jurisdictions are likely to occur also in others. A second bias arises from the selection of individual policy cases: It can be assumed that the willingness of individual desk officers to be interviewed is usually higher in relation to RIA that were judged to be successful in terms of both quality of analysis and policy impact. Furthermore, the identification of cases started from lists of adopted policies and therefore we did not include initiatives that were abandoned during the policy formulation process (perhaps also as a result of an unconvincing RIA). As a result of these biases, the case studies may draw an overly positive picture of RIA. While not being fully representative of RIA practice across Europe, our analysis provides valuable insights into the functions of policy assessment in policy-making and into the factors influencing them.

The most striking observation when analysing the practice of RIA is the large variability of process and outcome, not just between but also within jurisdictions. The variability concerns the process, the timing, the type and quality of knowledge produced, and the function of the knowledge in the policy process: We found superficial RIAs done after all major decisions were taken, with the only objective of complying with an administrative procedure. On the other hand, we also found - sometimes in the same country - excellent pieces of analysis carried out in parallel with the policy development process, analysing rigorously the major intended and unintended effects of different options, led to considerable instrumental learning on policy design. While a certain heterogeneity in terms of process, quality and impact may be expected, we surprisingly found that the relationship between those variables is also far from consistent: Some of the studied RIA reports were well-written and rigorously researched but interviews showed that they served the function of justifying a previously taken decision and have very little impact on the decision (except, perhaps, in the sense of creating political support for the preferred policy option). In another case we found that a fairly simple RIA that was narrowly focused on administrative costs turned out to be influential in changing the design of the policy.

What is also clearly visible from the 22 case studies is that conformity of RIA practice with - or even resemblance to - the process described by jurisdictional guidance documents is the exception rather than the norm. The divergence between

guidance and practice can be described and analysed in different ways. The mainstream literature on RIA normally focuses on barriers to more effective assessment and provides advice on processes, institutions, incentives and resources that could improve compliance. In the context of this paper we want to take a different approach and describe RIA practice in relation to the key assumptions of the instrumental-rational RIA model analysed in the previous section. We summarise them in relation to five 'illusions of rational policy analysis'.

#### **5.4.1 The illusion of linearity**

While guidance documents tend to describe RIA in terms of a rational problem-solving process, the reality observed in practice often corresponds to a process in which the objectives and problems are continuously reframed and re-interpreted. Policy development often takes place under constraints which leave little room for manoeuvre due to the need to find consensus and political support. Accordingly, policy change is largely path dependent and incremental. There were few cases where a more fundamental policy change was a realistic possibility and for which the lead ministry seriously considered fundamentally different policy options. In many of the studied cases, policy discussions and negotiations evolved around a solution (or policy measure) rather than a problem. Thereby, policy making resembled more the 'garbage can model' of policy making (Cohen et al. 1972) or the multiple stream model (Kingdon 1984). In some cases, the policy process originated neither from a problem nor from a solution, but from a decision opportunity. This was, for example, the case when a newly appointed minister took the opportunity to raise her profile by announcing a new policy initiative. Even where one can speak of a policy problem that prompted a certain measure, those often took the form of administrative or legal requirements created by the politico-administrative system itself - often at a higher governance level. This concerns for example the need to implement European legislation or to operationalise overarching laws through more detailed regulations. Desk officers feel at times obliged to describe a fictitious process of problem definition and options appraisal which has not taken place and would not have been realistic to expect. The idea that better knowledge leads straightforwardly to better policy designs is also not usually borne out in practice. Although RIA produced in some cases robust and useful insights that were taken into account in policy formulation (especially in the EU), in other cases the analysis only played a marginal role due to conflicting political commitments. In some cases a very elaborated analysis turned out to be completely irrelevant for

practical decision making. And even if the knowledge gathered in the RIA process is taken up in the political decision making, its function is not obvious: As observed previously by many other authors (e.g. Weiss 1999, Hertin et al. 2007), learning is only one possible use of knowledge. Other functions include political or strategic use (i.e. to justify or undermine a particular policy), symbolic use (i.e. to delay decisions) and non-use.

#### **5.4.2 The illusion of 'neutral' and 'objective' analysis**

The expectation RIA can provide a reliable, objective and comprehensive picture of potential impacts of a planned policy is clearly not realistic. The holistic approach - as formulated in many guidelines - to assess all intended and unintended effects and side effects is far beyond the possibilities of RIA in practice. Almost all cases showed that analysis of potential future impacts is necessarily uncertain, incomplete, simplified and potentially contested. The only exceptions were very small or procedural measures the implications of which can be determined with certain accuracy. The reasons for this related to many different factors at different levels. There are obvious methodological difficulties (e.g. in adequately describing temporally and spatially differentiated environmental impact) and data shortages (e.g. due to commercial confidentiality), more fundamental limitations of knowledge (e.g. about future socioeconomic conditions), problems of human agency and reflexivity (e.g. in the behaviour of public agencies or target groups) and irresolvable normative disputes about the valuation of different types of impacts (e.g. trade-offs between economic, social and environmental effects). Several interviewees - especially in the UK and the EU - also pointed out the tension between comprehensiveness and policy impact, emphasising that in their experience neither stakeholders nor politicians have the time to engage with long, technical RIA reports. Particular difficulties were associated with the assessment of the benefits of policies. Even a brief reflection on studied policies makes it clear that it is difficult to accurately measure their benefits, for example through increased social and environmental reporting by companies, extended parental leave, lower agricultural subsidies, better groundwater protection, an extension of organic farming or more transparent financial services. Benefits are often dispersed, long-term and difficult to measure. RIAs were not just uncertain and incomplete, but it was also apparent that they inevitably adopt a selective analytical framing. This partly appeared to be a strategy to reduce complexity: Given the wide range of different effects and the uncertainties associated with them, those in charge of the RIA tended to withdraw

into the corner of their own area of expertise (i.e. the intended policy objectives) and that of partial methods that produce unambiguous figures, (e.g. on costs). Short-term economic costs are better represented than benefits because they tend to be raised by well-organised and well-resourced stakeholder groups. Still, we found cases in which the assessment contributed to an increased transparency in weighting costs and benefits. It seems plausible that this made it more difficult to represent private or sectoral interests at the expense of public interests, although this is a claim that is difficult to confirm empirically. Overall, however, unintended effects and distributional implications were typically not given much attention. While the framing of the analysis was often coherent and thought through, it also seemed clear that alternative framings could be envisaged, for example with regard to problem definition, policy options, types of impacts, methods and time-scales. In some cases this was illustrated by competing approaches by stakeholders and government departments opposing the measure. Given that RIA knowledge is often used strategically by different actors to promote a specific political position, it does not surprise that political considerations also play a role in the set-up of the analysis. Several desk officers confirmed the impression one can have from reading RIA reports: that information is commonly filtered and presented in a way that it supports and justifies the preferred policy option. In a number of EU cases and to a lesser extent in the UK, the setup of RIA studies was subject to influence and lobbying. This was of course not an issue in jurisdictions where the framing of the RIA is an internal administrative process that is not made transparent to outsiders.

#### **5.4.3 The illusion of a unitary decision-maker**

The idea of a unitary decision-maker seems implicit in many RIA-related policy documents. Even though the lead policy unit has shown to be very influential in the studied policy processes, the model of a unitary decision-maker who chooses the most efficient policy option based on the RIA is unrealistic. While the RIA process was always largely steered by the lead department, other actors play important roles in the process of producing and using RIA knowledge: Inter-departmental cooperation tended to be central for larger and cross-cutting policies in the European Commission and the UK. External stakeholders typically functioned as providers of information (e.g. in assessments of administrative burden in Denmark and the Netherlands), in some instances they played a role in shaping the analysis. In a small number of cases, NGOs and industry groups were involved in defin-

ing the scope analysis, successfully insisted on additional research or brought their competing assessments into the policy arena. The use of the knowledge in decision-making processes is even more accessible to competing approaches. RIA knowledge is frequently used by government departments, opposition parties, target groups and other stakeholders to oppose a proposed measure (typically on grounds of administrative or economic cost) or to argue that it does not go far enough. In one UK case, the same cost data put forward by the economics department to justify the policy was used by the finance ministry to argue for the withdrawal of the policy. RIA has in some cases been a forum in which actors with conflicting interests can engage in a transparent, evidence based debate about the consequences of policies. In other instances, it has provided an arena for strategic use of information. While this can take the form of introducing illegitimate bias into the analysis, it can also contribute to a fuller consideration of impacts. For example in one case the long term benefits of a policy in terms of tax revenues were calculated to defend the proposal against the ministry of finance which opposed the policy on budgetary grounds.

#### **5.4.4 The illusion of analytical 'closure'**

While many guidance documents favour quantitative and economic approaches, desk officers were typically unable to provide any formal analysis except narrow assessments of administrative burdens on companies and simple cost calculations (with the exception of large EU policy reforms that drew on extensive studies). In theory, RIA is supposed to guide decisions by providing a reliable picture of positive and negative impacts of the policy, i.e. it aims to help 'close down' (Stirling 2005) decision processes. In practice, however, this was only achieved in relation to the more 'technical' RIAs carried out on very specific policies (e.g. different implementation options for an EU Directive). In more complex cases, RIAs tended to show that policies have a wide range of consequences - some desired, some undesired, some uncertain - which cannot easily be weighed up against each other, not least because of fundamental problems of incommensurability. While RIA has shown to produce relevant knowledge, it does not in itself lead to analytical closure in the sense of producing a 'best' policy option. Interviewees confirmed that this is often at odds with the expectations of policy-makers. Unless a minister or senior official happens to be very involved in a particular issue, he or she tends to expect clear and concise recommendations for a favoured course of action rather than qualified, complex information reflecting on different options and impacts. Officials

therefore tended to downplay potential risks and leave out alternative options - at least when the proposal is made public or enters political negotiations. This has in some cases lead to a form of 'artificial closure' based on the legitimacy of an assessment rather than on the substance of the analysis which was framed in ways that were not shared by all stakeholders. While lack of closure or artificial closure were the most common scenarios, we also analysed one case where the specific circumstances allowed the RIA process to support a participatory search for consensual, efficient measures to address a recognised problem.

#### **5.4.5 The illusion that relevant knowledge is exclusively held by experts**

In most jurisdictions, RIA is conceived as a largely internal process based on the expertise of public administration. Government officials, particularly the lead policy unit, are expected to have access to the knowledge required to assess the impacts of new policies, in some cases with the assistance of external studies or sectoral agencies. It is evident that specialised government officials normally have great - in some cases unrivalled - knowledge of a policy area. There can also be no doubt that ex ante policy appraisal requires specialised technical expertise. However, the experience in jurisdictions that give stakeholders a more prominent role in RIA (especially the EU, to some extent also the UK and Scandinavian countries) shows that the knowledge of practitioners is also very important. In case studies that drew extensively on knowledge (and judgement) by industry, NGOs and other stakeholders and professionals, interviewees emphasised that their input was vital in becoming aware of unintended consequences, determining the magnitude of effects, reaching a balanced assessment, and developing norms and procedures that can be implemented in practice.

#### **5.5 Conclusion: Towards Regulatory Impact Assessment as a discursively rational process**

In the previous section we have shown that RIA as it operates in practice shows little resemblance to the linear and instrumentally-rational process of gathering neutral facts for better policies that it typically held up as the ideal-typical model in policy documents. What, however, are the implications of this finding? One might argue that this observation does not in itself discredit the instrumental-rational model as an aspiration, nor does it provide an alternative to it. Taking each of these arguments in turn, the first question is whether the positivist orientation of RIA procedures is a barrier to their functioning as an effective and democratic aid

to policy-making. The insights generated by the research suggests that the expectations currently associated with RIA function indeed as a major constraint to the fruitful application of the procedure as a tool for evidence-based policy-making. Three main problem areas can be identified. First, we have observed a widespread lack of commitment and resources to RIA. While few actors have expressed the view that RIA is wholly unnecessary, it is often seen as a 'side event' of the political process. Actors involved in the production and use of RIA knowledge - desk officers, senior officials, politicians, stakeholders - have expressed different views on why the impact of RIA on decisions is limited, but overall the research suggests that the large gap between the prescribed linear RIA formats and the practice of political decision-making plays an important role. If assessment processes are seen rather separate from policy formulation, important actors will not devote substantial resources to carrying out a thorough analysis, discussing implications or drawing conclusions about desirable courses of action. This phenomenon was clearly apparent from many interviews with both government officials and non-state actors, and it appears to be self-reinforcing.<sup>0</sup>

Second, we would argue that the instrumentally-rational approach leads to a problematic bias in the selection of analytical methods. The focus of RIA methodology on prediction and precision tends to narrow down the scope of the assessment as carries with it a dominance of economic valuation and other quantitative methods. While this often increases the depth of the assessments, the trade-offs in relation to the breadth of impact areas is not sufficiently acknowledged. Qualitative knowledge tends to be undervalued and few attempts are made to capture uncertainties or explore sensitivities in relation to methods and assumptions. The case studies have illustrated a strong reluctance to apply structured ways of analysing qualitative information and to introduce methodological approaches that open up decision processes to public scrutiny. Finally, the presumed simple relationship between knowledge and policy appears to a lack of attention to process issues. This concerns, in particular, the widespread assumption that the lead policy unit has - or can easily acquire, the required knowledge. As RIA procedures tend to make little effort to involve different types of expertise, for example by other ministries, target groups, other affected stakeholders, and implementing bodies, they miss the opportunity to gather knowledge for the robust design of workable and acceptable policies. The rational model also draws the attention of evaluators inside and outside government to the 'technical' elements of the assessment (for



example the number of options studied, the degree of quantification and so on) to the detriment of a more appropriate focus on learning processes.

The question of an alternative orientation of RIA is more difficult to answer, as the post-positivist perspective is arguably better at pointing to the weaknesses of traditional assessment approaches than at providing operational alternatives. We would not argue that instrumental learning has no role to play in RIA and that conventional methods of policy analysis should be completely replaced. Policy formulation raises different types of questions and many of them can be adequately treated through traditional forms of rational analysis. Policy analysis may provide such approaches, even though they are reductionist and their relevance can only be provisional. The strong points of the post-positivist analysis lies in making us aware of even those provisional qualities and of the risks associated with the non-reflective use of scientific knowledge in the policy domain. By identifying the limits of rationalist approaches, by reframing the expectations of the potentials of RIA from this perspective, assessments can be made more robust and more relevant to the policy process. The potentials of the discursive and political functions of RIA are currently underutilised. As developments in other fields of assessment - particularly risk assessment, technology assessment and environmental assessment - have shown how traditional methodologies and processes can be adjusted to increase not only the legitimacy, but also the robustness of analysis.

In the area of RIA, the example of the European Commission's Impact Assessment procedure has shown how the rational approach can be significantly qualified and attenuated without compromising the basic goal of improving the evidence base of policy-making (see also Hertin et al. 2007). Most importantly, RIA requirements, documents and institutions could more explicitly acknowledge the complex interrelationships and fuzzy boundaries between assessment activities and the political process. RIA practice is an activity where knowledge and politics are inextricably linked, one that combines evidence, logic, norms, judgement and rhetoric in a certain policy space. Therefore, neither policy documents nor those involved in the analysis should expect RIA to produce a single best choice. The aims of the assessment have to be put modestly, as for example in the Commission's guidelines: "This may then allow the conclusion to be drawn that one option stands out above the others. However, it is important to reiterate that the final decision on whether, and how, to proceed is a political one" (CEC 2005, p. 39). On the other hand, if the primacy of the political decision is over-emphasised, RIA will be limited to a narrow adjustment of policy design or an exercise in ex post justification. It is hence nec-

essary to reflect on a case-by-case basis about appropriate role of the assessment in the given political, legal and administrative context. RIA procedures should give lead ministries the flexibility to adapt the approach to the political and technical requirements of the specific case. In some cases, RIA can and should reflect on a broad set of potential measures, in others it can realistically do little more than fine-tune a proposal on which there is political consensus.

Recognising the political dimension of RIA also implies that it should not try to isolate itself from politics, but relate to the interplay between bargaining and arguing and to acknowledge the presence of preferences, conflict, and different values. This is partly a matter of framing the analysis appropriately, but can also be achieved through institutional changes. One way of improving the coupling between RIA and politics would be to ensure that RIA is not located at the lowest level of the administrative hierarchy, but receives attention from the political leadership, for example through a ministerial signature for RIA reports or the involvement of parliament. This would require in many jurisdictions that the RIA process has to become far more transparent to external stakeholders. This would be a challenge particularly for countries with a more corporatist or closed culture of decision-making, but EU example shows that a public scrutiny can be achieved and does not necessarily turn RIA into an exercise that just serves political legitimisation purposes. The inter-ministerial steering groups and influential review bodies can provide a certain guard against the instrumentalisation of RIA for interest-based bargaining.

Acknowledging the limits of instrumental rationality also implies that officials, policy-makers and stakeholders do not see the use of sophisticated assessment tools as the key to clearer recommendations. Although further investment in methodologies and data can be useful, it should be seen as a step towards more transparency and a better understanding of the normative choices. Overall, more attention should be given to systematic ways of analysing different qualitative and distributional impacts. These should aim to broaden the analysis, to connect and compare different impacts without the over-ambitious objective to integrate all aspects into a single methodological framework. There is a wide range of multi-criteria assessment approaches the application of which could be promoted through guidance documents, best practice sharing and training courses. If RIA is to be developed towards a more discursive practice, reflection on methodology has to be seen as an important step in the scoping of the assessment. It should not just be seen as a purely technical matter, but needs to be discussed with key actors (in particular

relevant ministries and stakeholders). In important and controversial policy cases, it might be necessary to involve interested parties in the detailed design of the approach to ensure that the results are widely accepted. Given the current difficulties of RIA procedures in many countries to achieve even a fairly basic level of implementation and policy impact, such a more discursive orientation could not only achieve a higher level of legitimacy and accountability, but it also seems a prerequisite to improving their relevance and, ultimately, effectiveness.

## **6. Towards Regulatory Impact Assessment as a reflexive governance arrangement**

### **6.1 A critical reflection on environmental policy integration**

A strength of the environmental policy integration literature lies in its close coupling with real world political and administrative processes. It describes and analyses – often in great detail – the environmentally relevant decision-making processes, involved actors, inter- and intra-ministerial procedures as well as the conception and implementation of a wide range of integration mechanisms (see for example Jacob, Volkery, et al. 2008, Eckerberg and Nilsson 2013). It has also substantially contributed to understanding opportunities for and barriers to a reform of policy-making processes oriented towards long-term ecological sustainability (e.g. Nilsson et al. 2008, Turnpenny et al. 2008). These have been translated into practical tools and policy recommendations aiming for an incremental integration of environmental concerns into sectoral policy-making (Jacob, Hertin, et al. 2008, Jacob, Volkery, et al. 2008, Nilsson et al. 2008).

The weakness of the environmental policy integration perspective is that it fundamentally underestimates the breadth and depth of change processes required for a substantive change in the way environmental concerns are addressed in policy. A few contributions to the literature – not least the approach presented in chapter 2 – highlight the conceptual learning required for environmental policy integration, but the bulk of proposals for reforming administrative structures display a rather mechanistic style. This particularly refers to the assumed role of knowledge and expertise. The environmental policy integration literature is largely based on the implicit assumption that ‘better knowledge’ on environmental impacts leads to more sustainable policies. This is somewhat curious because the protagonists of this strand of research – predominantly political scientists – are not generally naive in relation to the role of economic interests and power relations in policy-making. Nonetheless, there appears to be persistent optimism that transparency about the negative impacts of, for example, transport or agricultural policies would strengthen environmental actors such as NGOs or environmental ministries. The reason behind this optimism is the essentially positivist stance that these detrimental environmental impacts are simply ‘out there’ and that policy appraisal is able to provide evidence of incontestable facts.

The research presented in chapters 4 and 5 has shown, in contrast, that gathering evidence on environmental impact is a complex as well as disputed task and that policy appraisal is far from providing closure to questions such as “what conse-

quences will this policy have?” and “what is the best policy option to address a given problem?”. Especially with regard to politically contested policy issues and those relating to areas with high uncertainty (see also Funtowicz and Ravetz 1993), policy appraisal can be based on very different rationalities, argue very different cases, raise fundamental normative questions and in the end tends to throw up more questions than it actually answers. Without a different understanding of policy-making and the relationship between knowledge and policy, efforts to promote integrated appraisal have limited effects. The recent literature on reflexive governance might provide useful perspective for this purpose.

## **6.2 Conceptual foundations of reflexive governance**

The term reflexive governance is used differently in individual areas of research (see Feindt 2012). Here, we refer to the concept as used in the wider field of sustainability governance (De Schutter and Deakin 2005, Grin 2006, Rip 2006, Voß and Kemp 2006, Hendriks and Grin 2007, Newig et al. 2008, Feindt 2012, Stirling 2014). Reflexive governance has two main conceptual foundations which will be described in turn.

First, it builds on the work around the concept of governance. The notion of governance indicates a broad view of the process of policy-making which includes not just formal democratic institutions but a wide range of actors, processes and discourses (Rhodes 1997, Pierre and Peters 2000, Kooiman 2003, Rhodes 2007). Decisions are not seen as the outcome of hierarchical, top-down steering of government but of many vertical and horizontal processes in policy networks made up of interdependent governmental and non-governmental actors structured around shared interests in public policy-making. In looking at these broader processes of decision-making, the governance perspective recognises the erosion of the state’s ability to authoritatively steer society and economy. Governance can then essentially be understood as a self-steering of society in which policy pathways emerge as the result of heterogeneous, but interacting decisions at different levels.

Second, reflexive governance builds on the theory of reflexive modernisation as developed by Beck, Giddens, Lash and others (Beck 1986, Beck 1993, Beck et al. 1994). It starts from the observation that traditional modernisation processes and institutions – described as ‘simple modernity’ – have produced risks and unintended consequences which tend to undermine their own foundations. Dynamic processes of modernisation with their optimism of control, exploitation of natural resources, belief in technological progress and lack of concern about unintended

side effects have caused a self-endangerment of society in the shape of environmental and social risks such as nuclear accidents, climate change, and mass unemployment (Beck 1986). At the same time, associated processes of individualisation and globalisation lead to a disintegration and dissolution of established institutions of first modernity such as social class, traditional gender roles, and family structure. In short, the paradigm of technical and economic rationality tends to undermine itself. The modernisation process itself becomes the object of modernisation. This fundamentally affects the role of public policy. In a context of simple modernisation, the role of public policy was to guarantee the legal and economic order and to create and maintain the conditions for technological development, economic growth and welfare. With progressing modernisation and increasingly visible negative consequences, however, “the guardians become offenders of law, order, wealth and freedom” (Beck 1993, own translation). The role of public policy becomes increasingly one of containing these risks, thereby entering into an iterative cycle of risk creation and risk management (cf. Voß, Kemp, et al. 2006). By confronting these self-generated risks and negative consequences of its technical and economic development, modernisation necessarily becomes reflexive. “While crises, transformation and radical social change have always been part of modernity, the transition to a reflexive second modernity not only changes social structures but revolutionizes the very coordinates, categories and conceptions of change itself” (Beck et al. 2003). From this perspective, the concept of reflexive governance aims to use critical self-observation to explore ways of consciously moving policy making on from the increasingly self-defeating mechanisms and approaches of first modernity.

### **6.3 Defining reflexive governance**

Reflexive governance is – similar to environmental policy integration – a concept that is normatively founded, but also to some extent empirically based. In its empirical-analytical dimension, a change of political institutions is not a conscious choice, but results autonomously from inevitable processes of self-confrontation. Following Beck’s argument, the question is not whether society confronts the side effects of modernity, but in what way: through a counter-modernity which provides new certainties and rigidities or through a radicalised modernisation which reformulates objectives and foundations of western society (Beck 1993). Therefore, reflexive governance can be used as an analytical concept for diagnosing ongoing processes of democratic and institutional change we currently witness. At the

same time, the concept has a strong normative impetus, being seen as a progressive and emancipatory way of reshaping decision-making processes (Stirling 2008) or as an approach which confronts the challenges of sustainable development by reflecting on underlying problematic developments (Voß and Kemp 2006, p. 7). Normative expectations typically associated with reflexive governance are participation, transparency, deliberation, learning, inter- and transdisciplinarity, reflection, critique, flexibility, experimentation and consensus-building. This dual character of reflexive governance as empirical and normative concept has been, for example, expressed by Feindt: “Reflexive governance is *needed* to address the joint challenges of multi-level and multi-referential governance in providing global public goods; it *emerges* from ongoing parallel attempts to build multi-level policies and cope with the side effects from practices and institutions of the first modernity type“ (Feindt 2012, emphasis added). Both perspectives are equally valid, but should be clearly distinguished (cf. Beck 1993, p. 15).

In the current literature on reflexive governance, empirical uses of the concept are clearly less widespread than normative ones, especially in relation to sustainable development. According to reflexive modernisation theory we are still at the early stages of a process of reinventing governance in the era of second modernity. While we observe in many places a crisis of traditional forms of government and governance, new approaches are only beginning to take shape. For example, it is obvious that many traditionally popular political parties across Europe are losing membership and reach lower levels of mobilisation. It is less clear, however, whether and how their role and function will be replaced in the longer term. In other words: Because the concept of reflexive governance emerges from a crisis of classical-modernist government, it is – empirically – easier to say what reflexive governance is not than to say what it is. In its quest to find a sustainable pathway for economic and social development, reflexive governance has to abandon a number of key premises of first modernity:

- Reflexive governance can rely to a lesser extent on the institutions of first modernity such as a sovereign nation state, popular and social embedded political parties, the legal system, parliamentary democracy – all these institutions have been considerably weakened and undermined over the last decades. The institutions of governance, the political and democratic processes have to be reshaped and renegotiated (Voß and Kemp 2006).
- Reflexive governance needs to question the concept of technical-scientific rationality with its associated principles of technological and economic pro-

gress and functional differentiation and its optimism of human control over nature and technology (Beck 1986, Beck et al. 1994).

- Reflexive governance has to be based on a new concept of nature which can no longer be seen as an external resource to be exploited to the full in the quest to maximise economic gains. The clear separation between society and nature becomes blurred as we become more aware not only of our fundamental dependence on geological resources and ecosystem services but also of the ways in which humans shape 'natural' processes in the age of climate change (Beck 2010) and the Anthropocene (Latour 2013). Instead, a new, sustainable relationship between humans and nature is needed (Beck et al. 2003).

The more widespread efforts to define reflexive governance normatively tended to start from the perceived contemporary challenges, looking for ways to adequately address them through a new mode of governance. Recent normative definitions of reflexive governance typically start from the distinction between first order and second order reflexivity (e.g. Voß and Kemp 2006, p. 6, Hendriks and Grin 2007, p. 2, Gottschick 2013):

- First order reflexivity is a process in which policy-making tries to remedy the problems of modernity (i.e. the side effects of earlier decisions such as negative effects on the environment) but in dealing with them creates new problems.
- In contrast, second order reflexivity is thought to confront the structural causes for these negative side effects which create the perpetual cycle between problems, solutions and new problems. It thereby questions the basis of decision making, generates knowledge which may challenge existing policy objectives, analyses control problems, deals with uncertainty and is learning-oriented.

This distinction puts the concept of reflexive governance in the context of modernisation theory, but for two reasons it does little to advance our understanding of this new approach to collective decision-making. First, from a perspective of modernisation theory, the mechanism described as first order reflexivity clearly has to be associated with (advanced) simple modernity. It is precisely the effort of addressing environmental and social problems through targeted instrumental measures that characterises this period. The phenomenon of being confronted with negative side effects of modernisation (i.e. "self-confrontation") can contribute very little to a definition of reflexive governance because reflexive governance is supposed to be a new steering mode which helps overcome this dilemma of recurring crises. In



short: reflexive governance is an antipode to first-order reflexivity. Second, the self-reflection of governance associated with “agency, intention and change” (Hendriks and Grin 2007, p. 334) described as “second order reflexivity” is not per se a new phenomenon or one which defines a new sociological age. As described in chapter 2, both theorists and practitioners of environmental policy have long reflected on the structures, institutions and frames which contribute to persistent environmental problems. Instruments such as sustainable development strategies, interministerial working groups on the environment, sectoral integration strategies, Green Cabinets, green budgeting, ecological finance reforms etc. were all developed to change the institutions and practices of governance in order to address the shortcomings of a functionally differentiated administrative systems with the ultimate goal of more integrated, forward-looking and sustainable policy decisions (Jordan and Lenschow 2008). The definition of reflexive governance should therefore not be restricted to a sheer reflection on the structural factors that contribute to the production of detrimental side effects. This would oversimplify the idea of reflexivity as it was the case in the debate on reflexive modernisation: Looking back on a decade of academic work on the concept, Beck and his colleagues note: “The ‘reflexivity’ in ‘reflexive modernization’ is often misunderstood. It is not simply a redundant way of emphasizing the self-referential quality that is a constitutive part of modernity” (Beck et al. 2003, p. 1).

A definition which brings out both the analytical depth as well as the innovative normative core of the concept of reflexive governance needs to be more substantive and reflect deeper ontological and epistemological foundations of reflexivity. Heuristically helpful in this context is the typology by Stirling who distinguishes between ‘unreflectiveness’, ‘reflectiveness’ and ‘reflexivity’ (Stirling 2006, p. 226ff.):

- Unreflectiveness is defined as a “governance situation in which representations, understandings and interventions are effectively restricted to whatever are held to be the most obvious, operational or instrumentally pertinent attributes of the object under intention” (ibid, p. 226).
- Reflectiveness is a “mode of representation, understanding and intervention by governance systems in which attention extends to a ‘full range’ of whatever are held to be broadly salient attributes to the object in question” (ibid, p. 227).
- Reflexivity involves the recognition that governance subject and object – the governance system and the area of intervention – are co-constituted through a “recursive mutual contingency of subjective representations and interventions” (ibid, p. 229).

The value of this typology is that it highlights the distinction between broadening decision-criteria and participation (reflectiveness) and the more fundamental re-thinking of the ontological and epistemological basis of governance (reflexivity). This distinction is particularly important because it refers to the key contribution of reflexive modernisation theory to the governance debate: “Without further measures, practices of network management, public participation, self-organisation and so on will reflect many of the assumptions of first modernity, and reproduce the patterns of action typical for it” (Grin 2006, p. 60). Just as the distinction between first order and second order reflexivity, the typology put forward by Stirling is also essentially normative. It can be interpreted as a stages model in which the aim is to move from a less reflexive to a more reflexive level. There is also, however, an implicit functional dimension because a higher degree of reflexivity is assumed to be better equipped to deal with the social and environmental problems faced by late modernity.

There have been few attempts to provide a general definition of reflexive governance. Starting ‘top down’ from a normative analysis of the basic problems of sustainable development, Voß and Kemp propose five “strategy elements” of reflexive governance:

- “integrated transdisciplinary knowledge production,
- adaptivity of strategies and institutions,
- anticipation of the long-term systemic effects of action strategies,
- iterative participatory goal formulation, and
- interactive strategy development” (Voß and Kemp 2006, p. 17ff.).

Generally, the terminology used here – especially the reference to “strategies and institutions” – suggests that the authors have an overall governance system in mind which incorporates these elements. Moreover, the strategy elements are very general in nature and mostly process-oriented. Only one criterion (“anticipation of long-term systemic effects”) directly relates to the substance of decision outcomes. With its focus on how to take of a broad range of relevant aspects and actors into account in a dynamic and flexible way, the criteria are more concerned with reflectiveness than with reflexivity. Somewhat curiously, the strategy elements seem to be loosely structured around the policy cycle which has attracted much criticism for its instrumental perspective on policy-making (see for example Jann and Wegrich 2007): Goals are formulated (agenda setting), the effects of different strategies are anticipated (options appraisal), strategies are developed (policy formulation and

implementation), and knowledge is produced (policy evaluation). While indicating a general direction of thought, these criteria do not yet provide a substantive definition, typology or analytical framework of reflexive governance.

An alternative, more operational definition is put forward by Feindt who suggests that “reflexive governance occurs

- where institutional and procedural arrangements involve actors from various levels of governance and/or various epistemic backgrounds
- in an effort to reflect on and possibly adapt their cognitive and normative beliefs
- in ways that take into account and acknowledge alternative understandings of the problems
- in an attempt to integrate multiple approaches to problem solution” (Feindt 2012, p. 161).

This definition has a similar focus and direction. It also mainly refers to procedural aspects and highlights the need for interaction between different stakeholders. On the other hand, there are significant differences between the two ways of operationalising the concept: While Voß and Kemp emphasise the need for adaptive *strategies and institutions*, this is not a key criterion for Feindt who, instead, highlights the adaptation of cognitive and normative *beliefs* and the acknowledgement of alternative *understandings*. This second definition is therefore more concerned with reflexivity than with reflectiveness. A second difference is that the strategy elements put forward by Voß and Kemp refer to the substance of evaluation criteria (“anticipation of long-term systemic effects”, for example to avoid undesirable social and environmental impacts). Feindt, in contrast, abstains from formulating any ‘external’ normative objective or reference point. Instead, he defines reflexivity purely through procedural ‘ways of doing’ such as the integration of different perspectives and the adaptation of beliefs (ibid., p. 161).

While it appears to be difficult to define and operationalise reflexive governance as such, it is possible to get a better understanding of its substance when turning to the specific area of reflexive policy appraisal which is recognised to be a key element in reflexive governance (Stirling 2014, p. 20). Here, two concepts will be explored because they are useful for the further analysis: the idea of ‘opening up’ vs. ‘closing down’ and the concept of congruency.

Stirling emphasises the function of appraisal for ‘opening up’ analytical and decision-making processes (Stirling 2008). Contrary perhaps to an intuitive understanding of the term, opening up is not the same as broadening out the scope of assessment. The broadening of impacts and decision criteria considered in ap-

praisal refers to the scope on the input side (i.e. reflectiveness). A narrow analysis, for example, would only consider direct economic effects while a broad analysis would include a range of different impacts such as indirect economic effects, environmental outcomes and distributional aspects. The task of opening up, in contrast, refers to the way in which these inputs are processed in the context of the analysis and how results are presented. Here, closing down could, for example, mean that the appraisal proposes a 'best' policy option on the basis of a straightforward cost-benefit analysis. An appraisal which plays the role of opening up may instead be based on a number of different methodologies, carry out sensitivity analyses to test different plausible assumptions and present several policy options with their associated opportunities and risks. It would make underlying uncertainties and potentially contested normative commitments visible and highlight choices in framing the policy issue as well as in addressing it. In analogy to how Stirling describes the role of social science more broadly, the function of policy appraisal from the perspective of reflexive governance can be described as "helping to inform – and catalyse, provoke and mobilise – more vibrant political debate over the particular questions, framings, values and knowledges under which alternative courses of action look most reasonable" (Stirling 2014, p. 6).

The second concept which has been used to describe the function of reflexive policy appraisal is that of congruency (Grin and Van de Graaf 1996, Grin et al. 2004). Congruency describes a course of action that makes sense for each of the actors involved: "Stakeholders consider it an 'unproblematic' solution to 'their' problem, while co-producers are motivated for performing their envisaged part in realising the solution" (Grin et al. 2004, p. 128). It turns "a technically good idea into a 'socially robust'" (ibid.). Crucially, congruency is different from both consensus and compromise. Consensus typically implies a full alignment of the problem framing and solutions which is neither required for an effective solution nor easy to achieve. Compromise – typically based on bargaining – is a well established way of resolving political deadlock. While it can often be effective in the short term, it may be less robust over the longer term (ibid.). The option of exploring congruent courses of action through reflexive policy appraisal opens up the potential for finding innovative ways of creating momentum for collective decision-making.

Based on this review of relevant definitions and concepts, we can now adopt a tentative working definition of reflexive governance. In the context of this thesis, reflexive governance will be understood as practices aimed at collective decision-making which

- involve a wide range of relevant actors,
- include a broad range of (intended and unintended) impacts and decision criteria,
- open up analytical and decision-making processes as well as connecting empirical and normative enquiry,
- reflect critically on the way in which problems are framed and decision-relevant knowledge is produced,
- increase actors' mutual understanding of frames, values and knowledges with a view to identify congruent solutions, and
- recognise limitations to prognostic and managerial capacities and make provisions for adaptation and learning.

#### **6.4 Comparing environmental policy integration and reflexive governance**

A structured comparison between the concept of reflexive governance and the concept of environmental policy integration shows commonalities as well as differences. Both approaches have in common the fundamental objectives of dealing with side effects of modernity and steering development processes towards sustainable development. One important way to achieve this is the integration of knowledge, beliefs and perspectives across scales and policy areas. On the other hand, there are major differences.

Summarising the more detailed analysis in table 6.1, it can be noted that the concept of environmental policy integration is much narrower in its scope and has a focused reform agenda. Reflexive governance, in contrast, is an encompassing perspective which responds to a broad range of political, economic and environmental crises.

The second major difference is their very distinct ontological and epistemic orientation. Environmental policy integration is essentially based on realist ontology and a positivist epistemology. Economic development is thought to have negative side effects which should be predicted and acknowledged in the policy formulation process to find better, 'win-win' policy options. Environmental policy integration aims to promote ecological modernisation through the procedural advancement of environmental information in policy and administration which is hoped to result in a promotion of environmental technology and green growth.

The concept of reflexive governance, in contrast, includes a fundamental critique of realist ontology and positivist epistemology. It is based on the assumption that social reality is multiple and relative and that the knowledge acquired about the world is socially constructed. The reflexive governance perspective therefore explicitly deals with the problems and phenomena which emerged in the empirical analysis of appraisal practice in chapters 4 and 5, for example the competition between different rationalities in the political process and the fundamental uncertainties and incommensurabilities in environmental assessment and decision-making. From the perspective of the conception of policy appraisal, these are undesirable divergences from the rational-instrumental ideal (cf. chapters 4 and 5).

While the theoretical perspective of environmental policy integration is not well equipped to conceptualise these problems, the reflexive perspective concept can help understand and respond to these phenomena. It allows to analyse how an alternative approach to rationality could be employed in practice, for example in scientific policy advice (Van Zwanenberg and Millstone 2000). It recognises and values normative and epistemic diversity, analyses the role of participation and deliberation under conditions of uncertainty and reflects on the iterative relationship between knowledge and power (Stirling 2014). While the environmental policy integration literature has extensively studied existing policy-making institutions and processes, the literature which uses reflexive governance explicitly as a theoretical lens has engaged rather little with the institutions of representative democracy but has, instead, focused on new and experimental decision and planning processes.

Table 5: Comparison between environmental policy integration and reflexive governance

	Environmental Policy Integration	Reflexive Governance
<b>Commonalities</b>		
Overall objectives	Steering the development process of society towards sustainability	
	Dealing with unexpected and undesirable consequences of development	
	Integration of knowledge, perspectives and beliefs across scales and sectors	
<b>Differences</b>		
Theoretical basis	Ecological modernisation theory	Reflexive modernisation theory
Direction of critique	Critique of functional differentiation of environmental policy-making and administration	Broader critique of policy-making institutions of modernity
Reform agenda	Reform agenda to solve one particular problem	Continuous self-observation of society
Focus	Focus on environmental problems	Relevant to all side effects of modernity
Role of knowledge	Positivist view that knowledge informs policy. Knowledge on environmental impacts is 'out there', but has to be integrated into sectoral decision-making.	Post-positivist view of co-evolution of knowledge and power. Different knowledge claims compete, their legitimacy and validity needs to be negotiated in the policy formulation process.
View of technology	Social change leading to technical change	Socio-technical change as joint process
Role of appraisal	Integrating environmental concerns into decision-making to make better and more balanced decisions	Opening up decision processes, highlighting choices, increasing accountability and legitimacy, reflecting uncertainty and including marginalised positions
Policy processes in focus	Focus on reform of existing policy-making processes (e.g. regulatory impact assessment, sustainable development strategies, administrative reforms)	Focus on new processes typically detached from established democratic processes (constructive technology assessment, adaptive management, participatory scenario planning, transition management etc.)
Policy advice	Policy advice with strong instrumental dimension, typically concrete recommendations with incremental ambition	Policy advice with strong post-positivist dimension, typically abstract recommendations with radical ambition

Source: Own compilation

## 6.5 Regulatory Impact Assessment as a reflexive governance arrangement?

### 6.5.1 The analytical framework

The key questions of the subsequent analysis are, then, to what extent and under which conditions RIA can serve as a reflexive governance arrangement. In at-

tempting to answer this question, it seems useful to come back to the distinction between reflectiveness and reflexivity introduced in section 6.3.2.2, because it captures two important, but quite distinct elements of reflexive governance. In addition, we will distinguish between two other perspectives, namely the institutional setting and the outcome. The institutional setting describes the formal rules of the appraisal procedures, for example the prescribed process, actors to be involved, timing, and reporting obligations. As appraisal outcome we understand the learning that actually takes place during RIA. Here, we ask whether the appraisal has actually lead to a change of the beliefs and positions of different actors and ultimately been reflected in the policy design. This distinction between setting and actual output seems crucial given that our previous analysis has shown a huge gap between the theory and practice of appraisal: The institutional framework provided by the procedure is an important determinant of the kind of learning that can occur, but the link between the institutional setting and the outcome of an appraisal is far from straightforward.

Bringing the dimensions together – reflectiveness and reflexivity on the one hand and institutional set-up and learning outcome on the other – we arrive at four criteria for the analysis:

- Reflectiveness of the governance setting: This criterion describes the degree to which the governance arrangements make provisions to ensure that not just direct effects but also less obvious impacts play a role in decision-making, including unintended consequences, distributional impacts and external-effects (cf. Stirling 2006). This aspect is equally covered by the principle of environmental policy integration. The reflexive governance perspective, however, emphasises the crucial role of participation in order to achieve reflectiveness (Feindt 2012). A governance setting which enables or even encourages the participation of actors with different kinds of expertise and different interests is more likely to consider a broader range of aspects.
- Degree of reflective learning: Here, we observe the extent to which policy decisions are actually based on a broader range of impacts, evaluation criteria and options. This includes knowledge which is put to use for concrete decisions in the sense of specific information to improve the design of policies (cf. Dedeurwaerdere 2009, see also chapter 4). In short, the question is whether the cognitive basis for policy decisions has been widened to take account of all relevant aspects. Reflective learning is also aimed for by environmental policy integration.



- Reflexivity of the governance setting: A reflexive governance setting is one that provides the conditions to systematically acknowledge and analyse multiple perspectives, including those typically excluded from decision-making. It provides a process which does not aim to immediately close in on one particular way of judging or acting. It uses methodologies which connect facts and values, empirical and normative enquiry (cf. Stirling 2006, Fischer et al. 2007, Stirling 2008). A reflexive governance setting also aims to reflect on limits of knowledge and control, thereby developing alternative models of rationality, modes of justification and approaches to steering societal development (which may be latent already but not fully recognised as legitimate in public, cf. Beck et al. 2003).
- Degree of reflexive learning: This criterion refers to the extent to which actors have actually developed an understanding of the way in which normative standpoints, framing assumptions and the structure of knowledge impact on their respective positions with regard to the policy in question. Reflexive learning opens up opportunities for policy change through a challenge of existing beliefs (Hendriks and Grin 2007, see also chapter 4). Reflexive learning has occurred if the appraisal has helped to overcome political deadlocks, to address persistent environmental and social problems or to find congruent courses of action through a fundamental reflection on ways of thinking and acting. It has also occurred if those courses of action are based on a modest expectation towards the ability of state actors to anticipate and steer societal developments.

Table 6: Framework for assessing the reflexivity of governance arrangements

<p><b>1. Reflectiveness of the governance setting</b></p> <ul style="list-style-type: none"> <li>- setting encourages participation of diverse actors</li> <li>- setting enables inclusion of full range of intended and unintended impacts, including long-term effects</li> </ul>	<p><b>2. Degree of reflective learning</b></p> <ul style="list-style-type: none"> <li>- wide range of impacts and evaluation criteria are considered</li> <li>- policy design improves, negative unintended impacts are reduced, long-term effects are considered</li> </ul>
<p><b>3. Reflexivity of the governance setting</b></p> <ul style="list-style-type: none"> <li>- setting allows connecting and opening up analytical and decision-making processes</li> <li>- setting encourages congruent solutions, early and deep involvement</li> <li>- setting enables development of alternative modes of rationality, justification, and steering</li> </ul>	<p><b>4. Degree of reflexive learning</b></p> <ul style="list-style-type: none"> <li>- actors improve understanding of each other's frames, values, and knowledges</li> <li>- deadlocks are overcome, congruent courses of action are identified</li> <li>- measures are based on modest expectations of steering capacity</li> </ul>

Source: Own compilation

In applying this framework, the aim is not to evaluate RIA on the basis of a simple blueprint. Developing a general model of reflexive RIA would be inappropriate, not least because of the heterogeneous conditions for each appraisal. As shown by Spruijt et al. (2014), there is a broad consensus in the relevant literatures that expertise plays a different role in policy-making depending on the decision context, for example the type of issue and the type of knowledge. In relation to RIA, we have observed strong differences in the institutional contexts and administrative cultures which vary not only between, but also within jurisdictions (see chapter 3 and 4). RIA also covers very different kinds of policy issues. These include issues with minor political, economic and ethical importance as well as major reform projects. They include simple problems that can be easily solved through technical or legal measures as well as 'wicked' problems or complex systems that are difficult to steer. Therefore, the aim of the subsequent analysis is not to prescribe any particular model of RIA but to get a better understanding of the extent to which RIA can and does increase the reflexivity of policy-making.

### 6.5.2 Regulatory Impact Assessment as reflective setting

In principle, RIA has a considerable potential to function as a reflective governance setting. Broadening the set of evaluation criteria and taking unintended consequences into account are key objectives of this form of policy appraisal. Involving a wider range of actors in the assessment process (e.g. through public hearings) can also be part of RIA.

In practice, however, the jurisdictions and procedures studied here are using this potential to a varying, but overall limited degree. A significant number of procedures aim to make policy appraisal more comprehensive. The most common instrument to achieve this is to prescribe an extended list of themes and indicators to be considered. In some procedures, these explicitly included sustainable development indicators, other common topics are climate change, health, gender, and small business. This objective of broadening the analysis is, however, counteracted by methodological choices. As described in the empirical chapters, RIA is in many countries conceived as a narrow cost-benefit or administrative burden assessment. Impacts that are difficult or impossible to include in those methodologies tend to be sidelined in these procedures.

Generally, the majority of guidance documents studied focus on questions of content (methodology, options, criteria etc.) and do not make detailed provisions for the process of appraisal. Many RIA procedures are conceived as internal administrative processes. While some require that the results of the appraisal become publicly accessible, only a few explicitly foresee stakeholder involvement. Any procedure which contributes to transparency is likely to increase reflectiveness because it enables societal actors to challenge the analysis and to voice concerns if certain impacts are excluded. Procedures which combine a narrow methodology with a purely internal focus have to be judged as unreflective.

### **6.5.3 Reflective learning in Regulatory Impact Assessment**

Here, the question is whether RIA procedures have actually led to a broadening of criteria, impact areas and policy options considered in the policy formulation process. As this question corresponds with the idea of environmental policy integration and has been covered in detail in the previous chapters, the results will only be recapitulated briefly. Overall, we found that reflective learning occurs only to a limited extent. The main factor which restricted any kind of learning is that a considerable share of desk officers did not carry out an actual assessment, but only complied formalistically with the requirements (see section 4.2.2). Many of them saw the RIA procedure as an unnecessary obligation, mostly because the prescribed process of open options appraisal contrasts with a much more constrained reality of policy formulation.

Even in cases where some kind of appraisal was eventually carried out, the expectation that RIA standards translate directly into a broadening of appraisals and therefore fundamentally change policy decisions has proven to be naive. Desk

officers in charge of developing a policy were rarely 'enlightened' through the analysis in the sense that it made them consider a policy option, an evaluation criterion or an impact they had previously neglected (see section 4.2.3). The dominance of a particular perspective of the policy unit in the lead ministry is a matter of beliefs, political commitments and interests rather than a matter of lacking factual information. In our case studies, desk officers were typically well-informed about major side effects of particular decisions. Government administrations also normally have routine cooperation mechanisms that ensure that civil servants from other affected policy areas have opportunities to voice concerns on particular issues.

The question then is what priority is given to, in particular, environmental side effects. Here, RIA does very little to change the dominant routines of decision-making because it is not systematically linked with the political process. Most procedures do not foresee the involvement of external stakeholders, with the effect that any broader impacts eventually included remain without political support. Moreover, RIA does not offer methodologies that go beyond an analysis of mostly short-term costs and benefits. Confronted with complex causal links, uncertainties, shortage of data and a lack of well-established assessment methods, desk officers tend to exclude indirect and long-term effects. RIA also usually sets in too late in the policy process for an open reflection on fundamentally different approaches. Especially in the case of major political initiatives, political parties, ministers or government coalitions usually already have a firm political commitment to implement a particular instrument.

Where reflective learning occurred, it tended to do so at the margins of a policy decision (see section 4.2.4). Where side effects could be addressed without compromising the core of the policy initiative, policy assessment have in some instances helped to identify possible improvements in the design of policies. While RIA did not change the basic balance of power between different actors representing different concerns and evaluation criteria, it appeared to have allowed in some cases a fuller consideration of potential problems and side effects. This is particularly true for the small number of jurisdictions in which stakeholders can contribute to RIA and – to a lesser extent – for those where results of the appraisal are published (see section 4.2.4). Other factors enabling (both reflective and reflexive) learning in RIA which can be derived from the analysis in section 4.2.4 are the absence of strong previous political commitments to a particular instrument and the formal recognition of a political dimension of the decision.

#### **6.5.4 Regulatory Impact Assessment as reflexive setting**

The potential for RIA to work as a reflexive setting is ambiguous. RIA is situated right at the core of democratic decision making: Unlike many other forms of appraisal, RIA is directly integrated into the process of rule-making. This offers both opportunities for and barriers to reflexivity. On the one hand, its position at the interface between the administrative and the political sphere means that RIA is, in principle, well placed to encourage a reflection on the direction, scope and justification of collective action. As observed in section 5.1, there are few institutional venues in which knowledge, politics and policy-making are more closely interlinked than in RIA. It is exactly in this arena that a reflexive process is needed to disentangle the different justifications and knowledge claims, thereby leading to a fuller, more informed and critical public debate.

On the other hand, the proximity to the political process can also be a barrier to reflexive appraisal as it raises the stakes and puts the procedure under time pressure. RIA is expected to come to a conclusion within a relatively short timeframe. RIA could still endeavour to combine opening up the decision process criteria before closing down towards a particular course of action, but there is likely to be a structural pressure to narrow down the options. Finally, the possibility of RIA to achieve the more ambitious expectations of reflexive governance is heavily restrained by the fact that it is a highly regulated procedure governed from within a functionally differentiated and hierarchically structured bureaucracy. Desk officers in charge of framing and carrying out RIA are unlikely to have much incentive or leeway to engage in a more fundamental reflection about alternative modes of rationality, unorthodox forms of justification and new ways of steering.

In practice, RIA procedures are typically not designed in a way that supports reflexivity (see section 5.3). The way in which RIA is dominantly conceived – not only by guidance documents, but also by the majority of actors supposed to contribute to and learn from this form of appraisal – is not in line with the basic assumptions of reflexivity: RIA is widely expected to provide an objective and neutral way of predicting consequences of a policy (see section 5.3). It is thought to convey a rationale for action seen as superior to that produced by the political process from which it therefore needs to be detached. The possibility of previous political commitments is rarely acknowledged, the analysis assumed to start with a blank sheet. The narrow instrumental model on which these procedures usually build means that they do not explore the wider decision context, for example alternative problem framings, different evaluation criteria, and diverging normative standpoints. As

long as this model is maintained, RIA is unable to systematically connect and open up both analytical and decision-making processes.

The stated aim of RIA procedures to open up the decision-process does not usually go beyond reflectiveness (see section 5.3.1). The methodologies typically used in RIA – especially cost-benefit analysis and regulatory burden assessment, cf. section 5.3.8 – systematically closes down the analysis, because it hides uncertainties and disguises value conflicts. RIA also tends to be conceived as an internal administrative process. The lack of stakeholder participation, the limited attention to the wider decision context and the neglect of distributional effects across society are barriers to exploring the potential for congruent solutions. It should be noted, however, that there are a number of procedures in different jurisdictions which have a more discursive character and see stakeholder consultation or other forms of dialogue as part of the appraisal process (see section 5.3.5). In these cases, especially the EU Impact Assessment system and the Swedish ‘committees of inquiry’ (see section 4.2), the procedure offers opportunities to address the wider decision context as well as to connect participatory and analytical aspects of appraisal.

### **6.5.5 Reflexive learning in Regulatory Impact Assessment**

Here, the question is whether RIA has actually helped political and societal actors to improve the understanding of each other’s knowledges, frames and values and to identify congruent courses of action. The analysis in the previous section has made clear that RIA as such has characteristics which structurally limit its reflexivity. In addition, the set-up of these procedures in practice often undermines their ability to function as reflexive arrangements. It is therefore hardly surprising that the case studies provided little evidence for reflexive learning through RIA. Instead, the most common form of knowledge use was strategic: Lead policy units – if they substantively engaged with RIA at all – tended to do so in a defensive mindset (see sections 4.2.3 and 5.4.2). They framed the appraisal in a way that it supported the policy options they had previously decided to pursue (because it was considered to be either politically or technically the right course of action). The aim was to close down the decision-making process in order to steer ‘their’ regulatory project through the democratic process as quickly and effectively as possible. Nonetheless, procedures with a high degree of transparency have in a number of cases helped to clarify the analytical (and sometimes normative) decision-making basis of the lead ministry. This made it easier for outside actors to challenge the

chosen course of action on the basis of the decision-making basis and to put forward alternative framings, values and knowledges. This can be interpreted as a partial 'one-way reflexive learning'. Measured against a counterfactual situation without any RIA, this is doubtless a first step towards reflexivity which transcends pure reflectiveness. Measured against the ambitions of reflexivity set out above, however, this effect is very limited.

#### **6.5.6 Results**

The analysis of RIA from the perspective of environmental policy integration in chapters 3, 4 and 5 has been disappointing: Procedures were often not properly implemented. Where RIA was actually carried out in a more than formalistic fashion, it did not always promote the consideration of environmental impacts of a policy in the decision process. Assessments tended to focus on direct economic and administrative costs and to use methods which give more weight to easily quantifiable market effects vis-à-vis uncertain and indirect environmental consequences. Cases where RIA promoted environmental policy integration were the exception rather than the rule.

Section 6.3 has reflected on the empirical material from the more recent theoretical perspective of reflexive governance. A key difference compared to the environmental policy integration approach is that the reflexive governance concept aims to address not just a given and known set of environmental problems, but a broader set of political, economic and ecological crises emerging from processes of self-endangerment of modernity. Moreover, the very notion of reflexive governance is based on a post-positivist ontology and epistemology which imply a fundamentally different set of ambitions with regard to policy appraisal. Section 6.3.5 has spelled out the diverging expectations with regard to both the setting and the outcome of RIA. This has allowed exploring in more detail the potentials and limitations of RIA to promote reflexive learning, as well as to evaluate the achievements and failures of the concrete policy cases studied in this thesis.

Table 7: Results of the analysis

<p><b>1. Reflectiveness of the governance setting</b></p> <ul style="list-style-type: none"> <li>- regulatory impact assessment has considerable potential for reflectiveness</li> <li>- procedures realise this potential only to a limited degree because of lacking provisions for participation and a bias towards unreflective methodologies (e.g. cost-benefit analysis)</li> </ul>	<p><b>2. Degree of reflective learning</b></p> <ul style="list-style-type: none"> <li>- in many cases reflective learning did not occur because breadth of analysis related to existing beliefs and previous commitments, not lacking knowledge</li> <li>- in some cases reflective learning occurred, especially in jurisdictions with transparent and participatory procedures</li> </ul>
<p><b>3. Reflexivity of the governance setting</b></p> <ul style="list-style-type: none"> <li>- ambiguous potential: well-placed at the interface between policy and politics to encourage reflection, but integration in law-making process creates pressure to quickly close down decision</li> <li>- instrumental settings do not support exploring the wider decision context</li> <li>- recommended methodologies tend to disguise uncertainties and value conflicts</li> </ul>	<p><b>4. Degree of reflexive learning</b></p> <ul style="list-style-type: none"> <li>- typically no reflexive learning, but strategic use of regulatory impact assessment to close down decision-process towards the preferred course of action</li> <li>- in some cases partial 'one-way' reflexive learning observed in jurisdictions with transparent and participatory procedures</li> </ul>

Source: Own compilation

Summarising the results of the analysis (see Table 7), we find that RIA provides, in principle, a considerable opportunity to increase the reflectiveness of policy-making, but the actual setting created by procedures across the EU, realises this potential only partially. In practice, reflective learning occurred only in few cases, while in most cases the appraisal has not affected or even reduced the scope of the appraisal. The analysis also shows that the potential of RIA to function as a reflexive setting is ambivalent. On the one hand, the venue is ideally situated for different stakeholders to explore and negotiate the normative and analytical basis of concrete policy decisions. On the other hand, the integration into the law-making process provides a narrow frame and creates considerable time pressure. This already restrained context combined with the technical-instrumental set-up in the large majority of jurisdictions makes truly reflexive learning very difficult. As a result, we only have observed partial 'one-way' reflexive learning processes in a few cases.

In sum, the shift towards the theoretical perspective of reflexive governance has allowed to clarify in which sense regulatory impact assessment can contribute towards the opening-up of policy processes, and which types of learning processes



(reflective vs. reflexive) can reasonably be expected under currently dominant and under more conducive circumstances.

## 7. Conclusion

### 7.1 Synthesis of results

The overall question addressed by this thesis is whether and how regulatory impact assessment promotes the consideration of environmental and sustainability concerns in policy-making. This issue is approached through a number of specific research questions. This synthesis summarises key results from the previous sections in relation to these research questions.

1. *What kinds of processes are conceptually required to improve the consideration of environmental concerns in collective decision-making and to reorient such decision-making towards sustainable development?*

This question was addressed through two different theoretical lenses: first through the perspective of environmental policy integration (with ecological modernisation theory as its basis), and then through the concept of reflexive governance (with reflexive modernisation theory as its basis, cf. section 6.2).

The review of the environmental policy integration literature has shown that the question of what is being integrated how and by whom is under-conceptualised. In order to address this conceptual gap, chapter 2 drew out the key rationale for environmental policy integration from the ecological modernisation literature: Existing patterns of departmentalised administrative structures combined with antagonistic relationships between environmental and sectoral departments are taken to lead to ineffective and expensive policy strategies and to hinder the development of integrated and innovative solutions. If, in contrast, sectoral and environmental departments worked together to develop integrated approaches focused on avoiding detrimental environmental effects through innovation and technical change, then the economy could be ecologically modernised. Based on this rationale, the chapter derives four generic processes that are expected to promote a shift between a segregated and an integrated mode of environmental policy:

- environmental agenda setting within sectoral departments (e.g. high-level political commitment and systematic assessment of environmental impacts during policy formulation),
- horizontal communication between environmental and sectoral administrations (e.g. early consultation of the environmental department in sectoral policy initiatives),

- environmental capacity building within sectoral departments (e.g. well-resourced units responsible for environmental issues with a mission to identify win-win options), and
- policy learning (e.g. positive eco-modernist framing of the link between sectoral interests and environmental objectives).

The analysis supports the view that environmental policy integration is not just the political will to prioritize environmental issues, but a multi-dimensional process with a strong cognitive dimension. Efforts that address only one dimension (e.g. just putting resources into environmental units of sectoral ministries) are unlikely to be successful. The analysis highlights the need to recognise the fundamental role of learning in environmental policy integration, both at an instrumental level (about means to achieve given ends) and at a conceptual levels (reflecting about ends themselves). The fundamental optimism of this perspective does not only stem from empirical research showing large potentials for technological solutions with positive economic and environmental effects, but also from the assumption that 'better knowledge' on environmental impacts leads to more sustainable policies. It emerged during the research, however, that this optimistic outlook underestimates the breadth and depth of change processes required for a substantive change in the way environmental concerns are addressed in policy. In particular, the instrumental view of the role of knowledge in policy-making has proven to be unrealistic (cf. research question 4). These insights motivated a conceptual shift to the perspective of reflexive governance (chapter 6). Here, the question of reorienting the decision-making towards sustainable development is framed differently. The focus is not just on environmental issues but on all negative effects of modernisation, including social ones. The key reform agenda derived from the reflexive governance literature is to develop governance institutions which involve a wide range of relevant actors, open up of the process of knowledge production and decision-making, reflect critically on the way in which problems are framed, increase actors' mutual understanding of relevant issues, and make provisions for adaptation and learning.

On the basis of this literature, chapter 6 has defined a framework for assessing the reflexivity of governance arrangements. It draws on the distinction between reflectiveness (i.e. a broadening of representations, modes of understanding and interventions) and reflexivity (i.e. the recognition that governance subject and object are co-constituted). Distinguishing on the other hand between institutional set-up

and learning outcome, chapter 6 derived four criteria for evaluating the reflexivity of governance arrangements:

- reflectiveness of governance setting (the degree to which setting encourages participation of diverse actors and enables inclusion of full range of intended and unintended impacts, including long-term effects)
- reflective learning (the degree to which wide range of impacts and evaluation criteria are considered, policy design improves, negative unintended impacts are reduced, long-term effects are considered)
- reflexivity of the governance setting (the degree to which setting allows connecting and opening up analytical and decision-making processes, encourages congruent solutions through involvement of societal actors at early decision stages, enables development of alternative modes of rationality, justification, and steering)
- reflexive learning (the degree to which actors improve understanding of each other's frames, values, and knowledges, deadlocks are overcome, congruent courses of action are identified, measures are based on modest expectations of steering capacity).

The framework developed from the perspective of reflexive governance overlaps with that derived from environmental policy integration with regard to the broadening of the analysis and the need for policy learning. The reflexive governance approach goes further, however, in three important ways: First, it widens the scope from only addressing environmental issues to all undesirable side-effects of development. Second, it recognises the fundamental plurality of values, knowledges and rationalities and therefore puts much more emphasis on early, wide and deep involvement of societal actors. Third, it is more sceptical with regard to technocratic models of steering and promotes flexible, learning-oriented courses of action.

## 2. *How is Regulatory Impact Assessment framed and institutionalised across the EU?*

The research shows that current procedures for RIA are rooted in two distinct agendas: better regulation and environmental policy integration. The constituencies associated with these agendas have conflicting expectations about the functions of these appraisal procedures. Typically, however, these different expectations remain implicit. The policy documents underlying RIA procedures in the different EU Member States often do not state any normative objective such as promoting sustainable development. Instead, aims which can be derived from policy

documents are more generic and procedural: to improve the evidence base of policy decisions, to enhance regulatory quality, to reduce unnecessary bureaucracy and to improve the coherence of policy-making decisions in different areas.

While the research has demonstrated strong similarities in the basic orientation of RIA procedures across the EU, there is one key aspect in which variation was found: The majority of the studied jurisdictions conceive RIA as a purely internal administrative exercise. A number of jurisdictions, however, use RIA also as a way of increasing transparency, accountability, and participation. These jurisdictions provide different degrees of access to information (e.g. publication of final assessment reports) or stakeholder involvement (e.g. consultations). The institutional set-up of procedures also varies significantly, for example the way in which policy proposals are selected for appraisal, the extent of central coordination, and the methodological approach favoured. These variations can to some extent be explained by different politico-administrative systems and cultures.

Policy appraisal procedures are based on a number of assumptions closely associated with the model of instrumental rationality. The analysis in chapter 4 has highlighted three assumptions: First, policy appraisal is based on the idea that policy-making is a problem-solving process. It is supposed to support the policy cycle in the early stages of problem definition, identification of options and policy formulation. Second, policy appraisal is conceptualised as informing one single decision-maker with a unified and coherent set of evaluation criteria. Third, policy appraisal is supposed to make policy-making more rational and evidence-based by providing unbiased factual information.

Chapter 5 has shown in detail that policy appraisal procedures across Europe are conceived as neutral fact-finding exercises free from political pressure. This perspective is reflected in different characteristics of the procedures including the stated objectives, the process design, timing and audience, and the role of analytical methodologies. Policy documents typically conceive RIA as an expert-based, objective process that helps officers develop a balanced proposal based on rational reasoning. Guidance documents foresee that assessments should be performed by the relevant administrative units, in most countries without requirements to include external stakeholders or political institutions (such as parliament). In its ideal type, RIA is meant to be free of normative choices, which are assumed to be made by politicians at later stages of the decision-making process. Procedures are – at least implicitly – based on the idea that there is a unitary decision maker who should be informed through a quasi-scientific assessment.

The lack of attention to process issues also reflects the perception that the relationship between knowledge and policy is linear and instrumental. With a few exceptions, the conception of RIA draws heavily on a positivist epistemology. The only two types of methodologies commonly mentioned in policy documents are cost-benefit analysis (including variants such as cost-effectiveness analysis) and administrative burdens assessment. A notable exception to this model is the EU's Impact Assessment procedure which is relatively transparent, involves stakeholder consultation, has a wider scope in terms of impacts and foresees a range of appraisal methods.

### 3. *What kind of knowledge is generated in Regulatory Impact Assessment?*

While the thesis found a relatively strong homogeneity in the conception and basic orientation of procedures for RIA, the actual assessment practice varies widely between and within jurisdictions (chapter 4 and 5). Most RIA systems are characterised by a considerable implementation deficit, some procedures appear to only exist on paper. In many cases, we found that either the impacts of a planned policy have not been formally appraised at all or in a very superficial and formalistic way. In these cases, RIA has not generated any relevant new knowledge.

The expectation that RIA guides decisions was only met in a few, more technical assessments carried out on very specific policy options (e.g. different implementation options for an EU Directive). In more complex cases, appraisals tended to identify a wide range of consequences – some desired, some undesired, some uncertain – which could not easily be weighed up against each other. While RIA has in many cases produced relevant knowledge, it has not in itself led to analytical closure in the sense of clearly identifying a 'best' policy option. Interviewees pointed out that this lack of closure is often at odds with the expectations of policymakers who tend to look for unequivocal and concise recommendations rather than qualified, complex information reflecting on different options and impacts. Officials admitted that this gap between external expectations and actual outcomes of the analysis made it in some cases more difficult to constructively engage with RIA.

Where RIAs have been carried out, they typically adopted a very selective analytical framing. While the chosen frame of analysis was often coherent and plausible, alternative framings could easily be envisaged, for example with regard to problem definition, policy options, types of impacts, methods and timescales.

Although many guidance documents recommend the use of quantitative appraisal methods, assessments were rarely based on any formal quantitative or qualitative

analysis. Where methodologies were used, there was a strong bias towards partial economic analytical methods (such as assessments of administrative burdens on companies and cost-benefit analysis with focus on short term cost to business). Unintended effects and distributional implications were typically not given much attention. Exceptions were large policy reforms which were in some cases based on extensive external studies.

The selective framing and biased use of methods can be explained by four main factors: First, the tendency to narrow the analysis down to specific issues appeared to be a strategy adopted by desk officers to reduce the effort of appraisal and avoid areas in which they had less experience and information. Confronted with a wide range of different direct and indirect effects, those in charge of the appraisal tended to focus on questions close to their own area of expertise. Second, several desk officers confirmed that information was commonly selected and presented in a way that supported the preferred policy option. Potential negative effects were often not explored in depth or even excluded from the analysis. Third, using methodologies that produce unambiguous results and sparing out impacts which are hard to predict was seen as a way to generate supposedly robust analysis and avoid methodological criticism. Fourth, another reason for the focus on short-term economic costs was that these tended to be a matter of concern raised by well-organised and well-resourced stakeholder groups.

In many cases, therefore, the RIA has tended to produce knowledge which strengthens the legitimacy of courses of actions chosen by powerful incumbent actors rather than bringing critical knowledge to the decision-process. In some cases, however, the question what kind of knowledge should be generated and used in RIA became itself the object of political controversy, for example between the lead ministry and other departments affected by the policy. In jurisdictions where the process of RIA is transparent, external actors have attempted to influence the setup of RIA or bring different knowledge claims into the discussion.

#### 4. *How is knowledge from Regulatory Impact Assessment used in decision-making?*

Chapter 4 draws on the literature on policy learning to identify three different types of using knowledge in policy-making:

- instrumental learning about means to attain a given end,
- conceptual learning which challenges existing beliefs, and

- political use of knowledge which includes different forms of symbolic and strategic use.

As with regard to the previous research question, the research presented in chapter 4 and 5 has again shown considerable differences between the studied RIAs. In the majority of cases, the overall influence of the appraisal on the policy output was small. Assessments were typically unable to influence the policy-formulation process in the way set out in the appraisal guidance documents, decisions tended to be shaped much more by political dynamics and power relations.

The dominant type of knowledge use found in the case studies was political. In many cases, the predominant function of the assessment was the justification of a specific measure by the lead ministry vis-à-vis other departments (and, where assessment reports were published, also with regard to external stakeholders). This strategic use of knowledge can have positive effects when it makes the rationale of a policy intervention more transparent. It can, on the other hand, also be illegitimate, if the analysis is biased or based on contested assumptions. In some cases, strategic use of knowledge has led to what can be termed 'artificial closure': Lead ministries have successfully used RIA to legitimise a political intervention on the basis of 'scientific evidence' even though the appraisal was framed in a way which was not acceptable to relevant societal groups. In these cases, the political function of RIA was to silence conflict and avoid critical debate, thus ultimately helping to support and reproduce existing power structures.

A different dynamic tended to emerge when assessment knowledge was made public. In cases of transparent RIA procedures, the knowledge produced was then frequently challenged, for example by NGOs demanding the inclusion of (further) environmental impacts or by industry associations proposing higher cost estimates. In other cases, elements of the assessment were used politically by stakeholders to require changes in the planned policy. It needs to be noted, however, that less well-resourced stakeholder groups did not always have the means to critically analyse and challenge the frames used in the RIA, especially if they were not given access to all relevant information, for example underlying external modelling studies.

Although political use tended to be dominant, instrumental learning with regard to the specific policy design also occurred in many cases. It tended to be selective in its focus on achieving political objectives at the lowest economic and administrative costs. Evidence of conceptual learning (in the sense that an assessment contributed to a shift of fundamental views about a policy by either the lead ministry or



external actors) was found only in very few cases. This suggests that RIA procedures typically helped to refine predetermined policy conceptions, again reinforcing existing power relationships.

The way in which the appraisal knowledge was used was influenced by a broad range of factors, some relating to the administrative culture of the lead ministry, others to the characteristics of the procedures and some to the specific policy case (chapters 4 and 5). The most important factors were the extent to which there were pre-existing political commitments, the positions of powerful stakeholders and public opinion, the inherent complexity of the issue, the organisational culture of the administration responsible for the appraisal, the attitude of the policy officer in charge, the level of transparency provided by the procedure and the degree of political controversy associated with the impacts of the proposed measure. The impact of these factors is, however, somewhat contingent and difficult to generalise. For example, where highly politicised policies were in question, assessment processes could actually become an additional venue for conflict with stakeholders even commissioning alternative studies. In other cases, however, RIA became largely irrelevant in the face of intense political controversy.

Interestingly, the research presented in chapters 3, 4 and 5 found that actors interpreted patterns of knowledge use in very different ways. Government officials and different stakeholder groups often appear to genuinely consider themselves as the more fact oriented and 'rational' actors, while accusing other players of using research in a biased, strategic, or symbolic way. While this may in part be itself a strategic behaviour, it also points towards the influence of competing rationalities and the blurred boundaries between science and policy, facts and norms.

5. *Can Regulatory Impact Assessment promote the consideration of sustainable development in policy-making and how are the conception and design of assessment procedures influencing this ability?*

The hope and expectation of the literature on environmental policy integration was that RIA would strengthen the knowledge base about negative ecological impacts in the policy formulation process and help identify integrated and synergistic sectoral policies (chapter 2). While this has happened in some cases and to a limited extent, practice showed that there is also a considerable risk that RIA can work against sustainable development (chapters 3, 4 and 5). This can particularly be the case if it requires administrations to demonstrate – for example through a formal cost-benefit analysis – that the benefit of a proposed intervention is greater than its

cost. This openness of RIA towards different political agendas is in line with the observation that this instrument was supported from the beginning by two very different constituencies, namely from the field of environmental policy integration and from proponents of better regulation (chapter 2). It means that the substantive outcome of policy appraisal strongly depends not only on the political context and the political agenda of the lead ministry, but also on the conception and design of RIA procedures.

The lack of normative orientation observed in RIA across the EU (cf. research question 2) is an expression of the assumption that providing evidence is ‘value-free’. The research presented in this thesis has made clear, however, that the idea of ‘neutral’ policy appraisal is a misconception. The findings show that – while some learning takes place in RIA – this occurs *despite* rather than *because* of the rational-instrumental set-up of the procedures (chapter 4 and 5). Three main barriers to learning were identified:

- The lack of attention to issues such as stakeholder involvement, issue framing and consensual definition of the scope of assessment was a strong barrier to learning and consensus building.
- The bias towards “hard” quantitative data and a reluctance to include qualitative, uncertain or incomplete information inhibit a broader reflection about the policy and therefore tend to undermine the broader social legitimacy of the appraisal.
- The gap between the conception of RIA and the actual political-administrative decision-making processes has led many policy officers to treat it as a bureaucratic hurdle rather than a learning opportunity.

For RIA to promote the consideration of sustainability, it is therefore necessary to develop a fundamentally different conception of the role of appraisal at the interface between knowledge and policy. Drawing on the reflexive governance literature, chapter 6 has explored potentials for and limitations of a reflexive kind of RIA. It found that RIA provides, in principle, a considerable opportunity to increase the *reflectiveness* of policy-making. As several cases of good practice have demonstrated, it can help broaden the set of evaluation criteria and take account of unintended consequences. This requires, however, that the design of RIA procedures encourages participation of diverse actors, both from within and outside government.

The potential of RIA to promote *reflexivity* is, in contrast, more limited. On the one hand, the venue, if properly designed, is ideally situated for different stakeholders to explore and negotiate the normative and analytical basis of policy decisions. On the other hand, the integration into the law-making process provides a relatively narrow frame and considerable time pressures. A RIA procedure which achieves at least a certain degree of reflexivity would also require the development of new approaches to appraisal. These would need to connect and open up analytical and decision-making processes, to find ways of exploring congruent solutions as well as to enable the development of alternative modes of rationality, justification, and steering (cf. section 7.4).

The concept of reflexive governance allows to envision such an alternative design and use of RIA. As a contrasting ideal, it helps to arrive at a clearer view how prevailing practices of RIA tend to reproduce closures in the policy process rather than providing opportunities for opening up.

## 6. Conclusion

Overall, the research presented in chapters 2-6 highlights the risks and opportunities policy appraisals pose to the agenda of environmental policy integration. It demonstrates the varied uses of knowledge in policy appraisal. While it reveals that RIA tends to become closely entangled with the political contest for particular decisions, it can also inform decisions in more traditional ways and occasionally reshape positions and interests of different actors. In the cases where appraisal processes played a significant role in decision-making, policy officers in lead ministries tended to be simultaneously engaged in processes of learning, convincing, steering, and manipulating at the boundaries between knowledge, policy, and politics. Drawing on these insights, the research provides an empirically-based critique of a positivist orientation of policy appraisal procedures, draws out the barriers and predicaments caused by 'apolitical' process design and shows ways of making these processes more discursive. Appraisal procedures and those involved in practice should explicitly acknowledge the complex links and fuzzy boundaries between appraisal, policy-making and politics. The function of appraisal should be reframed with lower expectations towards analytical closure through more sophisticated analysis, but a stronger focus on the discursive and political functions. This would require more careful individual framing of the analyses and – in most jurisdictions – a more transparent and participatory appraisal process. Such a reflexive

redesign would, however, challenge the often affirmative function of RIA in reproducing and legitimising pre-existing closures of the policy process.

## **7.2 Impact of the research: Reception in the academic literature**

Since their publication in academic journals, chapters 2 to 5 of this thesis have received considerable attention in the academic literature. In this section, I review the reception in the literature and relate this to the key results presented in the previous section. For this purpose, a review has been carried out of major references to the four research chapters by academic articles, books, and book chapters. By May 2015, Google Scholar found 271 citations for all four research papers. Chapter 4 has been most frequently cited (134 references), followed by chapter 2 (85), chapter 5 (36) and chapter 3 (27).<sup>13</sup> All publications referenced below cite one or several of the published research chapters presented in this thesis.

A review of the reception of chapter 2 shows that it has helped clarify the meaning of environmental policy integration (see for example Coffey and Major 2005, Mickwitz and Kivimaa 2007, Persson 2007, Adelle and Russel 2013, Massey and Huitema 2013). Making the link between ecological modernisation theory and environmental policy integration was seen as a conceptually innovative way of highlighting the importance of technological innovation in environmental policy as well as the depth of changes associated with environmental policy integration (Jay and Morad 2007, Persson 2007). As Persson points out:

“Hertin and Berkhout [...] focus on the organisational environment and power structure within which it takes place. What is perhaps most interesting about their contribution, however, is that they put EPI [environmental policy integration] in a larger context of ecological modernisation and look beyond the short- and medium-term. In their view, EPI is a transitory means for achieving a new type of policy-making. In reality, their vision of such policymaking may not differ much from other authors, but the issue of what comes after integration is raised, in terms of a new policy-making culture” (Persson 2007, p. 17).

Another argument taken up in the literature is the emphasis on learning processes (as recognised, for example, by Oberthür 2009, Jordan and Lenschow 2010, Adelle and Russel 2013). In arguing that environmental policy integration has the potential to lead to a redefinition of sectoral interests – from perceiving calls for stricter environmental protection as threat to seeing them as an opportunity for innovation and competitive advantage – chapter 2 was seen as bringing a cognitive perspective into the literature which has previously been undervalued.

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<sup>13</sup> Accessed on 19.05.2015.

Chapter 3 has been mostly cited for its empirical content. It is cited for

- providing evidence on the growing number of policy assessments carried out in Western democracies (see Schout et al. 2010),
- drawing attention to the ambiguous nature of some procedures due to their roots in both better regulation and environmental policy integration (Meadowcroft and Steurer 2013),
- showing the trend towards the increasingly integrated nature of assessments as opposed to previous single-issue assessment procedures (Huge et al. 2011), and
- highlighting the fact that the scope of assessments in practice tends to be narrow with a focus on economic costs and short-term effects (Volkery and Ribeiro 2009, Meadowcroft and Steurer 2013).

The article contained in chapter 4 was cited particularly often, especially in the political science literature. Conceptually, the paper is seen to contribute to a more differentiated and realistic representation of the policy process and to highlight the challenges this poses to appraisal processes (see Huge et al. 2011, Adelle et al. 2012, Adelle and Weiland 2012, Weiland et al. 2013). It is therefore cited in arguments critical of the rational-analytical account of appraisal use that dominates the literature and which tends to prescribe more and better analytical tools as the panacea for evidence-based policy-making:

“A key strand of consensus that has developed is that the gap between the rational-analytic promise of policy appraisal and reality of the ‘policy mess’ results in significant barriers to decision-makers’ learning (Hertin et al, 2009)” (Dunlop 2010).

Empirically, the chapter has addressed the knowledge gap in relation to the actual impacts of policy assessments on policy processes and policy outputs. It has been referenced for example in relation to

- the different contexts appraisal is used in (Cashmore et al. 2010),
- the bias of appraisal practice towards short-term economic and administrative costs (De Smedt 2010),
- the finding that the strategic use of knowledge is dominant (Dunlop 2010, Amblard and Mann 2011, Weiland et al. 2013),
- evidence for the perfunctory use of assessments (Galvin 2011), and
- the finding that appraisal typically only use simple analytical tools (Hirschi et al. 2013).

The analysis contained in chapter 5 is cited as a contribution to a new type of critical literature on policy appraisal (see Adelle et al. 2012, Adelle and Weiland 2012, Weiland et al. 2013). Turnpenny et al have distinguished four types of research (Turnpenny et al. 2009): Type 1 research which mainly addresses the design of tools and methods for policy appraisal, Type 2 research which aims to explain and improve the performance of policy appraisal, Type 3 research which explores appraisal from the perspective of learning and knowledge utilisation and Type 4 research which investigates the politics of assessment. Adelle and Weiland draw on this typology and note that “a small number of Type 2 researchers appear to have evolved into Type 3 researchers (e.g. Hertin et al 2009a;b; Turnpenny et al 2009)” (Adelle and Weiland 2012). Adelle et al also observe that there is still an insufficient amount of – particularly empirical - research of this type (Adelle et al. 2012). They conclude that:

“Hertin et al (2009b) have helped to raise further questions prompted by the post-positivist critique which remain almost entirely unanswered at present. Questions such as: how can the design of policy appraisal better adjust to the messier reality of policy making?” (Adelle et al. 2012, p. 12).

Overall, this review of citations shows that other authors have drawn on insights relating to all five research questions. Conceptually, the question relating to processes of change in environmental policy integration has been of interest to other researchers (research question 1). Frequently cited were also the empirical insights into how RIA procedures have diffused across Europe and how they are designed (research question 2). In relation to the production of knowledge (research question 3), a number of authors have referred to the more instrumental results regarding patterns of implementation, methodologies and tool use. Others have taken note of the more critical observation that RIA tends to generate selective and biased knowledge about policy options and impacts. The insights on how knowledge from RIA is actually used in policy-making (research question 4) have also been taken up in the literature – both in relation to empirical results and in relation to developing a new understanding of the science policy interface. One key finding which has not been followed up in the literature is the observation that the rational-instrumental character of RIA procedures acts as a barrier towards learning (research question 5). While some authors have taken note of the gap between the theory and practice of RIA, the question how a different conception of RIA may contribute to a more democratic and more effective policy appraisal remains to be addressed by research in this area.

### **7.3 Future practice: Making Regulatory Impact Assessment more reflexive**

How can the insights of this analysis be translated into practical ways of making RIA more reflexive? The first and most critical question is under what circumstances key actors – particularly the lead ministries, but also governmental and non-governmental stakeholders – have an interest in using the potentials for reflexive RIA identified in the previous section. The current rationalist conception of RIA creates a bias towards artificial analytical closure, towards narrow expert knowledge and towards the framing assumptions of those in charge of the appraisal. Powerful incumbents – for example government officials who successfully steer policy processes and important interest groups which currently benefit from privileged access to policy-makers – may therefore have little interest in increasing the reflexivity of policy appraisal processes.

While this argument seems valid to some degree, I would argue that there are two factors which attenuate this interest and improve the outlook for reflexive RIA. First, policy-making is increasingly confronted with a public which expects a high degree of transparency. The spread of RIA procedures in EU Member states observed in chapter 3 is a symptom and result of this expectation. Electronic media and – more recently – the emergence of digital social networks put additional pressure on political protagonists to communicate more quickly and consistently about why and how political decisions are taken. Although networked digital communication may also provide new avenues for disinformation and propaganda, it generally poses a challenge to the closed, neo-corporatist style of policy-making which has been common in many EU Member States and in many policy areas. Transparency, therefore, is not just a normative element of reflexive governance, but it is also becoming a social reality and – we would argue – a potential pro-active strategy of administrations seeking a policy decision.

Second, many problems today require more complex solutions and, ultimately, the cooperation of a broader range of actors from different areas of expertise and different governance levels. This applies particularly to governance for sustainability which is the focus of this research. These factors make it more likely that incumbent actors will in the future more actively explore the political opportunities of reflexivity, which lie predominantly in the identification of congruent solutions. Nonetheless, a tension remains between the aspirations of RIA as a reflexive activity which challenges current ways of thinking and acting and the need to engage powerful actors which will often represent precisely this dominant frame.

Bringing together our empirical insights and the theoretical considerations associated with the reflexive governance literature, we can formulate a number of directions for developing a practice of RIA which is more in line with the aspirations of reflexive governance:

- *Focusing on the function of opening up decision-making:* RIA needs to be developed from a tool of closure to a two-phase process of opening up and closing down. In this way, the reflexive governance perspective fundamentally changes the logic of appraisal. From the perspective of environmental policy integration it seemed possible to arrive at a 'best' decision (ideally a 'win-win' constellation between environmental protection and economic gains through ecological modernisation, cf. chapter 2). The role of appraisal in this context is to strengthen the role of objective environmental evidence vis-à-vis politically powerful incumbents. This implies that RIA should be isolated from politics. In contrast, from a reflexive governance point of view, the main task of RIA is to open up the decision-making process as well as to acknowledge and negotiate the different worldviews, diverging evaluation criteria and alternative ways of appraising amongst all relevant actors. Only once this crucial stage has been accomplished, the process of closing down towards a congruent course of action can begin. This means that the appraisal needs to systematically engage with politics in a constructive way.
- *Increasing participation in RIA:* RIA should be developed from being (in most jurisdictions) an internal administrative procedure to becoming a discursive and participatory exercise. Both reflectiveness and reflexivity in RIA can only be achieved through a direct and meaningful involvement of a broad range of stakeholders. That participatory RIAs had more impact on decision-making than purely internal ones has been an empirical observation (see chapter 4 and 5) for which the reflexive governance literature provides a theoretically based explanation: From the perspective of environmental policy integration it seemed possible to anticipate, consider and ultimately mitigate the objective negative environmental consequences through a detached rational analysis. The understanding of environmental policy integration developed in chapter 2 has somewhat enriched this perspective to include policy learning in the sense of a change of framing problems and solutions. Nonetheless, there is an implicit expectation that a desk officer who has to carry out an encompassing RIA would see for himself what the environmental impacts are and adjust his or her policy preference accordingly. The analysis in chapters 3 and 4



showed that this expectation is unrealistic. Reflective learning mostly occurred at the margins of the policy and when consulted actors (including other ministries) insisted on a broadening of evaluation criteria. The concept of environmental policy integration, however, failed to provide a theoretical explanation for this finding. Reflexive governance, in contrast, emphasises that knowledge is embedded in social practices. Different actors may have fundamentally different cognitive and normative beliefs which have to be uncovered through discursive processes rather than just scientific methodology. Therefore, the appraisal cannot just rely on a wider analysis carried out by the same actors, but it has to invite actors representing these different worldviews and knowledges to take part. The objective is to move from reflective learning and partial 'one-way reflexive learning' to a broader process of reflexive learning where all relevant actors improve their understanding of each other's positions, interests, problem framings, beliefs and knowledge claims in order to search for congruent solutions. Direct and systematic stakeholder involvement is a necessary (but not sufficient) condition for this form of reflexive learning. In practice, this means that RIA has to be understood as a transparently documented process, that stakeholders should be asked to critically review not just factual data, but the problem definition and the overall regulatory approach.

- *Defining standards of process rather than material standards:* Reflexive RIA requires a flexibility to adjust to different circumstances: The empirical study has shown that RIA is often not a relevant and meaningful activity for desk officers in charge of actual policy processes. One important reason for this is over-standardisation through guidance documents which prescribe a uniform approach (options, methods, indicators etc.). Currently, many procedures attempt to ensure implementation through a strict set of formal obligations. The experience suggests, however, that this approach largely fails because it is impossible to coerce desk officers into engaging constructively in a process which is not seen to support their work. Relevance in practice can only be achieved if there is a considerable amount of flexibility and responsiveness in the way in which it is applied. Procedures have to accommodate a wide range of decision contexts (see chapters 3 and 4). Therefore, key decisions (e.g. on the scope of the analysis, on alternative policy pathways to be compared, on the kind of expertise to be used and on the methods which should be applied) have to be taken individually for each assessment. The quality of these deci-

sions can much better be improved through standards of process (requirements for the involvement of external and internal stakeholders) than material standards.

- *RIA should provide frame reflexivity*: The RIA process has to be extended to cover both the framing of the policy problem and the framing of the appraisal (frame reflexivity). I have argued that RIA has in many jurisdictions contributed to increasing the transparency of policy-making because it has clarified the decision-making basis of the lead ministry. This transparency, however, mostly applied to the 'factual' basis of the decision, e.g. the costs and benefits of different options. The ways in which the policy problem is defined and the appraisal is framed were typically not reflected in the process. Moreover, the appraisal process is supposed to be separate from normative and political questions, conceived as unconstrained appraisal of all available options. In most observed cases, only 'hard' factual restrictions on policy decisions were acknowledged, for example budgetary constraints or compatibility with European law. Supposedly 'softer' constraints such as political pledges or lack of societal support tend not to be mentioned because they are seen as illegitimate within RIA. A reflexive RIA needs to avoid this positivist reduction of the idea of rationality and acknowledge the political dimension of decisions. Reflexivity – a self-critical opening up of decision-making processes – requires that each appraisal is as transparent as possible about 'policy commitments' because they can only become the subject of political debate if they are openly acknowledged. In analogy to the term 'technological commitment' as introduced by Stirling (2008), 'policy commitment' can be defined as an attachment (political, institutional, economic or discursive etc.) to particular policy pathways. Political commitments can be deliberate and explicit (e.g. included in programmes of the political parties in government, previous statements by leading politicians or coalition agreements). They can also be emergent, diffuse and tacit. Policy commitments can refer to a particular policy instrument or to specific regulatory impacts (or their avoidance). They are informed by knowledge, but also relate to values and interests. Overall, commitment and appraisal co-evolve as political commitments provide the political possibility space in which appraisal explores different options, while at the same time appraisal informs political commitments (cf. Stirling 2008). In practice, policy commitments should be described and justified in the RIA report.

- *RIA should be understood as boundary work*: Moreover, RIA could then be understood as a conscious reflection of the interface between science and policy. So far, it has often served as ‘boundary work’ in the sense of maintaining a clear demarcation between scientific expertise and the subsequent normative policy decision (cf. Gieryn 1983). Reflexive RIA, in contrast, should recognise that there is a broad zone at the interface between science and policy where cognitive and normative beliefs are closely intertwined. In this zone, the function of the assessment in general as well as the scope and contribution of specific assessment methodologies are likely to be contested between different stakeholders. Managing this interface is a “fundamental element in effectively linking knowledge to action” (Cash et al. 2002, p. 1). This means in practice that actors involved in reflexive RIA need to put effort into determining exactly which questions can be answered by what kind of expertise. Specific methodologies of the assessments should not be considered as taken-for-granted factual input, but as ‘boundary objects’. Originally coined in the context of studying the collaboration of scientists from different disciplines and backgrounds, the term denotes ‘work arrangements’ (such as maps or models) which facilitate the cooperation of different groups without consensus (Star and Griesemer 1989, Star 2010). In the context of RIA, this may imply that elements of the appraisal such as evaluation criteria, indicators, forecasts or cost calculations are explicitly integrated into stakeholder dialogue to facilitate communication about underlying controversies about assumptions, values and perspectives. This task is (as we have seen in chapters 4 and 5) underappreciated in the theory and practice of policy appraisal.

#### **7.4 Future research: Reflexive governance and the classical-modernist institutions of representative democracy**

So far, the reflexive governance literature has not been concerned in much detail with the functioning of classical-modernist policy-making institutions. This can be largely explained by a general scepticism towards the ability of established policy-making structures to address the fundamental economic, social and technological crises diagnosed by reflexive modernisation theory (cf. section 6.3.2). Reflexive modernisation theory has also observed that the classical-modernist institutions of the nation state have been weakened, especially through the parallel processes of globalisation and individualisation. This discrepancy between the scope of the challenge and the perceived lack of steering capacity has led to a view that “these

[classical-modernist] institutions might simply lack the authority or focus needed for problem-solving that is widely perceived to be both effective and legitimate” (Hajer 2003, p. 177, see also Ott 2014).

Because of this scepticism, many reflexive governance scholars are exploring the potential role of new governance arrangements typically adjacent to existing democratic venues, for example transition management, constructive technology assessment, adaptive management, participatory scenario planning, local networks and so on (e.g. Kemp and Loorbach 2006, Sendzimir et al. 2006, Weber 2006, Gottschick 2013). In addition, it is sometimes suggested that reflexive governance complements the (essentially unchanged) modernist forms of government. For example, Voß and Kemp argue for “an additional level of integrative, unrestrained and open-ended ‘second order’ reflexivity governance that reflects, orients and supervises diverse specialised problem-solving processes [i.e. first order governance]. In this way, the powers of specialisation and integration can check and balance each other” (2006, p. 7).

Developing and studying new, experimental governance arrangements has a number of obvious benefits: new constellations of actors may be less ‘tainted’ by entrenched conflicts between political parties and factions, the issue at question can be framed more freely, the process design is open for experiments and learning, and engaging in innovative processes tends to motivate both researchers and participants. While recognising the value of new governance arrangements, we would argue that sparing out the classical-modernist democratic institutions in the reflection on governance is misguided.

The first reason is empirical. States still matter because they “structure political, economic and social interactions, maintain legal frameworks [...] backed by coercive power, and deploy significant economic and administrative resources” (Duit et al. forthcoming). I also follow Ott (2014, p. 304ff.) that a radical pessimism regarding the ability of the democratic state to respond to the ecological crisis is not justified when we look at the evidence over a long-term perspective. There are many indications that the modernist institutions of democracy in Europe (and beyond) are changing in the light of ecological and social crises. We can observe that critical ecological thinking is becoming more mainstream and that many governmental and non-governmental actors are searching for more sustainable development pathways. Examples include the recent expansion of renewable energy, the increasing emphasis on relating public spending to societal needs, a renewed critical thinking on economic growth not only amongst radical NGOs but in mainstream

public discourse, as well as an increasingly networked civil society with a strong interest in environmental issues. Given that there are also counter-examples of political stalemate and backlog of reform (or indeed counter-modernity), the aim is not to claim that a state-led ecological transformation can be taken for granted. Rather, we would argue that it would be wrong to underestimate the dynamic and impacts of the response of existing state institutions to the ongoing ecological crisis.

The second reason is normative: Reflectiveness and reflexivity are principles which should apply not just to overarching societal discourses which frame specific decision situations, but to every political decision and every collective action. The analysis in chapters 4 and 5 has shown that policy-making institutions are not only concerned with specialist issues for which a technical-rational paradigm is appropriate. Much of the day-to-day decision-making by governments and parliaments relates to conflictual political issues. Moreover, uncertainty and value conflicts also arise in decision processes which may seem rather technical on the surface. Therefore, reflexivity not only requires new governance arrangements but at the same time a fundamental reform of classical-modernist institutions: "Reflexivity in governance for sustainable development should be understood primarily as a property of the governance system as a whole" (Meadowcroft 2009, p. 340).

The suggestion of a division of labour between classical-modernist government continuing its traditional role of specialist problem-solving and new governance arrangements providing a broader frame for reflection seems unrealistic: It is hard to conceive how new reflexive governance arrangements "reflect", "orient" and "supervise" specialised problem-solving processes (Voß and Kemp 2006, see above) if there is an increasing discrepancy in the ways issues are framed, alternatives assessed and solutions conceived in these two distinct arenas. Moreover, this argument ignores the fact that there are classical-modernist institutions (such as parliament and political parties) which are deeply involved in broader societal discourse beyond technical problem-solving.

The argument for a need to reshape core institutions of representative democracy also holds true if there is not an assumption of a division of labour but the alternative view that new governance arrangements *take over certain functions* from traditional institutions which are increasingly strained and are losing some of their relevance. This idea resonates with the concept of sub-politics (Subpolitik, cf. Beck 1993) which assumes that politics is increasingly made outside traditional political arenas, for example if civil society action (such as consumer boycotts or NGO

campaigns) leads companies to take environmental action beyond their legal obligations. The replacement of 'old' with 'new' governance also seems to underlie the idea of an "institutional void" put forward by Hajer (2003). Political action, Hajer argues, now frequently takes place next to or across traditional venues and "there are no generally accepted rules and norms according to which politics is to be conducted and policy measures are to be agreed upon" (Hajer 2003, p. 175). Actors thereby simultaneously engage in negotiations about new institutional rules, i.e. in both politics and meta-politics. While it is a valid observation that established institutions such as governments, parliaments and political parties have lost some of their power and appeal, they remain central institutions of democracy. It is hard to see how they could be fundamentally replaced.

Therefore, a third reason why the reflexive governance literature should occupy itself with classical-modernist institutions is that new governance arrangements have to connect to the institutions of representative democracy. Generally, the literature does not sufficiently acknowledge the socio-political context in which reflexive governance takes place (Hendriks and Grin 2007, p. 336). It has tended to neglect politics, which is seen as "bother to steering, rather than as something that governance needs to accommodate and build upon" (ibid.). The question how 'old' and 'new' governance arrangements interact remains largely unanswered. Stand-alone reflexive governance experiments are likely to suffer from a lack of structures and commitments that could take the outcomes of specific processes forward, a lack of democratic legitimacy and an increased risk of duplicating processes for democratic opinion formation on particular societal problems. The critical questions Meadowcroft (2009, p. 335) poses with regard to transition management equally apply to other new reflexive governance arrangements (in a similar vein: Hendriks and Grin 2007, p. 336f): How well-equipped are these processes to negotiate the political dimensions of the issue in question? How do they relate to traditional policy tools which remain key instruments of governance for sustainable development? Are they suited to make decisions which require a formal framework of democratic legitimacy, for example because they have distributive consequences? The key research agenda for the reflexive governance literature, thus, has three elements.

- First, future work should analyse and support efforts to increase the reflexivity of classical-modernist institutions. An important undertaking would be to analyse the barriers to and opportunities for increased reflexivity in institutions such as expert bodies, political parties, parliaments, the administration, and

the judiciary: What are the potentials of these different institutions to increase the reflexivity of policy-making? What conceptions of the science policy interface underlie these institutions? Have these changed over time? Where can we already find elements of reflexivity such as efforts to open up decision-making? What are key entry points for more reflexive practices?

- Second, research is required to identify ways to systematically connect 'old' and 'new' governance arrangements: How do innovative, participatory processes such as transition management, constructive technology assessment or participatory dialogues produce both relevant and legitimate knowledge? How have these processes to be set up in order to ensure that they can feed into decision-making processes associated with democratically legitimised institutions?
- Third, this more empirical analysis should be accompanied by a further theoretical development of the concept of reflexive governance. If reflexive governance is to become a guiding principle for collective decision-making, it has to be further developed from a normative and relatively fuzzy notion to a well-defined concept with a normative, empirical and functional grounding. The definition developed in section 6.3.3 as well as the analytical framework developed and applied in section 6.3.5 have provided a starting point for this. Further work could develop and clarify key concepts underlying reflexive governance such as frame reflexivity and boundary work (cf. section 7.3).

In pursuing this line of research, the reflexive governance debate can and should build on the environmental policy integration literature, which – as observed in section 6.3.1 – has largely failed to change the practice of policy making for sustainable development. Nonetheless, it has generated important insights. Its strength lies in its detailed analysis of real world political and administrative processes and its differentiated description of barriers to policy change. Informed by theoretical perspectives such as the comparative political systems analysis, policy analysis and institutional analysis, the literature on environmental policy integration has generated a solid and insightful analysis of functionally differentiated decision-making structures and their effects on sustainability. Future research should take note of these findings when exploring potentials to make these institutions and processes more reflexive.

This thesis has made a first step in this direction. It has shown that it is possible for RIA to create “moments of reflexivity amid the sea of everyday politics” (Hendriks and Grin 2007, p. 334), thereby providing an important entry point for making the

workings of our democracy more reflexive. It has also shown, however, that there will be circumstances under which key actors have little interest and incentive to engage in any effort to increase the reflexivity of decision-making. The extent to which the potential reforms of the classical-modernist institutions of democracy will be realised in the future will to a large extent depend on how vigorously actors outside the inner circle of policy-making push for change.



## 8. References

- Adelle, C., A. Jordan and J. Turnpenny (2012). *Proceeding in parallel or drifting apart? A systematic review of policy appraisal research and practices*. *Environment and Planning-Part C* 30(3): 401.
- Adelle, C. and D. Russel (2013). *Climate policy integration: A case of deja vu?* *Environmental Policy and Governance* 23(1): 1-12.
- Adelle, C. and S. Weiland (2012). *Policy assessment: the state of the art*. *Impact assessment and project appraisal* 30(1): 25-33.
- Adger, W. N. and A. Jordan (2009). *Governing sustainability*, Cambridge University Press Cambridge.
- Amblard, L. and C. Mann (2011). *Ex-ante institutional compatibility assessment of policy options: methodological insights from a case study on the Nitrate Directive in Auvergne, France*. *Journal of Environmental Planning and Management* 54(5): 661-684.
- Andersen, M. S. (1994). *Governance by green taxes : making pollution prevention pay*. Manchester, Manchester University Press.
- Andersen, M. S. and I. Massa (2000). *Ecological modernisation - Origins, dilemmas and future directions*. *Journal of Environmental Policy and Planning* 2(4): 337-345.
- Anderson, D. S. and B. J. Biddle (1991). *Knowledge for policy : improving education through research*. London, Falmer.
- Barnes, B., D. Bloor and J. Henry (1996). *Scientific knowledge: A sociological analysis*, University of Chicago Press.
- Beck, U. (1986). *Risikogesellschaft. Auf dem Weg in eine andere Moderne*. Frankfurt a. M., Suhrkamp.
- Beck, U. (1993). *Die Erfindung des Politischen : zu einer Theorie reflexiver Modernisierung*. Frankfurt am Main, Suhrkamp.
- Beck, U. (2010). *Climate for change, or how to create a green modernity?* *Theory, Culture & Society* 27(2-3): 254-266.
- Beck, U., W. Bonss and C. Lau (2003). *The Theory of Reflexive Modernization: Problematic, Hypotheses and Research Programme*. *Theory, Culture & Society* 20(2): 1-33.
- Beck, U., A. Giddens and S. Lash, Eds. (1994). *Reflexive Modernization. Politics, Tradition, and Aesthetics in the Modern Social Order*. Cambridge, Polity Press.
- Berkhout, F. and D. Smith (1999). *Products and the environment: An integrated approach to policy*. *European Environment* 9: 174-185.
- Bijker, W. E., T. P. Hughes and T. J. Pinch, Eds. (1987). *The Social Construction of Technological Systems: new directions in the sociology and history of technology*. Cambridge MA, MIT Press.
- Blazejczak, J., D. Edler, J. Hemmelskamp and M. Jänicke (1999). *Umweltpolitik und Innovation: Politikmuster und Innovationswirkungen im internationalen Vergleich*. *Zeitschrift für Umweltpolitik und Umweltrecht* 22(1): 1-32.
- BMI (2006). *Arbeitshilfe Gesetzesfolgenabschätzung (GFA)*. Berlin, German Federal Ministry of the Interior / Bundesministerium des Innern.
- BMWi (2012). *First Monitoring Report "Energy of the future" - Summary*. Berlin, BMWi (Federal Ministry of Economics and Technology).

- BMWi (2014). *Die Energie der Zukunft. Ein gutes Stück Arbeit. Erster Fortschrittsbericht zur Energiewende*. Berlin, BMWi (Bundesministerium für Wirtschaft und Energie).
- BMWi and BMU (2010). *Energiekonzept für eine umweltschonende, zuverlässige und bezahlbare Energieversorgung*. Berlin, BMWi (Bundesministerium für Wirtschaft und Technologie), BMU (Bundesministerium für Umwelt Naturschutz und Reaktorsicherheit).
- Buller, H. (2002). Integrating EU Environmental and Agricultural Policy. In: *Environmental Policy Integration. Greening Sectoral Policies in Europe*. A. Lenschow. London, Earthscan: 103-126.
- Bulmer, M. (1987). *Social science research and government : comparative essays on Britain and the United States*. Cambridge, Cambridge University Press.
- Bulmer, S. and M. Burch (1998). *Organizing for Europe: Whitehall, the British state and the European Union*. Public Administration 76: 601-628.
- Bundesregierung (2012). *Fortschrittsbericht 2012 zur nationalen Nachhaltigkeitsstrategie*. Berlin, Presse- und Informationsamt der Bundesregierung.
- Buttel, F. H. (2000). *Ecological modernization as social theory*. Geoforum 31(1): 57-65.
- Cabinet Office (2003). *Better policy making: A guide to Regulatory Impact Assessment*. London, Regulatory Impact Unit.
- Cabinet Office (2007). *Impact Assessment Guidance*. London, Cabinet Office.
- Calliess, C. (1998). *Die neue Querschnittsklausel des Art. 6 ex 3c EGV als Instrument zur Umsetzung des Grundsatzes der nachhaltigen Entwicklung*. Deutsches Verwaltungsblatt 113(11): 559-568.
- Caplan, N., A. Morrison and R. J. Stambaugh (1975). *The use of social science knowledge in policy decisions at the national level: A report to respondents*. Ann Arbor, University of Michigan.
- Carter, N., R. Klein and P. Day (1992). *How organisations measure success: the use of performance indicators in government*. London, Routledge.
- Cash, D., W. C. Clark, F. Alcock, N. M. Dickson, N. Eckley and J. Jäger (2002). *Saliency, credibility, legitimacy and boundaries: Linking research, assessment and decision making*. John F. Kennedy School of Government, Harvard University, Faculty Research Working Papers Series, RWP02-046.
- Cashmore, M., T. Richardson, T. Hilding-Ryedvik and L. Emmelin (2010). *Evaluating the effectiveness of impact assessment instruments: theorising the nature and implications of their political constitution*. Environmental Impact Assessment Review 30(6): 371-379.
- CEC (1999). *Commission staff working paper on sustainable industrial development. SEC (1999) 1729*. Brussels, CEC: (Commission of the European Communities).
- CEC (2002). *Communication from the Commission on Impact Assessment, CEC(2002) 276 final*. Brussels, CEC (Commission of the European Communities).

- CEC (2002). *Communication from the Commission: Action plan "Simplifying and improving the regulatory environment"*. COM(2002) 278 final. Brussels, CEC (Commission of the European Communities).
- CEC (2005). *Impact Assessment Guidelines. 15 June 2005. SEC(2005) 791*. Brussels, CEC (Commission of the European Communities).
- CEC (2006). *A strategic review of Better Regulation in the European Union. COM(2006) 689 final*. Brussels, CEC (Commission of the European Communities).
- Cobb, R. W. and C. D. Elder (1972). *Participation in American politics : the dynamics of agenda-building*. Boston (Mass.), Allyn and Bacon.
- Coffey, B. and A. Major (2005). *Towards more integrated natural resource management in Victoria: possible elements of an integrated state-wide policy framework*. Australasian journal of environmental management 12(sup1): 29-38.
- Cohen, M. D., J. G. March and J. P. Olsen (1972). *A garbage can model of organizational choice*. Administrative Science Quarterly 17(1): 1-25.
- Commissioner on the Environment and Sustainable Development (2004). *Report of the Commissioner on the Environment and Sustainable Development*. Ontario, Office of the Auditor General of Canada.
- Corwin, R. and K. S. Louis (1982). *Organizational barriers to knowledge use*. Administrative Science Quarterly(27): 623-640.
- De Bruyn, S. (1998). Dematerialisation and rematerialisation. In: *Managing a material world: Perspectives in Industrial Ecology*. P. Vellinga, F. Berkhout and J. Gupta. Dordrecht, Kluwer Academic Publishers: 147-164.
- De Sadeleer, N. and S. Leubusher (2002). *Environmental principles: from political slogans to legal rules*, Oxford University Press Oxford.
- De Schutter, O. and S. Deakin (2005). Reflexive governance and the dilemmas of social regulation. In: *Social Rights and Market Forces: Is the Open Coordination of Employment and Social Policies the Future of Social Europe?* O. De Schutter and S. Deakin. Brüssel, Bruylant: 1-17.
- De Smedt, P. (2010). *The use of impact assessment tools to support sustainable policy objectives in Europe*. Ecology and Society 15(4): 30.
- DeLeon, P. (1997). *Democracy and the policy sciences*. Albany, N.Y., State University of New York Press.
- Deshpande, R. (1981). *Action and Enlightenment Functions of Research: Comparing Private- and Public-Sector Perspectives*. Science Communication 2(3): 317-330
- DETR (1998). *Policy appraisal and the environment: Policy guidance*. London, DETR (Department of Environment Transport and the Regions).
- Dierkes, M., M. Alexis, A. B. Antal, B. Hedberg, P. Pawlowsky, J. Stopford and L. S. Tsui-Auch, Eds. (1999). *The annotated bibliography of Organizational Learning*. Berlin, Edition Sigma.
- Dryzek, J. (1990). *Discursive democracy : politics, policy, and political science*. Cambridge, Cambridge University Press.

- Dryzek, J. S. (1993). *Policy analysis and planning: from science to argument*. The argumentative turn in policy analysis and planning: 213-232.
- Dryzek, J. S. (2000). *Deliberative Democracy and beyond: Liberals, Critics, Contestations*. Oxford, Oxford University Press.
- Duit, A., P. Feindt and J. Meadowcroft (Forthcoming). *Greening Leviathan: The rise of the environmental state?* Environmental Politics 2015(4).
- Dunlop, C. A. (2010). *The temporal dimension of knowledge and the limits of policy appraisal: biofuels policy in the UK*. Policy Sciences 43(4): 343-363.
- Dwyer, J. P. (1990). *The Pathology of Symbolic Legislation*. Ecology LQ 17: 233.
- Eckerberg, K. and M. Nilsson (2013). *Environmental policy integration in practice: Shaping institutions for learning*. London, Routledge.
- Edwards, D. (1998). *The link between company environmental and financial performance*. London, Earthscan.
- EEA (2005). *Environmental Policy Integration in Europe: State of play and evaluation framework*. Copenhagen, EEA (European Environment Agency).
- EEA (2015). *The European Environment - State and Outlook 2015. Synthesis Report*. Copenhagen, European Environment Agency.
- Esty, D. C. and M. E. Porter (2001). Ranking National Environmental Regulation and Performance: A Leading Indicator of Future Competitiveness. In: *The Global Competitiveness Report 2001-2002*. W. E. Forum. New York, Oxford University Press.
- European Council (1998). *Cardiff European Council - presidency conclusions*. SN 150/98. Cardiff.
- Fay, B. (1975). *Social Theory and Political Practice*. New York, Holmes & Meier Publishers.
- Feindt, P. H. (2012). Reflexive governance and multilevel decision making in agricultural policy: Conceptual reflections and empirical evidence. In: *Reflexive Governance for Global Public Goods*. E. Brousseau, T. Dedeurwaerdere and B. Siebenhüner. Cambridge Mass. und London, MIT Press: 159-178.
- Fergusson, M., C. Coffey, D. Wilkinson, D. Baldock, A. Farmer, R. A. Kraemer and A.-G. Mazurek (2001). *The effectiveness of EU council integration strategies and options for carrying forward the 'Cardiff' process*, Institute for European Environmental Policy.
- Fischer, F. (1998). *Beyond empiricism: policy inquiry in post positivist perspective*. Policy Studies Journal 26(1): 129-146.
- Fischer, F. and J. Forester, Eds. (1993). *The argumentative turn in policy analysis and planning*. Durham and London, Duke University Press.
- Fischer, F., G. J. Miller and M. S. Sidney, Eds. (2007). *Handbook of Public Policy Analysis. Theory, Politics, and Methods*. Public Administration and Public Policy. Boca Raton, CRC Press.
- Foucault, M. (1996). *De orde van het Spreken*. Meppel & Amsterdam, Boom.
- Francis, W. L., J. D. King and J. W. Riddlesperger (1980). *Problems in the communication of evaluation research to policy makers*. Policy Studies Journal(8): 1184-1194.

- Funtowicz, S. and J. Ravetz (1993). *Science for the post-normal age*. *Futures* 25(7): 739-755.
- Galvin, R. J. (2011). *Discourse and Materiality in Environmental Policy: the Case of German Federal Policy on Thermal Renovation of Existing Homes*, University of East Anglia.
- Gieryn, T. F. (1983). *Boundary-work and the demarcation of science from non-science: Strains and interests in professional ideologies of scientists*. *American Sociological Review* 48(6): 781-795.
- Goldsmith, E., R. Allen, M. Allaby, J. Davoll and S. Lawrence (1972). *A Blueprint for Survival*. London, Penguin Books.
- Gottschick, M. (2013). *Reflexive Capacity in Local Networks for Sustainable Development: Integrating Conflict and Understanding into a Multi-Level Perspective Transition Framework*. *Journal of Environmental Policy & Planning*: 1-22.
- Gouldson, A. and J. Murphy (1996). *Ecological modernization and the European Union*. *Geoforum* 27(1): 11-21.
- Grin, J. (2006). Reflexive modernisation as a governance issue, or: designing and shaping re-structuration. In: *Reflexive Governance for Sustainable Development*. J.-P. Voß, D. Bauknecht and R. Kemp. Cheltenham, Edward Elgar Publishing: 57-81.
- Grin, J., F. Felix, B. Bos and S. Spoelstra (2004). *Practices for reflexive design: lessons from a Dutch programme on sustainable agriculture*. *International Journal of Foresight and Innovation Policy* 1(1): 126-149.
- Grin, J. and H. Van de Graaf (1996). *Technology assessment as learning*. *Science, Technology & Human Values* 21(1): 72-99.
- Hajer, M. (2003). *Policy without polity? Policy analysis and the institutional void*. *Policy sciences* 36(2): 175-195.
- Hajer, M., M. Nilsson, K. Raworth, P. Bakker, F. Berkhout, Y. de Boer, J. Rockström, K. Ludwig and M. Kok (2015). *Beyond Cockpit-ism: Four Insights to Enhance the Transformative Potential of the Sustainable Development Goals*. *Sustainability* 7(2): 1651-1660.
- Hajer, M. A. (1994). *The politics of environmental discourse: ecological modernization and the policy process*. Oxford, Clarendon Press.
- Hajer, M. A. and H. Wagenaar (2003). *Deliberative policy analysis : Understanding governance in the network society*. Cambridge, Cambridge University Press.
- Hazell, S. (2004). *Interview with Stephen Hazell, National Executive Director, Canadian Parks and Wilderness Society and the Green Budget Coalition*.
- Hendriks, M. C. and J. Grin (2007). *Contextualizing reflexive governance: the politics of Dutch transitions to sustainability*. *Journal of Environmental Policy & Planning* 9(3-4): 333-350.
- Hertin, J. and F. Berkhout (2003). *Analysing institutional strategies for environmental policy integration: The case of EU enterprise policy*. *Journal of Environmental Policy and Planning* 5(1): 39-56.
- Hertin, J., J. Turnpenny, M. Nilsson, B. Nykvist, A. Jordan and D. Russel (2007). *Rationalising the policy mess? The role of ex ante policy assessment in four countries*. Paper presented at the Amsterdam

- Conference on the Human Dimension of Global Climate Change, 24-26 Mai 2007. Berlin, Environmental Policy Research Centre.
- Hertin, J., D. Wilkinson, M. Bartolomeo, K. Jacob and A. Volkery (2004). *Making EU policies more sustainable? The new Impact Assessment procedure in the European Commission*. Brighton, SPRU, University of Sussex.
- Hey, C. (1996). *The incorporation of the environmental dimension into the transport policies in the EU*. EURES discussion paper dp-50. Freiburg, EURES.
- Hey, C. (2002). Why does environmental policy integration fail? The case of environmental taxation for heavy goods vehicles. In: *Environmental Policy Integration. Greening Sectoral Policies in Europe*. A. Lenschow. London, Earthscan: 127-152.
- Hielscher, S., G. Seyfang and A. Smith (2011). *Community innovation for sustainable energy*, CSERGE working paper EDM.
- Hill, J. and A. Jordan (1993). *The greening of government lessons from the White Paper process*. ECOS-British Association of Nature Conservationists 14: 3-3.
- Hirschi, C., A. Widmer, S. Briner and R. Huber (2013). *Combining policy network and model-based scenario analyses: an assessment of future ecosystem goods and services in Swiss mountain regions*. Ecology and Society 18(2): 42.
- Hisschemöller, M. and R. Hoppe (2001). Coping with intractable controversies: The case for problem structuring in policy design and analysis. In: *Knowledge, power and participation in environmental policy analysis*. M. Hisschemöller, R. Hoppe, W. Dunn and J. Ravetz. New Jersey, Transaction Publishers: 47-72.
- Hoppe, R. (1999). *Policy analysis, science and politics: from 'speaking truth to power' to 'making sense together'*. Science and Public Policy 26(3): 201-210.
- Hoppe, R. (2005). *Rethinking the science-policy nexus: from knowledge utilization and science technology studies to types of boundary arrangements*. Poiesis & Praxis: International Journal of Technology Assessment and Ethics of Science 3(3): 199-215.
- Howlett, M. (2009). *Policy analytical capacity and evidence-based policy-making: Lessons from Canada*. Canadian public administration 52(2): 153-175.
- Huge, J., T. Waas, G. Eggermont and A. Verbruggen (2011). *Impact assessment for a sustainable energy future—Reflections and practical experiences*. Energy Policy 39(10): 6243-6253.
- IMV (2006). *Getting proportions right - How far should EU Impact Assessments go?* Copenhagen, Institute for Miljøvurdering (IMV) / Environmental Assessment Institute.
- Industry Council (1999). *Conclusions on the integration of environment and sustainable development in the industrial policy of the EU, April 29th 1999*. Brussels.
- Industry Council (1999). *Report from the Industry Council to the European Council on the integration of sustainable development into European Union industry policy*. 13549/1/99 REV 1. Brussels, Council of the European Union: 11.

- Industry Council (2001). *A strategy for integration of sustainable development into the enterprise policy of the European Union to be submitted to the Göteborg European Council 15-16 June 2001*. Brussels 14-15 May 2001.
- IPCC (2014). *Climate change 2014: impacts, adaptation, and vulnerability*, Intergovernmental Panel on Climate Change.
- IUCN (1980). *World conservation strategy - Living resources conservation for sustainable development*. Gland, International Union for Conservation of Nature and Natural Resources.
- Jacob, K., J. Hertin, P. Hjerp, C. Radaelli, A. Meuwese, O. Wolf, C. Pacchi and K. Rennings (2008). *Improving the practice of Impact Assessment. Output from the EVIA (Evaluating Integrated Impact Assessments) project*. Berlin, Freie Universität Berlin.
- Jacob, K., J. Hertin and A. Volkery (2007). Impact Assessment and Sustainable Development: European Practice and Experience. In: *Impact Assessment for a New Europe and Beyond*. C. George and C. Kirkpatrick. Cheltenham, Edward Elgar.
- Jacob, K. and A. Volkery (2004). *Institutions and Instruments for Government Self-Regulation: Environmental Policy Integration in a Cross-Country Perspective*. *Journal of Comparative Policy Analysis: Research and Practice* 6(3): 291-309.
- Jacob, K. and A. Volkery (2006). Institutions and instruments for government self-regulation: Environmental policy integration in a cross-country-perspective. In: *Environmental governance in global perspective: New approaches to ecological and political modernisation*. FFU Report 01-2006. M. Jänicke and K. Jacob. Berlin, Freie Universität Berlin: 239-264.
- Jacob, K., A. Volkery and A. Lenschow (2008). Instruments for Environmental Policy Integration in 30 OECD-Countries. In: *Innovation in Environmental Policy? Integrating environment for sustainability*. A. Jordan and A. Lenschow. Cheltenham, Edward Elgar: 24-28.
- Jänicke, M. (1990). *State failure :The impotence of politics in industrial society*. Cambridge, Polity Press.
- Jänicke, M. (1992). *Conditions for environmental policy success: an international comparison*. *The Environmentalist* 12(1): 47-58.
- Jänicke, M. (1993). *Über ökologische und politische Modernisierungen*. *Zeitschrift für Umweltpolitik und Umweltrecht* 16(2): 159-175.
- Jänicke, M. (2001). *Ökologische Modernisierung als Innovation und Diffusion in Politik und Technik - FFU-report 00-01*. Berlin, Forschungsstelle für Umweltpolitik.
- Jänicke, M. and H. Jörgens (2006). *Environmental Governance in Global Perspective. New Approaches to Ecological Modernisation*. Berlin, Freie Universität Berlin.
- Jänicke, M., H. Mönch and M. Binder (1993). *Umweltentlastung durch industriellen Strukturwandel? Eine explorative Studie über 32 Industrieländer (1997-1990)*. Berlin, Edition Sigma.
- Jann, W. and K. Wegrich (2007). *Theories of the Policy Cycle*. *Handbook of public policy analysis*: 43.

- Jasanoff, S. (2004). *States of knowledge: the co-production of science and the social order*, Routledge.
- Jay, M. and M. Morad (2007). *Crying over spilt milk: A critical assessment of the ecological modernization of New Zealand's dairy industry*. *Society and Natural Resources* 20(5): 469-478.
- Joas, M. (1999). Building up and splitting down: Environmental policy organisation in the Nordic countries. In: *The Nordic environments: Comparing political, administrative and policy aspects*. M. Joas and A.-S. Hermanson. Adlershot, Ashgate: 133-162.
- Jordan, A. (1998). *European Union: Greener policies* Oxford Analytica Daily Brief 4(14 July): 12-14.
- Jordan, A. (2002). Efficient Hardware and Light Green Software: Environmental Policy Integration in the UK. In: *Environmental Policy Integration: Greening sectorial Policies in Europe*. A. Lenschow. London, Earthscan: 35-56.
- Jordan, A. and A. Lenschow (1999). 'Memorandum' in House of Commons, Environmental Audit Committee, First Report and Proceedings (Session 1999-2000). *EU Policy and the environment: An agenda for the Helsinki Summit*. London, HOC.
- Jordan, A. and A. Lenschow (2000). 'Greening' the European Union: What can be learned from the 'Leaders' of EU environmental policy. *European Environment* 10(3): 109-120.
- Jordan, A. and A. Lenschow (2008). Environmental policy integration: an innovation in environmental policy? In: *Innovation in Environmental Policy: Integrating the Environment for Sustainability?* A. Jordan and A. Lenschow. Cheltenham, Edward Elgar: 313-342.
- Jordan, A. and A. Lenschow (2008). *Innovation in environmental policy? Integrating the environment for sustainability*. Cheltenham, Edward Elgar.
- Jordan, A. and A. Lenschow (2010). *Environmental policy integration: a state of the art review*. *Environmental Policy and Governance* 20(3): 147-158.
- Jordan, A. and A. Schout (2006). *The coordination of the European Union: Exploring the capacities of networked governance*. Oxford, Oxford University Press.
- Jörgens, H. (1996). Die Institutionalisierung von Umweltpolitik im internationalen Vergleich. In: *Umweltpolitik der Industrieländer*. M. Jänicke. Berlin, Edition Sigma: 59-112.
- Kemp, R. and D. Loorbach (2006). *Transition management: a reflexive governance approach*. Reflexive Governance for Sustainable Development, Cheltenham, UK and Northampton, MA, USA: Edward Elgar: 103-130.
- Kingdon, J. W. (1984). *Agendas, Alternatives and Public Policies*. Boston, Brown.
- Knorr, K. D. (1977). *Policy makers' use of social science knowledge: Symbolic or instrumental? Using Social Research in Public Policy Making*. Lexington, MA, Lexington Books.
- Kooiman, J. (2003). *Governing as Governance*. London, Sage.
- Kraack, M., H. Pehle and P. Zimmermann-Steinhart (2001). *Umweltintegration in der Europäischen Union - Das umweltpolitische*



- Profil der EU im Politikfeldvergleich*. Baden-Baden, Nomos Verlagsgesellschaft.
- Kraemer, R. A. (2001). *Ergebnisse des 'Cardiff-Prozesses' zur Integration der Erfordernisse des Umweltschutzes in andere Politiken - Bewertung des Zwischenstandes*. Berlin, Ecologic - Institute for International and European Environmental Policy.
- Kraemer, R. A., A. Klasing, D. Wilkinson and I. von Homeyer (2002). *EU Environmental Governance: A Benchmark of Policy Instruments*, Belgian Federal Department of the Environment Ministry for Public Health, Food Chain Security & Environment.
- Lafferty, W. and E. Hovden (2002). *Environmental Policy Integration: Towards an Analytical Framework?* Oslo, University of Oslo.
- Lafferty, W. M., Ed. (2004). *Governance for Sustainable Development*. Cheltenham, Edward Elgar.
- Latour, B. (2013). *An inquiry into modes of existence*, Harvard University Press.
- Latour, B. and S. Woolgar (1979). *Laboratory life : the social construction of scientific facts*. Beverly Hills ; London, Sage Publications.
- Leach, M., J. Rockström, P. Raskin, I. C. Scoones, A. C. Stirling, A. Smith, J. Thompson, E. Millstone, A. Ely and E. Arond (2012). *Transforming innovation for sustainability*. Ecology and Society 17(2): 11.
- Lebessis, N. and J. Paterson (2000). *Developing new modes of governance*. Brussels, European Commission, Forward Studies Unit.
- Lee, N. and C. Kirkpatrick (2004). *A pilot Study on the Quality of European Commission Extended Impact Assessment. Draft for consultation*. Manchester, Institute for Development Policy and Management, University of Manchester.
- Lenschow, A. (1997). *Variation in EC environmental policy integration: agency push within complex institutional structures*. Journal of European Public Policy 4(1): 109-127.
- Lenschow, A. (2002). Conclusion: What are the Bottlenecks and Where are the Opportunities for Greening the EU? In: *Environmental Policy Integration. Greening Sectoral Policies in Europe*. A. Lenschow. London, Earthscan: 219-233.
- Lenschow, A., Ed. (2002). *Environmental Policy Integration. Greening Sectoral Policies in Europe*. London, Earthscan.
- Lenschow, A. (2002). Greening the European Union: An Introduction. In: *Environmental Policy Integration. Greening Sectoral Policies in Europe*. A. Lenschow. London, Earthscan: 3-21.
- Lewanski, R. (2002). Environmental Policy Integration in Italy: Is a Green Government enough? Some evidence from the Italian Case. In: *Environmental Policy Integration: Greening sectorial policies in Europe*. A. Lenschow. London, Earthscan: 78-100.
- Liberatore, A. (1997). Sustainable development and EU policy-making. In: *The politics of sustainable development*. S. Baker, M. Kousis, D. Richardson and S. Young. London, Routledge: 107-126.
- Lindblom, C. E. (1959). *The Science of Muddling Through*. Public Administration Review 19: 79-88.

- Lindblom, C. E. and D. K. Cohen (1979). *Usable knowledge: Social science and social problem solving*. New Haven & London, Yale University Press.
- Majone, G. (1989). *Evidence, argument, and persuasion in the policy process*. New Haven ; London, Yale University Press.
- Marsden, S. (1999). *Legislative EA in the Netherlands: The E-Test as a Strategic and Integrative Instrument*. *European Environment*(9): 90-100.
- Massey, E. and D. Huitema (2013). *The emergence of climate change adaptation as a policy field: the case of England*. *Regional Environmental Change* 13(2): 341-352.
- Meadowcroft, J. (2009). *What about the politics? Sustainable development, transition management, and long term energy transitions*. *Policy Sciences* 42(4): 323-340.
- Meadowcroft, J. and R. Steurer (2013). *Assessment Practices in the Policy and Politics Cycles: A Contribution to Reflexive Governance for Sustainable Development?* *Journal of Environmental Policy & Planning*: 1-23.
- Mickwitz, P. and P. Kivimaa (2007). *Evaluating policy integration: The case of policies for environmentally friendlier technological innovations*. *Evaluation* 13(1): 68-86.
- Millennium Ecosystem Assessment (2005). *Ecosystems and human well-being: Synthesis*, Island Press.
- Mol, A. P. J. (1995). *The refinement of production: Ecological modernisation theory and the chemical industry*. Utrecht, Van Arkel.
- Mol, A. P. J. (2000). *The environmental movement in an era of ecological modernisation*. *Geoforum* 31(1): 45-56.
- Mol, A. P. J. and D. A. Sonnenfeld (2000). *Ecological modernisation around the world: An introduction*. *Environmental Politics* 9(1): 3-14.
- Mol, A. P. J. and G. Spaargaren (2000). *Ecological modernisation theory in debate: a review*. *Environmental Politics* 9(1): 17-49.
- Müller, E. (2002). *Environmental Policy Integration as a Political Principle: The German Case and the Implications of European Policy*. In: *Environmental Policy Integration: Greening sectorial policies in Europe*. A. Lenschow. London, Earthscan: 57-77.
- Murphy, J. (2000). *Ecological modernisation*. *Geoforum* 31(1): 1-8.
- Murphy, J. and A. Gouldson (2000). *Environmental policy and industrial innovation: integrating environment and economy through ecological modernisation*. *Geoforum* 31(1): 33-44.
- NAO (2006). *Evaluation of Regulatory Impact Assessments 2005-06*. London, NAO (National Audit Office).
- National Audit Office (2006). *Regulatory Impact Assessment and Sustainable Development. Briefing for the Environmental Audit Committee*. London.
- Newig, J., J.-P. Voß and J. Monstadt (2008). *Governance for Sustainable Development: Coping with ambivalence, uncertainty and distributed power*, Routledge.
- Nilsson, M. (2006). *The role of assessments and institutions for policy learning: a study on Swedish climate and nuclear policy formation* *Policy Sciences* 38: 225-249.

- Nilsson, M., A. Jordan, J. Turnpenny, J. Hertin, B. Nykvist and D. Russel (2008). *The use and non-use of policy appraisal tools in public policy making: an analysis of three European countries and the European Union*. Policy Sciences 41(4): 335-355.
- Nollkaemper, A. (2002). Three conceptions of the Integration Principle in International Environmental Law. In: *Environmental Policy Integration*. A. Lenschow. London, Earthscan: 22-32.
- Nutley, S. M., I. Walter and H. T. Davies (2007). *Using evidence: How research can inform public services*, Policy Press.
- Oberthür, S. (2009). *Interplay management: enhancing environmental policy integration among international institutions*. International Environmental Agreements: Politics, Law and Economics 9(4): 371-391.
- OECD (1997). *Regulatory impact analysis : best practices in OECD countries*. Paris; Washington, OECD (Organisation for Economic Co-operation and Development).
- OECD (2001). *Improving Policy Instruments through Impact Assessment. Sigma Paper No. 31*. Paris, OECD (Organisation for Economic Co-operation and Development).
- OECD (2004). *Regulatory Impact Analysis (RIA) Inventory*. Paris, (OECD) Organisation for Economic Co-operation and Development.
- Ohlhorst, D., K. Tews and M. Schreurs (2014). Energiewende als Herausforderung der Koordination im Mehrebenensystem. In: *Im Hürdenlauf zur Energiewende*. Berlin, Springer: 93-104.
- Ott, K. (2014). Deliberative Zwischenreiche und Umweltpolitik. In: *Jahrbuch für Recht und Ethik / Annual Review of Law and Ethics*. J. Hruschka and J. C. Joerden. Berlin, Duncker & Humblot. 22: 289-312.
- Owens, S. (2005). *Making a difference? Some perspectives on environmental research and policy*. Transactions of the Institute of British Geographers 30(3): 287-292.
- Owens, S., T. Rayner and O. Bina (2004). *New agendas for appraisal: reflections on theory, practice, and research*. Environment and Planning A 36(11): 1943-1959.
- Persson, Å. (2007). *Different perspectives on EPI*. Environmental policy integration in practice: Shaping institutions for learning: 25-48.
- Pesch, U. (2005). *The predicaments of publicness. An inquiry into the conceptual ambiguity of public administration*. Delft, Eburon.
- Pesch, U. (2007). *How economists want to improve our lives, and why they don't succeed: Regulatory impact assessments and the real world*. Paper presented at the Conference of the Society for the Social Studies of Science. Montreal.
- Pielke, R. A. (2007). *The honest broker: making sense of science in policy and politics*, Cambridge University Press.
- Pierre, J. and G. B. Peters (2000). *Governance, Politics and the State*. Basingstoke, Macmillan Press.
- Pressman, J. L. and A. Wildavsky (1979). *Implementation: How great expectations in Washington are dashed in Oakland*. Berkeley, Calif. ; London, University of California Press.
- Radaelli, C. M. (1995). *The role of knowledge in the policy process*. Journal of European public policy 2(2): 159-183.

- Radaelli, C. M. (2004). *The diffusion of regulatory impact analysis - Best practice or lesson-drawing?* European Journal of Political Research 43(5): 723-747.
- Radaelli, C. M. (2005). *Diffusion without convergence: how political context shapes the adoption of regulatory impact assessment.* Journal of European Public Policy 12(5): 924-943.
- Radin, B. A. (2000). *Beyond Macchiavelli. Policy Analysis Comes of Age.* Washington D.C., Georgetown University Press.
- Ravetz, J. R. (1985). Usable knowledge, usable ignorance; Incomplete science with policy implications. In: *Sustainable development of the biosphere.* P. Clark and C. Munn. London, Mansell.
- Regeringskansliet, F. (2005). *Utvecklingen av kommittéväsendet - förslag från en arbetsgrupp inom Regeringskansliet, IR2005:009.*
- Rein, M. and D. Schön (1991). Frame-reflective policy discourse. In: *Social sciences and modern states. National experiences and theoretical crossroads.* P. W. Wagner, C.H., B. Wittrock and H. Wollman. Cambridge, Cambridge University Press: 262-289.
- Rhodes, R. A. (1997). *Understanding governance : policy networks, governance, reflexivity and accountability.* Buckingham ; Philadelphia, Open University Press.
- Rhodes, R. A. (2007). *Understanding governance: Ten years on.* Organization studies 28(8): 1243-1264.
- Rip, A. (2006). A co-evolutionary approach to reflexive governance - and its ironies. In: *Reflexive Governance for Sustainable Development.* J.-P. Voß, D. Bauknecht and R. Kemp. Cheltenham, Edward Elgar Publishing: 82-100.
- Romsdahl, R. J. (2005). When Do Environmental Decision Makers Use Social Science. In: *Decision Making for the Environment: Social and Behavioral Science Research Priorities.* G. D. Brewer and P. Stern. Washington D.C., The National Academies Press.
- Russel, D. J., Andrew (2007). *Gearing-up governance for sustainable development: Patterns of policy appraisal in UK central government* Journal of Environmental Planning and Management 50(1): 1-21.
- Sabatier, P. A. (1999). *Theories of the policy process.* Boulder, Colorado, Westview Press.
- Sabatier, P. A. and H. Jenkins-Smith (1988). *Policy change and policy-oriented learning : exploring an advocacy coalition framework.* Dordrecht ; London, Kluwer.
- Sabatier, P. A. and H. C. Jenkins-Smith (1993). *Policy Change and Learning: An Advocacy-Coalition Framework.* Boulder, Colorado, Westview Press.
- Sabatier, P. A. and H. C. Jenkins-Smith (1999). The Advocacy-Coalition Framework: An Assessment. In: *Theories of the Policy Process.* P. A. Sabatier. Boulder, Colorado, Westview Press: 117-166.
- Scharpf, F. W. (1997). *Games Real Actors Play: Actor-Centered Institutionalism in Policy Research.* Boulder, Oxford, Westview.
- Schepelmann, P. (2000). *Von Helsinki nach Goteborg.* Vienna, Sustainable Europe Research Institute.

- Schout, A., A. Jordan and M. Twena (2010). *From 'old' to 'new' governance in the EU: explaining a diagnostic deficit*. West European Politics 33(1): 154-170.
- Sendzimir, J., P. Magnuszewski, P. Balogh and A. Vári (2006). *Adaptive management to restore ecological and economic resilience in the Tisza river basin*. Reflexive governance for sustainable development: 131-161.
- Shafik, N. and S. Bandyopadhyay (1992). *Economic growth and environmental quality: Time-series and cross-country evidence*. Washington, D.C., Office of the Vice President Development Economics, World Bank.
- Simon, H. A. (1997). *Administrative Behavior. A Study of Decision-Making Processes in Administrative Organization*. New York & London, The Free Press.
- Spaargaren, G. (1997). *The ecological modernization of production and consumption: essays in environmental sociology*, Landbouwniversiteit Wageningen.
- Spaargaren, G. and A. P. J. Mol (1992). *Sociology, environment, and modernity - Ecological modernization as a theory of social-change*. Society & Natural Resources 5(4): 323-344.
- Spaargaren, G. and B. van Vliet (2000). *Lifestyles, consumption and the environment: the ecological modernisation of domestic consumption*. Environmental Politics 9(1): 50-76.
- Spruijt, P., A. B. Knol, E. Vasileiadou, J. Devilee, E. Lebret and A. C. Petersen (2014). *Roles of scientists as policy advisers on complex issues: a literature review*. Environmental Science & Policy 40: 16-25.
- SRU (2011). *Ökologische Leitplanken setzen, natürliche Lebensgrundlagen schützen – Empfehlungen zum Fortschrittbericht 2012 zur nationalen Nachhaltigkeitsstrategie. Kommentar zur Umweltpolitik*. Berlin, SRU (Sachverständigenrat für Umweltfragen).
- SRU (2012). *Umweltgutachten 2012. Verantwortung in einer begrenzten Welt*. Berlin, Erich Schmidt.
- Star, S. L. (2010). *This is not a boundary object: Reflections on the origin of a concept*. Science, Technology & Human Values 35(5): 601-617.
- Star, S. L. and J. R. Griesemer (1989). *Institutional ecology, translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39*. Social studies of science 19(3): 387-420.
- Steffen, W., W. Broadgate, L. Deutsch, O. Gaffney and C. Ludwig (2015) *The trajectory of the Anthropocene: The Great Acceleration*. The Anthropocene Review. First published online, 1-18 DOI: 10.1177/2053019614564785
- Steffen, W., W. Broadgate, L. Deutsch, O. Gaffney and C. Ludwig (2015). *The trajectory of the Anthropocene: The Great Acceleration*. The Anthropocene Review, First published online: 1-18.
- Stigson, B., S. P. Babu, J. Bordewijk, P. O'Donnell, P. Haavisto, J. Morgan and D. Osborn (2009). *Sustainability "Made in Germany". We know you can do it. Peer Review der deutschen Nachhaltigkeitspolitik*. Berlin, Rat für Nachhaltige Entwicklung.

- Stirling, A. (2005). Opening up or closing down? Analysis, participation and power in the social appraisal of technology. In: *Science, Citizenship and Globalization*. M. Leach, I. Scoones and B. Wynne. London, Zed Books: 218-231.
- Stirling, A. (2006). *Analysis, participation and power: justification and closure in participatory multi-criteria analysis*. Land use policy 23(1): 96-107.
- Stirling, A. (2006). Precaution, foresight and sustainability: reflection and reflexivity in the governance of science and technology. In: *Reflexive governance for sustainable development*. J.-P. Voß, D. Bauknecht and R. Kemp. Cheltenham, Edward Elgar: 225-272.
- Stirling, A. (2008). "Opening up" and "closing down" power, participation, and pluralism in the social appraisal of technology. *Science, Technology & Human Values* 33(2): 262-294.
- Stirling, A. (2014). From sustainability to transformation: dynamics and diversity in reflexive governance of vulnerability. In: *Vulnerability in Technological Cultures: New Directions in Research and Governance*. A. Hommels, J. Mesman and W. E. Bijker. Cambridge, MIT Press: 305-332.
- Stirling, A. (2014). *Transforming power: Social science and the politics of energy choices*. *Energy Research & Social Science* 1(March 2014): 83–95.
- Stone, D. A. (2002). *The Policy Paradox. The Art of Political Decision Making*. New York & London, W.W. Norton & Company.
- Turner, R. K. (2007). *Limits to CBA in UK and European environmental policy: retrospects and future prospects*. *Environmental and Resource Economics* 37(1): 253-269.
- Turnpenny, J., M. Nilsson, D. Russel, A. Jordan, J. Hertin and B. Nykvist (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.
- Turnpenny, J., C. M. Radaelli, A. Jordan and K. Jacob (2009). *The policy and politics of policy appraisal: emerging trends and new directions*. *Journal of European Public Policy* 16(4): 640-653.
- Van Zwanenberg, P. and E. Millstone (2000). *Beyond skeptical relativism: evaluating the social constructions of expert risk assessments*. *Science, Technology & Human Values* 25(3): 259-282.
- Volkery, A. (2004). *Regulatory Impact Analysis in Canada*. Berlin, Environmental Policy Research Centre.
- Volkery, A. and K. Ehrhardt (2004). *Sustainability and Regulatory Impact Assessment in the Netherlands*. Berlin, Environmental Policy Research Centre.
- Volkery, A. and T. Ribeiro (2009). *Scenario planning in public policy: understanding use, impacts and the role of institutional context factors*. *Technological forecasting and social change* 76(9): 1198-1207.
- Voß, J.-P., D. Bauknecht and R. Kemp, Eds. (2006). *Reflexive Governance for Sustainable Development*. Cheltenham, Edward Elgar Publishing.
- Voß, J.-P. and R. Kemp (2006). Sustainability and reflexive governance: introduction. In: *Reflexive Governance for Sustainable Development*.

- J.-P. Voß, D. Bauknecht and R. Kemp. Cheltenham, Edward Elgar Publishing: 3-28.
- Voß, J.-P., R. Kemp and D. Bauknecht (2006). Reflexive governance: a view on an emerging path. In: *Reflexive Governance for Sustainable Development*. J.-P. Voß, D. Bauknecht and R. Kemp. Cheltenham, Edward Elgar Publishing: 419-438.
- Wallace, D. (1995). *Environmental policy and industrial innovation: strategies in Europe, the U.S., and Japan*. London, Earthscan and the Royal Institute of International Affairs.
- WBGU (2014). *Klimaschutz als Weltbürgerbewegung*. Berlin, WBGU (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen).
- WCED (1987). *Our common future*. Oxford, Oxford University Press.
- Weale, A. (1992). *The new politics of pollution*. Manchester and New York, Manchester University Press.
- Weale, A. (1998). A sceptical look at Environmental Policy Integration. In: *'Integration of environmental concerns into all policy areas', Report of the EEB conference, Brussels 26th and 27th of November 1998*. European Environmental Bureau: 25-32.
- Weale, A. (2008). Foreword. In: *Innovation in Environmental Policy: Integrating the Environment for Sustainability?* A. Jordan and A. Lenschow. Cheltenham, Edward Elgar.
- Weale, A., G. Pridham, M. Cini, D. Konstadakopulos, M. Porter and B. Flynn (2000). *Environmental Governance in Europe*. Oxford, Oxford University Press.
- Weale, A., G. Pridham, M. Cini, D. Konstadakopulos, M. Porter and B. Flynn (2002). *Environmental governance in Europe: an ever closer ecological union?* OUP Catalogue.
- Weber, K. M. (2006). *Foresight and adaptive planning as complementary elements in anticipatory policy-making: a conceptual and methodological approach*. Reflexive governance for sustainable development: 189-221.
- Weiland, S., V. Weiss and J. Turnpenny (2013). *Introduction: Science in policy making*. Nature and Culture 8(1): 1-7.
- Weingart, P. (1999). *Scientific expertise and political accountability: paradoxes of science in politics*. Science and Public Policy 26(3): 151-161.
- Weiss, C. H. (1999). *The interface between evaluation and public policy*. Evaluation 5(4): 468-486.
- Weizsäcker, E. U. v., A. B. Lovins and L. H. Lovins (1996). *Factor four: Doubling wealth - halving resource use: The new report to the Club of Rome*. London, Earthscan.
- Wilburn, G. (2004). *Interview with Greg Wilburn, Senior Policy Officer at the Canadian Environmental Assessment Agency*
- Wildavsky, A. B. (1979). *Speaking truth to power*, Transaction Publishers.
- Wilkinson, D. (1997). *Towards sustainability in the European Union? Steps within the European Commission towards integrating the environment into other European Union policy sectors*. Environmental Politics 6(1): 153-173.

- Wilkinson, D., M. Fergusson, C. Bowyer, J. Brown, A. Ladefoged, C. Monkhouse and A. Zdanowicz (2004). *Sustainable Development in the European Commission's Integrated Impact Assessments for 2003*. London, IEEP.
- Wilkinson, D., C. Monkhouse, M. Herodes and A. Farmer (2005). *For Better or for Worse? The EU's 'Better Regulation' Agenda and the Environment*. London, IEEP: 33.
- Wilson, J. Q. (1980). *The Politics of regulation*. New York, Basic Books.
- Woolgar, S. E. (1988). *Knowledge and reflexivity: New frontiers in the sociology of knowledge*, Sage Publications, Inc.
- World Commission on Environment and Development (1987). *Our Common Future: The Report of the World Commission on Environment and Development*. Oxford, Oxford University Press.



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